Appendix 2A

The Nature of the Fine Particle and Regional Haze Air Quality Problems in the MANE-VU Region: A Conceptual Description

Prepared for the Ozone Transport Commission
Prepared by NESCAUM
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Final
November 2, 2006

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Scientific evidence has established a solid link between cardiac and respiratory health risks and transient exposure to ambient fine particle pollution. The same fine particles that are capable of penetrating deep into the lungs are also in the size range that is most efficient at absorbing and scattering visible light, thus impairing visibility. The emission sources, atmospheric chemistry, and meteorological phenomena that influence ambient concentrations of fine particle pollution can act on scales that range from hundreds to thousands of kilometers. Fine particles are not exclusively a secondary pollutant; primary fine particle pollution from local sources can have a significant effect on ambient concentrations in some locations. Fine particles are also not exclusively a summertime pollutant. There are important differences between the meteorological and chemical dynamics that are responsible for high fine particle levels during summer and winter.

In 1997, the U.S. Environmental Protection Agency (USEPA) issued a national ambient air quality standard (NAAQS) for fine particles with an aerodynamic diameter of 2.5 micrometers or less. In 1999, the USEPA followed up with the Regional Haze Rule that enforces a national visibility goal laid out in the Clean Air Act. This will ultimately restore natural visibility to 156 national parks and wilderness areas across the country (called "Class I" areas). To address these Clean Air Act requirements, states will have to develop State Implementation Plans (SIPs) detailing their approaches for reducing fine particle pollution to meet the health-based fine particle NAAQS. They also must develop plans that address the degradation of visibility that exists in various parts of the Northeast (referred to as the Mid-Atlantic/Northeast Visibility Union (MANE-VU) region). As part of this process, the USEPA urges states to include in their SIPs a conceptual description of the pollution problem in their nonattainment and Class I areas. This document provides the conceptual description of the fine particulate and regional haze problems in the MANE-VU states consistent with the USEPA's guidance.

Scientific studies of the regional fine particle problem have uncovered a rich complexity in the interaction of meteorology and topography with fine particle formation and transport. Large scale high pressure systems covering hundreds of thousands of square miles are the source of classic severe fine particle episodes in the eastern United States, particularly in summer. These large, synoptic scale systems create particularly favorable conditions for the oxidation of sulfur dioxide (SO_2) emissions to various forms of sulfate which, in turn, serves to form – or is incorporated into – fine particles that are subsequently transported over large distances. These synoptic scale systems move from west to east across the United States, bringing air pollution emitted by large coal-fired power plants and other sources located outside MANE-VU into the region. This then adds to the pollution burden within MANE-VU on days when MANE-VU's own air pollution sources are themselves contributing to poor air quality. At times, the high pressure systems may stall over the East for days, creating particularly intense fine particle episodes.

In the winter, temperature inversions occur that are effective at concentrating local primary particle emissions at the surface overnight and during early morning hours. This pollution can then be mixed into regionally transported particle pollution (aloft) later in the morning when convection is restored. Additionally, the lower temperature in the winter can shift the chemical equilibrium in the atmosphere slightly toward the production of nitrate particle pollution relative to sulfate formation. As a result, nitrate can become a significant fraction of measured fine particle mass in parts of the eastern U.S. during winter months.

Primary and secondary emissions of carbon-containing compounds (e.g., diesel exhaust, biogenic organic carbon emissions, and anthropogenic volatile organic compound emissions) all contribute to a significant presence of carbonaceous aerosol across the MANE-VU region, which can vary from urban to rural locations and on a seasonal basis. In addition, short range pollution transport exists, with primary and precursor particle pollutants pushed by land, sea, mountain, and valley breezes that can selectively affect relatively local areas. With the knowledge of the different emission sources, transport scales, and seasonal meteorology in various locations adjacent to and within MANE-VU, a conceptual picture of fine particle pollution and its impacts emerges.

The conceptual description that explains elevated regional $PM_{2.5}$ peak concentrations in the summer differs significantly from that which explains the largely urban peaks observed during winter. On average, summertime concentrations of sulfate in the northeastern United States are more than twice that of the next most important fine particle constituent, organic carbon (OC), and more than four times the combined concentration of nitrate and black carbon (BC) constituents. Episodes of high summertime sulfate concentrations are consistent with stagnant meteorological flow conditions upwind of the MANE-VU region and the accumulation of airborne sulfate (via atmospheric oxidation of SO_2) followed by long-range transport of sulfur emissions from industrialized areas within and outside the region.

National assessments have indicated that in the winter, sulfate levels in urban areas are higher than background sulfate levels across the eastern U.S., indicating that the local urban contribution to wintertime sulfate levels is significant relative to the regional sulfate contribution from long-range transport. A network analysis for the winter of 2002 suggests that the local enhancement of sulfate in urban areas of the MANE-VU region ranges from 25 to 40% and that the long-range transport component of $PM_{2.5}$ sulfate is still the dominant contributor in most eastern cities.

In the winter, urban OC and sulfate each account for about a third of the overall $PM_{2.5}$ mass concentration observed in Philadelphia and New York City. Nitrate also makes a significant contribution to urban $PM_{2.5}$ levels observed in the northeastern United States during the winter months. Wintertime concentrations of OC and nitrate in urban areas can be twice the average regional concentrations of these pollutants, indicating the importance of local source contributions. This is likely because winter conditions are more conducive to the formation of local inversion layers which prevent vertical mixing. Under these conditions, emissions from tailpipe, industrial and other local sources become concentrated near the Earth’s surface, adding to background pollution levels associated with regionally transported emissions.

From this conceptual description of fine particle pollution formation and transport into and within MANE-VU, air quality planners need to develop an understanding of what it will take to clean the air in the MANE-VU region. Every air pollution episode is unique in its specific details. The relative influences of the transport pathways and local emissions vary by hour, day, and season. The smaller scale weather patterns that affect pollution accumulation and its transport underscore the importance of local (in-state) controls for SO_2, nitrogen oxides (NO_X) and volatile organic compound (VOC) emissions. Larger synoptic scale weather patterns, and pollution patterns associated with them, support the need for SO_2 and NO_X controls across the broader eastern United States. Studies and characterizations of nocturnal low level jets also support the need for local and regional controls on SO_2 and NO_X sources as locally generated and transported pollution can both be entrained in low level jets formed during nighttime hours. The presence of land, sea, mountain, and valley breezes indicate that there are unique aspects of pollution accumulation and transport that are area-specific and will warrant policy responses at the local and regional levels beyond a one-size-fits-all approach.

The mix of emission controls is also important. Regional fine particle formation is primarily due to SO_2, but NO_X is also important because of its influence on the chemical equilibrium between sulfate and nitrate pollution during winter. While the effect of reductions in anthropogenic VOCs is less well characterized at this time, secondary organic aerosol (SOA) is a major component of fine particles in the region and reductions in anthropogenic sources of OC may have a significant effect on fine particle levels in urban nonattainment areas. Therefore, a combination of localized NO_X and VOC reductions in urban centers with additional SO_2 and NO_X reductions from across a larger region will help to reduce fine particles and precursor pollutants in nonattainment areas as well improve visibility across the entire MANE-VU region.

1. INTRODUCTION

1.1. Background

Fine particle pollution is a persistent public health problem in the Mid-Atlantic/Northeast Visibility Union (MANE-VU) region. Because of its physical structure, fine particulate matter ($PM_{2.5}$) can bypass conductive airways and deliver exogenous materials, such as reactive organic chemicals that adsorb onto the particle core, into the deep lung.[a] Studies of particulate matter (PM) in urban areas have found associations of short- (daily) and long-term (annual and multiyear) exposure to airborne PM as well as $PM_{2.5}$ with cardiopulmonary health outcomes. These effects include increased symptoms, hospital admissions and emergency room visits, and premature death (Pope *et al.* 2004).

In addition to health implications, visibility impairment in the eastern United States is largely due to the presence of light-absorbing and light-scattering fine particles in the atmosphere. The United States Environmental Protection Agency (USEPA) has identified visibility impairment as the best understood of all environmental effects of air pollution (Watson, 2002). A long-established physical and chemical theory relates the interaction of particles and gases in the atmosphere with the transmission of visual information along a sight path from object to observer.

The Clean Air Act requires states that have areas designated "nonattainment" of the fine particle national ambient air quality standard (NAAQS) to submit State Implementation Plans (SIPs) demonstrating how they plan to attain the fine particle NAAQS. [b] The Clean Air Act also contains provisions for the restoration and maintenance of visibility in 156 federal Class I areas.[c] SIPs for dealing with visibility impairment (or regional haze) must include a long-term emissions management strategy aimed at reducing fine particle pollution in these rural areas.

As part of the SIP process for both of these air quality issues, the USEPA urges states to include a conceptual description of the pollution problem. The USEPA has provided guidance on developing a conceptual description, which is contained in Chapter 11 of the document "Guidance on the Use of Models and Other Analyses for

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[a] $PM_{2.5}$ or "fine particles" refer to those particles with a diameter ≤ 2.5 micrometers (μm).
[b] The 1997 $PM_{2.5}$ NAAQS includes a requirement that the three-year average of yearly annual average $PM_{2.5}$ design values must be below 15 μg/m^3 and a requirement that the three-year average of the 98th percentile 24-hour average concentration must be below 65 μg/m^3. In October 2006, the USEPA acted to change the daily standard (98th percentile value based on valid 24-hour average concentrations measured at a site) from 65 to 35 μg/m^3.
[c] The Class I designation applies to national parks exceeding 6,000 acres, wilderness areas and national memorial parks exceeding 5,000 acres, and all international parks that were in existence prior to 1977. In the MANE-VU area, this includes: Acadia National Park, Maine; Brigantine Wilderness (within the Edwin B. Forsythe National Wildlife Refuge), New Jersey; Great Gulf Wilderness, New Hampshire; Lye Brook Wilderness, Vermont; Moosehorn Wilderness (within the Moosehorn National Wildlife Refuge), Maine; Presidential Range – Dry River Wilderness, New Hampshire; and Roosevelt Campobello International Park, New Brunswick.

Demonstrating Attainment of Air Quality Goals for Ozone, $PM_{2.5}$, and Regional Haze" (EPA-Draft 3.2, September 2006) (Appendix A of this report reproduces Chapter 11 of the USEPA guidance document). This report provides the MANE-VU states with the basis for their conceptual descriptions, consistent with the USEPA's guidance. In the guidance, the USEPA recommends addressing 13 questions related to $PM_{2.5}$ and eight questions related to visibility to help define the problem in a nonattainment or Class I area. This report addresses these questions, as well as provides some in-depth data and analyses that can assist states in developing conceptual descriptions tailored to their specific areas.

1.2. PM Formation

Fine particles directly emitted into the atmosphere are called "primary" fine particles, and they come from both natural and human sources. These fine particles commonly include unburned carbon particles directly emitted from high-energy processes such as combustion, and particles emitted as combustion-related vapors that condense within seconds of being exhausted to ambient air. Combustion sources include motor vehicles, power generation facilities, industrial facilities, residential wood burning, agricultural burning, and forest fires.

Fine particles are also comprised of "secondary" fine particles, which are formed from precursor gases reacting in the atmosphere or through the addition of PM to pre-existing particles. Although direct nucleation from the gas phase is a contributing factor, most secondary material accumulates on pre-existing particles in the 0.1 to 1.0 micrometer (μm) range and typically account for a significant fraction of the fine PM mass. Examples of secondary particle formation include the conversion of sulfur dioxide (SO_2) to sulfuric acid (H_2SO_4) droplets that further react with ammonia (NH_3) to form various sulfate particles (e.g., ammonium sulfate $(NH_4)_2SO_4$, ammonium bisulfate (NH_4HSO_4), and letovicite ($(NH_4)_3H(SO_4)_2$). The dominant source of SO_2 emissions in the eastern U.S. is fossil fuel combustion, primarily at coal-fired power plants and industrial boilers. Similarly, secondary $PM_{2.5}$ is created by the conversion of nitrogen dioxide (NO_2) to nitric acid (HNO_3) which reacts further with ammonia to form ammonium nitrate (NH_4NO_3) particles. Nitrate particles are formed from the NO_X emitted by power plants, automobiles, industrial boilers, and other combustion sources. Nitrate production in the northeastern U.S. is ammonia-limited and controlled by the availability of sulfate and temperature, especially along the East Coast.[d] While human sources account for most nitrate precursors in the atmosphere, there are some natural sources, including lightning, biological and abiological processes in soils, and stratospheric intrusion. Large sources of ammonia arise from major livestock production and fertilizer application throughout the Midwest, Gulf Coast, mid-Atlantic, and southeastern United States, in addition to the sources of ammonia associated with human activities.

The carbon fraction of fine PM may refer to black carbon (BC) and primary organic and/or secondary organic carbon (OC). Most black carbon is primary, which is

[d] Ammonia reacts preferentially with sulfuric acid, and if sufficient excess ammonia is available, it can then combine with nitric acid to form particulate nitrate.

also sometimes referred to as elemental carbon (EC) or soot. Black carbon is the light-absorbing carbonaceous material in atmospheric particles caused by the combustion of diesel, wood, and other fuels. Organic carbon includes both primary emissions and secondary organic PM in the atmosphere. Secondary organic particles are formed by reactions involving volatile organic compounds (VOCs), which yield compounds with low saturation vapor pressures that nucleate or condense on existing particles at ambient temperature. Organic carbon in both the gas and solid phase is emitted by automobiles, trucks, and industrial processes, as well as by many types of vegetation. The relative amounts of organic carbon from different sources remain highly uncertain, and data are needed to be able to assess the relative contribution of primary versus secondary and anthropogenic versus biogenic production.

1.3. PM Impacts on Visibility

Under natural atmospheric conditions, the view in the eastern United States would extend about 60 to 80 miles (100 to 130 kilometers) (Malm, 2000). Unfortunately, views of such clarity have become a rare occurrence in the East. As a result of man-made pollution, the average visual range in the eastern half of the country has diminished to about 15-30 miles, approximately one-third the visual range that would be observed under unpolluted natural conditions.

In general, the ability to see distant features in a scenic vista is determined less by the amount of light reaching the observer than by the contrast between those features and their surroundings. For example, the illumination of a light bulb in a greenhouse is barely discernible on a sunny day but would be highly visible at night. Similarly, a mountain peak is easily seen if it appears relatively dark against the sunlit sky. If, on the other hand, a milky haze “fills” the space between the observer and the mountain peak, the contrast between the mountain and its background is diminished as both take on a similar hue (Figure 1-1).

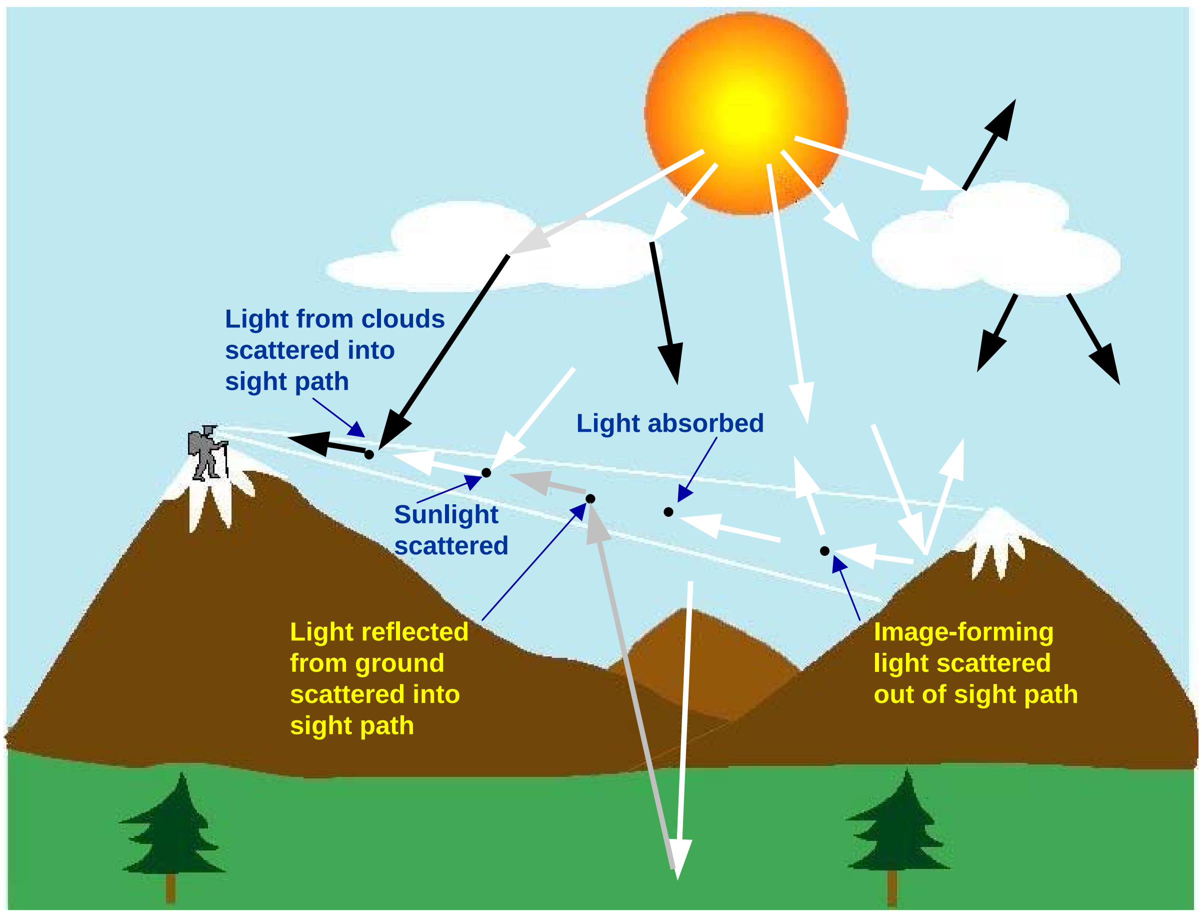
Figure 1-1. View of a good visibility day (left) and a poor visibility day (right) at Acadia National Park, Maine in June 2003.

Source: CAMNET, http://www.hazecam.net

In simple terms, this hazy effect occurs when small particles and certain gaseous molecules in the atmosphere absorb or scatter visible light, thereby reducing the amount of visual “information” that reaches the observer. This occurs to some extent even under natural conditions, primarily as a result of the light scattering effect of individual air molecules (known as Rayleigh scattering[e]) and of naturally occurring aerosols.[f] The substantial visibility impairment caused by manmade pollution, however, is almost entirely attributable to the increased presence of fine particles in the atmosphere.[g]

Figure 1-2 presents a simplified schematic of the way such small particles interact with packets of light or "photons" as they travel from a distant object to an observer. Along the way, particles suspended in the air can deflect or scatter some of the photons out of the sight path. Intervening particles can also absorb photons, similarly removing them from the total amount of light reaching the observer.

Figure 1-2. Schematic of visibility impairment due to light scattering and absorption (adapted from Malm, 2000).



[e] Because air molecules more effectively scatter light of short wavelengths (i.e., blue light), Rayleigh scattering explains the blue color of the sky.

[f] Atmospheric aerosol is a more general term for fine particles suspended in the atmosphere and refers to any particle (solid or liquid) that is suspended in the atmosphere.

[g] The only light-absorbing *gaseous* pollutant present in the atmosphere at significant concentrations is nitrogen dioxide (NO_2). However, the contribution of NO_2 to overall visibility impacts in the Northeast is negligible and hence its effects are not generally included in this discussion or in standard calculations of visibility impairment.

At the same time, particles in the air can scatter light into the sight path, further diminishing the quality of the view. The extraneous light can include direct sunlight and light reflected off the ground or from clouds. Because it is not coming directly from the scenic element, this light contains no visual information about that element. When the combination of light absorption and light scattering (both into and out of the sight path) occurs in many directions due to the ubiquitous presence of small particles in the atmosphere, the result is commonly described as "haze."

1.4. $PM_{2.5}$ Design Values in the MANE-VU Region

SIP developers use monitoring data in several important ways to support SIP activities. This section as well as Section 1.5 present measurements from the FRM and IMPROVE network needed in establishing SIP requirements. Following USEPA guidance (40CFR Part 50, Appendix N; USEPA, 2003a; USEPA, 2003b), we use these data to preview the Design Values and Baseline Conditions that SIP developers must consider for each nonattainment area and Class I area.

The current annual fine particle National Ambient Air Quality Standard was established in 1997 at 15 $\mu g/m^3$. To meet this standard, the 3-year average of a site's annual mean concentration must not be greater than this level. The current daily standard was set at 65 $\mu g/m^3$ at the 98^{th} percentile level. To meet this standard, the 98^{th} percentile value (of valid measurements recorded at a site) must not be greater than this level. No counties in MANE-VU have been designated nonattainment for the daily standard, however, the USEPA has revised the NAAQS with respect to the 24-hr average concentrations and states will have to comply with the new standard (35 $\mu g/m^3$ at the 98^{th} percentile level) within five years of designations (expected in 2010). Fine particle data from the USEPA's Air Quality System (AQS) database for years 2002 through 2004 were used to determine the attainment status of monitoring sites in MANE-VU.

Table 1-1 shows a summary of areas found to exceed the annual standard (no areas exceed the daily standard). As tabulated, 12 areas fail to achieve the annual standard, with design values ranging from 15.1 to 20.4 $\mu g/m^3$. The nonattainment areas are concentrated in Pennsylvania and the coastal urban corridor. Sulfates and organic carbon represent the largest contributors to these high fine particle levels.

Table 1-1. 2004 $PM_{2.5}$ Design Value for Nonattainment Areas in MANE-VU

State(s)	Nonattainment Area	2004 Annual Design Value	2004 24-hr Design Value
MD	Baltimore	16.3	41
PA	Harrisburg-Lebanon-Carlisle	15.4	41
PA	Johnstown	15.3	40
PA	Lancaster	16.8	42
PA	Liberty-Clairton	20.4	65
MD	Martinsburg, WV-Hagerstown	16.1	39
NY-NJ-CT	New York-N. New Jersey-Long Island	16.8	50
PA-NJ-DE	Philadelphia-Wilmington	15.4	39
PA	Pittsburgh-Beaver Valley	16.5	45
PA	Reading	16.1	42
DC-MD-VA	Washington, DC	15.1	42
PA	York	16.9	43

1.5. Regional haze baseline conditions

The Regional Haze Rule requires states and tribes to submit plans that include calculations of current and estimated baseline and natural visibility conditions. They will use monitoring data from the IMPROVE program as the basis for these calculations. Table 1-2 and Table 1-3 present the five-year average[h] of the 20 percent worst day mass concentrations and 20 percent best day mass concentrations respectively in six Class I areas. Five of these areas are in MANE-VU and one (Shenandoah) is nearby but located in a neighboring regional planning organization (RPO) region.[i] Table 1-4 and Table 1-5 give the corresponding worst day and best day contributions to particle extinction for the six Class I areas. Each of these tables show the relative percent contribution for all six Class I sites. Sulfate and organic carbon dominate the fine mass, with sulfate even more important to particle extinction.

To guide the states in calculating baseline values of reconstructed extinction and for estimating natural visibility conditions, the USEPA released two documents in the fall of 2003 outlining recommended procedures (USEPA 2003a; USEPA 2003b). Recently, the IMPROVE Steering Committee endorsed an alternative method for the calculation of these values. The IMPROVE alternative methods were used, to create Table 1-6, which provides detail on the uniform visibility goals for the 20 percent worst conditions at the six Class 1 areas.

[h] Great Gulf calculations are based on four years of data (2001-2004).

[i] Note that values presented for Shenandoah, a Class I area in the Visibility Improvement State and Tribal Association of the Southeast (VISTAS) region, are for comparative purposes only. VISTAS will determine uniform rates of progress for areas within its region.

The first column of data in Table 1-6 gives the alternative proposed natural background levels for the worst visibility days at these six sites. MANE-VU has decided to use this approach, at least initially, for 2008 SIP planning purposes (NESCAUM, 2006). The second column shows the baseline visibility conditions on the 20 percent worst visibility days. These values are based on IMPROVE data from the official five-year baseline period (2000-2004) and again were calculated using the IMPROVE alternative approach. Using these baseline and natural background estimates, we derive the uniform rate of progress shown in the third column.[j] The final column displays the interim 2018 progress goal based on 14 years of improvement at the uniform rate.

Table 1-2. Fine mass and percent contribution for 20 percent worst days

20% Worst-day Fine Mass ($\mu g/m^3$)/% contribution to fine mass					
Site	SO_4	NO_3	OC	EC	Soil
Acadia	6.3/ 56%	0.8/ 7%	3.2/ 28%	0.4/ 4%	0.5/ 5%
Brigantine	11.6/ 56%	1.7/ 8%	5.8/ 28%	0.7/ 3%	1/ 5%
Great Gulf	7.3/ 59%	0.4/ 3%	3.8/ 31%	0.4/ 3%	0.6/ 5%
Lye Brook	8.5/ 58%	1.1/ 7%	3.9/ 27%	0.5/ 3%	0.6/ 4%
Moosehorn	5.7/ 54%	0.7/ 7%	3.4/ 32%	0.4/ 4%	0.4/ 4%
Shenandoah	13.2/ 68%	0.7/ 3%	4.2/ 22%	0.6/ 3%	0.7/ 4%

Table 1-3. Fine mass and percent contribution for 20 percent best days

20% Best-day Fine Mass ($\mu g/m^3$)/% contribution to fine mass					
Site	SO_4	NO_3	OC	EC	Soil
Acadia	0.8/ 42%	0.1/ 6%	0.8/ 41%	0.1/ 5%	0.1/ 6%
Brigantine	1.8/ 43%	0.5/ 11%	1.5/ 35%	0.2/ 6%	0.2/ 5%
Great Gulf	0.7/ 43%	0.1/ 7%	0.7/ 40%	0.1/ 5%	0.1/ 6%
Lye Brook	0.6/ 44%	0.1/ 11%	0.4/ 33%	0.1/ 5%	0.1/ 7%
Moosehorn	0.8/ 37%	0.1/ 6%	1/ 47%	0.1/ 5%	0.1/ 5%
Shenandoah	1.4/ 45%	0.5/ 16%	1/ 29%	0.2/ 5%	0.2/ 5%

[j] We calculate the rate of progress as (baseline – natural background)/60 to yield the annual deciview (dv) improvement needed to reach natural background conditions in 2064, starting from the 2004 baseline.

Table 1-4. Particle extinction and percent contribution for 20 percent worst days

20% Worst-day particle extinction (Mm^{-1}) /% Contribution to particle extinction						
Site	SO_4	NO_3	OC	EC	Soil	CM
Acadia	69.2/ 64%	8/ 7%	11.2/ 10%	4.3/ 4%	0.5/ 0%	1.9/ 2%
Brigantine	127.1/ 66%	15.7/ 8%	24.2/ 13%	7/ 4%	1/ 1%	5.4/ 3%
Great Gulf	76.6/ 68%	3/ 3%	14.4/ 13%	3.9/ 3%	0.6/ 1%	3/ 3%
Lye Brook	87.3/ 67%	9.1/ 7%	15.3/ 12%	4.8/ 4%	0.6/ 0%	1.8/ 2%
Moosehorn	58.5/ 60%	6.4/ 7%	11.9/ 12%	4.4/ 5%	0.4/ 0%	2.1/ 3%
Shenandoah	155.5/ 79%	5.8/ 3%	16.1/ 8%	5.7/ 3%	0.7/ 0%	2.5/ 1%

Table 1-5. Particle extinction and percent contribution for 20 percent best days

20% Best-day particle extinction (Mm^{-1}) /% Contribution to particle extinction						
Site	SO_4	NO_3	OC	EC	Soil	CM
Acadia	6.8/ 28%	1.1/ 4%	2.2/ 9%	0.9/ 4%	0.1/ 0%	0.7/ 6%
Brigantine	14.8/ 35%	3.9/ 9%	4.5/ 11%	2.4/ 6%	0.2/ 1%	3.2/ 11%
Great Gulf	5.8/ 27%	1/ 4%	2/ 9%	0.8/ 4%	0.1/ 0%	0.9/ 8%
Lye Brook	4.4/ 23%	1.2/ 6%	1.3/ 7%	0.6/ 3%	0.1/ 0%	0.5/ 6%
Moosehorn	6.7/ 26%	1.1/ 4%	3.1/ 12%	1/ 4%	0.1/ 0%	1.1/ 8%
Shenandoah	11.2/ 36%	4.2/ 13%	2.9/ 9%	1.6/ 5%	0.2/ 1%	1.1/ 5%

Table 1-6. Natural background and baseline calculations for select Class I areas

Site	20 % Worst Days Natural Background (dv)	20% Worst Days Baseline 2000-04(dv)	Uniform Rate (dv/yr)	Interim Progress Goal 2018 (dv)	20% Best Days Baseline 2000-04(dv)
Acadia	12.54	22.89	0.17	20.47	8.77
Brigantine	12.34	29.01	0.28	25.12	14.33
Great Gulf	12.12	22.82	0.18	20.32	7.66
Lye Brook	11.85	24.44	0.21	21.50	6.37
Moosehorn	12.10	21.72	0.16	19.48	9.15
Dolly Sods	10.45	29.05	0.31	24.71	12.28
James River Face	11.20	29.12	0.30	24.94	14.21
Shenandoah	11.44	29.31	0.30	25.14	10.92

As demonstrated in Table 1-2, the inorganic constituents of fine particles, sulfates and nitrates are the dominant contributors to visibility impairment, accounting for about 80 percent of total particle extinction. Within the MANE-VU sites, the relative split between these two components is ~8 to 1 sulfate to nitrate (at Shenandoah, the average 20 percent worst day contribution of sulfates is even more dominant). Carbonaceous components account for the bulk of the remaining particle extinction, ranging from 12 to nearly 20 percent, mostly in the form of organic carbon. The remaining components add little to the extinction budget on the worst days, with a few percent attributable to coarse mass and around a half percent from fine soil.

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2. A DETAILED LOOK AT FINE PARTICLE POLLUTION AND REGIONAL HAZE IN THE MANE-VU REGION

Developing a conceptual description of fine particle pollution or regional haze requires combining experience and atmospheric-science expertise with multiple data sources and analysis techniques. This includes measured data on ambient pollutant concentrations as well as emission inventory and meteorological data, chemical transport modeling, and observationally based models (NARSTO, 2003). Here, we begin with a conceptual description based on the existing scientific literature and regional data analyses concerning $PM_{2.5}$ and its effect on visibility. This includes numerous review articles and reports on the subject. Subsequent chapters review monitoring data, emissions inventory information, and modeling results to support the conceptual understanding of regional fine particle pollution presented here.

Most past assessments of fine particle pollution and visibility impairment have tended to be national in scope. For purposes of this discussion, we have selectively reviewed the literature in order to present a distinctly eastern U.S. focus. While we already know much about fine particle pollution and visibility impairment and their causes in the MANE-VU region (see NESCAUM, 2001, 2006; NARSTO, 2003; Watson, 2002), significant gaps in understanding remain with respect to the nitrate and organic component of $PM_{2.5}$. While research continues, we have assembled the relevant information that is available to provide an overview of our current understanding of the regional context for $PM_{2.5}$ nonattainment and visibility impairment in the MANE-VU region.

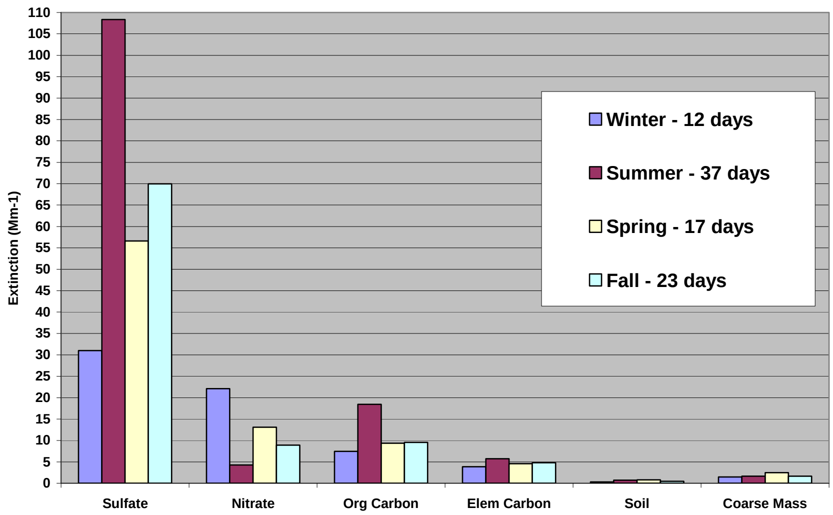
2.1. Chemical composition of particulate matter in the rural MANE-VU region

Sulfate alone accounts for anywhere from one-half to two-thirds of total fine particle mass on high $PM_{2.5}$ days in rural areas of MANE-VU. Even on low $PM_{2.5}$ days, sulfate generally accounts for the largest fraction (40 percent or more) of total fine particle mass in the region (NESCAUM, 2001, 2004b). Sulfate accounts for a major fraction of $PM_{2.5}$, not only in the Northeast but across the eastern United States (NARSTO, 2003).

After sulfate, organic carbon (OC) consistently accounts for the next largest fraction of total fine particle mass. Its contribution typically ranges from 20 to 30 percent of total fine particle mass on the days with the highest levels of $PM_{2.5}$. The fact that the contribution from organic carbon can be as high as 40 percent at the more rural sites on low $PM_{2.5}$ days is likely indicative of the role played by organic emissions from vegetation (so-called “biogenic hydrocarbons”).

Relative contributions to overall fine particle mass from nitrate (NO_3), elemental carbon, and fine soil are all smaller (typically under 10 percent), but the relative ordering among the three species varies with location and season. Figure 2-1 below, reflects the difference between nitrate and organic contributions to rural fine particle concentrations during different seasons (monitoring data for additional sites in the MANE-VU region are in Appendix B).

Figure 2-1. Comparison of contributions during different seasons at Lye Brook Wilderness Area on 20% worst visibility (high $PM_{2.5}$) days (2000-2003).

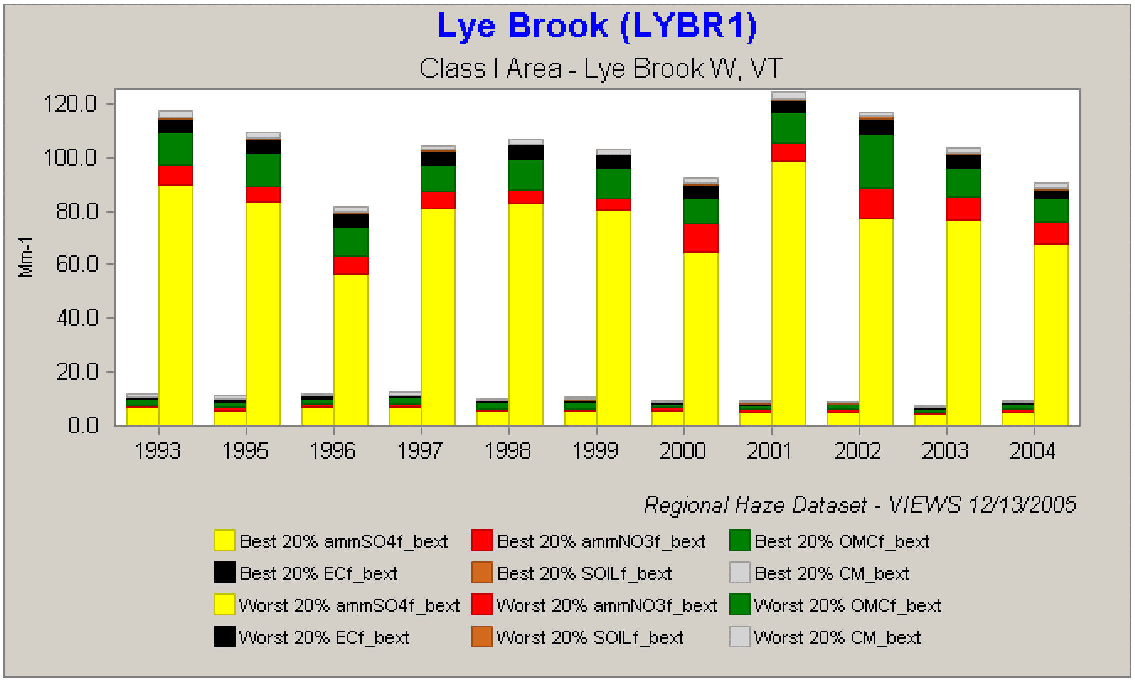


Almost all particle sulfate originates from sulfur dioxide (SO_2) oxidation and typically associates with ammonium (NH_4) in the form of ammonium sulfate ($(NH_4)_2SO_4$). Ninety-five percent of SO_2 emissions are from anthropogenic sources (primarily from fossil fuel combustion), while the majority of ammonium comes from agricultural activities and, to a lesser extent, from transportation sources in some areas (NARSTO, 2003).

Two major chemical pathways produce sulfate from SO_2 in the atmosphere. In the gas phase, production of sulfate involves the oxidation of SO_2 to sulfuric acid (H_2SO_4), ammonium bisulfate (NH_4HSO_4), or ammonium sulfate, depending on the availability of ammonia (NH_3). In the presence of small wet particles (typically much, much smaller than rain drops or even fog), a highly efficient aqueous phase process can oxidize SO_2 to sulfate extremely quickly (~10 percent per hour).

Not only is sulfate the dominant contributor to fine particle mass in the region, it accounts for anywhere from 60 percent to almost 80 percent of the *difference* between fine particle concentrations and extinction on the lowest and highest mass days at rural locations in the northeast and mid-Atlantic states (See Figure 2-2). Notably, at urban locations such as Washington DC, sulfate accounts for only about 40 percent of the difference in average fine particle concentrations for the 20 percent most versus least visibility impaired days (NESCAUM, 2001).

Figure 2-2. Comparison of species contributions on best and worst days at Lye Brook Wilderness Area.



2.2. Rural versus urban chemistry

Contributions to fine particle mass concentrations at rural locations include long-range pollutant transport as well as non-anthropogenic background contributions. Urban areas generally show mean $PM_{2.5}$ levels exceeding those at nearby rural sites. In the Northeast, this difference implies that local urban contributions are roughly 25 percent of the annual mean urban concentrations, with regional aerosol contributing the remaining, and larger, portion (NARSTO, 2003).

This rural versus urban difference in typical concentrations also emerges in a source apportionment analysis of fine particle pollution in Philadelphia (see Chapter 10 of NARSTO, 2003) using two different mathematical models, UNMIX and Positive Matrix Factorization (PMF). This analysis provides additional insight concerning sources of fine particle pollution in urban areas of the densely populated coastal corridor between Washington DC and New England. Specifically, this analysis found the following apportionment of $PM_{2.5}$ mass in the study area:

- Local SO_2 and sulfate: ~ 10 percent
- Regional sulfate: ~ 50 percent
- Residual oil: 4-8 percent
- Soil: 6-7 percent
- Motor vehicles: 25-30 percent

The analysis does not account for biogenic sources, which most likely are embedded in the motor vehicle fraction (NARSTO, 2003). The Philadelphia study suggests that both local pollution from nearby sources and transported "regional" pollution from distant sources contribute to the high sulfate concentrations observed in urban locations along the East Coast on an annual average basis. Summertime sulfate and organic carbon are strongly regional in eastern North America. Typically 75–95 percent of the urban sulfate concentrations and 60–75 percent of the urban OC concentrations arise from cumulative region-wide contributions (NARSTO, 2003). Urban air pollutants are essentially added on top of this regional background. Nitrate plays a noticeably more important role at urban sites compared to northeastern and mid-Atlantic rural monitoring sites, perhaps reflecting a greater contribution from vehicles and other urban pollution sources (NESCAUM, 2001).

It is difficult to discern any significant meaning about the cause of "excess" mass from a single pair of sites. There are many factors that influence the concentrations at a particular site and it is likely that for every pair of sites that shows an urban excess, one could find some pair of locations that might show something similar to an urban "deficit." While paired sites from an urban and a rural location will *typically* show greater concentrations in the urban location and lower levels of pollution in rural areas, great care must be exercised in the interpretation of any two-site analysis such as the comparisons of speciated components of $PM_{2.5}$ presented here. Nonetheless, such comparisons do provide a general feel for the typical chemical composition of $PM_{2.5}$ in the eastern U.S. and the relative differences in chemical composition between rural and more urban locations. More detailed, "network"-wide analyses (e.g., see NESCAUM 2004b; relevant sections are attached in Appendix C to this report) indicate that the results provided are not anomalous of typical urban environments in the MANE-VU region.

Figure 2-3 and Figure 2-4 compare two urban-rural pairs of speciation monitors: the New York nonattainment area (Elizabeth and Chester, New Jersey) and the Boston metropolitan area (Boston and Quabbin Reservoir, Massachusetts). The first three sites are Speciation Trends locations, while the Reservoir site is part of the IMPROVE protocol network.[k]

[k] To provide a more direct comparison of the differences between the urban and rural sites, only those days for which both monitors in a pair had data were used. Four seasonal averages were computed for 2002, with seasons defined as winter (January, February, December), spring (March, April, May), Summer (June, July, August) and Fall (September, October, November). July 7 was excluded from the analysis because the Quebec forest fires affecting the region on that day would have dominated the summertime averages. The major fine particle species categories considered included ammonium sulfate, ammonium nitrate, organic carbon, elemental carbon, and soil mass. The traditional assumptions about these constituents were made; all sulfate was fully neutralized and a multiplier of 1.4 was used to account for mass of organic carbon. An "other $PM_{2.5}$ mass" category was created to delineate the difference between gravimetric mass determined from the Teflon filter and the reconstructed mass sum of the individual mass constituents. Where no "other" mass is graphed, the sum of the species either equaled or exceeded the directly measured mass. No adjustments were made to account for the different operational definitions of carbon between the IMPROVE and STN networks. Average blank corrections were applied to all samples. In the case of New York City, both rural and urban monitors were STN. The Boston pair reflects not only inter-site differences, but also differences in definition of organic and elemental carbon. However, the general interpretation of the data differences remains consistent. Based on current understanding, the rural elemental carbon would be even lower than what is shown on the graph if it were made consistent with the STN definition of EC. Likewise, the organic carbon value would increase slightly for the rural value, as the

Figure 2-3. New York nonattainment area (Elizabeth, NJ) compared to an upwind background site (Chester, NJ)

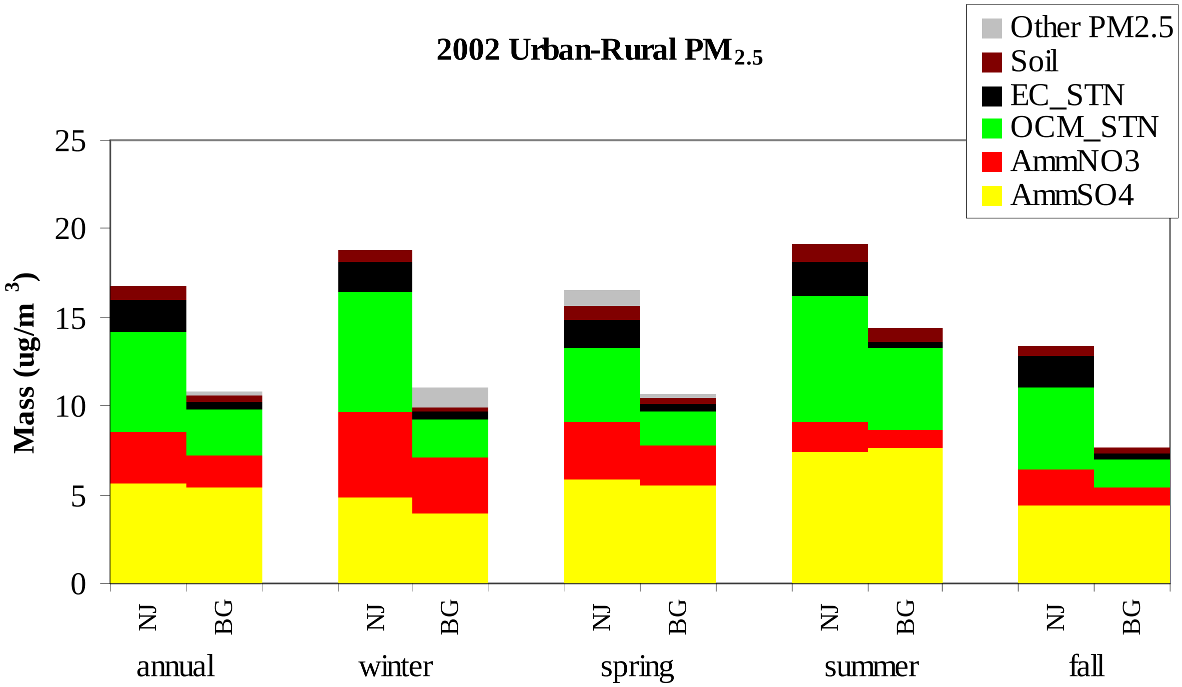
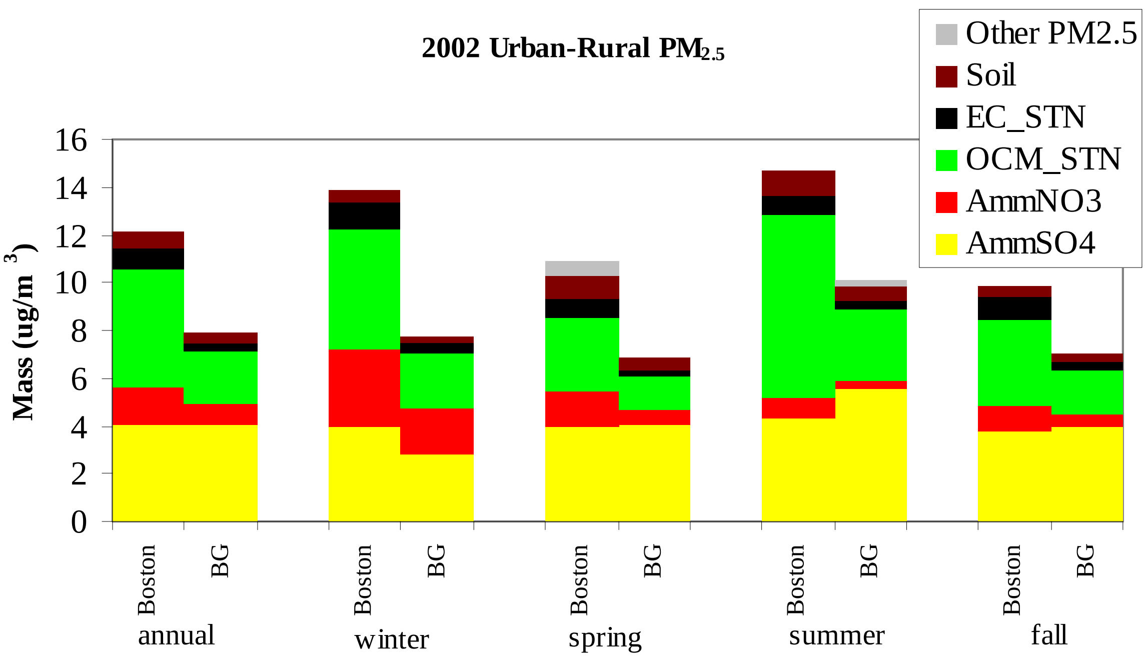


Figure 2-4. Boston urban area (Boston, MA) compared to an upwind background site (Quabbin Reservoir, MA)



EC would be allocated to OC. The urban OC levels are so much greater than those in the rural area that a

The urban-rural differences show consistency for both the New York City nonattainment area and Boston. On an annual scale, the sulfate levels are comparable, with increased mass loading at these urban sites driven primarily by differences in nitrates and carbon with smaller differences in "soil" levels. One interesting aspect of this comparison is the seasonal differences in the urban-rural sulfate split. On an annual basis, sulfate appears to be similar at urban and rural locations (based on these two pair of sites); however, during the colder months, the urban sulfate levels are elevated relative to the rural levels. This behavior is opposite during the summer. During the wintertime, the Northeast urban corridor itself is a substantial source of sulfur emissions. These local emissions can be trapped near the surface during the winter and have a corresponding higher impact on the urban area relative to the rural area.

For both urban and rural areas, the summertime OC levels are significantly greater than wintertime concentrations. Although the oxidation chemistry slows in winter, the cooler temperatures change the phase dynamics, driving more mass into the condensed over the gas phase. This along with more frequent temperature inversions (which limit atmospheric ventilation of the urban boundary layer) can lead to the observed increases in the relative influence of both organic and nitrate levels during winter months. EC, OC, and nitrate all are observed to have higher measured levels in the urban area (but still lower than the comparable summer values measured at the same sites), driven by local sources of these constituents.

2.3. Geographic considerations and attribution of $PM_{2.5}$/haze contributors

In the East, both annual average and maximum daily fine particle concentrations are highest near heavily industrialized areas and population centers. Not surprisingly, given the direct connection between fine particle pollution and haze, the same pattern emerges when one compares measures of light extinction on the most and least visibility impaired days at parks and wilderness areas subject to federal haze regulations in the MANE-VU region (NESCAUM, 2001). An accumulation of particle pollution often results in hazy conditions extending over thousands of square kilometers (km^2) (NARSTO, 2003). Substantial visibility impairment is a frequent occurrence in even the most remote and pristine areas of the MANE-VU region (NESCAUM, 2001).

$PM_{2.5}$ mass declines fairly steadily along a southwest to northeast transect of the MANE-VU region. This decline is consistent with the existence of large fine particle emissions sources (both primary and secondary) to the south and west of MANE-VU. This trend is driven, in large part, by the marked southwest-to-northeast gradient in ambient sulfate concentrations during three seasons of the year as illustrated in Figure 2-5. Wintertime concentrations, by contrast, are far more uniform across the entire region. Figure 2-6 shows that on an annual basis, both total $PM_{2.5}$ and sulfate mass are highest in the southwestern portions of the MANE-VU region (note the different scales for each pollutant). High concentrations of nitrate and organic particle constituents, which play a role in localized wintertime $PM_{2.5}$ episodes, tend to be clustered along the northeastern urban corridor and in other large urban centers.

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slight increase in rural OC makes little difference.

Figure 2-5. 2002 Seasonal average SO_4 based on IMPROVE and STN data

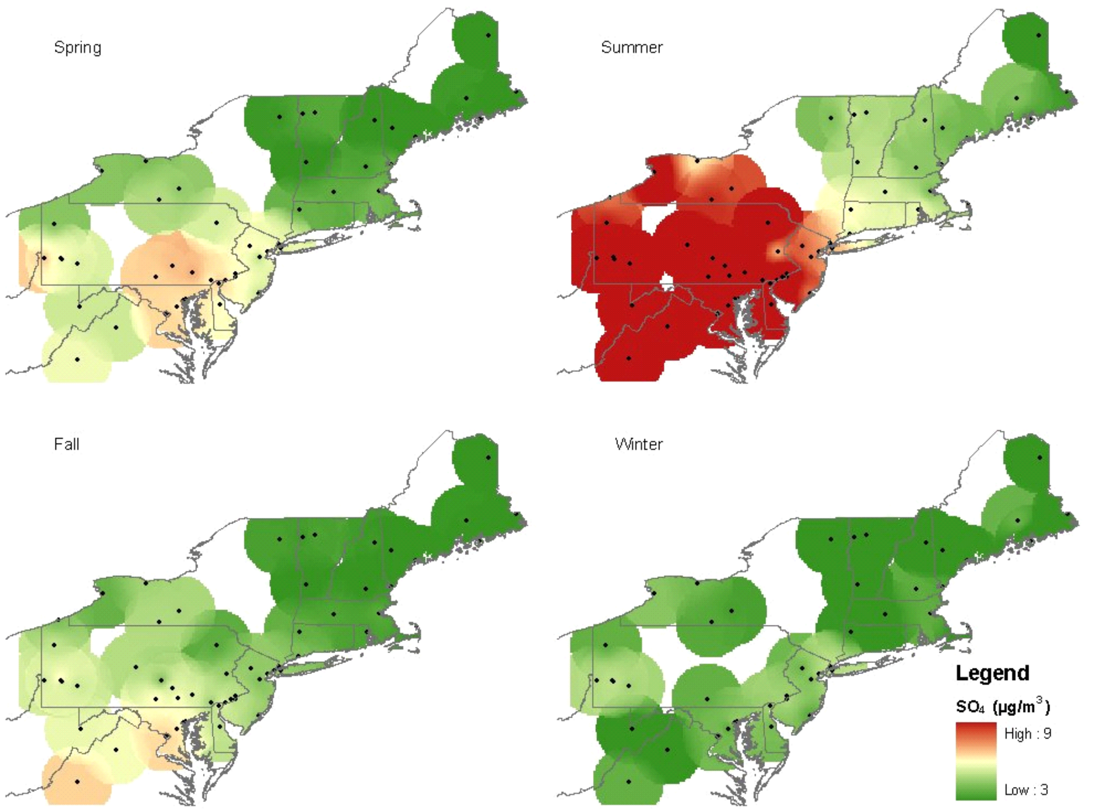
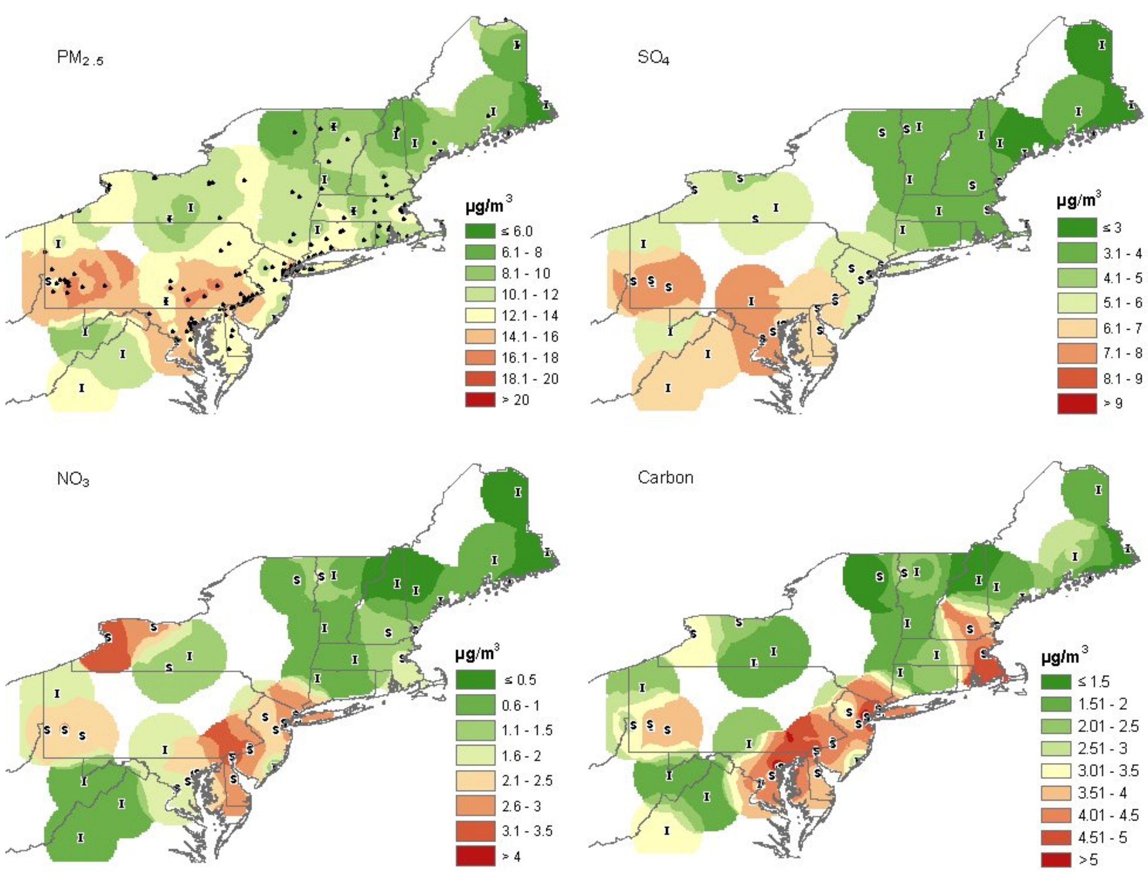


Figure 2-6. 2002 Annual average $PM_{2.5}$, sulfate, nitrate and total carbon for MANE-VU based on IMPROVE (I) and STN (S) data. $PM_{2.5}$ mass data are supplemented by measurements from the FRM network (•).



While these figures provide some preliminary context for identifying sources contributing to the region's particulate matter and visibility problems, they say nothing about the relative efficiency of a state's or region's emissions in contributing to the problem. It is clear that distance from the emissions source matters. Local, nearby sources are exceedingly important and sources within about 200 km are much more efficient (on a per ton emitted basis) at producing pollution impacts at eastern Class I sites such as Shenandoah National Park than emissions sources farther away (USNPS, 2003). In general, the "reach" of sulfate air pollution resulting from SO_2 emissions is longest (650–950 km). The reach of ammonia emissions or reduced nitrogen relative to nutrient deposition is the shortest (around 400 km), while oxides of nitrogen and sulfur — in terms of their impacts with respect to acidic deposition — have a reach between 550–650 km and 600–700 km, respectively (USNPS, 2003).

Monitoring evidence indicates that non-urban visibility impairment in eastern North America is predominantly due to sulfate particles, with organic particles generally second in importance (NARSTO, 2003). This makes sense, given the "long reach" of SO_2 emissions once they are chemically transformed into sulfate and given the ubiquitous nature of OC sources in the East. The poorest visibility conditions occur in highly industrialized areas encompassing and adjacent to the Ohio River and Tennessee Valleys. These areas feature large coal-burning power stations, steel mills, and other large emissions sources. Average fine particle concentrations and visibility conditions are also poor in the highly populated and industrialized mid-Atlantic seaboard but improve gradually northeast of New York City (Watson, 2002).

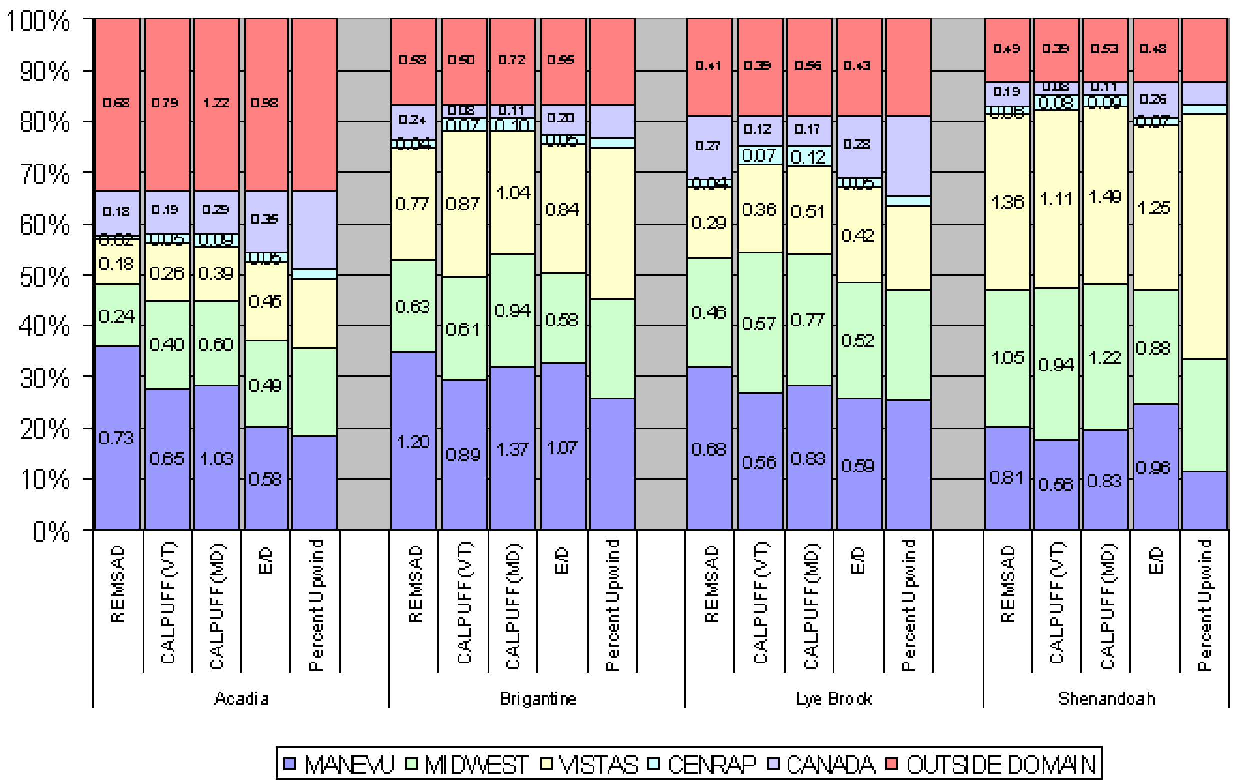
A review of source apportionment and ensemble trajectory analyses conducted by USEPA (2003) found that all back trajectory analyses for eastern sites associated sulfate with the Ohio River Valley area. These studies also are frequently able to associate other types of industrial pollutants (e.g., copper or zinc smelting, steel production, etc.) with known source areas, lending credibility to their performance. Several studies in the USEPA review noted transport across the Canadian border, specifically sulfates from the midwestern United States into Canada, and smelter emissions from Canada into the northeastern United States.

A recent, comprehensive analysis of air quality problems at Shenandoah National Park conducted by the U.S. National Park Service (USNPS, 2003) focused on contributions to particulate pollution and visibility impairment south of the MANE-VU region. In descending order of importance, the Park Service analysis determined that Ohio, Virginia, West Virginia, Pennsylvania, and Kentucky comprise the top five of 13 key states contributing to ambient sulfate concentrations and haze impacts at the park. West Virginia, Ohio, Virginia, Pennsylvania, and Kentucky comprise the top five contributing states with respect to sulfur deposition impacts at the park. Finally, Virginia, West Virginia, Ohio, Pennsylvania, and North Carolina were found to be the top five states contributing to deposition impacts from oxidized nitrogen at the park (USNPS, 2003).

In sum, the Park Service found that emission sources located within a 200 km (125 mile) radius of Shenandoah cause greater visibility and acidic deposition impacts at the park, on a per ton basis, than do more distant emissions sources (USNPS, 2003). When mapping deposition and concentration patterns for all three pollutants using contour lines, the resulting geographic pattern shows a definite eastward tilt in the area of highest impact. This is the result of prevailing wind patterns, which tend to transport most airborne pollutants in an arc[1] from the north-northeast to the east. The Park Service found, for example, that emissions originating in the Ohio River Valley end up three times farther to the east than to the west (USNPS, 2003).

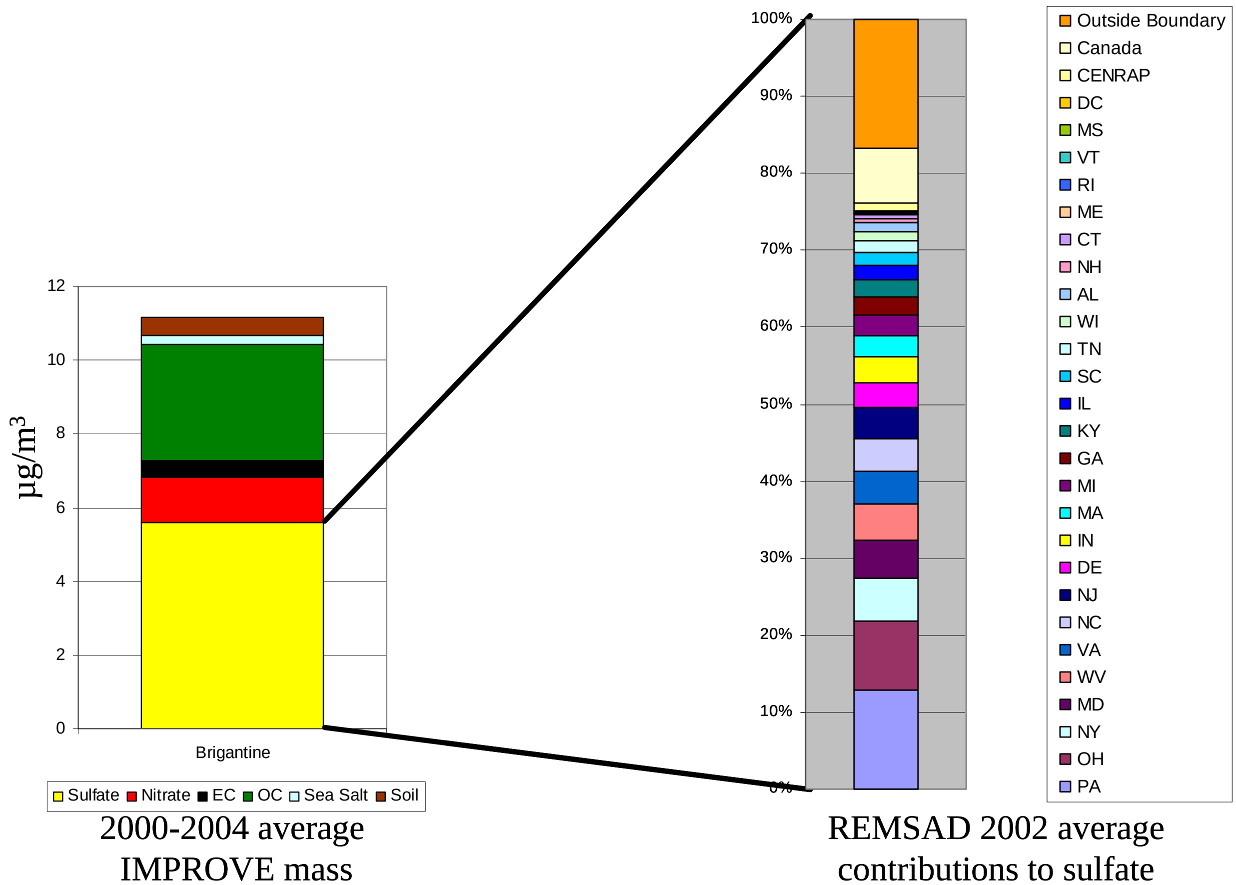
The recent sulfate attribution work completed by MANE-VU (NESCAUM, 2006) finds that a variety of different states contribute to observed sulfate in rural locations across the MANE-VU region, but that in the southwest portions of the region, neighboring RPOs contribute to a more significant degree relative to rural areas in the Northeast. Figure 2-7 shows relative contributions of RPOs to sulfate at three MANE-VU Class I areas and one VISTAS Class I area based on a variety of analysis methods. Figure 2-8 shows the individual state contributions to sulfate at Brigantine Wilderness Area on the New Jersey coast according to tagged REMSAD modeling.

Figure 2-7. 2002 Annual average contribution to $PM_{2.5}$ sulfate as determined by multiple analysis methods for four Class I areas spanning MANE-VU and Virginia



[1] The prevailing winds are eastward to northeast. This leads to greater pollution transport to the east-northeast relative to other directions.

Figure 2-8. 2002 Annual average mass contribution to $PM_{2.5}$ at Brigantine Wilderness in New Jersey (IMPROVE) and sulfate contributions as determined by tagged REMSAD model simulations (NESCAUM, 2006)



2.4. CAIR Modeling

The CAIR modeling by the USEPA provides information on the upwind areas (by state) contributing to downwind nonattainment for $PM_{2.5}$ in MANE-VU counties. Table 2-1 presents the upwind states significantly contributing to $PM_{2.5}$ nonattainment in counties within MANE-VU during 2001, according to significance criteria used by the USEPA (USEPA, 2005, from Table VII-3). The states listed in the table as significantly contributing to downwind nonattainment in MANE-VU counties include states outside of MANE-VU, indicating the broad regional scale of the $PM_{2.5}$ transport problem.

Table 2-2 provides the maximum contribution from each state to annual average $PM_{2.5}$ nonattainment in a downwind state (not necessarily restricted to MANE-VU nonattainment counties) based on CAIR modeling.

Table 2-1. Upwind states that make a significant contribution to $PM_{2.5}$ in each downwind nonattainment county (2001 modeling).

Downwind State/County		Upwind States									
DE	New Castle	MD/DC	MI	NY	OH	PA	VA	WV			
DC	District of Columbia	NC	OH	PA	VA	WV					
MD	Anne Arundel	NC	OH	PA	VA	WV					
MD	Baltimore City	NC	OH	PA	VA	WV					
NJ	Union	MD/DC	MI	NY	OH	PA	WV				
NY	New York	MD/DC	OH	PA	WV						
PA	Allegheny	IL	IN	KY	MI	OH	WV				
PA	Beaver	IN	MI	OH	WV						
PA	Berks	MD/DC	MI	NY	OH	VA	WV				
PA	Cambria	IN	MD/DC	MI	OH	WV					
PA	Dauphin	MD/DC	MI	OH	VA	WV					
PA	Delaware	MD/DC	MI	OH	VA	WV					
PA	Lancaster	IN	MD/DC	MI	NY	OH	VA	WV			
PA	Philadelphia	MD/DC	MI	OH	VA	WV					
PA	Washington	IN	KY	MI	OH	WV					
PA	Westmoreland	IN	KY	MD/DC	MI	OH	WV				
PA	York	MD/DC	MI	OH	VA	WV					

Table 2-2. Maximum downwind $PM_{2.5}$ contribution ($\mu g/m^3$) for each of the 37 upwind states (2001 data).

Upwind State	Maximum Downwind Contribution	Upwind State	Maximum Downwind Contribution
Alabama	0.98	Nebraska	0.07
Arkansas	0.19	New Hampshire	<0.05
Connecticut	<0.05	New Jersey	0.13
Delaware	0.14	New York	0.34
Florida	0.45	North Carolina	0.31
Georgia	1.27	North Dakota	0.11
Illinois	1.02	Ohio	1.67
Indiana	0.91	Oklahoma	0.12
Iowa	0.28	Pennsylvania	0.89
Kansas	0.11	Rhode Island	<0.05
Kentucky	0.9	South Carolina	0.4
Louisiana	0.25	South Dakota	<0.05
Maine	<0.05	Tennessee	0.65
Maryland/DC	0.69	Texas	0.29
Massachusetts	0.07	Vermont	<0.05
Michigan	0.62	Virginia	0.44
Minnesota	0.21	West Virginia	0.84
Mississippi	0.23	Wisconsin	0.56
Missouri	1.07		

2.5. Seasonal differences

Eastern and western coastal regions of the United States and Canada show marked seasonality in the concentration and composition of fine particle pollution, while central interior regions do not (NARSTO, 2003). While MANE-VU extends inland as far as the Pennsylvania and Ohio border, the majority of $PM_{2.5}$ NAAQS nonattainment areas and Class I areas affected by the Regional Haze Rule cluster along the East Coast and thus typically show strong seasonal influences. Maximum $PM_{2.5}$ concentrations typically occur during the summer over most of the rural Northeast, with observed summer values for rural areas in the region, on average, twice those of winter. In urban locations, summertime and wintertime $PM_{2.5}$ levels are more comparable and whether one season dominates over the other is more of a function of inter-annual variability of meteorology and fire activity (i.e., summertime fire activity can push average $PM_{2.5}$ values higher in some years). As described below, the reason for the wintertime strength of $PM_{2.5}$ levels in urban areas is related to the greater concentration of local pollution that accumulates when temperature inversions are present, significantly boosting the wintertime $PM_{2.5}$ levels. Winter nitrate concentrations are generally higher than those observed in summer and, as mentioned above, urban concentrations typically exceed rural concentrations year-round. In addition, local mobile source carbon grows in importance during wintertime. Hence, in some large urban areas such as Philadelphia and New York City, peak concentrations of $PM_{2.5}$ can occur in winter.

The conceptual descriptions that explain elevated regional $PM_{2.5}$ peak concentrations in the summer differs significantly from those that explain the largely urban peaks observed during winter. On average, summertime concentrations of sulfate in the northeastern United States are more than twice that of the next most important fine particle constituent, OC, and more than four times the combined concentration of nitrate and black carbon (BC) constituents (NARSTO, 2003). Episodes of high summertime sulfate concentrations are consistent with stagnant meteorological flow conditions upwind of MANE-VU and the accumulation of airborne sulfate (via atmospheric oxidation of SO_2) followed by long-range transport of sulfur emissions from industrialized areas within and outside the region.

National assessments (NARSTO, 2003) have indicated that in the winter, sulfate levels in urban areas are almost twice as high as background sulfate levels across the eastern U.S., indicating that the local urban contribution to wintertime sulfate levels is comparable in magnitude to the regional sulfate contribution from long-range transport. MANE-VU's network analysis for the winter of 2002 suggests that the local enhancement of sulfate in urban areas of MANE-VU is somewhat less with ranges from 25 to 40% and that the long-range transport component of $PM_{2.5}$ sulfate is still the dominant contributor in most eastern cities.

In the winter, urban OC and sulfate each account for about a third of the overall $PM_{2.5}$ mass concentration observed in Philadelphia and New York City. Nitrate also makes a significant contribution to urban $PM_{2.5}$ levels observed in the northeastern United States during the winter months. Wintertime concentrations of OC and NO_3 in urban areas can be twice the average regional concentrations of these pollutants, indicating the importance of local source contributions (NARSTO, 2003). This is likely because winter conditions are more conducive to the formation of local inversion layers that prevent vertical mixing. Under these conditions, emissions from tailpipe, industrial, and other local sources become concentrated near the Earth's surface, adding to background pollution levels associated with regionally transported emissions.

It is worth noting that while sulfate plays a significant role in episodes of elevated particle pollution during summer and winter months, the processes by which sulfate forms may vary seasonally. Nearly every source apportionment study reviewed by USEPA (2003) identified secondary sulfate originating from coal combustion sources as the largest or one of the largest contributors to overall fine particle mass in the region. It often accounted for more than 50 percent of $PM_{2.5}$ mass at some locations during some seasons. In a few cases, source apportionment studies identified a known local source of sulfate, but most assessments (in conjunction with back trajectory analysis) have pointed to coal-fired power plants in the Midwest as an important source for regional sulfate. Studies with multiple years of data have also tended to identify a distinguishable chemical "signature" for winter versus summer sources of sulfate, with the summer version typically accounting for a greater share of overall fine particle mass. Researchers have speculated that the two profiles represent two extremes in the chemical transformation processes that occur in the atmosphere between the source regions where emissions are released and downwind receptor sites. We note that while coal combustion is often referred to as the "sulfate source" because of the dominance of its sulfate contribution, coal combustion is often a source of significant amounts of organic carbon and is usually the single largest source of selenium (Se) and other heavy metal trace elements (USEPA, 2003).

Figure 2-9. Moving 60-day average of fine aerosol mass concentrations based on long-term data from two northeastern cities

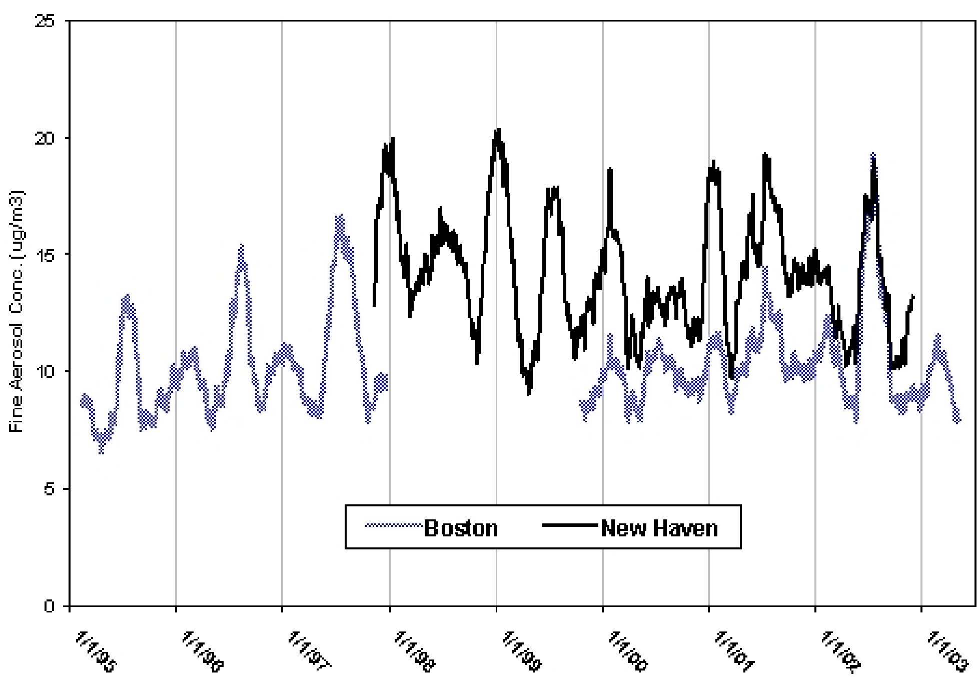
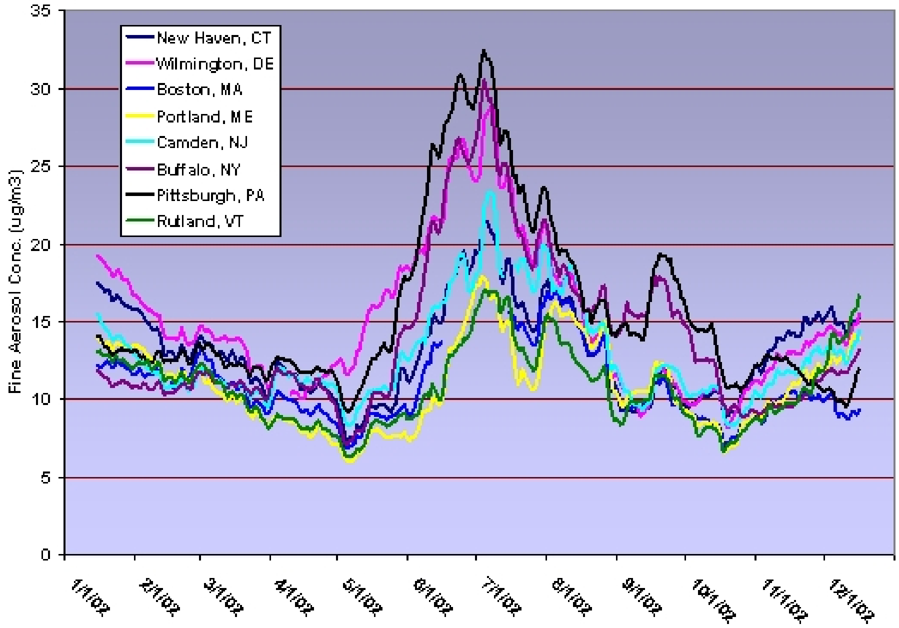


Figure 2-10. The 30-day average $PM_{2.5}$ concentrations from 8 northeastern cities during 2002



In general, fine particle concentrations in MANE-VU are highest during the warmest (summer) months but also exhibit a secondary peak during the coldest (winter) months that can dominate during some years, particularly in urban locations. This bimodal seasonal distribution of peak values is readily apparent in Figure 2-9. The figure shows the smoothed 60-day running average of fine particle mass concentrations using continuous monitoring data from two northeastern cities over a period of several years.

Figure 2-10 also demonstrates this bimodal pattern. Though slightly more difficult to discern in just a single year's worth of data, a "W" pattern does emerge at almost all sites across the region during 2002 with the winter peak somewhat lower than the summer peak at most sites. Urban monitors in Wilmington, Delaware and New Haven, Connecticut have wintertime peak values approaching those of summer.

In the summertime, MANE-VU sites repeatedly experience sulfate events due to transport from regions to the south and west. During such events, both rural and urban sites throughout MANE-VU record high (i.e., >15 $\mu g/m^3$) daily average $PM_{2.5}$ concentrations. Meteorological conditions during the summer frequently allow for summer "stagnation" events when very low wind speeds and warm temperatures (upwind and over MANE-VU) allow pollution levels to build in an air mass as it slowly moves across the continent. During these events, atmospheric ventilation is poor and local emission sources add to the burden of transported pollution with the result that concentrations throughout the region (both rural and urban) are relatively uniform. Generally, there are enough of these events to drive the difference between urban and rural sites down to less than 1 $\mu g/m^3$ during the warm or hot months of the year. As a result, concentrations of fine particles aloft will often be higher than at ground-level during the summertime, especially at rural monitoring sites. Thus, when atmospheric "mixing" occurs during summer[m] mornings (primarily 7 to 11 a.m.), fine particle concentrations at ground-level can actually increase (see Hartford, CT or Camden, NJ in Figure 2-11).

[m] Here we define summer as May, June, July and August.

Figure 2-11. Mean hourly fine aerosol concentrations during 2002 summer months

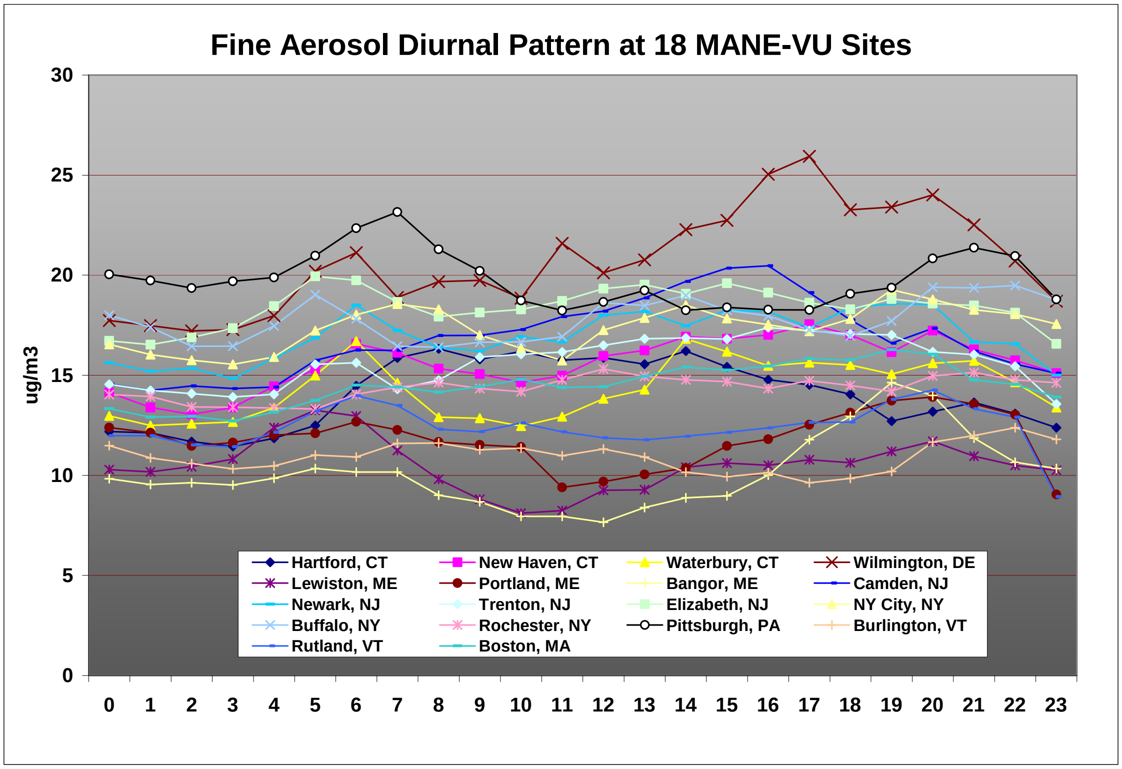
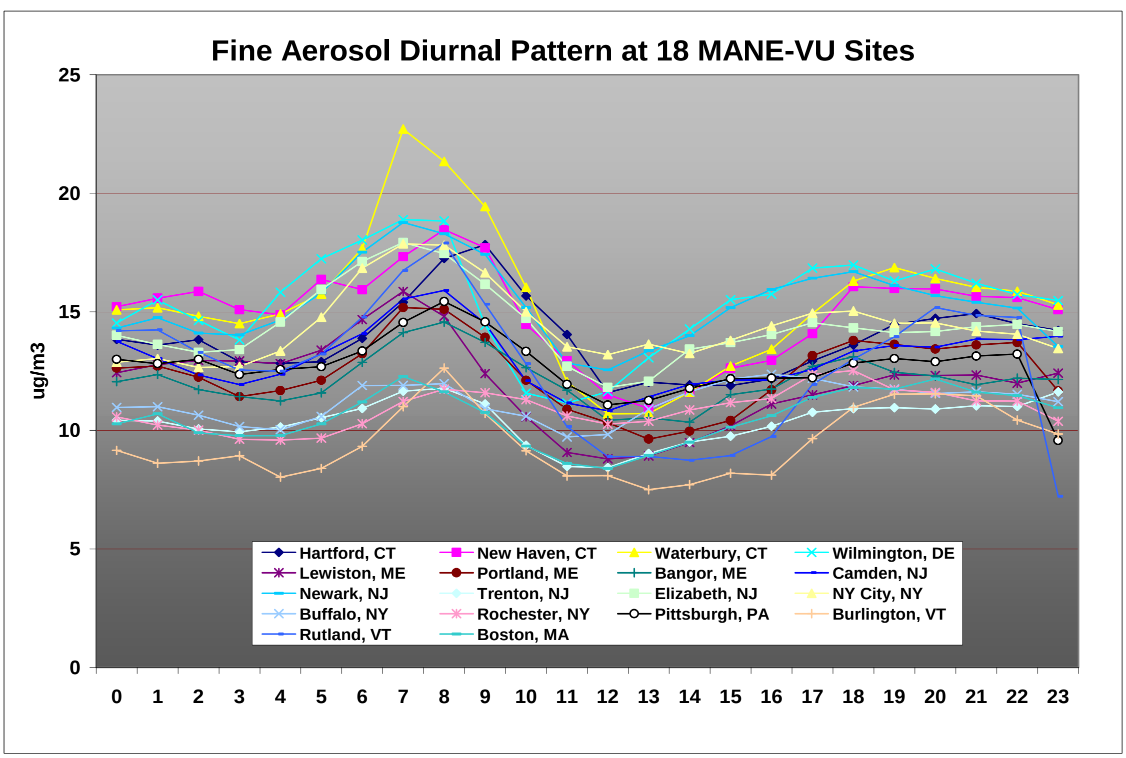


Figure 2-12. Mean hourly fine aerosol concentrations during 2002 winter months



During the wintertime, strong inversions frequently trap local emissions overnight and during the early morning, resulting in elevated urban concentrations. These inversions occur when the Earth's surface loses thermal energy by radiating it into the atmosphere (especially on clear nights). The result is a cold, stable layer of air near the ground. At sunrise, local emissions (both mobile and stationary) begin increasing in strength and build-up in the stable ground layer (which may extend only 100 meters or less above the ground). Increasing solar radiation during the period between 10 a.m. and noon typically breaks this cycle by warming the ground layer so that it can rise and mix with air aloft. Because the air aloft during wintertime is typically less polluted than the surface layer, this mixing tends to reduce ground-level particle concentrations (see Figure 2-12). This diurnal cycle generally drives wintertime particle concentrations, although the occasional persistent temperature inversion can have the effect of trapping and concentrating local emissions over a period of several days, thereby producing a significant wintertime pollution episode.

Rural areas experience the same temperature inversions but have relatively fewer local emissions sources so that wintertime concentrations in rural locations tend to be lower than those in nearby urban areas. Medium and long-range fine particle transport events do occur during the winter but to a far lesser extent than in the summertime. In sum, it is the interplay between local and distant sources together with seasonal meteorological conditions that drives the observed 3–4 $\mu g/m^3$ wintertime urban-rural difference in $PM_{2.5}$ concentrations.

Visually hazy summer days in the Northeast can appear quite different from hazy winter days. The milky, uniform visibility impairment shown in Figure 2-13 is typical of summertime regional haze events in the Northeast. During the winter, by comparison, reduced convection and the frequent occurrence of shallow inversion layers often creates a layered haze with a brownish tinge, as shown in Figure 2-14. This visual difference suggests seasonal variation in the relative contribution of different gaseous and particle constituents during the summer versus winter months (NESCAUM, 2001). Rural and inland areas tend not to experience these layered haze episodes as frequently due to the lack of local emission sources in most rural areas (valleys with high wood smoke contributions are an exception).

Overall (regional) differences in summer versus winter particle mass concentrations and corresponding visibility impairment (as measured by light extinction) are largely driven by seasonal variation in sulfate mass concentrations. This is because winter meteorological conditions are less conducive to the oxidation of sulfate from SO_2 (as borne out by the previously cited source apportionment studies). In addition, seasonal differences in long-range transport patterns from upwind SO_2 source regions may be a factor.

The greater presence of nitrate during the cold season is a consequence of the chemical properties of ammonium nitrate. Ammonia bonds more weakly to nitrate than it does to sulfate, and ammonium nitrate tends to dissociate at higher temperatures. Consequently, ammonium nitrate becomes more stable at lower temperatures and hence contributes more to $PM_{2.5}$ mass and light extinction during the winter months relative to the summer (NESCAUM, 2001).

Figure 2-13. Summertime at Mt. Washington

Clean Day **Typical Haze Event**

Figure 2-14. Wintertime in Boston

Clean Day **Typical Haze Event**

2.6. Summary

The presence of fine particulate matter in ambient air significantly degrades public health and obscures visibility during most parts of the year at sites across the MANE-VU region. Particle pollution generally, and its sulfate component specifically, constitute the principle driver for regional visibility impacts. While the broad region experiences visibility impairment, it is most severe in the southern and western portions of MANE-VU that are closest to large power plant SO_2 sources in the Ohio River and Tennessee Valleys.

Summer visibility impairment is driven by the presence of regional sulfate, whereas winter visibility depends on a combination of regional and local influences coupled with local meteorological conditions (inversions) that lead to the concentrated build-up of pollution.

Sulfate is the key particle constituent from the standpoint of designing control strategies to improve visibility conditions in the northeastern United States. Significant further reductions in ambient sulfate levels are achievable, though they will require more than proportional reductions in SO_2 emissions.

Long-range pollutant transport and local pollutant emissions are important, especially along the eastern seaboard, so one must also look beyond the achievement of further sulfate reductions. During the winter months, in particular, consideration also needs to be given to reducing urban sources of SO_2, NO_X and OC (NARSTO, 2003) .

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3. MANE-VU EMISSION INVENTORY CHARACTERISTICS FOR FINE PARTICLES

The pollutants that affect fine particle formation and visibility are sulfur oxides (SO_X), NO_X, VOCs, ammonia (NH_3), and particles with an aerodynamic diameter less than or equal to 10 and 2.5 µm (i.e., primary PM_{10} and $PM_{2.5}$). The emissions dataset illustrated in this section is the 2002 MANE-VU Version 2 regional haze emissions inventory. The MANE-VU regional haze emissions inventory version 3.0, released in April 2006, has superseded version 2 for modeling purposes.

3.1. Emissions inventory characteristics

3.1.1. Sulfur dioxide (SO_2)

SO_2 is the primary precursor pollutant for sulfate particles. Ammonium sulfate particles are the largest contributor to $PM_{2.5}$ mass on an annual average basis at MANE-VU nonattainment sites. It also accounts for more than 50 percent of particle-related light extinction at northeastern Class I areas on the clearest days and for as much as or more than 80 percent on the haziest days. Hence, SO_2 emissions are an obvious target of opportunity for both addressing $PM_{2.5}$ nonattainment and for reducing regional haze in the eastern United States. Combustion of coal and, to a substantially lesser extent, of certain petroleum products accounts for most anthropogenic SO_2 emissions. In fact, in 1998 a single source category — coal-burning power plants — was responsible for two-thirds of total SO_2 emissions nationwide (NESCAUM, 2001).

Figure 3-1 shows SO_2 emissions trends in MANE-VU states[n] extracted from the National Emissions Inventories (NEI) for the years 1996, 1999 (MARAMA, 2004), and the 2002 MANE-VU inventory. Most of the states (with the exception of Maryland) show declines in year 2002 annual SO_2 emissions as compared to 1996 emissions. Some of the states show an increase in 1999 followed by a decline in 2002 and others show consistent declines throughout the entire period. The upward trend in emissions after 1996 probably reflects electricity demand growth during the late 1990s combined with the availability of banked SO_2 emissions allowances from initial over-compliance with control requirements in Phase 1 of the USEPA Acid Rain Program. This led to relatively low market prices for allowances later in the decade, which encouraged utilities to purchase allowances rather than implement new controls as electricity output expanded. The observed decline in the 2002 SO_2 emissions inventory reflects implementation of the second phase of the USEPA Acid Rain Program, which in 2000 further reduced allowable emissions and extended emissions limits to more power plants.

Figure 3-2 shows the percent contribution from different source categories to overall annual 2002 SO_2 emissions in MANE-VU states. The chart shows that point sources dominate SO_2 emissions, which primarily consist of stationary combustion sources for generating electricity, industrial energy, and heat. Smaller stationary combustion sources called "area sources" (primarily commercial and residential heating)

[n] The description of MANE-VU state inventories discussed throughout this section does not include the portion of Virginia in the Washington, DC metropolitan area.

are another important source category in MANE-VU states. By contrast, on-road and non-road mobile sources make only a relatively small contribution to overall SO_2 emissions in the region (NESCAUM, 2001).

Figure 3-1. State level sulfur dioxide emissions

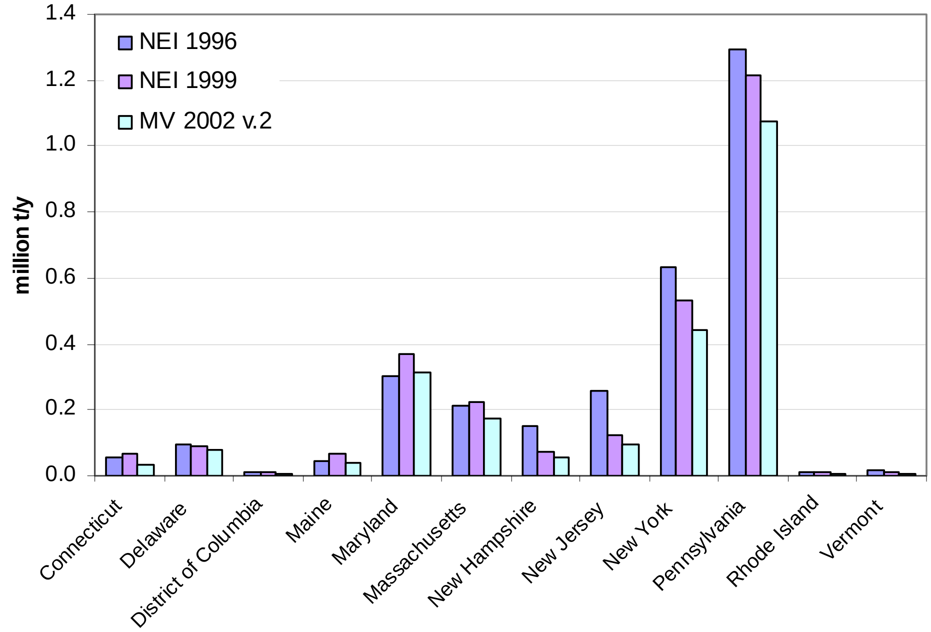


Figure 3-2. 2002 MANE-VU state SO_2 inventories

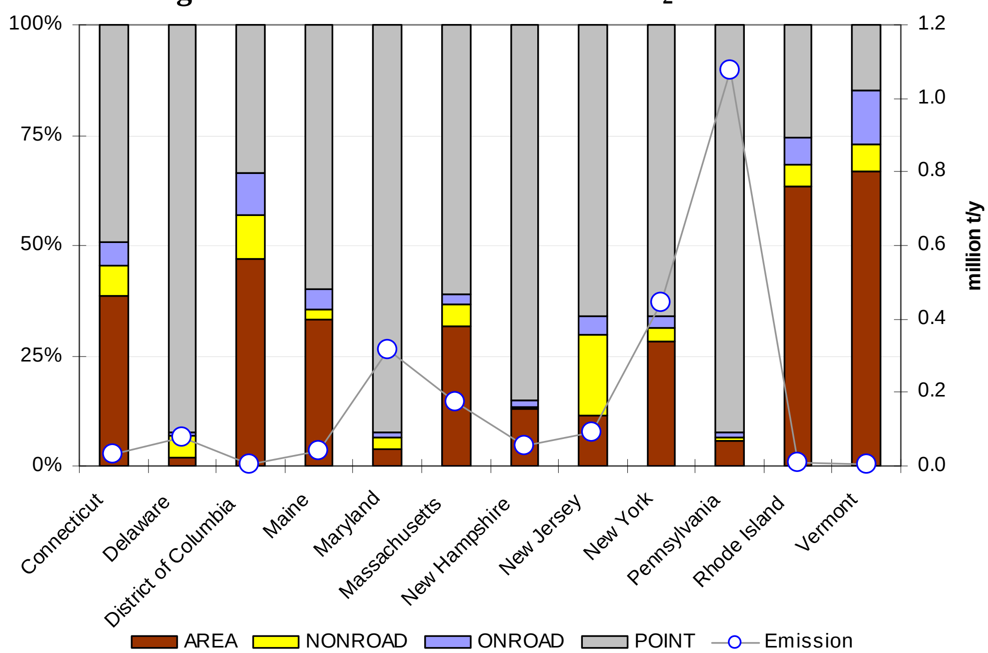


Figure Key: Bars = Percentage fractions of four source categories; Circles = Annual emissions amount in 10^6 tons per year. Note that Version 2 of the MANE-VU inventory was used and the Virginia portion of the Washington, DC metropolitan area is not shown in the figure.

3.1.2. Volatile organic compounds (VOCs)

Existing emission inventories generally refer to VOCs based on their historical contribution to ozone formation. From a fine particle perspective, VOCs (also referred to as hydrocarbons) are of concern because they can react in the atmosphere to form secondary organic aerosol (SOA) as a result of condensation and oxidation processes. The SOA component of fine particles also obscures visibility, but this component has a smaller impact on visibility (on a per unit mass basis) relative to sulfate or nitrate, which have an affinity for water that allows them to significantly “grow” as particles under humid conditions. Nonetheless, organic carbon typically has the second largest visibility impact at most Class I sites next to sulfate, given its large mass contribution.

As shown in Figure 3-3, the VOC inventory is dominated by mobile and area sources. Most VOC emissions in MANE-VU, however, come from natural sources, which are not shown in the figure. Among the human-caused VOC emissions, on-road mobile sources of VOCs include exhaust emissions from gasoline passenger vehicles and diesel-powered heavy-duty vehicles as well as evaporative emissions from transportation fuels. VOC emissions may also originate from a variety of area sources (including solvents, architectural coatings, and dry cleaners) as well as from some point sources (e.g., industrial facilities and petroleum refineries).

Naturally occurring (biogenic) VOC emissions are caused by the release of natural organic compounds from plants in warm weather. Natural, or biogenic, VOCs contribute significantly to fine particle formation. Biogenic VOCs are not included in Figure 3-3, but nationally, they represent roughly two-thirds of all annual VOC emissions (USEPA, 2006). Biogenic emissions are extremely difficult to estimate, as it requires modeling the behavior of many plants as well as their responses to the environment.

With regard to fine particle formation, understanding the transport dynamics and source regions for organic carbon is likely to be more complex than for sulfate. This is partly because of the large number and variety of VOC species, the fact that their transport characteristics vary widely, and the fact that a given species may undergo numerous complex chemical reactions in the atmosphere. Thus, the organic carbon contribution to fine particles in the East is likely to include manmade pollution transported from a distance, manmade pollution from nearby sources, and biogenic emissions, especially terpenes from coniferous forests.

For fine particles derived from organic carbon, the oxidation of hydrocarbon molecules containing seven or more carbon atoms is generally the most significant pathway for their formation (Odum *et al.*, 1997). Recent research, however, suggests that smaller reactive hydrocarbons like isoprene not only contribute significantly to ground-level ozone, which may indirectly impact organic aerosol formation, but also contribute directly to ambient organic aerosol through heterogeneous processes (Claeys et al., 2004; Kroll et al., 2005).

Figure 3-3. 2002 MANE-VU state VOC inventories

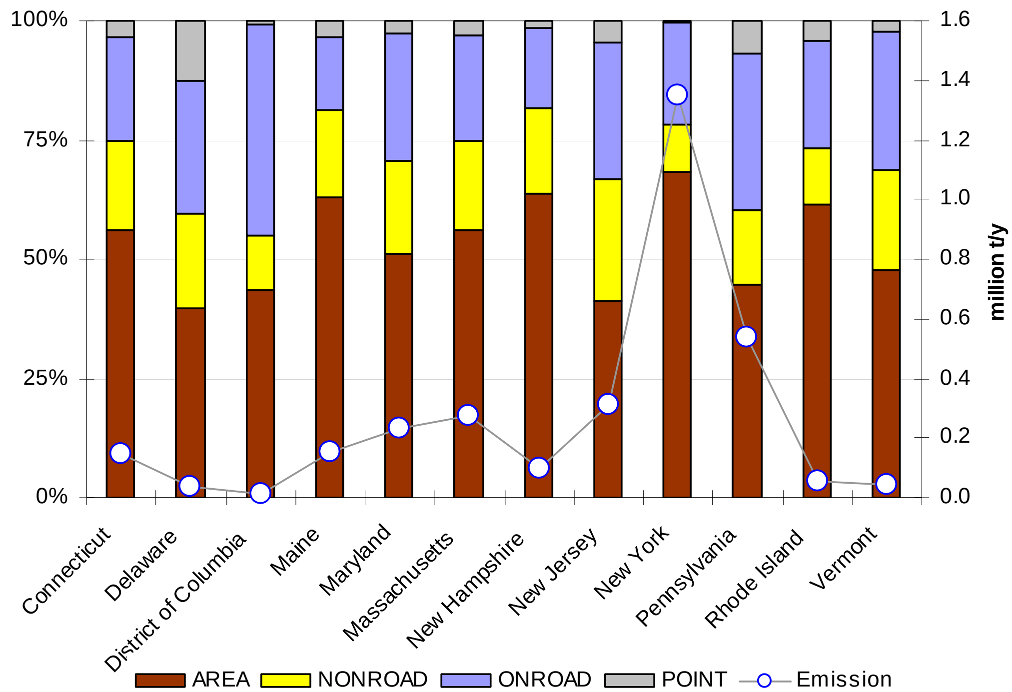


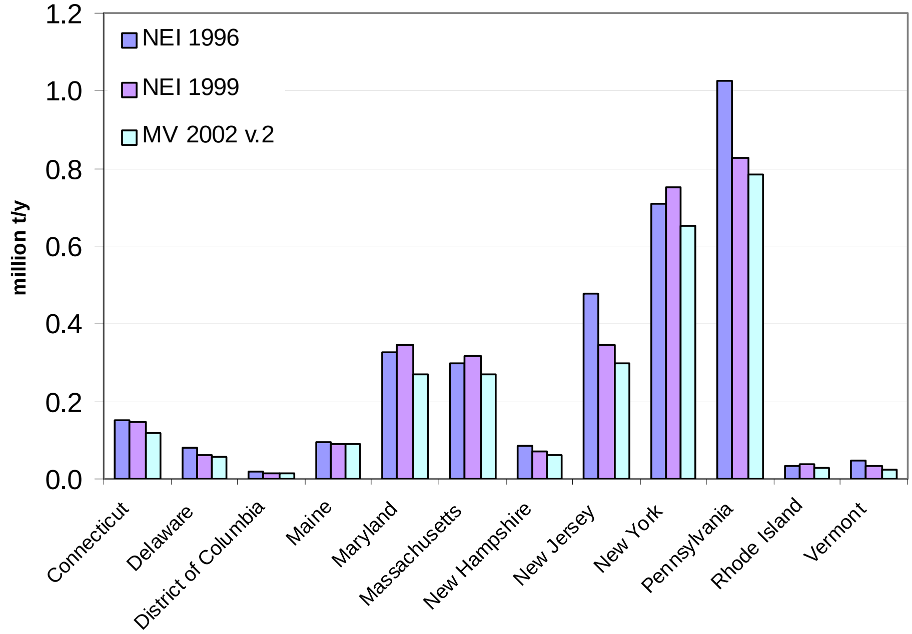
Figure key: Bars = Percentage fractions of four source categories; Circles = Annual emissions amount in 10^6 tons per year. Note that Version 2 of the MANE-VU inventory was used and the Virginia portion of the Washington, DC metropolitan area is not shown in the figure. Biogenic VOCs are not included in this figure.

3.1.3. Oxides of nitrogen (NO_X)

NO_X emissions contribute directly to $PM_{2.5}$ nonattainment and visibility impairment in the eastern U.S. by forming nitrate particles. Nitrate generally accounts for a substantially smaller fraction of fine particle mass and related light extinction than sulfate and organic carbon regionally in MANE-VU. Notably, nitrate may play a more important role at urban sites and in the wintertime. In addition, NO_X may have an indirect effect on summertime visibility by virtue of its role in the formation of ozone, which in turn promotes the formation of secondary organic aerosols (NESCAUM, 2001).

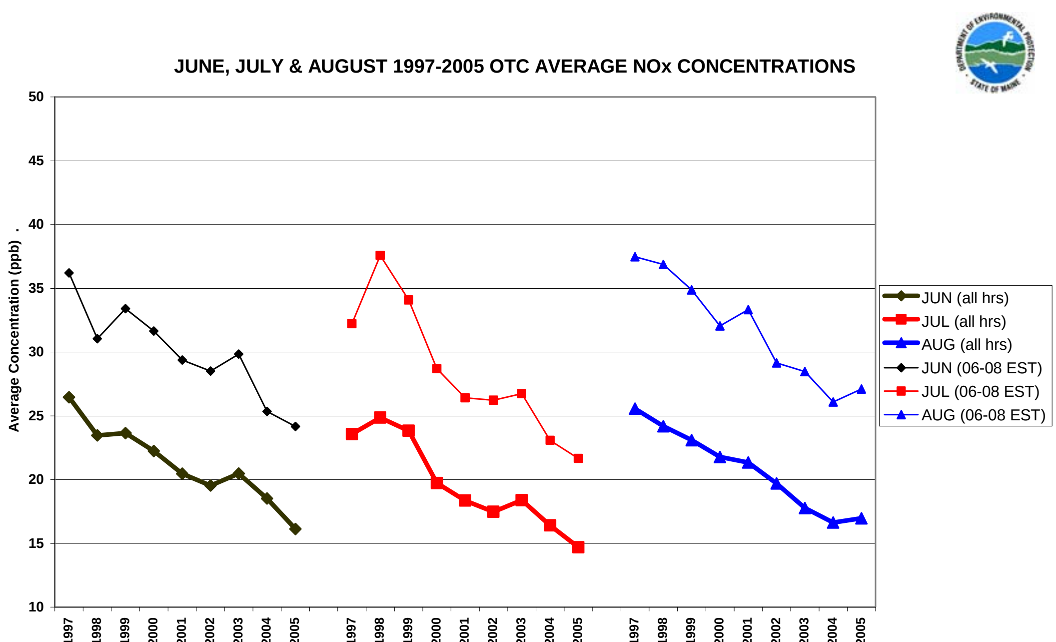
Figure 3-4 shows NO_X emissions in MANE-VU at the state level. Since 1980, nationwide emissions of NO_X from all sources have shown little change. In fact, emissions increased by 2 percent between 1989 and 1998 (USEPA, 2000a). This increase is most likely due to industrial sources and the transportation sector, as power plant combustion sources have implemented modest emissions reductions during the same time period. Most states in MANE-VU experienced declining NO_X emissions from 1996 through 2002, except Massachusetts, Maryland, New York, and Rhode Island, which show an increase in NO_X emissions in 1999 before declining to levels below 1996 emissions in 2002.

Figure 3-4. State level nitrogen oxides emissions



Monitored ambient NO_X trends during the summer from 1997 to 2005 corroborate the downward trend in NO_X emissions seen in the emissions inventories for MANE-VU. As seen in Figure 3-5, the 24-hour (lower trend lines) and 6 a.m.-8 a.m. (upper trend lines) NO_X concentrations indicate decreases in NO_X over this time period in MANE-VU. The NO_X reductions likely come from decreasing vehicle NO_X emissions due to more stringent motor vehicle standards as well as NO_X reductions from MANE-VU NO_X Budget Program and the NO_X SIP Call (mainly power plants).

Figure 3-5. Plot of monitored NO_X trends in MANE-VU during 1997-2005



Note: Upper trend lines correspond to NO_X measured from 0600-0800 EST in the morning. Lower trend lines correspond to NO_X measured over entire day (created by Tom Downs, Maine Department of Environmental Protection).

Power plants and mobile sources generally dominate state and national NO_X emissions inventories. Nationally, power plants account for more than one-quarter of all NO_X emissions, amounting to over six million tons. The electric sector plays an even larger role, however, in parts of the industrial Midwest where high NO_X emissions have a particularly significant power plant contribution. By contrast, mobile sources dominate the NO_X inventories for more urbanized mid-Atlantic and New England states to a far greater extent, as shown in Figure 3-6. In these states, on-road mobile sources — a category that mainly includes highway vehicles — represent the most significant NO_X source category. Emissions from non-road (i.e., off-highway) mobile sources, primarily diesel-fired engines, also represent a substantial fraction of the inventory.

Figure 3-6. 2002 MANE-VU state NO_X inventories

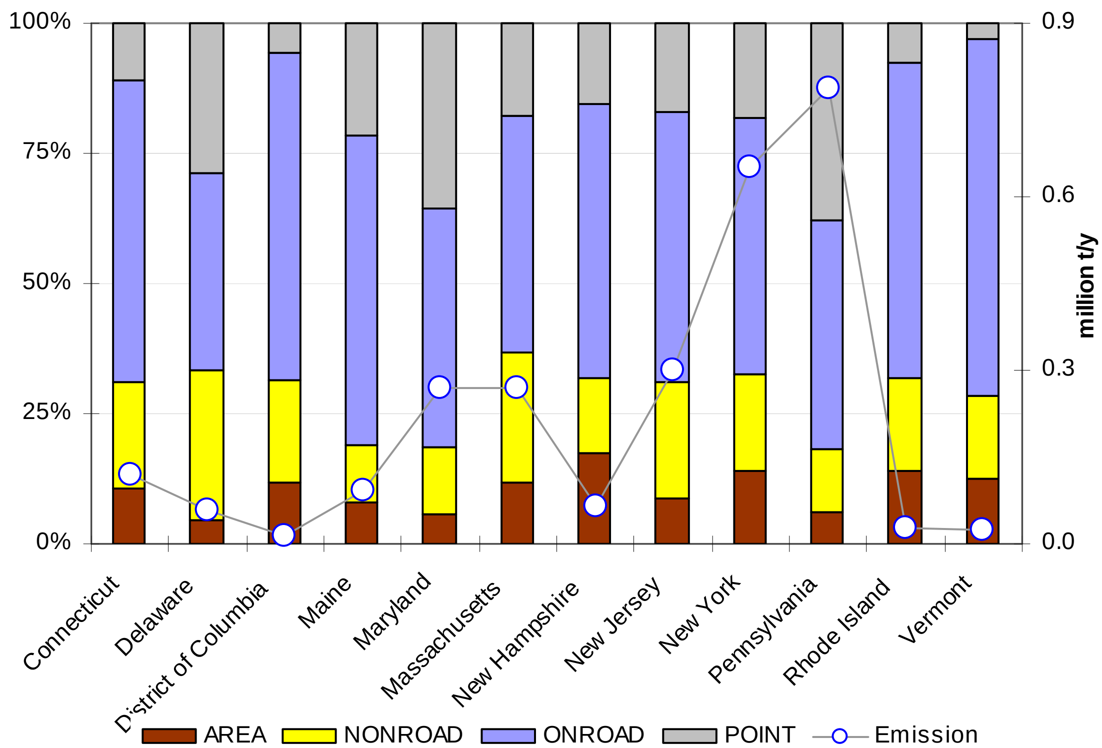


Figure key: Bars = Percentage fractions of four source categories; Circles = Annual emissions amount in 10^6 tons per year. Note that Version 2 of the MANE-VU inventory was used and the Virginia portion of the Washington, DC metropolitan area is not shown in the figure.

3.1.4. Primary particulate matter (PM_{10} and $PM_{2.5}$)

Directly-emitted or "primary" particles (as distinct from secondary particles that form in the atmosphere through chemical reactions involving precursor pollutants like SO_2 and NO_X) also contribute to fine particle levels in the atmosphere. For regulatory purposes, we make a distinction between particles with an aerodynamic diameter less than or equal to 10 micrometers and smaller particles with an aerodynamic diameter less than or equal to 2.5 micrometers (i.e., primary PM_{10} and $PM_{2.5}$, respectively).

Figure 3-7 and Figure 3-8 show PM_{10} and $PM_{2.5}$ emissions for MANE-VU states for the years 1996, 1999, and 2002. Note that, as opposed to the other constituents of PM, the 2002 inventory values for PM_{10} are drawn from the 2002 NEI. Most states show a steady decline in annual PM_{10} emissions over this time period. By contrast, emission trends for primary $PM_{2.5}$ are more variable.

Crustal sources are significant contributors of primary PM emissions. This category includes fugitive dust emissions from construction activities, paved and unpaved roads, and agricultural tilling. Typically, monitors estimate PM_{10} emissions from these types of sources by measuring the horizontal flux of particulate mass at a fixed downwind sampling location within perhaps 10 meters of a road or field. Comparisons between estimated emission rates for fine particles using these types of measurement techniques and observed concentrations of crustal matter in the ambient air at downwind receptor sites suggest that physical or chemical processes remove a significant fraction of crustal material relatively quickly. As a result, it rarely entrains into layers of the atmosphere where it can transport to downwind receptor locations. Because of this discrepancy between estimated emissions and observed ambient concentrations, modelers typically reduce estimates of total $PM_{2.5}$ emissions from all crustal sources by applying a factor of 0.15 to 0.25 before including in modeling analyses.

From a regional haze perspective, crustal material generally does not play a major role. On the 20 percent best-visibility days during the baseline period (2000-2004), it accounted for 6 to 11 percent of particle-related light extinction at MANE-VU Class 1 sites. On the 20 percent worst-visibility days, however, crustal material generally plays a much smaller role relative to other haze-forming pollutants, ranging from 2 to 3 percent. Moreover, the crustal fraction includes material of natural origin (such as soil or sea salt) that is not targeted under USEPA's Regional Haze Rule. Of course, the crustal fraction can be influenced by certain human activities, such as construction, agricultural practices, and road maintenance (including wintertime salting) — thus, to the extent that these types of activities are found to affect visibility at northeastern Class I sites, control measures targeted at crustal material may prove beneficial.

Experience from the western United States, where the crustal component has generally played a more significant role in driving overall particulate levels, may be helpful where it is relevant in the eastern context. In addition, a few areas in the Northeast, such as New Haven, Connecticut and Presque Isle, Maine, have some experience with the control of dust and road-salt as a result of regulatory obligations stemming from their past nonattainment status with respect to the NAAQS for PM_{10}.

Current emissions inventories for the entire MANE-VU area indicate residential wood combustion represents 25 percent of primary fine particulate emissions in the region. This implies that rural sources can play an important role in addition to the contribution from the region's many highly populated urban areas. An important consideration in this regard is that residential wood combustion occurs primarily in the winter months, while managed or prescribed burning activities occur largely in other seasons. The latter category includes agricultural field-burning activities, prescribed burning of forested areas, and other burning activities such as construction waste burning. Limiting burning to times when favorable meteorological conditions can efficiently disperse resulting emissions can manage many of these types of sources.

Figure 3-7. State level primary PM_{10} emissions

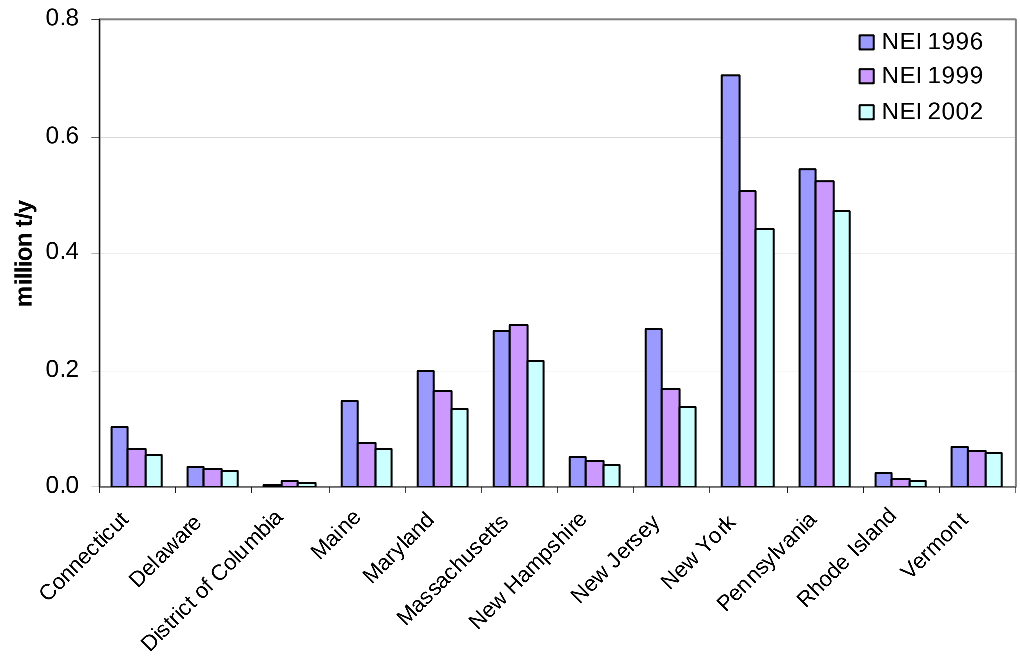


Figure 3-8. State level primary $PM_{2.5}$ emissions

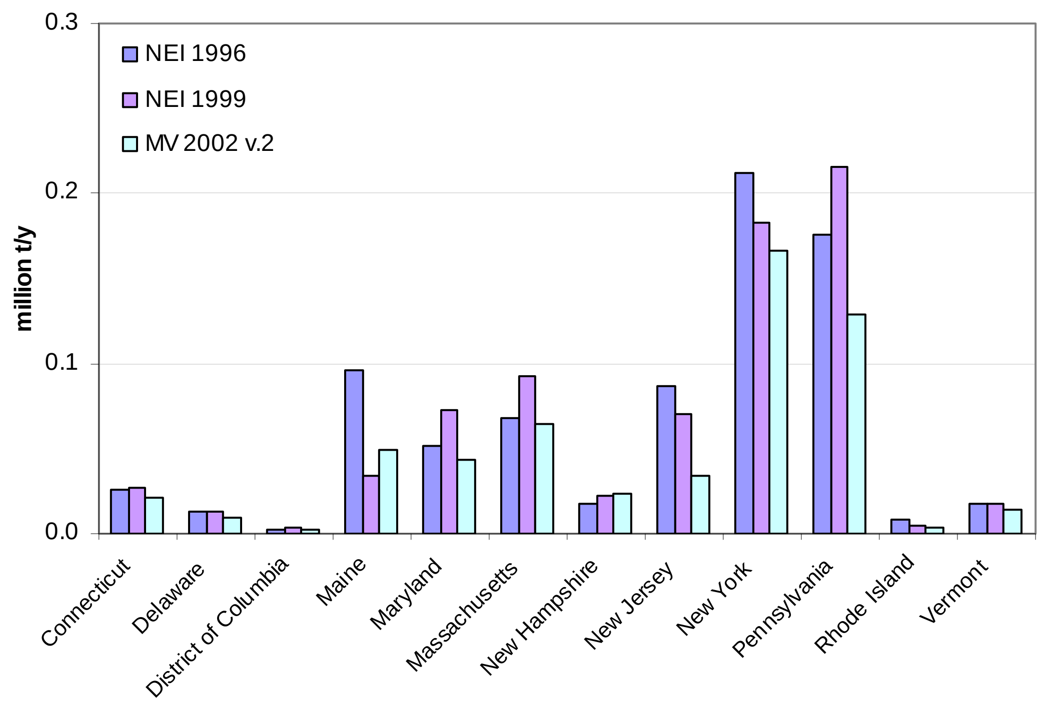


Figure 3-9 and Figure 3-10 show that area and mobile sources dominate primary PM emissions. (The NEI inventory categorizes residential wood combustion and some other combustion sources as area sources.) The relative contribution of point sources is larger in the primary $PM_{2.5}$ inventory than in the primary PM_{10} inventory since the crustal component (which consists mainly of larger or "coarse-mode" particles) contributes mostly to overall PM_{10} levels. At the same time, pollution control equipment commonly installed at large point sources is usually more efficient at capturing coarse-mode particles.

Figure 3-9. 2002 MANE-VU state primary PM_{10} inventories

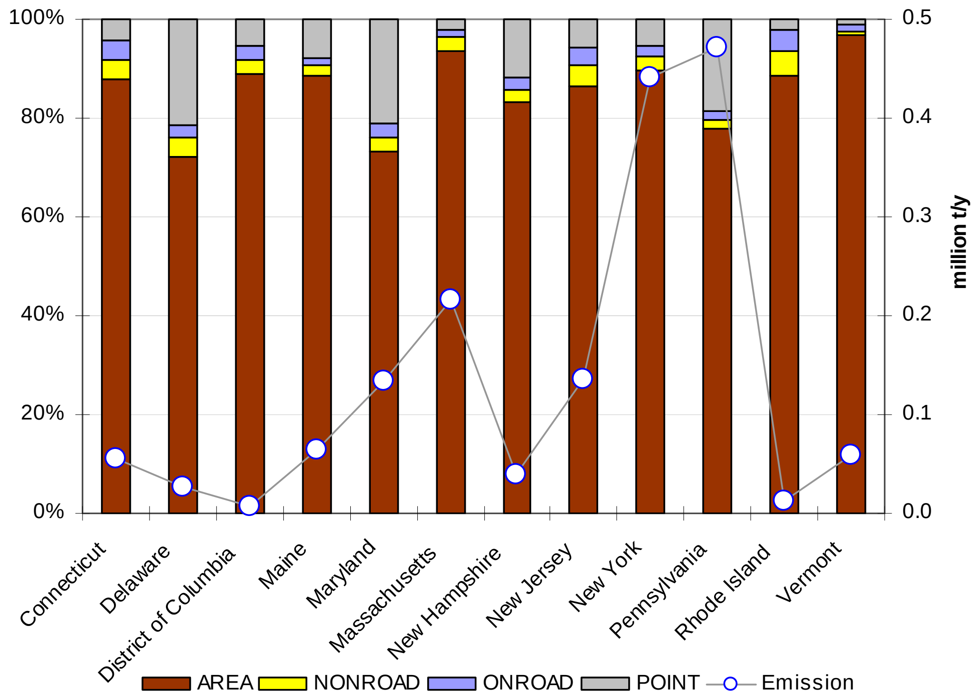


Figure 3-10. 2002 MANE-VU state primary $PM_{2.5}$ inventories

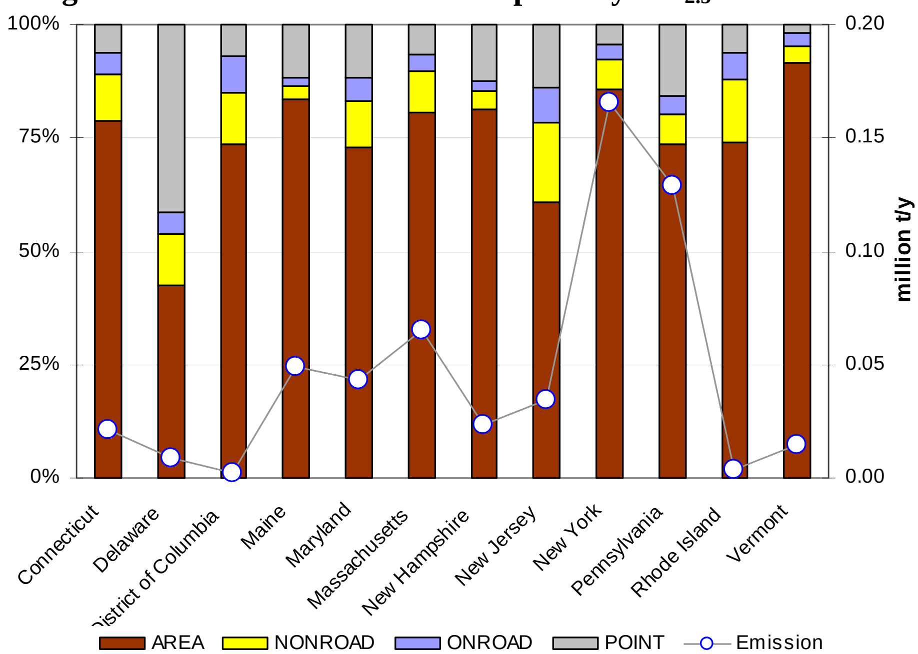


Figure key: Bars = Percentage fractions of four source categories; Circles = Annual emissions amount in 10^6 tons per year. Note that Version 2 of the MANE-VU inventory was used and the Virginia portion of the Washington, DC metropolitan area is not shown in the figure.

3.1.5. Ammonia emissions (NH_3)

Knowledge of ammonia emission sources will be necessary in developing effective regional haze reduction strategies because of the importance of ammonium sulfate and ammonium nitrate in determining overall fine particle mass and light scattering. According to 1998 estimates, livestock and agriculture fertilizer use accounted for approximately 85 percent of all ammonia emissions to the atmosphere (USEPA, 2000b). We need, however, better ammonia inventory data for the photochemical models used to simulate fine particle formation and transport in the eastern United States. Because the USEPA does not regulate ammonia as a criteria pollutant or as a criteria pollutant precursor, these data do not presently exist at the same level of detail or certainty as for NO_X and SO_2.

Ammonium ion (formed from ammonia emissions to the atmosphere) is an important constituent of airborne particulate matter, typically accounting for 10–20 percent of total fine particle mass. Reductions in ammonium ion concentrations can be extremely beneficial because a more-than-proportional reduction in fine particle mass can result. Ansari and Pandis (1998) showed that a one $\mu g/m^3$ reduction in ammonium ion could result in up to a four $\mu g/m^3$ reduction in fine particulate matter. Decision makers, however, must weigh the benefits of ammonia reduction against the significant role it plays in neutralizing acidic aerosol. SO_2 reacts in the atmosphere to form sulfuric acid (H_2SO_4). Ammonia can partially or fully neutralize this strong acid to form ammonium bisulfate or ammonium sulfate. If planners focus future control strategies on ammonia and do not achieve corresponding SO_2 reductions, fine particles formed in the atmosphere will be substantially more acidic than those presently observed.

To address the need for improved ammonia inventories, MARAMA, NESCAUM and USEPA funded researchers at Carnegie Mellon University (CMU) in Pittsburgh to develop a regional ammonia inventory system (Davidson et al., 1999). This study focused on three issues with respect to current emissions estimates: (1) a wide range of ammonia emission factor values, (2) inadequate temporal and spatial resolution of ammonia emissions estimates, and (3) a lack of standardized ammonia source categories.

Figure 3-11 shows that estimated ammonia emissions were fairly stable in the 1996, 1999, and 2002 NEI for MANE-VU states, with some increases observed for Massachusetts, New Jersey and New York. Area and on-road mobile sources dominate the ammonia inventory, according to Figure 3-12. Specifically, emissions from agricultural sources and livestock production account for the largest share of estimated ammonia emissions in MANE-VU, except in the District of Columbia. The two remaining sources with a significant emissions contribution are wastewater treatment systems and gasoline exhaust from highway vehicles.

Figure 3-11. State level ammonia emissions

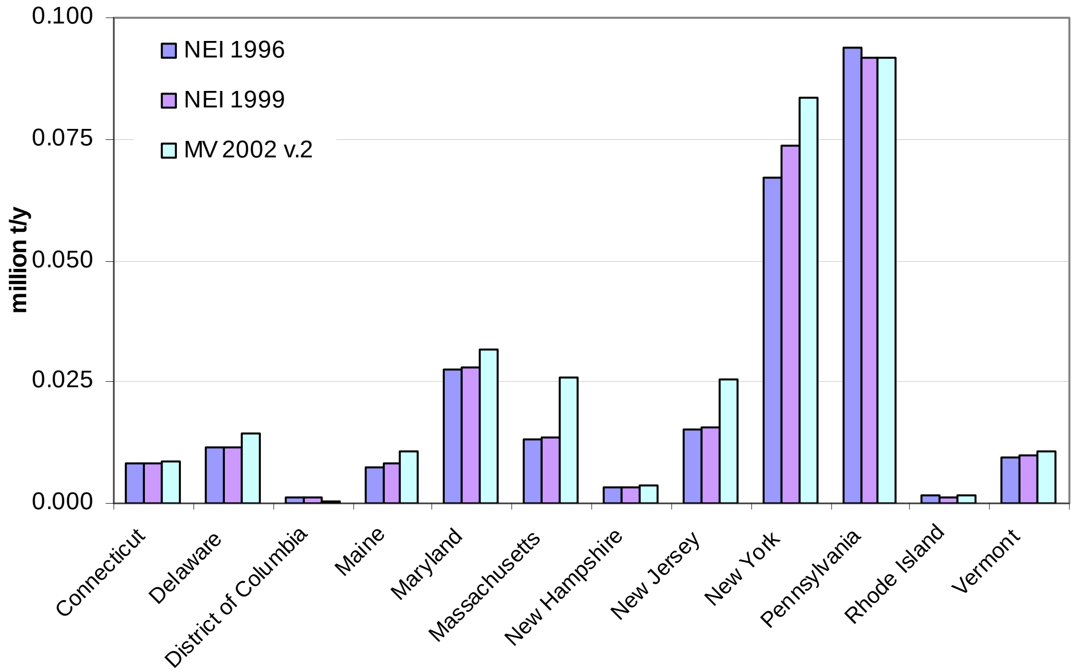


Figure 3-12. 2002 MANE-VU state NH_3 inventories

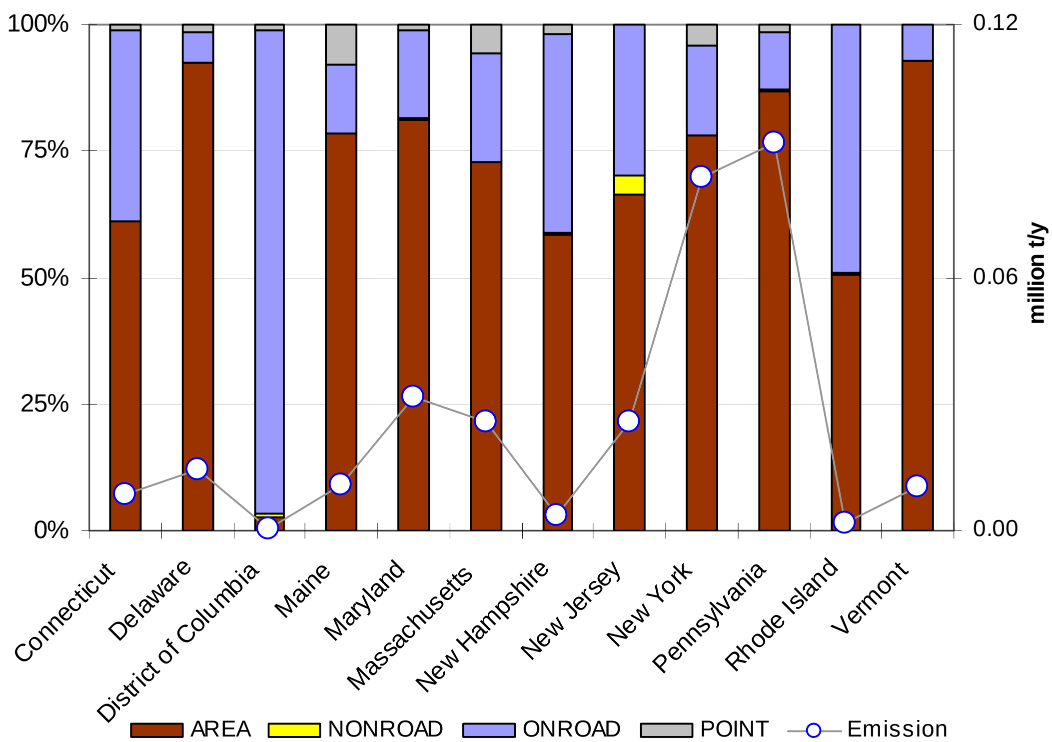


Figure key: Bars = Percentage fractions of four source categories; Circles = Annual emissions amount in 10^6 tons per year. Note that Version 2 of the MANE-VU inventory was used and the Virginia portion of the Washington, DC metropolitan area is not shown in the figure.

3.2. Emissions inventory characteristics outside MANE-VU

SO_2, NO_X and VOC emissions from within MANE-VU are only one component of the emissions contributing to fine particles affecting the MANE-VU region. As regional modeling for the CAIR has shown, emission sources, primarily of SO_2 and NO_X, located outside MANE-VU can significantly contribute to particle sulfate and nitrate transported into the MANE-VU region. Here we present regional emissions information grouped by the three eastern RPOs – MANE-VU, VISTAS (Visibility Improvement State and Tribal Association of the Southeast), and the MWRPO (Midwest RPO). Table 3-1 lists the states in each RPO.

The inventory information is extracted from the USEPA final 2002 National Emissions Inventory (NEI). For consistency, the MANE-VU information here also comes from the 2002 NEI rather than from the MANE-VU Version 2 regional haze emissions inventory described in Section 3.1. The differences between the inventories are not great, as the NEI and the MANE-VU Version 2 inventory are both based on the same inventory information provided by the states.

Table 3-1. Eastern U.S. RPOs and their state members

RPO	State
MWRPO	Illinois
MWRPO	Indiana
MWRPO	Michigan
MWRPO	Ohio
MWRPO	Wisconsin
MANE-VU	Connecticut
MANE-VU	Delaware
MANE-VU	District of Columbia
MANE-VU	Maine
MANE-VU	Maryland
MANE-VU	Massachusetts
MANE-VU	New Hampshire
MANE-VU	New Jersey
MANE-VU	New York
MANE-VU	Pennsylvania
MANE-VU	Rhode Island
MANE-VU	Vermont
VISTAS	Alabama
VISTAS	Florida
VISTAS	Georgia
VISTAS	Kentucky
VISTAS	Mississippi
VISTAS	North Carolina
VISTAS	South Carolina
VISTAS	Tennessee
VISTAS	Virginia
VISTAS	West Virginia

Table 3-2 presents SO_2 emissions by source sector and RPO for the eastern United States. The NO_X emissions by source sector and RPO are presented in Table 3-3 and VOC emissions in Table 3-4. Regionally, SO_2 emissions are more important with respect to regional particle formation and transport. NO_X emissions play an important role in determining the equilibrium between ammonium sulfate and ammonium nitrate formation, especially during winter. VOC emissions contribute to secondary organic aerosol formation.

Table 3-2. SO_2 emissions in eastern RPOs (tons/yr)

RPO	Point	Area	On-road	Non-road	Total
MWRPO	3,336,967	133,415	49,191	82,307	3,601,880
MANE-VU	1,924,573	353,176	39,368	74,566	2,391,683
VISTAS	4,349,437	448,023	83,001	91,307	4,971,769

Table 3-3. NO_X emissions in eastern RPOs (tons/yr)

RPO	Point	Area	On-road	Non-road	Total
MWRPO	1,437,284	184,790	1,290,178	723,844	3,636,096
MANE-VU	680,975	268,997	1,297,357	534,454	2,781,783
VISTAS	2,094,228	266,848	2,160,601	812,615	5,334,293

Table 3-4. VOC emissions in eastern RPOs (tons/yr)

RPO	Point	Area	On-road	Non-road	Total
MWRPO	234,938	1,182,186	660,010	492,027	2,569,160
MANE-VU	93,691	1,798,158	793,541	494,115	3,179,504
VISTAS	458,740	2,047,359	1,314,979	609,539	4,430,617

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USEPA. *2002 Final National Emissions Inventory (NEI)*, available online: ftp://ftp.epa.gov/EmisInventory/2002finalnei/, 2006 (accessed October 10, 2006) [The 2002 NEI reports national annual emissions for total anthropogenic VOC emissions as 16.8 million tons, and total biogenic VOC emissions as 41.8 million tons].

4. WHAT WILL IT TAKE TO CLEAN THE AIR?

In this chapter we build on the conceptual description of fine particle formation and impacts in the MANE-VU region by looking at a typical fine particle pollution event and the meteorological and chemical conditions which contributed to its formation. As an illustration of how the conceptual elements laid out in Chapter 2 and 3 contribute to a pollution event under real-world circumstances, we examine a pollution event from 2002. We examine this event from two perspectives: (1) the broad spatial patterns of the formation and transport of particle air pollution and (2) the chronological sequence of events at a few discrete points where high temporal resolution monitoring was in place. We then proceed to examine likely emission reduction strategies that should be considered in light of the conceptual understanding of fine particle formation and transport developed in this report.

4.1. Meteorological and Pollution Overview of August 8-16, 2002

Annual and seasonal statistics are useful for understanding the general patterns of air pollution in our region, but it is also instructive to review specific high $PM_{2.5}$ episodes in order to shed more light on the meteorological circumstances under which high ambient concentrations of $PM_{2.5}$ are able to form from emitted precursor pollutants. Here we present an analysis of the high $PM_{2.5}$ and regional haze episode of August 2002 by reviewing surface maps from the period to provide a synoptic overview of major weather systems that were influencing air quality across the Northeast U.S. during that time.

Figure 4-1 through Figure 4-3, respectively, show eight-panel displays of afternoon fine particle concentrations as well as surface weather maps and back trajectories from 12Z (8 a.m. EDT) each day. The following chronology of events combines the meteorological insights with $PM_{2.5}$ concentration information to provide a basic storyline for analysis.

A slow-moving high pressure system centered over the Great Lakes set up northerly flow over MANE-VU on August 8. The high drifted southeast-ward and became extended over several days bringing high temperatures to the region. Calm conditions west of MANE-VU on August 10 were pivotal in the formation of fine aerosol concentrations, which began building in the Ohio River Valley. Over the next four days, concentrations in MANE-VU climbed into the 60-90 µg/m^3 range over a wide area before being swept out to sea by a series of frontal passages beginning on August 15.

8/8 – A high pressure system over the Great Lakes produces NW-N prevailing surface winds (~4-8 mph) throughout the region. Maximum daily temperatures approach or exceed 80º F.

8/9 – Wind speeds fall off but direction remains NW-N as the high moves into the central portion of MANE-VU. Temperatures rise as cloud cover declines.

8/10 – The high reaches the East Coast and stalls. Temperatures (except in northern-most areas) reach 90º F while surface-level winds turn to more southerly directions. Calm conditions through the morning hours in the lower Ohio River Valley promote creation of haze noted in surface observations.

8/11 – Circulation around the high (now near Cape Hatteras) becomes well established. Peak temperatures are in the low to mid-90's. Morning winds are light-to-calm in the area east of the Mississippi – the area of haze now reaches from Michigan to northern Texas and eastward to West Virginia and eastern Tennessee. A surface-level trough descends from north of the Great Lakes during the day, passes eastward through the Ohio River Valley and stalls over the Allegheny Mountains and southward.

8/12 – Temperatures exceed 90º F throughout MANE-VU except in coastal ME. The area of concentrated haze has pushed eastward and now extends from central ME to central PA. Haze builds throughout the day as circulation forces it to channel NE between the stalled trough and a cold front approaching from the Midwest.

8/13 – Calm conditions prevail as the trough reaches coastal NJ by 8 a.m. Generally clear skies allow temperatures to reach the mid-90's everywhere except in coastal ME. Dew points, which had been rising since 8/8, reach the upper 60's. Peak hourly fine aerosol concentrations are greater than 40 $\mu g/m^3$ everywhere in MANE-VU and exceed 90 $\mu g/m^3$ in some locations. By 8 p.m., showers associated with the approaching cold front have reached into Ohio.

8/14 – By 8 a.m. the trough has dissipated and the high is moving offshore. Dew points remain in the upper 60's and peak temperatures reach into the 90's everywhere and top 100 in several locations. Increased ventilation causes aerosol concentrations to drop throughout the day everywhere except ME where some locations peak above 60 $\mu g/m^3$ after midnight.

8/15 – The approaching cold front and associated showers fall apart during the morning hours. By 8 p.m., a new batch of moderate rain has intruded deeply into the region from the SW and has virtually pushed the haze out of the MANE-VU region.

8/16 – A new high building in over the upper Midwest pushes the remains of the showers out of the Northeast.

Figure 4-1. Spatially interpolated maps of fine particle concentrations August 9 – 16, 2002

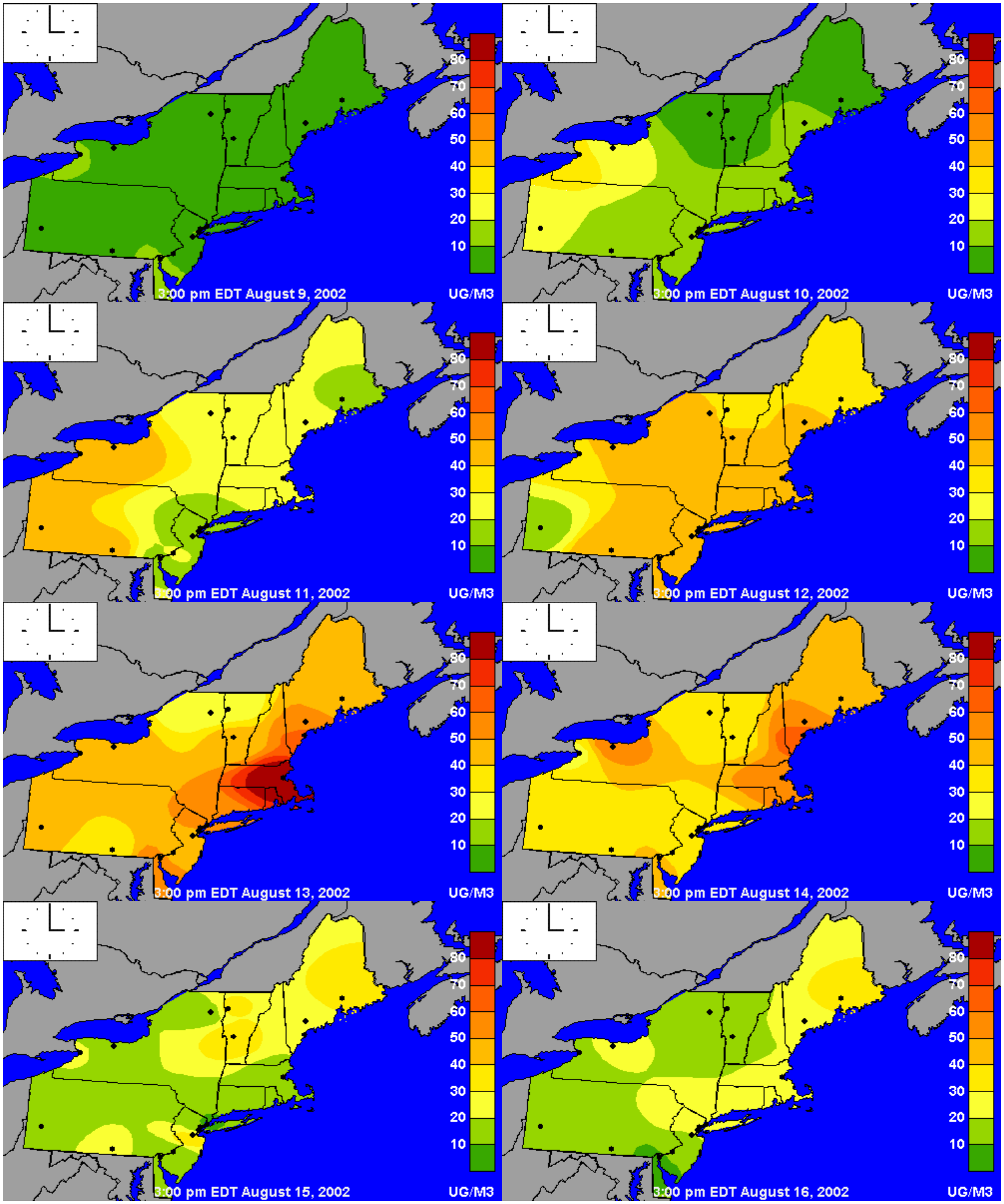


Figure 4-2. Surface weather maps for August 9-16, 2002

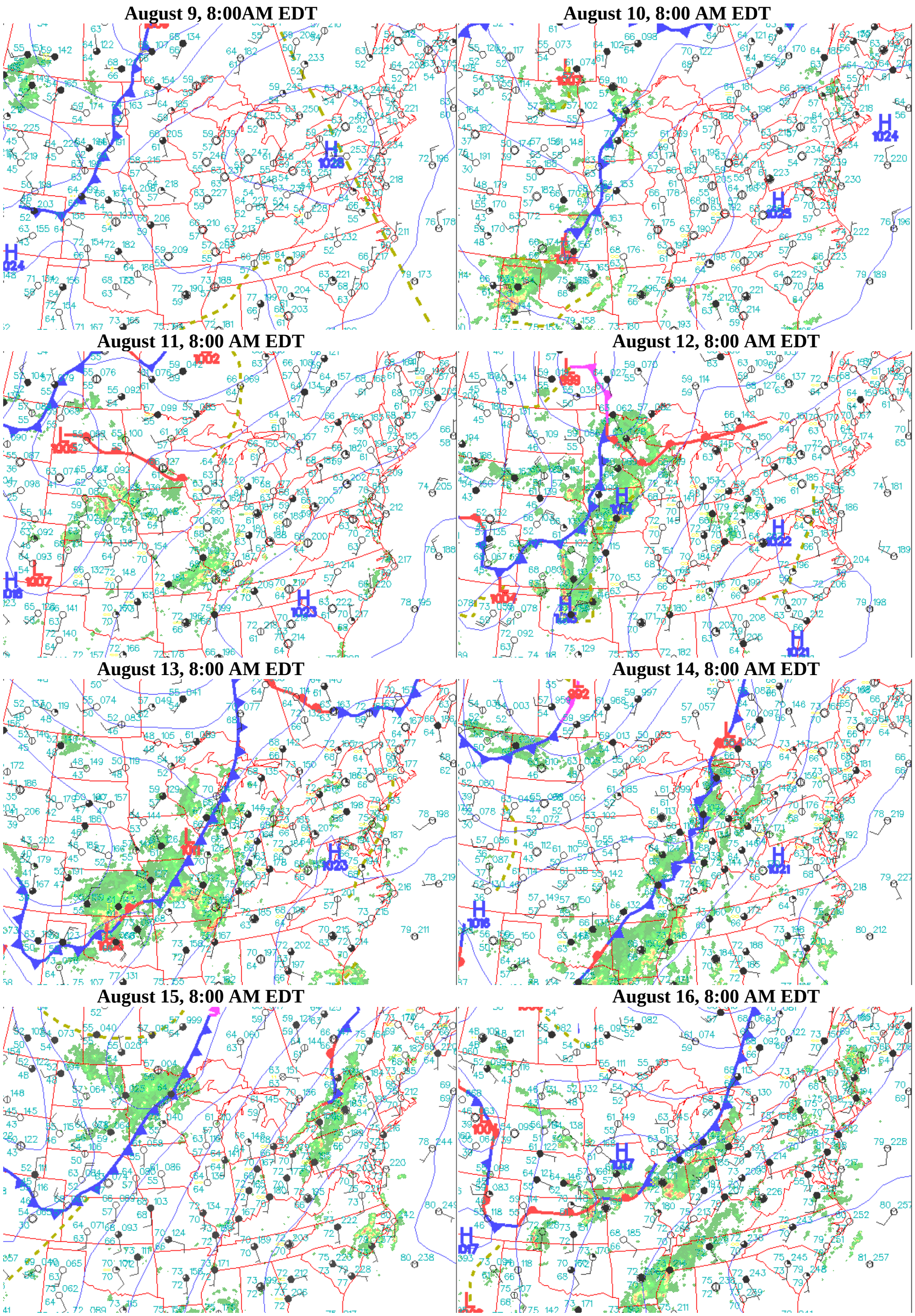
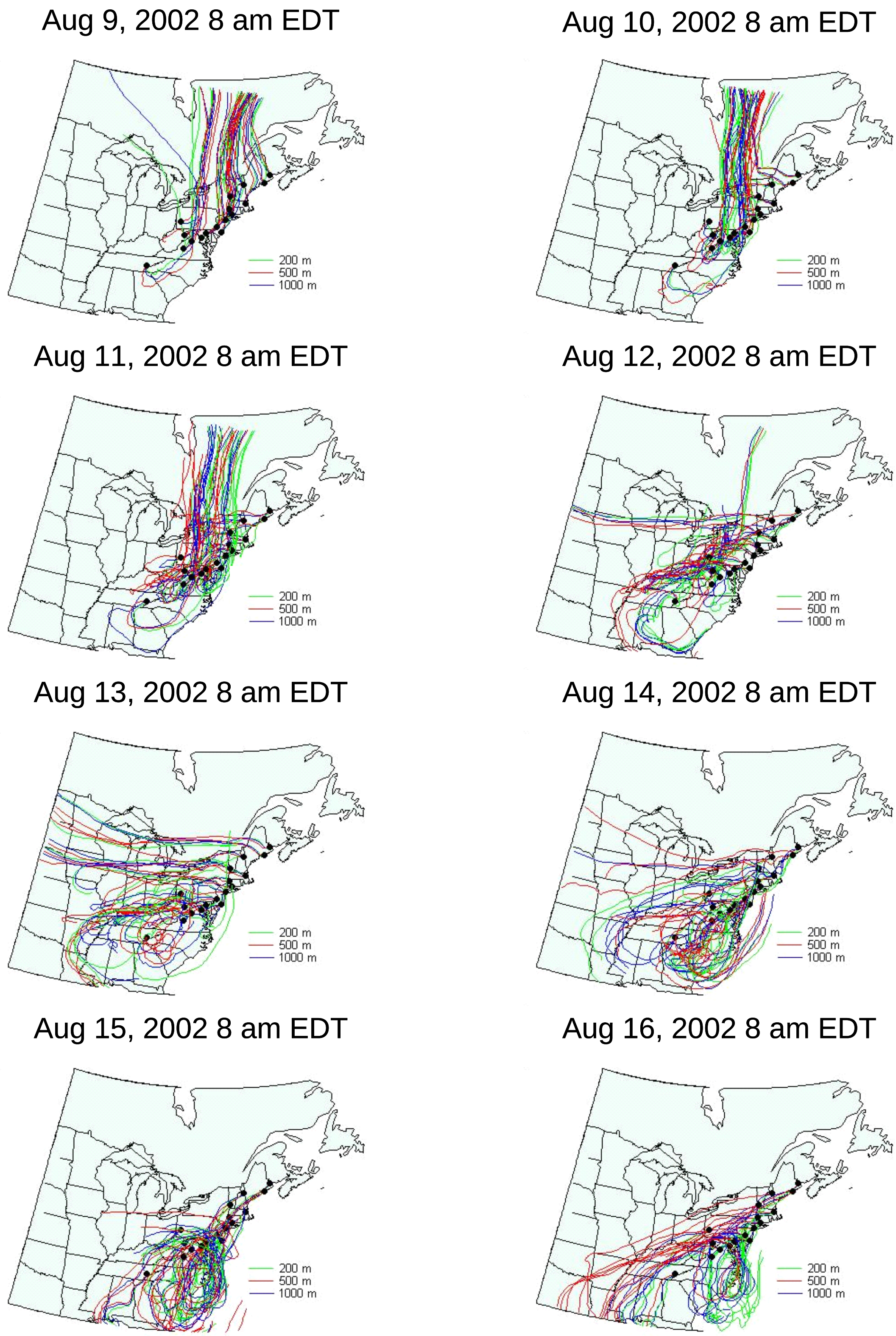


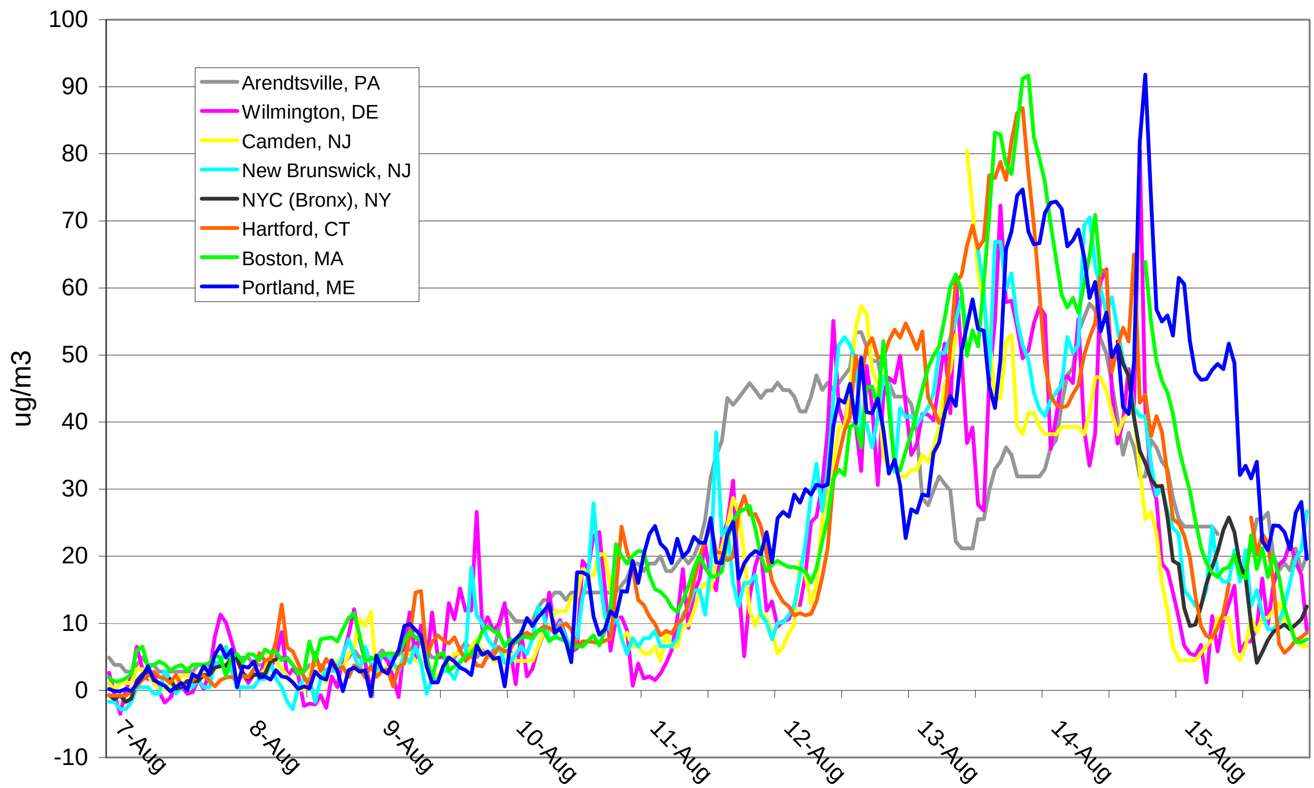
Figure 4-3. HYSPLIT 72-hour back trajectories for August 9-16, 2002



4.2. Temporally and spatially resolved $PM_{2.5}$ measurements

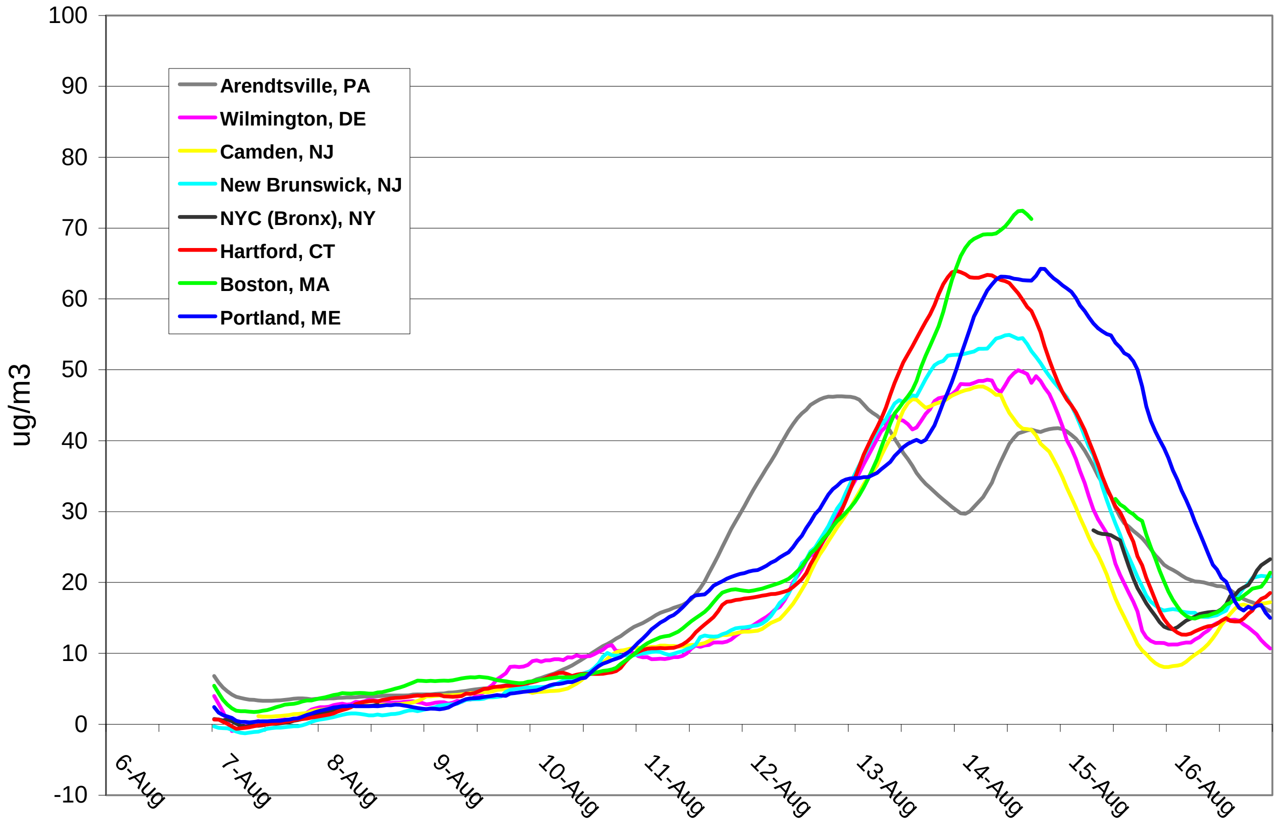
Higher temporal resolution data provide insight into how the events played out in much more detail than can be captured by eight frames on a page; however the most complete picture is obtained when these high *temporal* resolution data can be presented in the context of the relatively greater *spatial* detail provided by maps such as we have seen in Figure 4-1 through Figure 4-3. In Figure 4-4 and Figure 4-5, we present continuous $PM_{2.5}$ data (hourly average and 24-hour rolling average filtered, respectively) for the August 8-16, 2002 time period.

Figure 4-4. Hourly average fine aerosol at 8 sites during the August 2002 episode



Looking at Figure 4-4 in the context of the maps presented in the earlier figures, it is interesting to note the rapid increase, first, in Arendtsville, PA at noon on the 11th, followed by a rise in concentrations along the East Coast around noon on the 12th. This is consistent with Figure 4-1, which shows high $PM_{2.5}$ levels covering western Pennsylvania by 3 p.m. on the 11th and that high $PM_{2.5}$ area has moved over to cover the East Coast by 3 p.m. the next day. This also makes sense with respect to Figure 4-2 and Figure 4-3, which show the high pressure system established on the East Coast by the 11th with surface level back trajectories having shifted from northerly flow to slow southwesterly flow in the western portion of the domain by the morning of the 11th and the coastal sites having switched by the morning of the 12th.

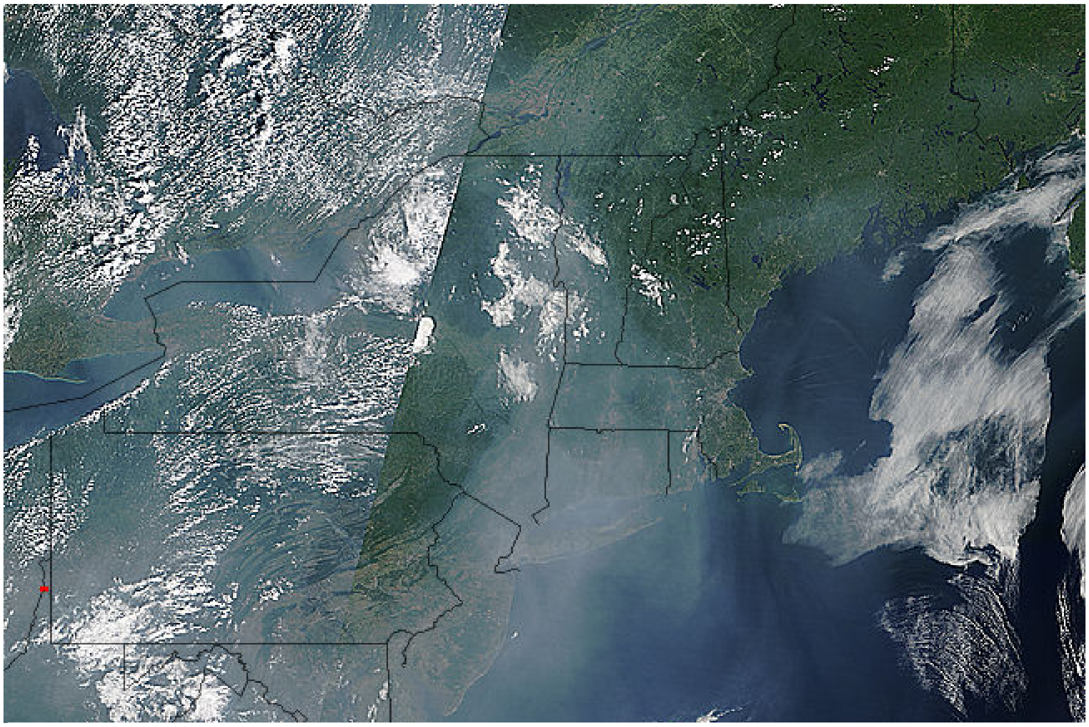
Figure 4-5. 24-hour rolling average fine aerosol at 8 MANE-VU sites during the August 2002 episode



Also note the very high levels observed close to mid-day on the 13th at sites between New York City and Portland, Maine. This is consistent with the strong gradients shown for 3 p.m. on the 13th in Figure 4-1. These rapid increases in concentration are easily explained by the back trajectories of Figure 4-3 that show the advancing front (at this point over Lake Michigan) beginning to push, at upper levels of the atmosphere, an air mass from the upper Midwest due east across the northern half of MANE-VU. At lower levels (see 200 meter trajectories), it can be seen that closer to the surface, this air mass had spent the previous three to four days winding around the Tennessee and Ohio River Valleys before it was driven into the northern reaches of MANE-VU at the peak of the pollution event.

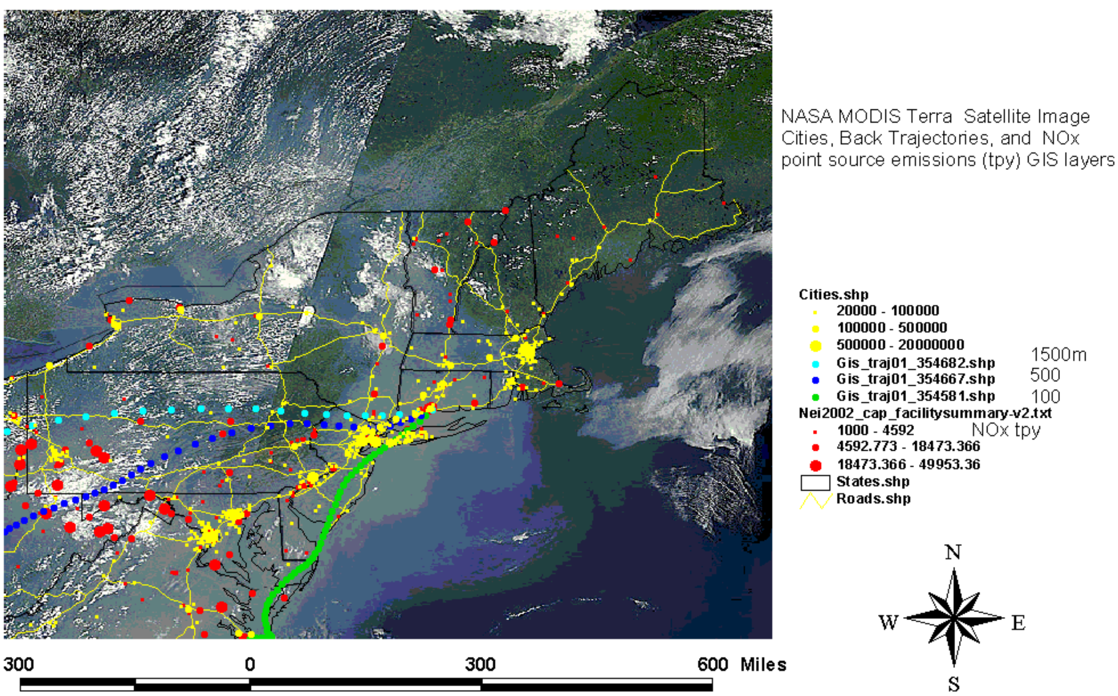
The following figures bring much of this information together in a single image. Figure 4-6 contains satellite photos from MODIS, a mosaic of two consecutive satellite passages on August 13, 2002 from NASA's TERRA satellite. Figure 4-7 shows the same image with geo-referenced activity data and inventory information layered on top to allow for simultaneous depiction of cities, roads, point source emissions, and back trajectories that play a role in the air pollution/haze that affected a large part of the Northeast during this episode.

Figure 4-6. Composite images from NASA's TERRA Satellite on August 13, 2002 showing fine particle pollution/haze.



Note the milky/gray haze due to particle pollution as distinct from the puffy white clouds over broad regions of southern New England and the eastern Mid-Atlantic region.

Figure 4-7. NASA MODIS Terra Satellite Image, Back Trajectories and NO_X Inventory



Geo-referenced activity and inventory data (on top of the satellite images presented above) demonstrating the relationship between observed pollution and upper level winds (driving weather patterns from West to East), mid-level winds (tracking back to major point sources), and lower level winds (tracking back to major population centers along the East Coast).

4.3. Implications for control strategies

A 2003 assessment of fine particulate matter by NARSTO[o] states, "[c]urrent air-quality management approaches focusing on reductions of emissions of SO_2, NO_X, and VOCs are anticipated to be effective first steps towards reducing $PM_{2.5}$ across North America, noting that in parts of California and some eastern urban areas VOC (volatile organic compounds) emissions could be important to nitrate formation."

This conclusion seems to be well supported by the historical record which documents a pronounced decline in particulate sulfate concentrations across the eastern United States during the 1990s. The timing of this observed decline suggests that this is linked to reductions in SO_2 emissions resulting from controls implemented under the federal Acid Rain program beginning in the early to mid-1990s. From 1989 to 1998, SO_2 emissions in the eastern half of the country — that is, including all states within a region defined by the western borders of Minnesota and Louisiana — declined by about 25 percent. This decline in SO_2 emissions correlated with a decline of about 40 percent in average SO_2 and sulfate concentrations, as measured at Clean Air States and Trend Networks (CASTNet) monitoring sites in the same region over the same time period. In fact, at prevailing levels of atmospheric SO_2 loading, the magnitudes of the emissions and concentration changes were not statistically different. This finding suggests that regional reductions in SO_2 emissions have produced near-proportional reductions of particulate sulfate in the eastern United States (NARSTO, 2003). Reductions since 1990 in precursor SO_2 emissions are likely also responsible for a continued decline in median sulfate concentrations in the northeastern United States. Nevertheless, episodes of high ambient sulfate concentrations (with peak levels well above the regional median or average) continue to occur, especially during the summertime when regional transport from the Ohio River Valley is also at its peak. This suggests that further reductions in regional and local SO_2 emissions would provide significant further air quality and visibility benefits (NARSTO, 2003).

For urban areas of the eastern United States, an effective emissions management approach may be to combine regional SO_2 control efforts aimed at reducing summertime $PM_{2.5}$ concentrations with local SO_2 and OC control efforts. Local SO_2 reductions would help reduce wintertime $PM_{2.5}$ concentrations, while OC reductions can help reduce overall $PM_{2.5}$ concentrations year-round. For areas with high wintertime $PM_{2.5}$ levels, strategies that involve NO_X reductions may also be effective (NARSTO, 2003).

Further support for this general approach may be found in a review of several studies by Watson (2002) which concluded that SO_2 emission reductions have in most cases been accompanied by statistically significant reductions in ambient sulfate concentrations. One study (Husar and Wilson, 1993) shows that regionally averaged light extinction closely tracks regionally averaged SO_2 emissions for the eastern United States from 1940 through the mid-1980s. Another study by Malm *et al.* (2002) shows that

[o] NARSTO was formerly an acronym for the "North American Research Strategy for Tropospheric Ozone." More recently, the term NARSTO became simply a wordmark signifying a tri-national, public-private partnership for dealing with multiple features of tropospheric pollution, including ozone and suspended particulate matter. For more information on NARSTO see http://www.cgenv.com/Narsto/.

regionally averaged emissions and ambient concentrations decreased together from 1988 through 1999 over a broad region encompassing the states of Connecticut, Delaware, Illinois, Indiana, Kentucky, Maine, Massachusetts, Maryland, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, Wisconsin, and West Virginia (Watson, 2002).

These studies and available data from the IMPROVE (Interagency Monitoring of Protected Visual Environment) monitoring network provide strong evidence that regional SO_2 reductions have yielded, and will continue to yield, reductions in ambient secondary sulfate levels with subsequent reductions in regional haze and associated light extinction. They indicate that reductions in anthropogenic primary particle emissions will also result in visibility improvements, but that these will not have a zone of influence as large as those of the secondary aerosols (Watson, 2002).

Watson (2002) notes that during the 65 years in which the regional haze program aims to reach its final visibility goals, several opportunities to revise this basic control approach will arise through the decadal SIP cycle. This enables new scientific results to continue to exert a positive influence as states implement new regulatory control programs for SO_2, NO_X and VOCs, and as ambient concentrations of these pollutants change relative to each other and relative to ambient ammonia levels. As these relationships between species change, atmospheric chemistry may dictate a revised control approach to those previously described. Further research on these issues should be a priority for supporting 2018 SIP submissions. They include the possibility that:

- Reduction of sulfate in a fully neutralized atmosphere (excess ammonia) could encourage ammonium nitrate formation.
- Ever-greater emissions reductions could be required to produce a given level of improvement in ambient pollutant concentrations because of non-linearities in the atmospheric formation of sulfate.
- Changes in ambient conditions favoring the aqueous oxidation of sulfate (this pathway largely accounts for the non-linearity noted above) may have implications for future emissions control programs. Causes of changing ambient conditions could include, for example, climate change.

West *et al.* (1999) examine a scenario for the eastern United States where $PM_{2.5}$ mass decreases linearly with ammonium sulfate until the latter is fully neutralized by ammonia. Further reductions would free ammonia for combination with gaseous nitric acid that, in turn, would slightly increase $PM_{2.5}$ until all of the nitric acid is neutralized and further sulfate reductions are reflected in lower $PM_{2.5}$ mass. This is an extreme case that is more relevant to source areas (e.g., Ohio) where nitric acid (HNO_3) is more abundant than in areas with lower emissions (e.g., Vermont) (Watson, 2002).

In most situations with non-neutralized sulfate (typical of the eastern United States), ammonia is a limiting agent for the formation of nitrate but will not make any difference until sulfate is reduced to the point where it is completely neutralized. At that point, identifying large sources of ammonia emissions will be important. This point is likely to be many years in the future, however (Watson, 2002).

Based on analyses using the Community Multi-Scale Air Quality (CMAQ) model, the aqueous phase production of sulfate in the Northeast appears to be very oxidant limited and hence non-linear. Thus, conditions that are conducive to a dominance of the gas-phase production pathway drive the summer peaks in ambient sulfate levels. Nonetheless, the expected reduction in ambient sulfate levels resulting from a given reduction in SO_2 emissions is less than proportional overall due to the non-linearity introduced by the aqueous pathway for sulfate formation (NARSTO, 2003). These non-linearity effects are more pronounced for haze than for sulfate deposition, especially at higher sulfate air concentrations (USNPS, 2003).

Finally, we note that because visibility in the clearest areas is sensitive to even minute increases in particle concentrations, strategies to preserve visibility on the clearest days may require stringent limits on emissions growth. In this context, even the dilute emissions from distant sources can be important (NARSTO, 2003)

4.4. Conclusion: Simplifying a complex problem

A conceptual understanding of fine particles from a regional perspective across MANE-VU and throughout the eastern U.S. is well understood, yet remains complex due to the multiplicity of source regions (both regional and local), pollutants (SO_2, NO_X, organic carbon, and primary $PM_{2.5}$), and seasons (summer and winter) that are involved in fine particle formation.

Regional approaches to the control of precursor SO_2 and NO_X emissions have been started through Title IV of the Clean Air Act, the NO_X SIP Call, the CAIR, and the establishment and support of Regional Planning Organizations to assist with Regional Haze Rule compliance. With the modeling foundation developed for the CAIR program, the USEPA has presented a compelling technical case on the need for additional regional SO_2 and NO_X reductions in the eastern U.S. to reduce particulate levels and protect public health. While states in the Northeast disagree with the extent of SO_2 and NO_X reductions and the timeline for those reductions to occur, the program is an excellent next step toward reducing fine particles in MANE-VU. It is tempting to suggest that the regional control of SO_2 and NO_X are the extent of the problem facing MANE-VU, but as the conceptual description contained in this report demonstrates, the reduction of fine particles in the eastern U.S. requires a careful balance of regional and local controls for SO_2, NO_X, sources of organic carbon and primary $PM_{2.5}$ during both summer and winter.

The (relatively) higher emissions of SO_2 and NO_X from regions upwind of MANE-VU as well as the long "reach" of sulfate pollution requires continued regional control of these fine particle precursors. However, local accumulation of SO_2-derived sulfate, NO_X-derived nitrate, and primary PM (mostly in the form of black carbon/diesel exhaust) can significantly boost urban $PM_{2.5}$ levels. Residential wood combustion in rural river valleys can significantly raise PM levels as well and affect rural visibility in areas near to Class I areas.

The balance between regional and local controls parallels the balance that needs to be achieved between pollutants. The regional contribution to fine particle pollution is driven by sulfates and organic carbon, whereas the local contribution to $PM_{2.5}$ is derived from SO_2, NO_X, organic carbon, and primary $PM_{2.5}$ (including black carbon/diesel exhaust).

Finally, control strategies which focus on regional SO_2 emissions reductions are needed throughout the summer and winter months, suggesting that a year-round approach to control is needed. Urban nonattainment counties with local emissions of NO_X and VOC will be driven to reduce these emissions during the summer for ozone benefits, but these same pollutants – as well as primary particulate emissions – contribute to high $PM_{2.5}$ levels in winter, suggesting that annual controls for all of these pollutants make sense in a multi-pollutant context. Finally, residential wood smoke near Class I areas is clearly a winter-only issue, and further controls may be desirable near specific Class I sites where organic carbon is a contributor on the 20 percent worst visibility days that occur in winter months.

To bring attainment to the current fine particle nonattainment counties and meet reasonable progress goals toward national visibility goals, there continues to be a need for more regional SO_2 and NO_X reductions coupled with appropriate local SO_2, NO_X, VOC, and primary $PM_{2.5}$ (including diesel exhaust) controls where local accumulation is shown to add to the regional burden of sulfate and nitrate $PM_{2.5}$ (primarily in winter). These local controls will vary by location and by season, but the regional control of SO_2 and NO_X should be maintained on an annual basis given the contribution of regional sulfate and nitrate to fine particle peaks during both summer and winter months.

Appendix A: Excerpts from EPA Guidance Document, Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, $PM_{2.5}$, and Regional Haze

APPENDIX A: EPA GUIDANCE DOCUMENT EXERPT

11.0 How Do I Get Started? - A "Conceptual Description"

A State/Tribe should start developing information to support a modeled attainment demonstration by assembling and reviewing available air quality, emissions and meteorological data. Baseline design values should be calculated at each monitoring site, as described in Section 3. For PM applications, speciated data should be reviewed to get a sense of what component(s) might be contributing most significantly to nonattainment or light extinction. If past modeling has been performed, the emission scenarios examined and air quality predictions may also be useful. Readily available information should be used by a State/Tribe to develop an initial conceptual description of the nonattainment or reasonable haze problem in the area which is the focus of a modeled demonstration. A conceptual description is instrumental for identifying potential stakeholders and for developing a modeling/analysis protocol. It may also influence a State's choice of air quality model, modeling domain, grid cell size, priorities for quality assuring and refining emissions estimates, and the choice of initial diagnostic tests to identify potentially effective control strategies. In general, a conceptual description is useful for helping a State/Tribe identify priorities and allocate resources in performing a modeled demonstration.

In this Section, we identify key parts of a conceptual description. We then present examples of analyses which could be used to describe each of these parts. We note that initial analyses may be complemented later by additional efforts performed by those implementing the protocol.

11.1 What Is A "Conceptual Description"?

A "conceptual description" is a qualitative way of characterizing the nature of an area's nonattainment or regional haze problem. It is best described by identifying key components of a description. Examples are listed below. There are 3 different examples. One each for ozone, annual $PM_{2.5}$, and regional haze. The examples are not necessarily comprehensive. There could be other features of an area's problem which are important in particular cases. For purposes of illustration later in the discussion, we have answered each of the questions posed below. Our responses appear in parentheses.

11.1.1 8-Hour Ozone NAAQS

1. Is the nonattainment problem primarily a local one, or are regional factors important?
(Surface measurements suggest transport of ozone close to 84 ppb is likely. There are some other nonattainment areas not too far distant.)

2. Are ozone and/or precursor concentrations aloft also high?
(There are no such measurements.)

3. Do violations of the NAAQS occur at several monitoring sites throughout the nonattainment area, or are they confined to one or a small number of sites in proximity to one another?
(Violations occur at a limited number of sites, located throughout the area.)

4. Do observed 8-hour daily maximum ozone concentrations exceed 84 ppb frequently or just on a few occasions?
(This varies among the monitors from 4 times up to 12 times per year.)

5. When 8-hour daily maxima in excess of 84 ppb occur, is there an accompanying characteristic spatial pattern, or is there a variety of spatial patterns?
(A variety of patterns is seen.)

6. Do monitored violations occur at locations subject to mesoscale wind patterns (e.g., at a coastline) which may differ from the general wind flow?
(No.)

7. Have there been any recent major changes in emissions of VOC or NO_X in or near the nonattainment area? If so, what changes have occurred?
(Yes, several local measures [include a list] believed to result in major reductions in VOC [quantify in tons per summer day] have been implemented in the last five years. Additionally, the area has seen large regional NO_X reductions from the NO_X SIP call.)

8. Are there discernible trends in design values or other air quality indicators which have accompanied a change in emissions?
(Yes, design values have decreased by about 10% at four sites over the past [x] years. Smaller or no reductions are seen at three other sites.)

9. Is there any apparent spatial pattern to the trends in design values?
(No.)

10. Have ambient precursor concentrations or measured VOC species profiles changed?
(There are no measurements.)

11. What past modeling has been performed and what do the results suggest?
(A regional modeling analysis has been performed. Two emission scenarios were modeled: current emissions and a substantial reduction in NO_X emissions throughout the regional domain. Reduced NO_X emissions led to substantial predicted reductions in 8-hour daily maximum ozone in most locations, but changes near the most populated area in the nonattainment area in question were small or nonexistent.)

12. Are there any distinctive meteorological measurements at the surface or aloft which appear to coincide with occasions with 8-hour daily maxima greater than 84 ppb?
(Other than routine soundings taken twice per day, there are no measurements aloft. There is no obvious correspondence with meteorological measurements other than daily maximum temperatures are always > 85 F on these days.)

Using responses to the preceding questions in this example, it is possible to construct an initial conceptual description of the nonattainment area's ozone problem. First, responses to questions 1 and 11 suggest there is a significant regional component to the area's nonattainment problem. Second, responses to questions 3, 4, 7, 8, and 11 indicate there is an important local component to the area's nonattainment problem. The responses to questions 4, 5 and 12 indicate that high ozone concentrations may be observed under several sets of meteorological conditions. The responses to questions 7, 8, and 11 suggest that ozone in and near the nonattainment area may be responsive to both VOC and NO_X controls and that the extent of this response may vary spatially. The response to question 6 suggests that it may be appropriate to develop a strategy using a model with 12 km grid cells.

The preceding conceptual description implies that the State/Tribe containing the nonattainment area in this example will need to involve stakeholders from other, nearby States/Tribes to develop and implement a modeling/analysis protocol. It also suggests that a nested regional modeling analysis will be needed to address the problem. Further, it may be necessary to model at least several distinctive types of episodes and additional analyses will be needed to select episodes. Finally, sensitivity (i.e., diagnostic) tests, or other modeling probing tools, will be needed to assess the effects of reducing VOC and NO_X emissions separately and at the same time.

11.1.2 Annual $PM_{2.5}$ NAAQS

1. Is the nonattainment problem primarily a local one, or are regional factors important?
(Surface measurements suggest that only design values in or immediately downwind of the city violate the NAAQS. However, other nearby design values come close to the concentration specified in the NAAQS)

2. What is the relative importance of measured primary and secondary components of $PM_{2.5}$ measured at sites violating the NAAQS?
(Secondary components (i.e., SO_4, NO_3, OC) constitute about 80% of the measured mass of $PM_{2.5}$. There are higher concentrations of primary $PM_{2.5}$ in the core urban area compared to the suburbs and more rural areas.)

3. What are the most prevalent components of measured $PM_{2.5}$?
(The most important components in ranked order are mass associated with SO_4, OC and inorganic primary particulate matter (IP)).

4. Does the measured mix of PM components appear to roughly agree with mix of emission categories surrounding the monitoring sites?
(No. Relative importance of measured crustal material (IP) appears less than what might be inferred from the inventory).

5. Do there appear to be any areas with large gradients of primary $PM_{2.5}$ in monitored or unmonitored areas?
(Cannot really tell for sources of crustal material until we resolve the preceding

inventory/monitoring discrepancy. There are no other obvious major sources of primary particulate matter).

6. Is there any indication of what precursor might be limiting formation of secondary particulate matter?
(No indicator species analyses have been performed. Past analyses performed for ozone-related SIP revisions suggest that ozone in this area may be limited by availability of VOC).

7. Do monitored violations occur at locations subject to mesoscale wind patterns (e.g., at a coastline) which may differ from the general wind flow?
(No.)

8. Have there been any recent major changes in emissions of PM or its precursors in or near the nonattainment area? What?
(Yes, measures believed to result in major reductions in VOC and NO_X have been implemented in the last 5 years. Reductions in power plant NO_X have resulted from the NO_X SIP call and SO_2 emissions reductions have resulted from the national program to reduce acid deposition.)

9. Are there discernible trends in design values or other air quality indicators which have accompanied a change in emissions?
(The trend appears to be downward, but the most recent air quality data has been higher. Overall, the period of record is insufficiently long to tell).

10. Is there any apparent spatial pattern to the trends in design values?
(No.)

11. What past modeling has been performed and what do the results suggest?
(A regional modeling analysis has been performed for ozone and $PM_{2.5}$. Two emission scenarios were modeled: current emissions and a substantial reduction in NO_X and SO_2 emissions throughout a regional domain. Reduced NO_X emissions led to substantial predicted reductions in 8-hour daily maximum ozone in most locations. Modeled SO_2 reductions from the CAIR rule had a strong impact on sulfate concentrations)

12. Are there any distinctive meteorological measurements at the surface or aloft which appear to coincide with occasions with $PM_{2.5}$ concentrations in excess of 15.0 :g/m^3?
(Other than routine soundings taken twice per day, there are no measurements aloft. There is no obvious correspondence with meteorological measurements other than daily maximum temperatures are often > 85F on days with the highest $PM_{2.5}$ observations.)

13. Do periods with high measured particulate matter or components of particulate matter appear to track each other or any other measured pollutant?
(There appears to be some correspondence between measured high concentrations of SO_4 and ozone).

Using responses to the preceding questions in this example, it is possible to construct an initial conceptual description of the nonattainment area's ozone problem. First, responses to questions 1, 2 and 3 suggest there is a significant regional component to the area's nonattainment problem. Second, responses to questions 1 and 3 indicate there is a local component to the problem. The responses to questions 11,12 and 13 suggest that there may be a link between reducing ozone and reducing particulate matter. Thus, it may be appropriate to assess effects of previously committed to strategies to reduce ozone and national PM control measures before simulating additional control measures. The responses to questions 4 and 5 suggest that it is premature to determine whether a "local area analysis" will be needed. The response to question 7 suggests that it may not be necessary to model with very small grid cells, at least for the secondary components of $PM_{2.5}$.

The preceding conceptual description implies that the State containing the nonattainment area in this example will need to involve stakeholders from other, nearby States to develop and implement a modeling/analysis protocol. It also suggests that a nested regional modeling analysis will be needed to address the problem.

11.1.3 Example reasonable progress application

1. What components of particulate matter appear to have high concentrations on days with poor visibility?
(Mass associated with SO_4 and coarse particulate matter (CM) seem to have the highest concentrations on most such days).

2. What are typical values for the humidity adjustment factor during the times of year when most of the days with poor visibility occur?
(Typical values appear to be about "4.0").

3. Does visibility appear to track well among nearby Class I areas?
(Yes, but not always).

4. Does poor visibility seem to occur under any specific meteorological conditions?
(This information is not readily available).

5. Does poor visibility seem to coincide with high observed concentrations of any particular other pollutant?
(There seems to be some correspondence with high regional ozone concentrations)

6. What components of particulate matter appear to have relatively high concentrations on days with good visibility?
(Coarse particulate matter and OC)

7. What are typical values for the humidity adjustment factor during times of year when most of the days with good visibility occur?
(About "2.3")

8. Does good visibility appear to occur under any specific meteorological conditions? (Don't know.)

Answers to the preceding questions suggest that strategies to reduce sulfate concentrations and, perhaps, regional ozone concentrations might be effective in reducing light extinction on days when visibility is currently poor. The responses suggest that a strategy which focuses on this alone should first be tried for the days with good visibility as well. Even though sulfate concentrations appear low on such days, the fact that sulfates scatter light efficiently (see Equation (6.1)) and relative humidity is still high enough to enhance this effect is worth considering. Responses suggest that further meteorological analyses would be worthwhile prior to selecting strategies to simulate with a resource intensive regional model.

It should be clear from the preceding examples that the initial conceptual description of an area's nonattainment problem draws on readily available information and need not be detailed. It is intended to help launch development and implementation of a modeling/analysis protocol in a productive direction. It will likely be supplemented by subsequent, more extensive modeling and ambient analyses performed by or for those implementing the modeling/analysis protocol discussed in Section 12.0.

Questions like those posed in Section 11.1 can be addressed using a variety of analyses ranging in complexity from an inspection of air quality data to sophisticated mathematical analyses. We anticipate the simpler analyses will often be used to develop the initial conceptual description. These will be followed by more complex approaches or by approaches requiring more extensive data bases as the need later becomes apparent. These analyses are intended to channel resources available to support modeled attainment demonstrations onto the most productive paths possible. They will also provide other pieces of information which can be used to reinforce conclusions reached with an air quality model, or cause a reassessment of assumptions made previously in applying the model. As noted in Section 7, corroboratory analyses should be used to help assess whether a simulated control strategy is sufficient to meet the NAAQS.

Appendix B: Monitoring Data from Class I sites in MANE-VU

Below are figures that were developed by Tom Downs of the Maine Department of Environmental Protection. These figures represent baseline monitoring data for the Class I sites (and Washington DC) based on IMPROVE monitoring network data using the EPA approved "default" algorithm for calculating reconstructed extinction and estimating natural background conditions. These statistics may need to be recreated using the alternative methodology approved by the IMPROVE steering committee and adopted by the MANE-VU states. Glide path graphs were created on the VIEWS website (http://vista.cira.colostate.edu/views/) using the Annual Summary Trends tool. Seasonal graphs were created from data downloaded from the VIEWS website using the Annual Summary Composition tool and should be updated to include 2004 data for a complete description of regional haze baseline data.

APPENDIX B: MONITORING DATA FROM CLASS I SITES IN MANE-VU

Figure B-1. Monitoring Data from Acadia NP, ME

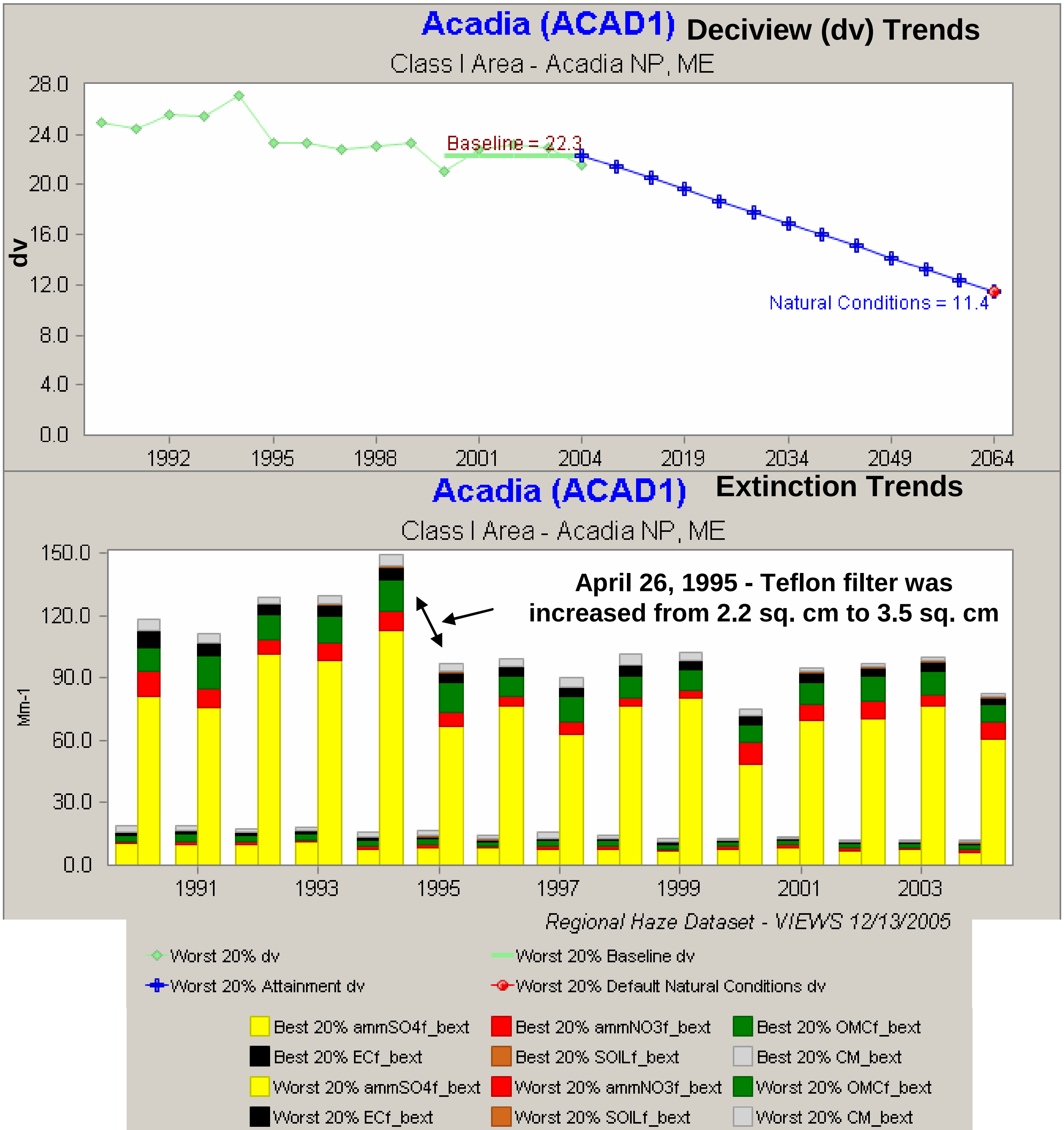


Figure B-2. Monitoring Data from Brigantine, ME

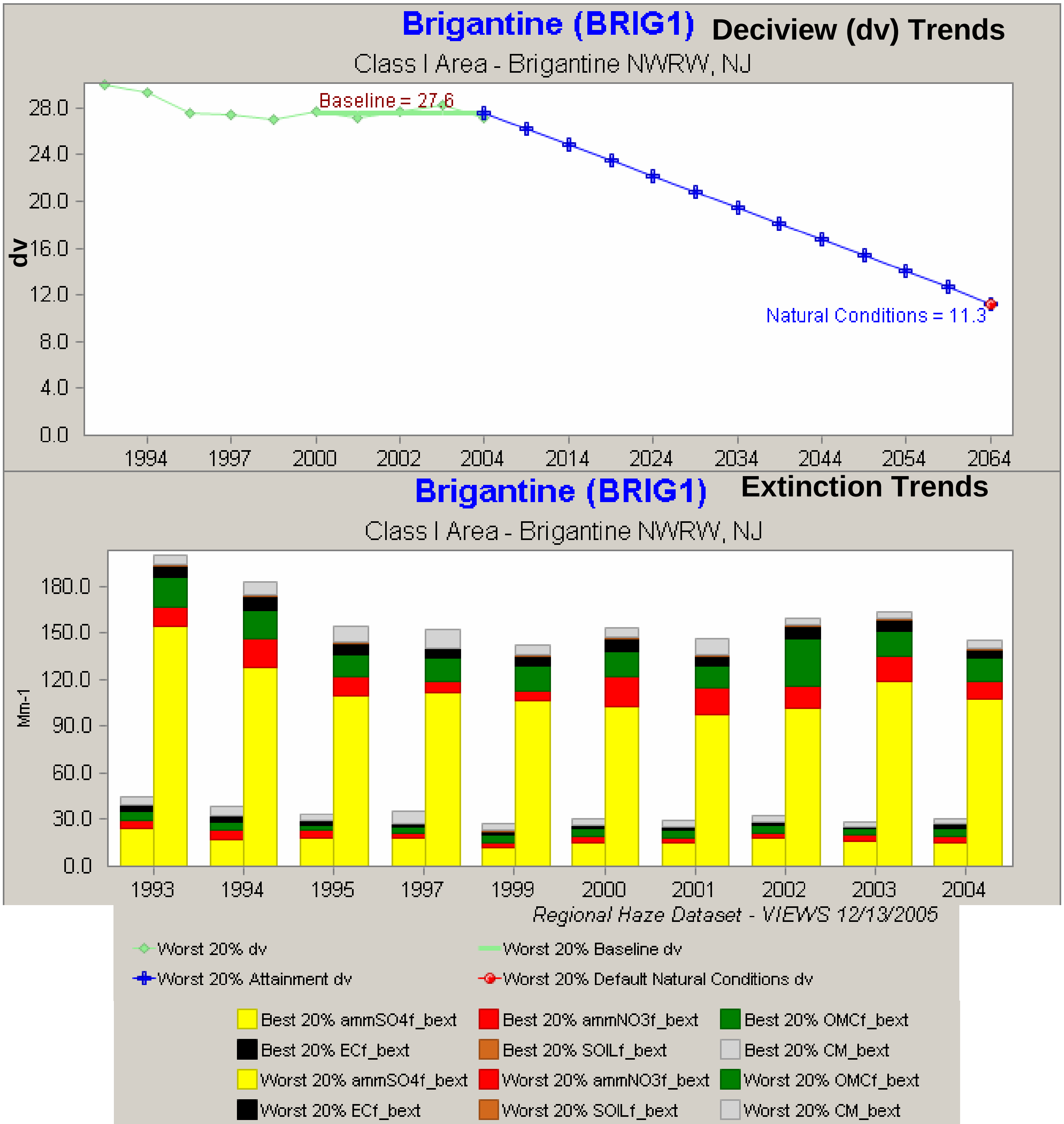


Figure B-3. Monitoring Data from Great Gulf, NH

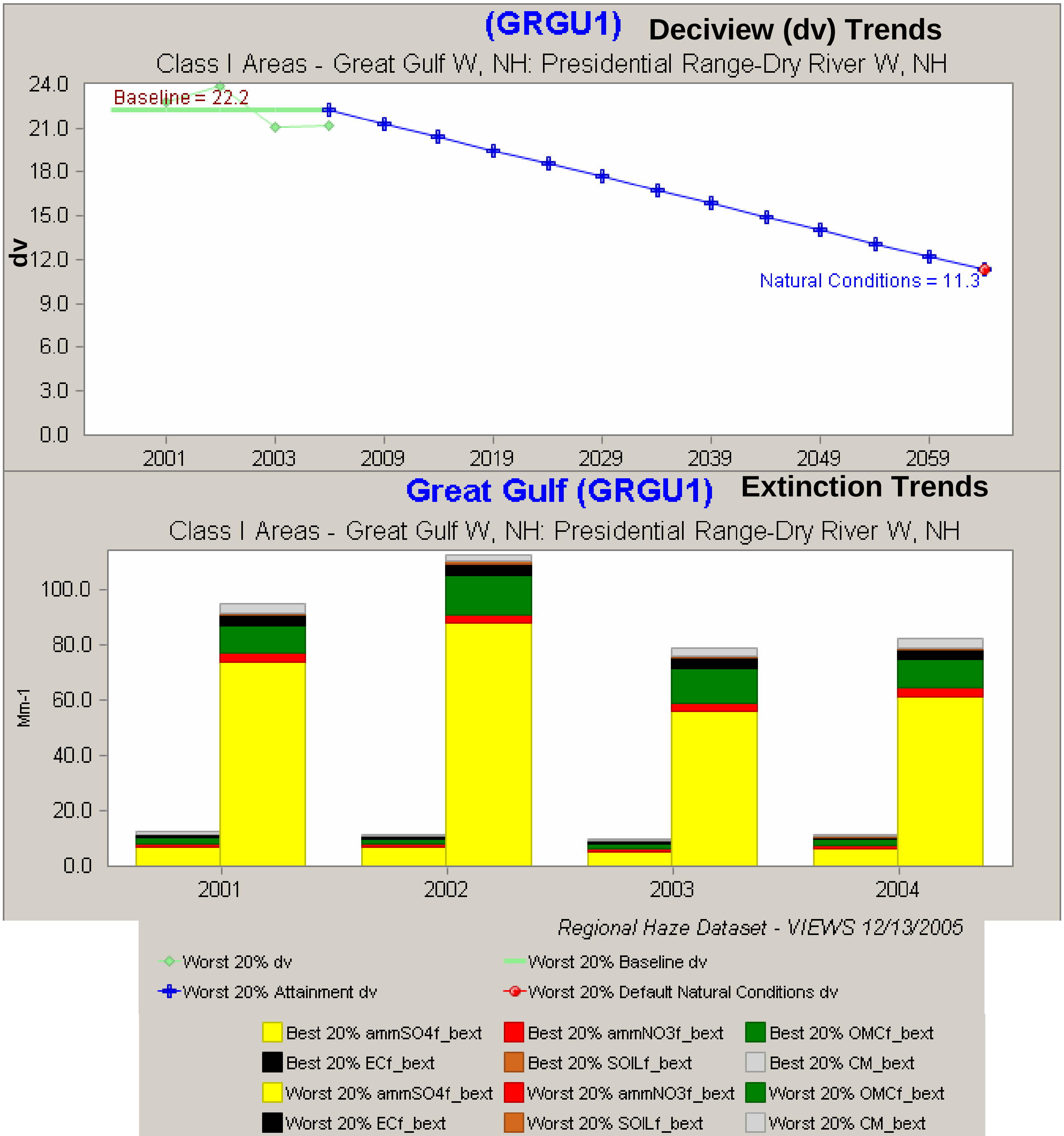


Figure B-4. Monitoring Data from Lye Brook, VT

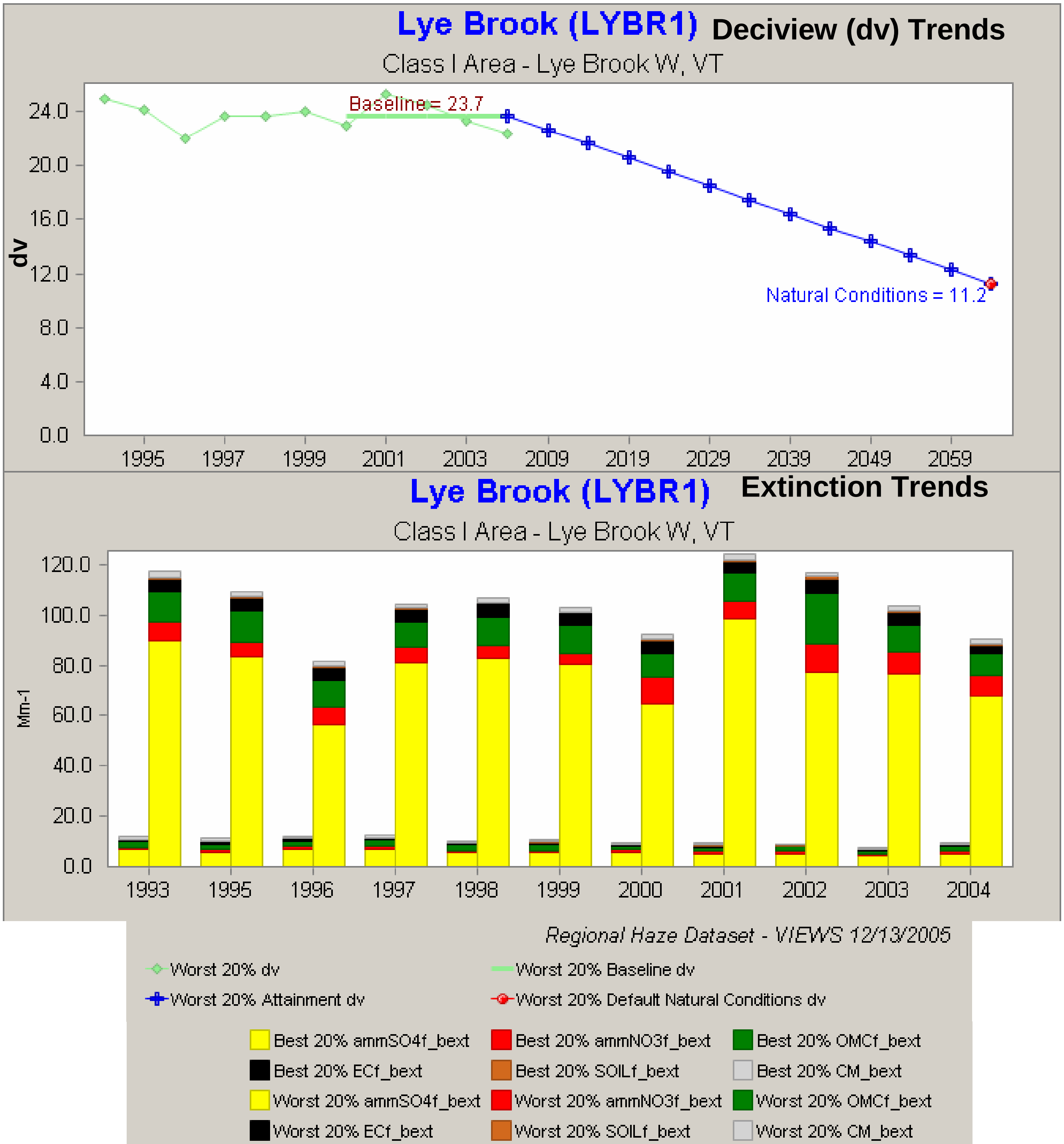


Figure B-5. Monitoring Data from Moosehorn, ME

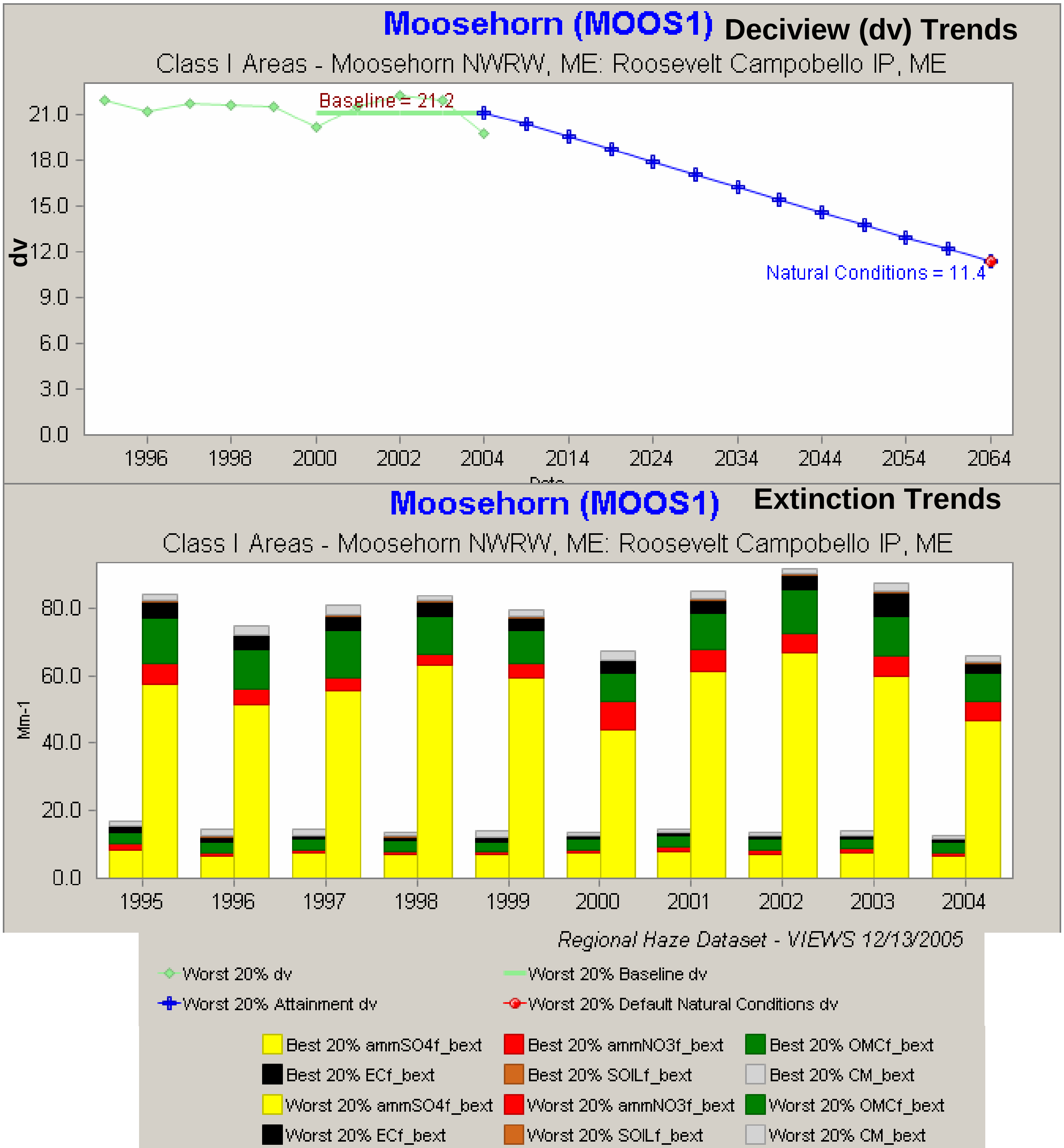


Figure B-6. Monitoring Data from Washington, DC

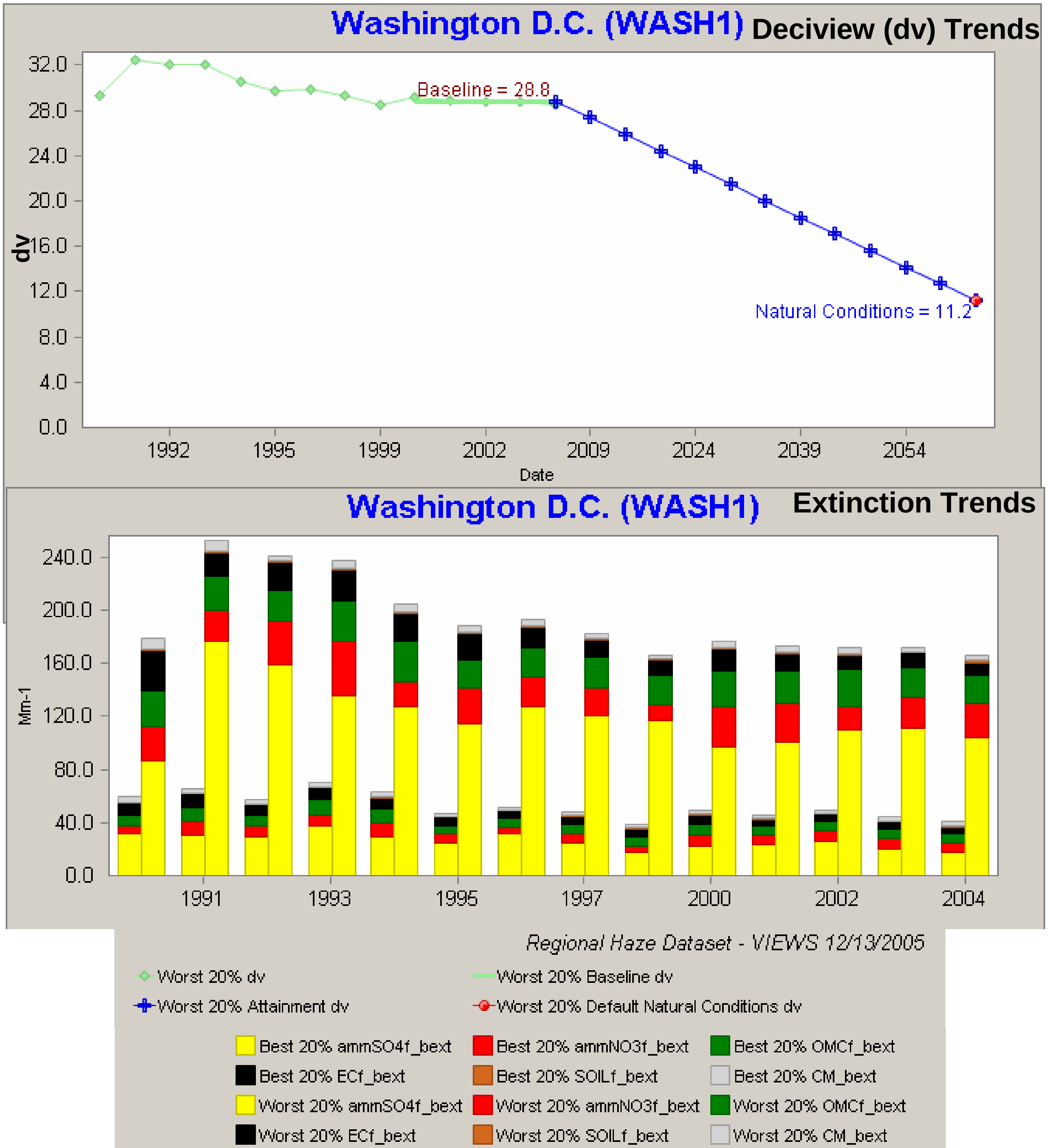
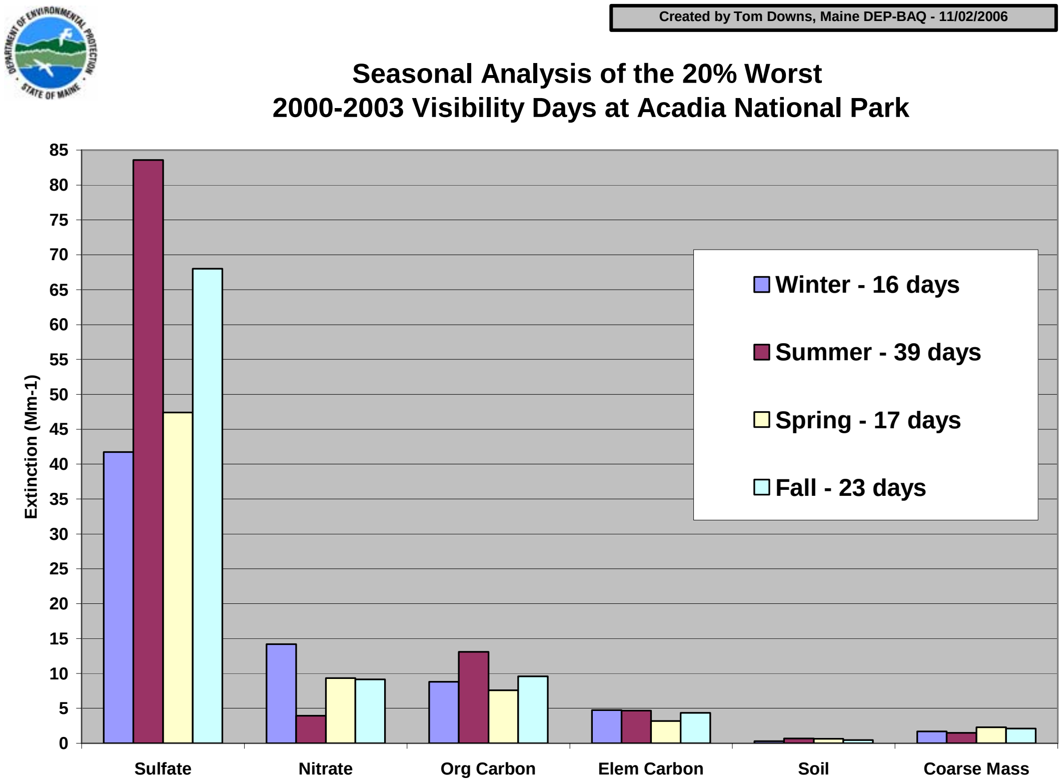


Figure B-7. 20% Worst and Best 2000-2003 Visibility Days at Acadia NP, ME



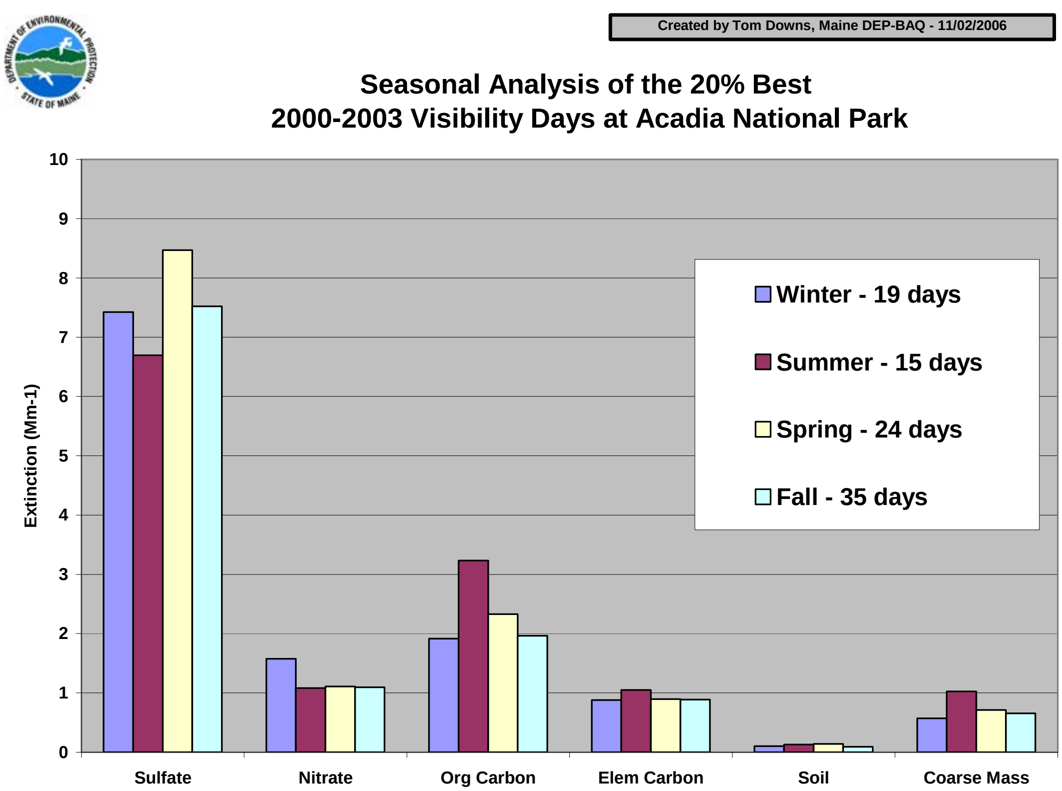
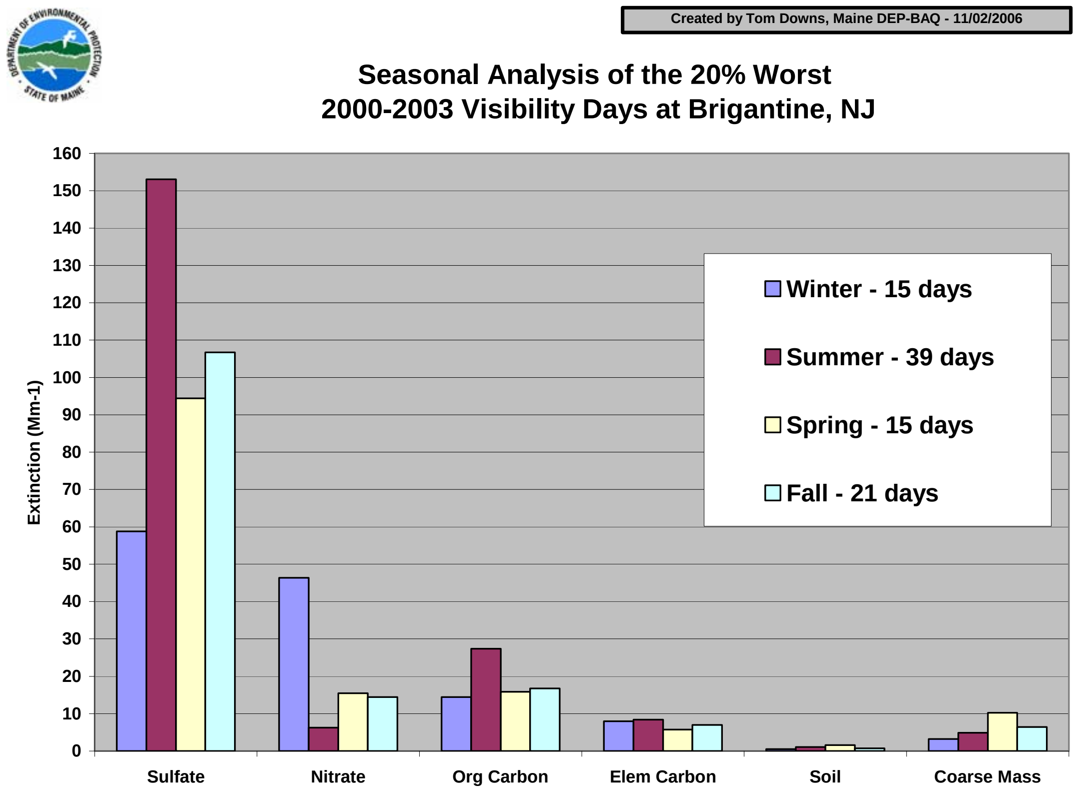


Figure B-8. 20% Worst and Best 2000-2003 Visibility Days at Brigantine, NJ



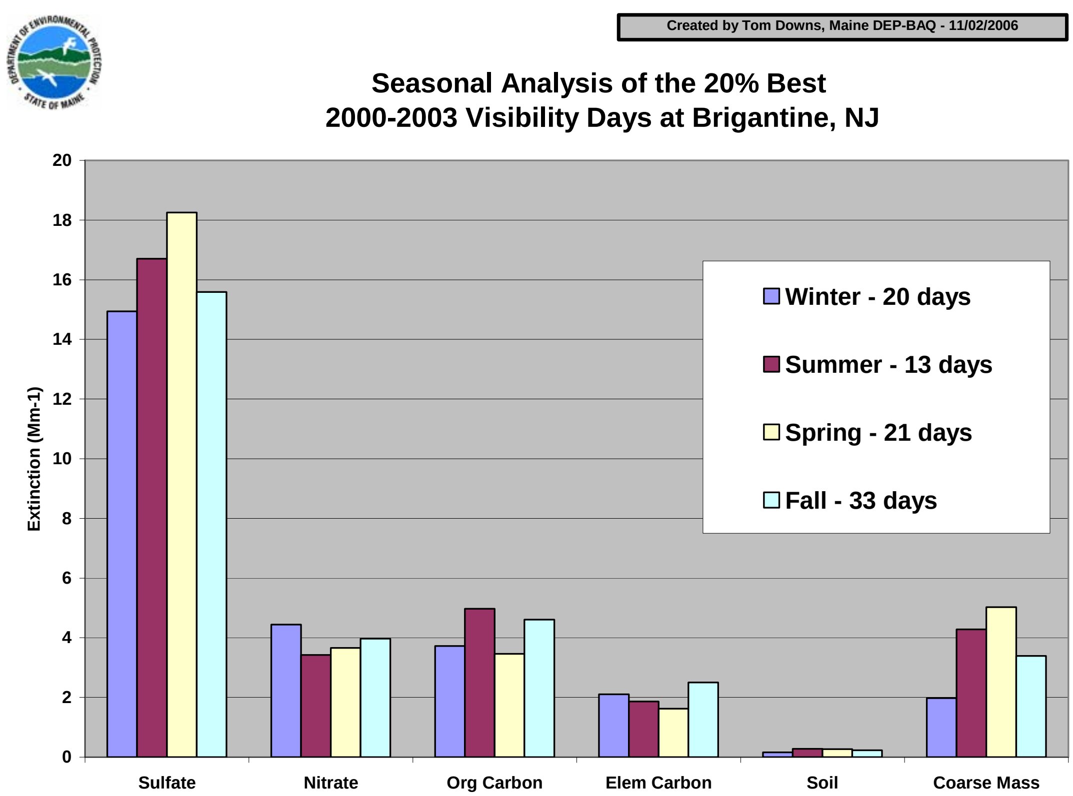
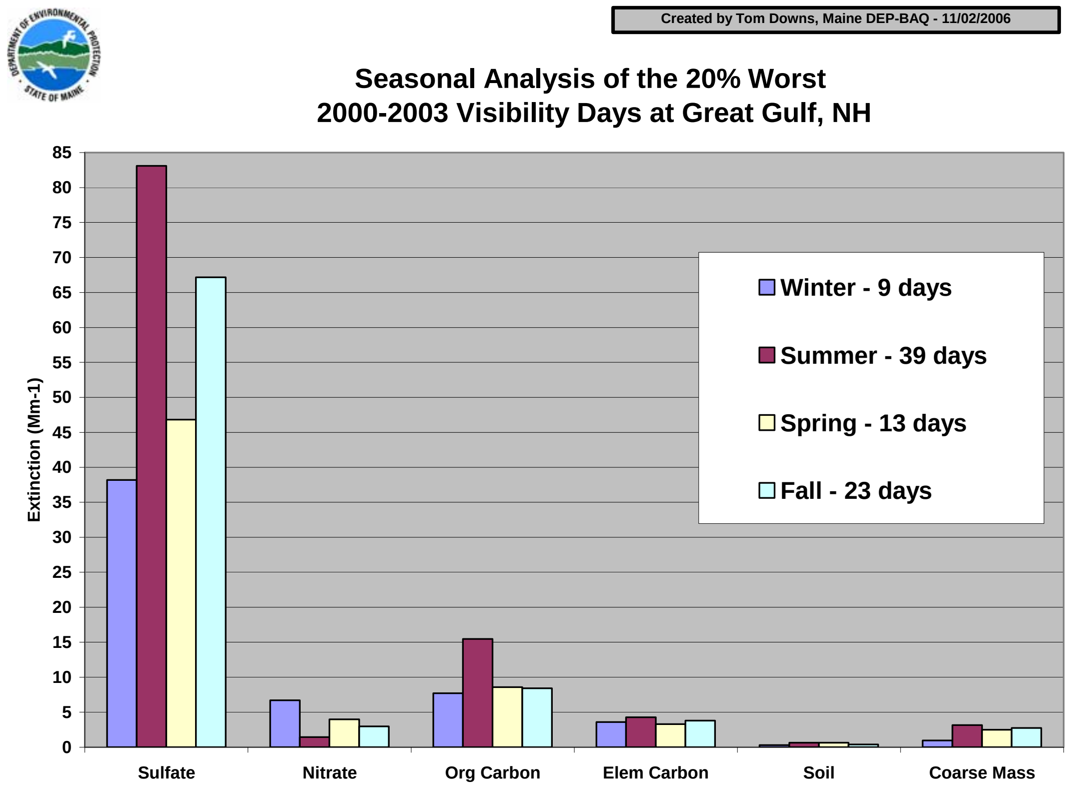


Figure B-9. 20% Worst and Best 2000-2003 Visibility Days at Great Gulf, NH



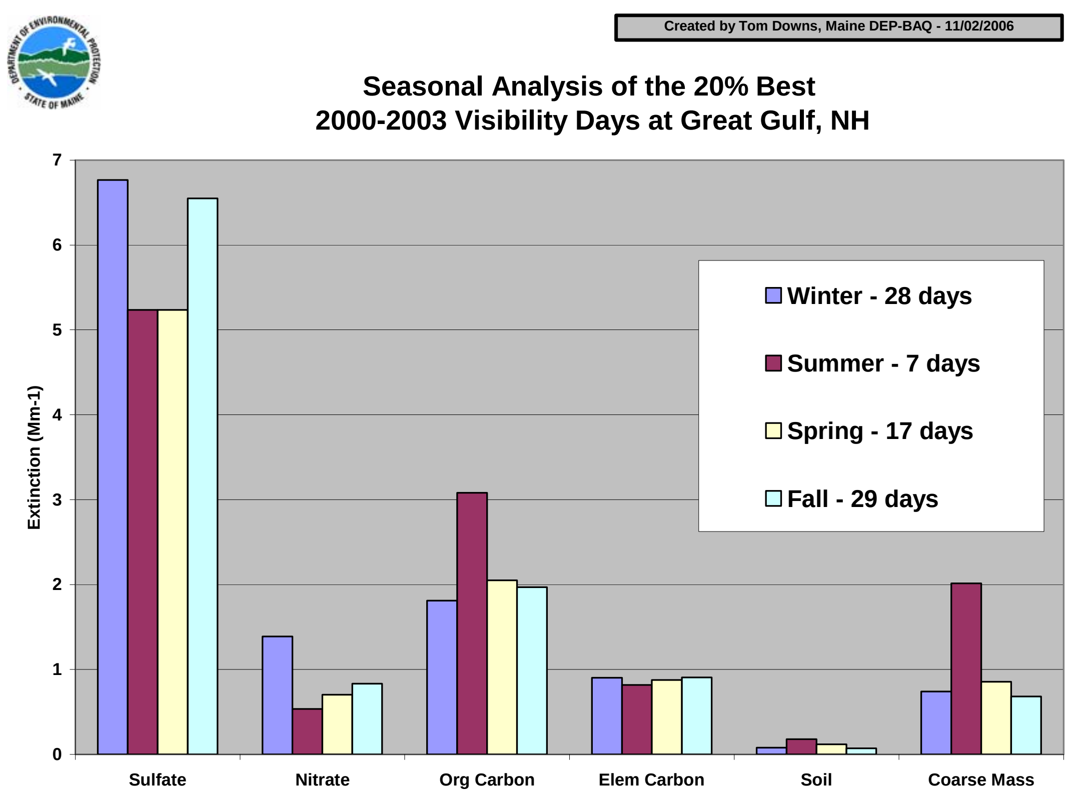
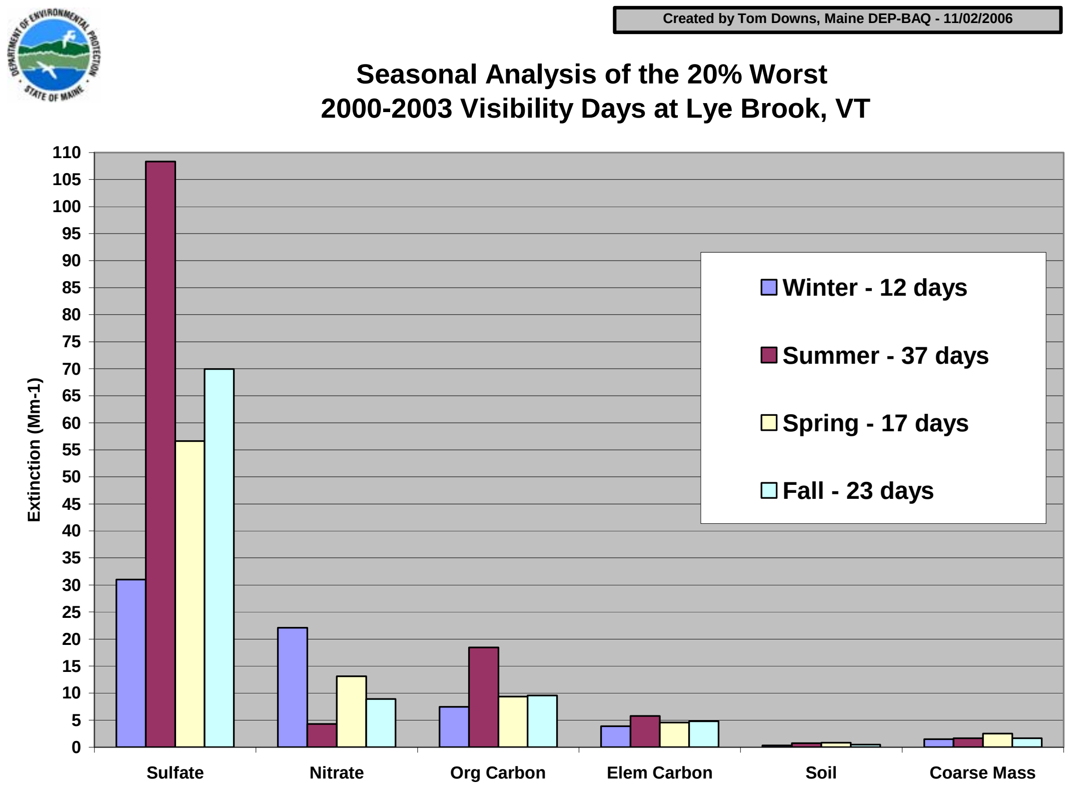


Figure B-10. 20% Worst and Best 2000-2003 Visibility Days at Lye Brook, VT



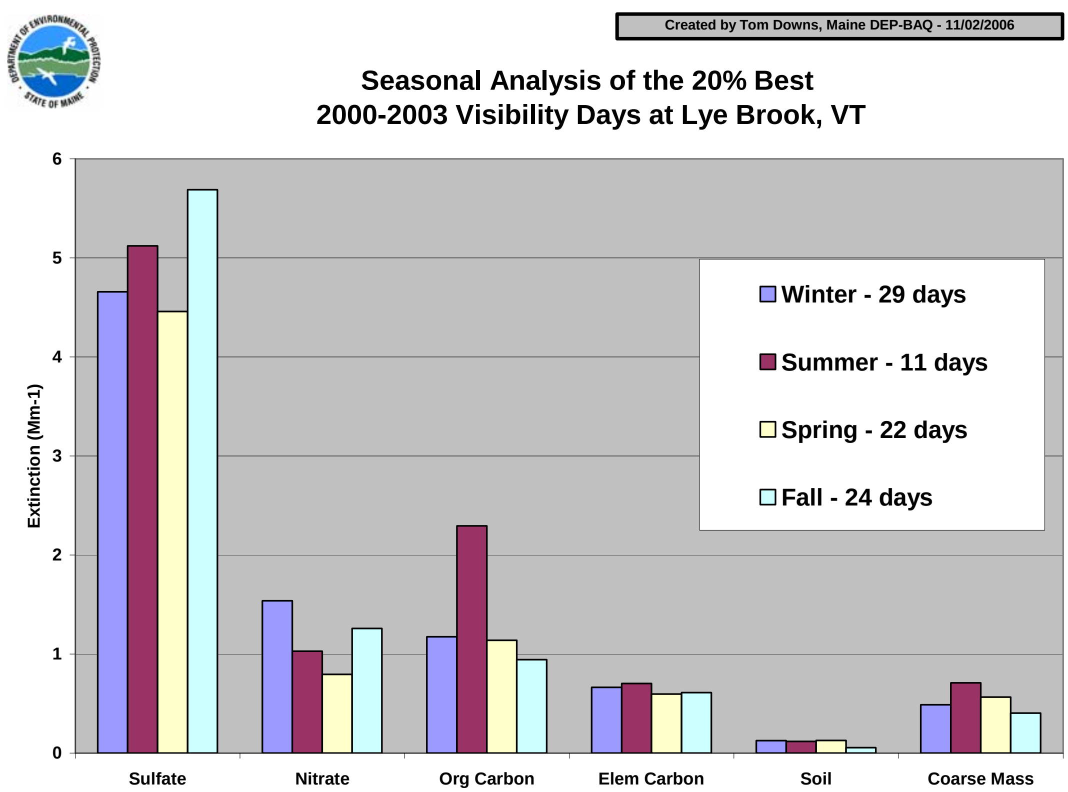
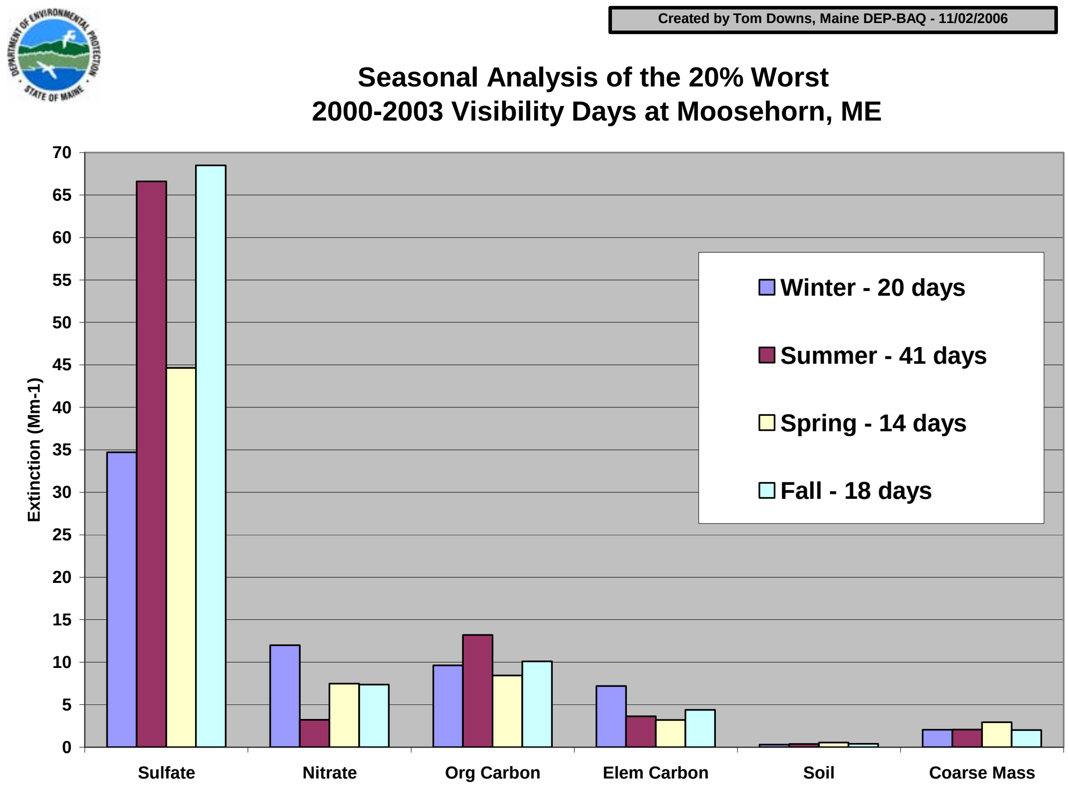


Figure B-11. 20% Worst and Best 2000-2003 Visibility Days at Moosehorn, ME



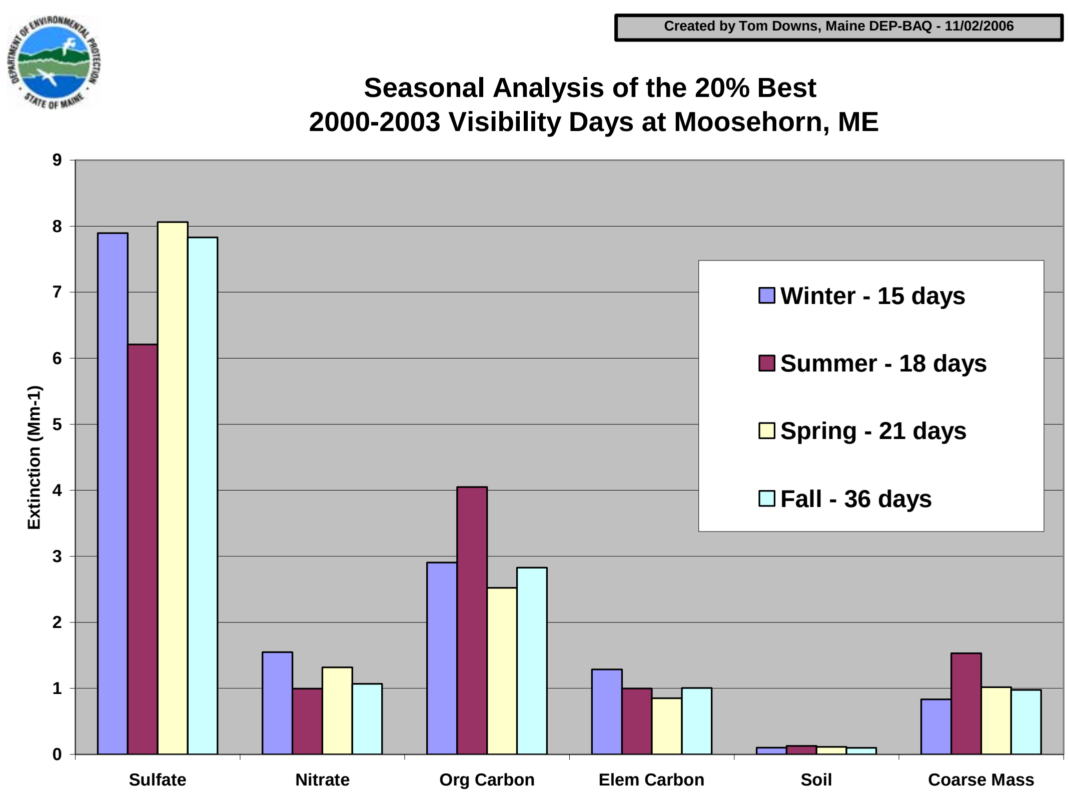
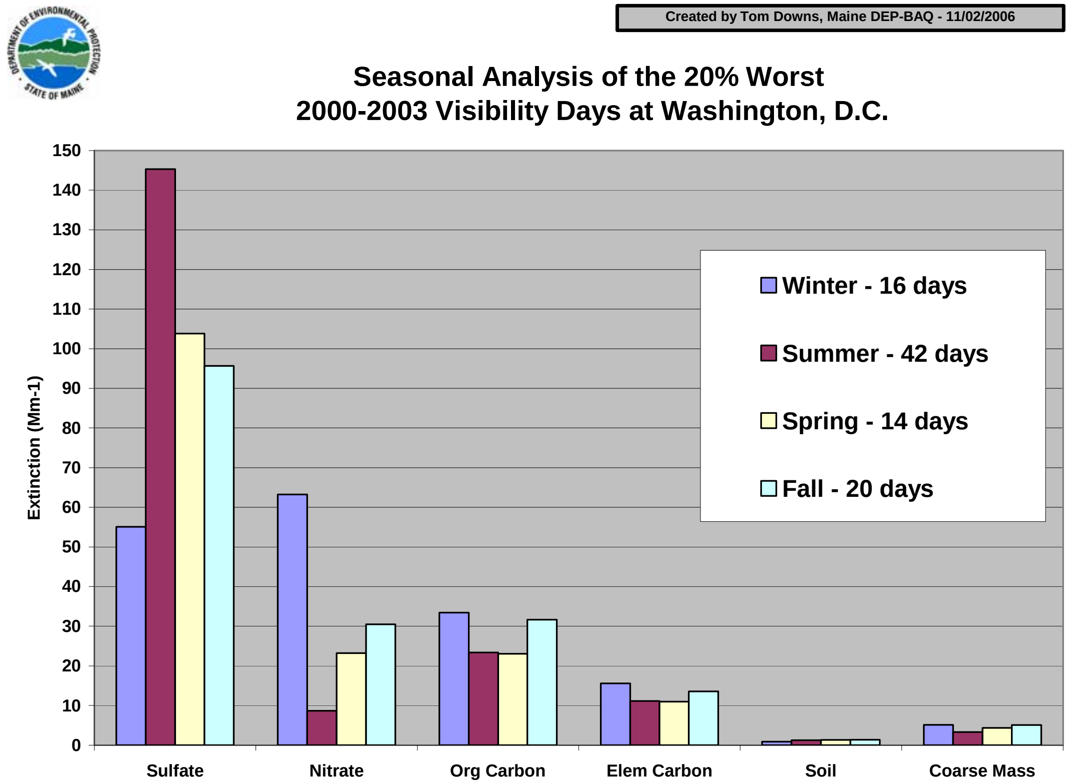


Figure B-12. 20% Worst and Best 2000-2003 Visibility Days at Washington, D.C.



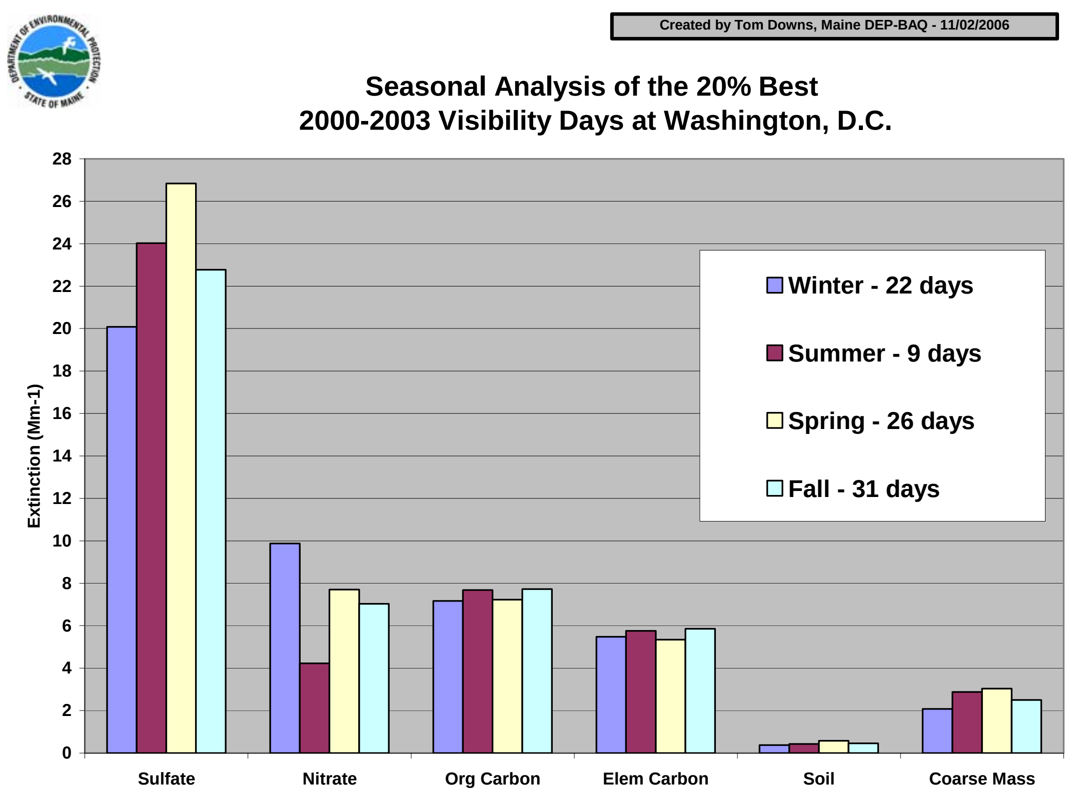
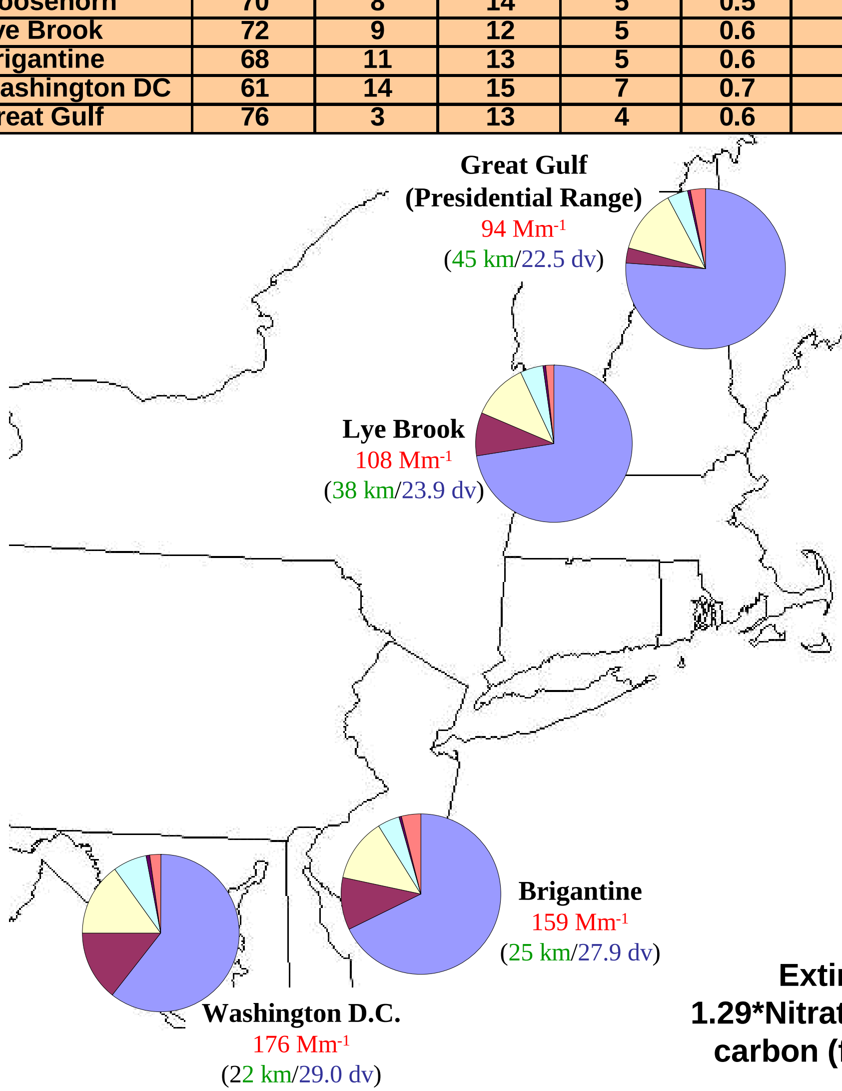


Figure B-13. 20% Best 2000-2003 Visibility Days Speciated Contributions to Extinction

Site	percent contributon to particle extinction					
	Sulfate	Nitrate	Org C	Elem C	Soil	Coarse Mass
Acadia	72	9	11	5	0.6	2
Moosehorn	70	8	14	5	0.5	3
Lye Brook	72	9	12	5	0.6	2
Brigantine	68	11	13	5	0.6	4
Washington DC	61	14	15	7	0.7	2
Great Gulf	76	3	13	4	0.6	3

Created by Tom Downs,
Maine DEP-BAQ 12/13/2005



20% Worst Visibility

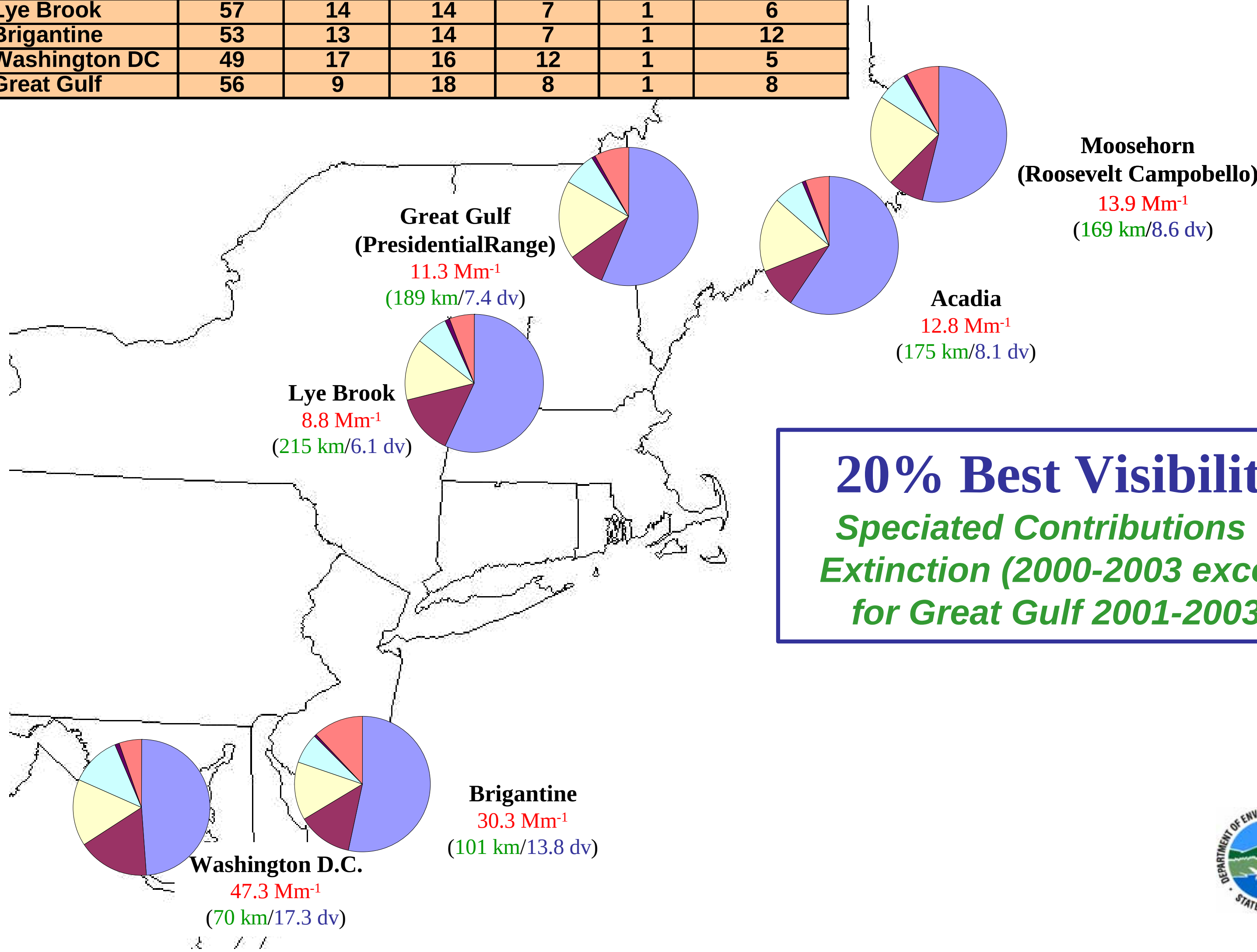
Speciated Contributions to Extinction (2000-2003 except for Great Gulf 2001-2003)

Extinction = 3*f(RH)*sulfate(f) + 1.29*Nitrate(f) + 4*1.4*OC(f) + 10* elemental carbon (f) + 1* soil(f) +0.6 * coarse mass

Figure B-14. 20% Best 2000-2003 Visibility Days Speciated Contributions to Extinction

Site	percent contributon to particle extinction					
	Sulfate	Nitrate	Org C	Elem C	Soil	Coarse Mass
Acadia	60	9	18	7	1	6
Moosehorn	54	9	22	7	1	8
Lye Brook	57	14	14	7	1	6
Brigantine	53	13	14	7	1	12
Washington DC	49	17	16	12	1	5
Great Gulf	56	9	18	8	1	8

Created by Tom Downs,
Maine DEP-BAQ 12/13/2005



20% Best Visibility

Speciated Contributions to Extinction (2000-2003 except for Great Gulf 2001-2003)

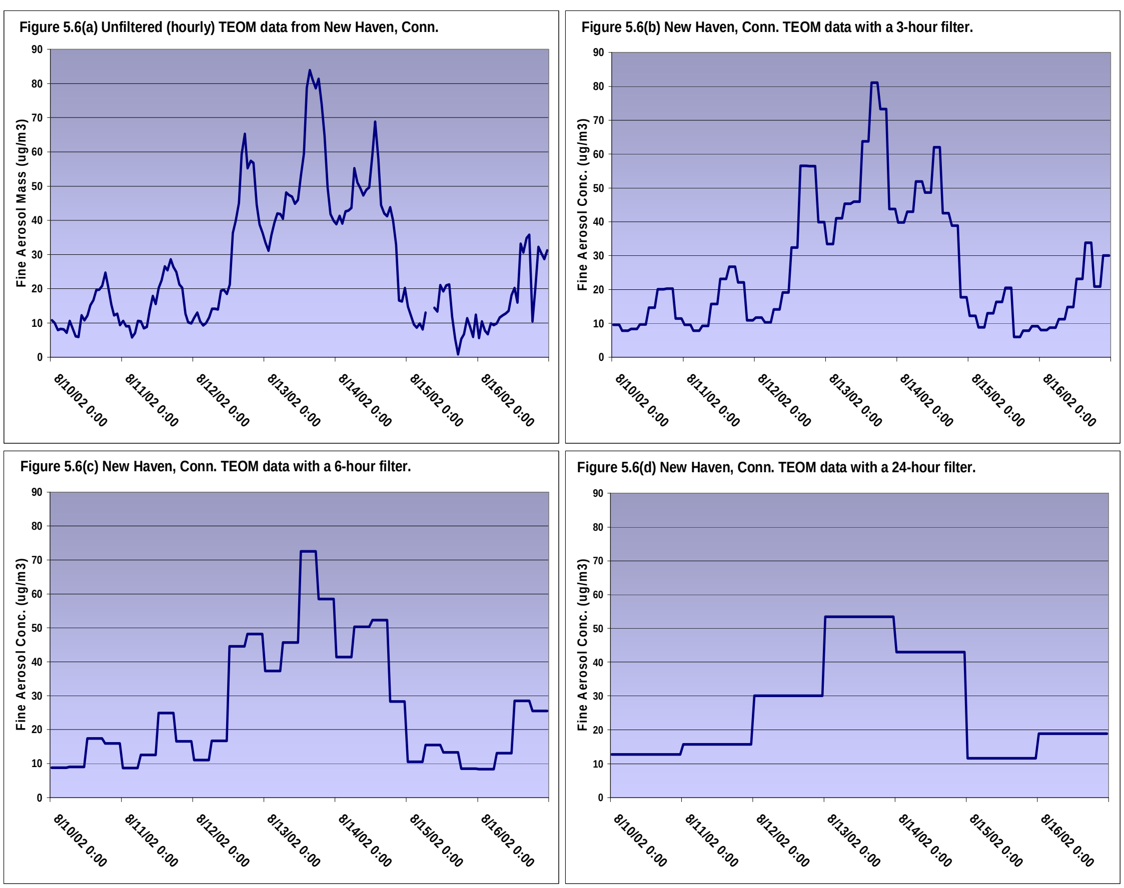
Appendix C: Additional Considerations for $PM_{2.5}$ Air Quality Management

APPENDIX C: ADDITIONAL CONSIDERATIONS FOR $PM_{2.5}$ AIR QUALITY MANAGEMENT

C.1. Averaging times and data interpretation

In analyzing the chemical data available for interpreting the air quality event of August 2002, it is important to point out that the use of different averaging times can have a profound effect on our understanding of the progression of any specific episode. Many subtleties of synoptic-scale meteorology and atmospheric chemistry are "aliased out" of data sets with temporal resolution greater than 3-6 hours. These effects are demonstrated in Figure C-1 which show fine aerosol TEOM data from New Haven for the "episode" period August 10-16, 2002. In these figures, the hourly TEOM values have been aggregated into 3-, 6- and 24-hour mean values. Average concentrations are inversely proportional to the length of the averaging period and the ratio of peak hourly concentration within a daily average ranges from about 1.5 to 1.75 for this episode.

Figure C-1. Effects of averaging times (or temporal resolution) on time series information



C.2. Rural versus urban PM$_{2.5}$ mass

Comparison of PM$_{2.5}$ concentrations from rural areas with those from urban/suburban areas can add significantly to our understanding of the impact on air quality of both urban sources and of medium to long-range fine aerosol transport. To assist with this approach, data from 10 pairs of rural and urban/suburban FRM sites throughout the MANE-VU region were selected and analyzed.

Table C-1 shows basic site description information including the approximate, straight-line distance between the site pairs.

Due to the difficulty in finding a significant number of urban-rural site pairs that operated on the same sampling schedule, sites with a mixture of schedules were used to insure samples representative of the entire MANE-VU region. As a result, three of the 20 sites employed an everyday schedule while two sites sampled every sixth day (the remainder sampled every third day). Data from the three everyday sites were edited so as to include data from the 1-in-3 schedule only. In all, a total of 1098 data points were possible from the 10 site pairs for 2002. Of the 1098 possible point-pairs, 951 (87%) were valid and were used in this analysis.

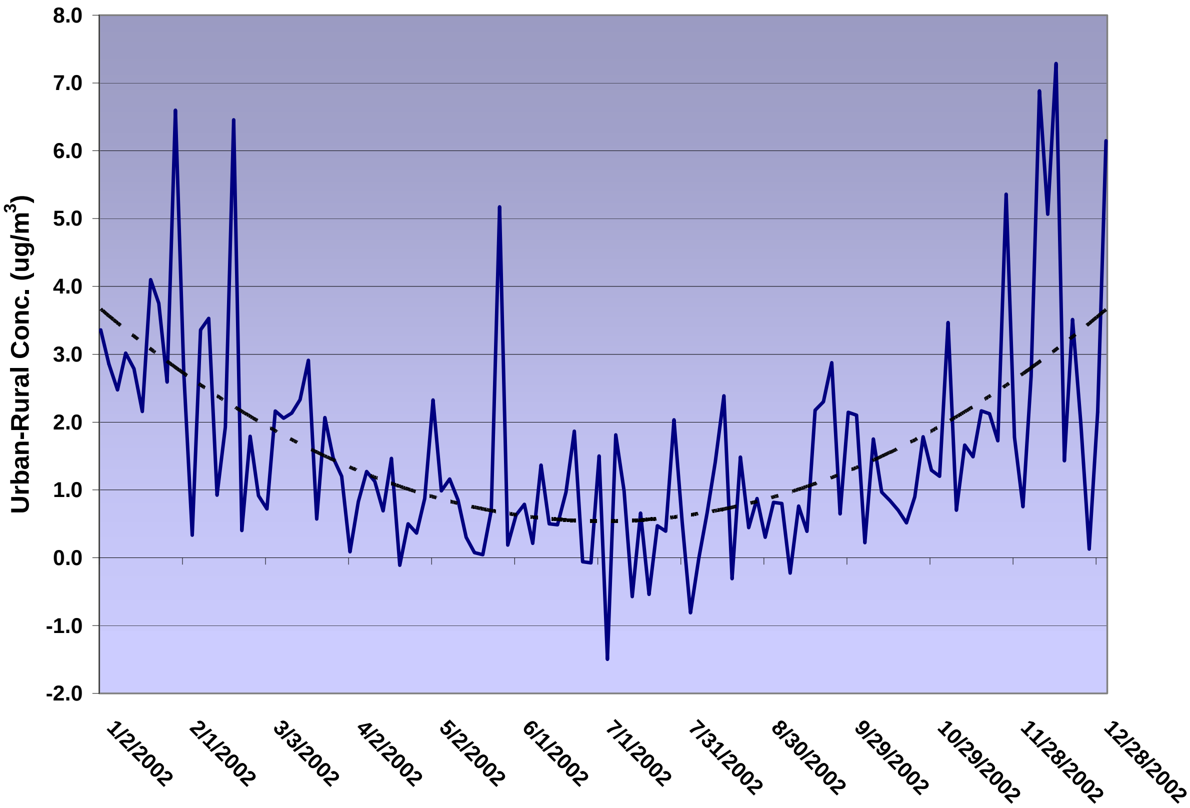
Table C-1. MANE-VU urban-rural site pair information

State	Site No	City	Land use	Location type	Longitude	Latitude	Inter-site Distance (mi)
DE	100051002		Agricultural	Rural	-75.55560	38.98470	
DE	100010002	Seaford	Residential	Suburban	-75.61310	38.64440	24.0
MA	250154002	Ware	Forest	Rural	-72.33472	42.29833	
MA	250130016	Springfield	Commercial	Urban & Center City	-72.59140	42.10890	17.6
MD	240030014		Agricultural	Rural	-76.65310	38.90250	
MD	245100049	Baltimore	Residential	Urban & Center City	-76.63750	39.26170	25.2
ME	230052003	Cape Elizabeth	Residential	Rural	-70.20778	43.56083	
ME	230010011	Lewiston	Commercial	Urban & Center City	-70.21500	44.08940	37.0
NJ	340218001		Agricultural	Rural	-74.85470	40.31500	
NJ	340210008	Trenton	Residential	Urban & Center City	-74.76360	40.22220	7.7
NY	360010012	Albany	Agricultural	Rural	-73.75690	42.68070	
NY	360930003	Schenectady	Residential	Suburban	-73.94020	42.79960	11.7
NY	361030001	Babylon	Commercial	Rural	-73.42030	40.74580	
NY	360590013	Bethpage	Residential	Suburban	-73.49060	40.76080	3.3
NY	360130011	Westfield	Agricultural	Rural	-79.60250	42.29080	
PA	420490003	Erie	Commercial	Suburban	-80.03860	42.14180	22.2
PA	420030093		Residential	Rural	-80.02080	40.60720	
PA	420030021	Pittsburgh	Residential	Suburban	-79.94140	40.41360	14.0
PA	420290100		Commercial	Rural	-75.76860	39.83440	
DE	100031012	Newark	Residential	Suburban	-75.76170	39.69190	10.0

As expected, urban/suburban areas, with their rich supply of emission sources, almost always reported higher concentrations than their nearby sister sites in rural areas. Of the 951 valid data pairs, 660 showed higher urban/suburban levels while 291 cases showed higher rural levels.

One interesting aspect of the 2002 urban-rural data concerns the pattern in seasonal differences between such site pairs. Figure C-2 shows the difference (urban-rural) between the 10 site pairs as a time series.

Figure C-2. Difference in FRM data between 10 urban-rural site pairs for 2002



Although some rural-to-urban seasonal differences are to be expected, the variation in the magnitude of this difference is surprising. In the warm/hot months, the mean rural/urban difference amounts to no more than ~0.7 $\mu g/m^3$ (based on a best-fit 2nd order polynomial curve), which is a relatively small differential. However, during the cool/cold months that difference climbs to almost 4 $\mu g/m^3$, demonstrating a total annual seasonal variation of at least 3 $\mu g/m^3$. Because the mean annual concentration of all sites is 12.6 $\mu g/m^3$, an annual variation of 3 $\mu g/m^3$ becomes significant.

One explanation for the observed seasonal variation concerns the temporal distribution of local and transported emissions. In the summertime, MANE-VU sites repeatedly experience sulfate events due to transport from regions to the south and west. During such events, rural and urban sites throughout MANE-VU record high (i.e., >15 $\mu g/m^3$) daily average $PM_{2.5}$ concentrations. During summer stagnation events, atmospheric ventilation is poor and local emissions are added to the transported burden with the result that concentrations throughout the region (rural and urban) are relatively uniform. There are enough of these events to drive the urban-rural difference down to less than 1 μg/m^3 during warm/hot months.

During the wintertime, strong local inversions frequently trap local emissions during the overnight and early morning periods, resulting in elevated urban concentrations. Rural areas experience those same inversions but have relatively fewer local sources so that wintertime concentrations in rural locations tend to be lower than those in nearby urban areas. Medium and long-range fine aerosol transport events do occur during the winter but at a much reduced rate compared to summertime. So, it is the interplay between local and distant sources as well as meteorological conditions that drive the observed seasonal urban-rural difference in FRM concentrations.

C.3. Seasonal relationship between $PM_{2.5}$ and NO_X

Because nitrogen oxides (NO_X) can be a good indicator of regional as well as local emissions, NO_X data for the MANE-VU region was downloaded from USEPA's AQS. Ultimately, data from six widely separated MANE-VU NO_X sites were selected (one site each in CT, DC, MA, NH, PA and VT). Sites were selected both for high data capture rates and geographic location. The NO_X data were then aggregated into regional averages on a daily basis and compared to $PM_{2.5}$ FRM data from 34 "everyday" sampling sites (which were also averaged on a regional basis).

During 2002, there were virtually no periods when regional mean $PM_{2.5}$ concentrations rose above 20 μg/m^3 and were not accompanied by rising (or already high) NO_X concentrations. However, as seen in Figure C-3, NO_X concentrations vary widely on an annual basis and tend to occur out-of-sync with fine particle concentrations.

Although the min/max extremes of these two pollutants are offset in time, they are highly correlated during some parts of the year. For example, Figure C-4 shows the regional $PM_{2.5}$ and NO_X data for the coldest (Jan., Feb., Nov., and Dec.) and hottest (May, June, July and Aug.) seasons of 2002. Wintertime NO_X and $PM_{2.5}$ concentrations are rather well correlated (r^2=0.67) while summertime concentrations are not at all linked. This dichotomy can be explained by several coincident effects including: 1) reduced UV radiation during cold months (which prevents photolysis of NO_2 to O_3); 2) the increase in space heating requirements from stationary sources (which preferentially increases morning NO_X emissions; increased NO_X emissions due to "cold-start" mobile source engines and 3) decreased mixing height depths due to reduced solar input (which allows morning concentrations to build quickly). Note that the Spring/Fall $PM_{2.5}$ vs. NO_X correlation (not shown) lies about mid-way between the winter/summer values shown in Figure C-4.

Figure C-3. Regional $PM_{2.5}$ and NO_X in 2002

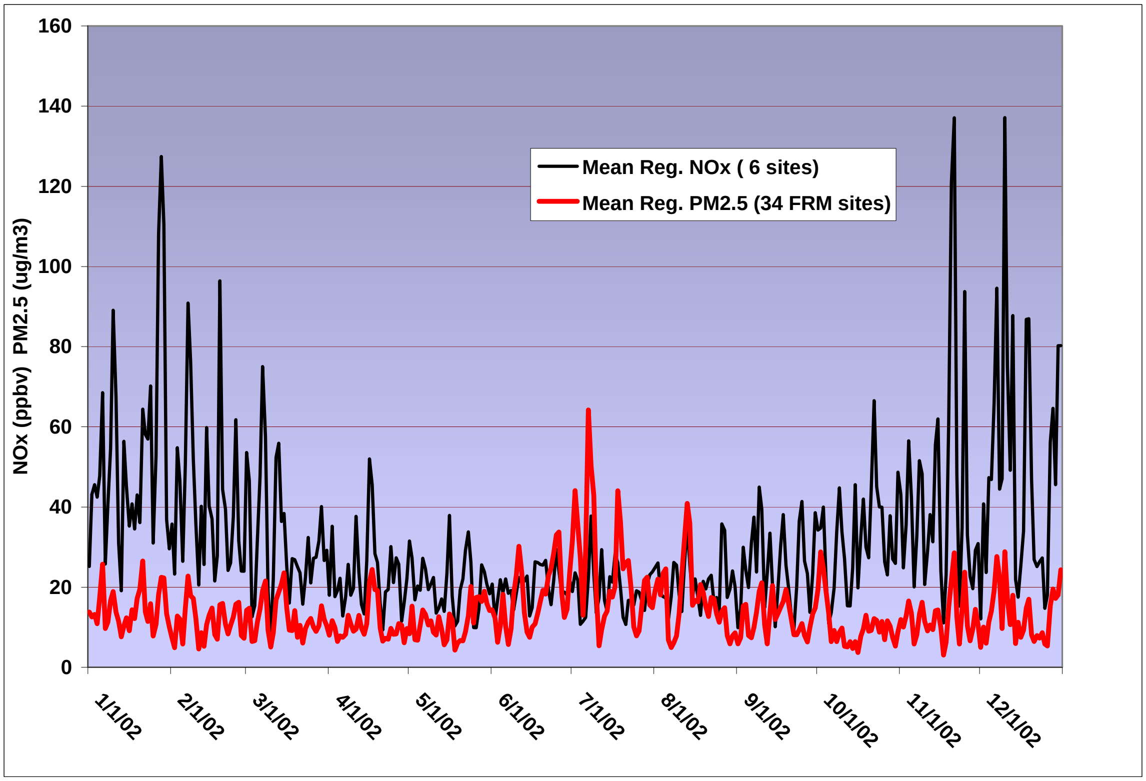
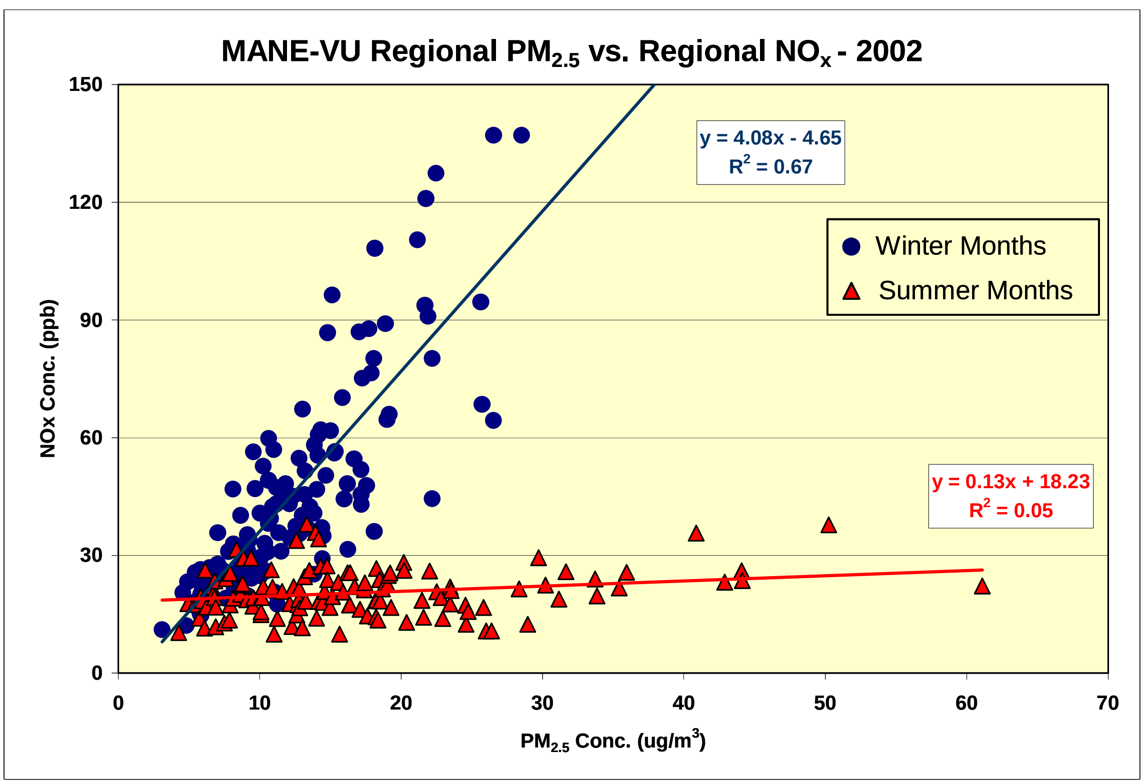


Figure C-4. $PM_{2.5}$ vs. NO_X correlation by season



Appendix 2B

Conceptual Model for PM2.5 in Connecticut

Prepared by
Kurt Kebschull
Connecticut DEP

April 2008

Conceptual model for Particulate Matter (PM) in Connecticut

Executive Summary

PM2.5 events in CT can be categorized as winter or summer time events.

Winter events can be characterized as having:

1. 98^{th} percentile value > 32 μg/m^3;
2. Low mixing heights (250m) and E/F Pasquill stability class (shallow, little mixing) for an extended period of time;
3. Warm fronts or overrunning warm air forcing low mixing heights with non-stagnant wind conditions;
4. Low level winds from the southwest (following the urban northeast corridor);
5. Extended periods of high values not just short duration diurnal rush hour peaks;
6. The primary PM source is motor vehicle (MV) (fresh and aged) and secondary aerosol (volatile species). Lesser contributions come from oil combustion aerosol and wood smoke;
7. Constituent aerosol is primarily carbon (oc/ec) and;
8. Wintertime sulfate aerosol is less than summertime sulfate aerosol. This can be attributed to cold temperature affinity of ammonium to nitrate over sulfate, the shallow mixing prohibiting deep mixing of Midwest aerosol downward, and reduced EGU emissions during the cold months (no air conditioning).

Summertime events can be characterized as having:

1. 98^{th} percentile value > 40 μg/m^3;
2. High mixing heights 600-1200m coast, >1500m inland;
3. Bermuda high weather conditions lasting over several days;
4. Low level winds from the SSW-SW (NYC CMSA), midlevel winds from the SW and WSW enhanced by the nocturnal low level jet (LLJ) (following urban NE corridor;)
5. Extended periods of high values not just short duration diurnal rush hour peaks;
6. The primary PM25 source is coal burning EGUs, followed by carbon from mobile sources;
7. Constituent aerosol is primarily ammonium sulfate, followed by organic carbon and;
8. Summertime sulfate aerosol is greater than wintertime sulfate aerosol. This can be attributed to warm temperature affinity of ammonium to sulfate over nitrate, the deep mixing of western aerosol downward, and increased EGU emissions during the warm months (air conditioning).

1.0 Wintertime PM2.5 Event Examples

With the recent availability of highly time resolved PM2.5 and pollutant gas measurements in CT, source type and region determinations can be made. One such site is in Thomaston, CT. It is a rural site that is adjacent to a four-lane highway, used primarily for commuting to Waterbury and points south, and truck transport to and from

Northwestern, CT. It is also within a few kilometers of some light industry and residential heating sources. In addition, it is in a valley with steep 300-500m sides, channeling airflow north and south (See Figures 1.1 and 1.2). The increased time resolution helps to differentiate between local and regional sources. Differentiation between rush hour, aging species and regional aerosol becomes apparent when time series of pollutants and wind speed are examined   For example, a short duration peak of NO, CO, and black carbon between 7 and 10 am in the morning point can indicate a motor vehicle source for a monitor located close to a highway. This will be discussed further in Section 1.3 and also in Figure 1.3.6.

Figure 1.1 Topographic Features of Thomaston, CT Monitoring Site

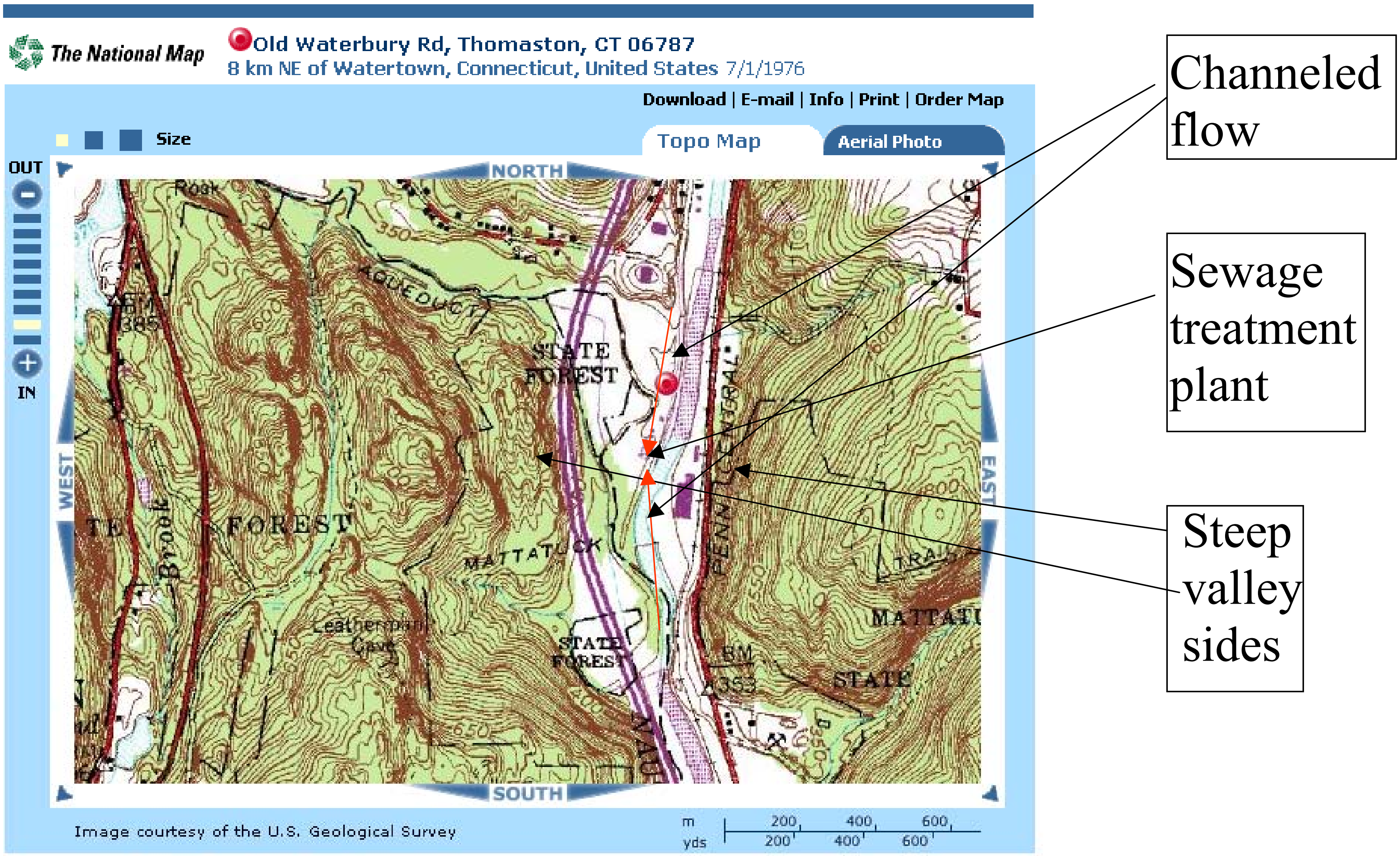
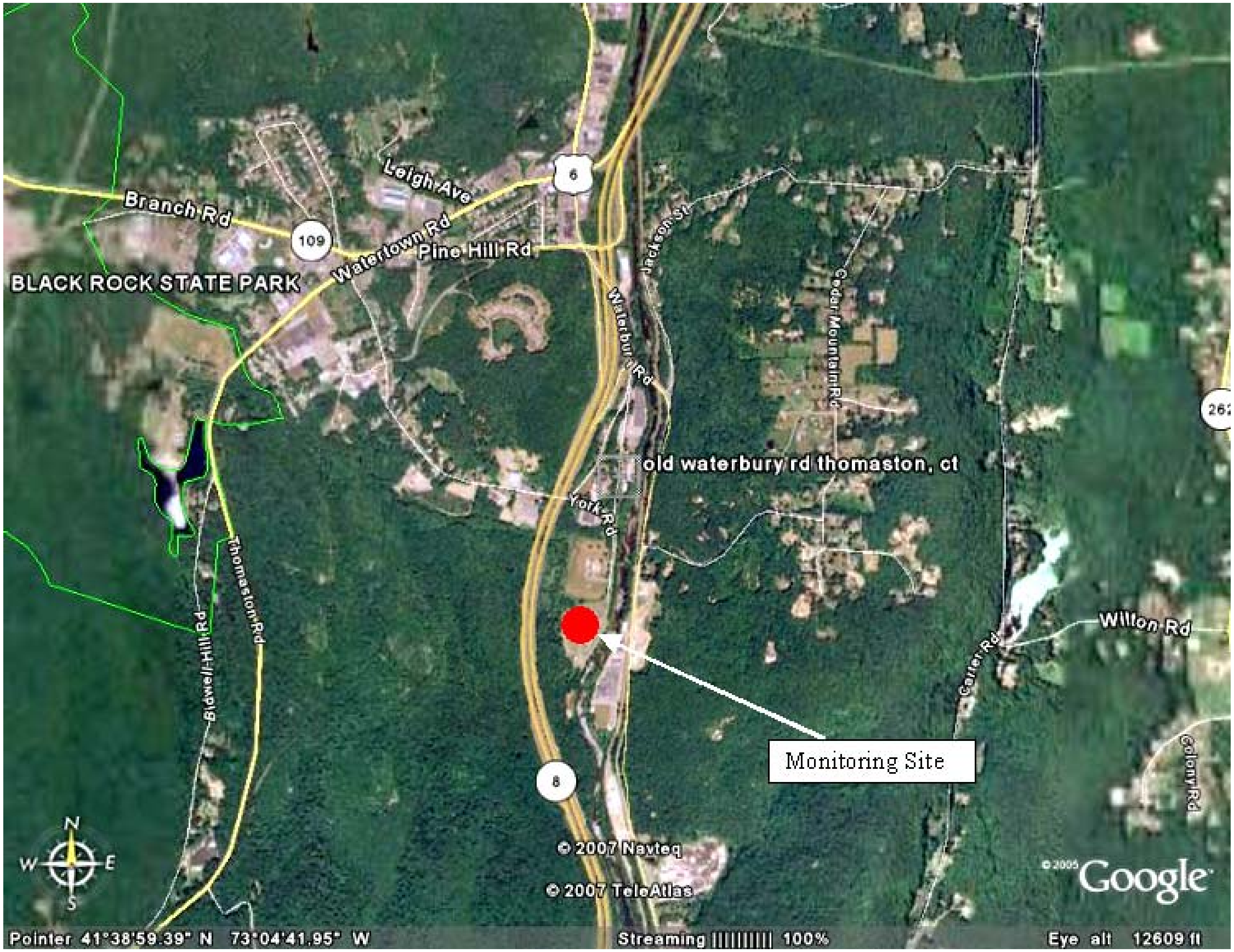


Figure 1.2 Satellite Photo of the Thomaston, CT monitoring site



1.1 January 7-8, 2008 event

An approaching warm front, warm surface temperatures (Figure 1.1.1), SSW winds (Figure 1.1.2) and a stream of unseasonably warm overriding air aloft (+7-8ºC at 850 mb) (Figure 1.1.3) provided the stable conditions necessary for trapping and transporting pollutants in a shallow boundary layer of 250m (Figure 1.1.4). Daily average values above 50 ug/m^3 and hourly values above 60 ug/m^3 were measured at Danbury and Bridgeport in SW CT (Figure 1.1.2). Hourly SO_4 values of 4-5 µg/m^3 and regionally predicted values between 2 and 4 ug/m^3 hinted at a low sulfate eastern source to the PM2.5 measured (See Figure 1.1.5). Given the sources are usually: crustal (clean conditions), sulfate (Midwest EGUs) or carbonaceous material (urban MV), the latter is most likely.

Figure 1.1.1 Surface Analysis for 1-7-08

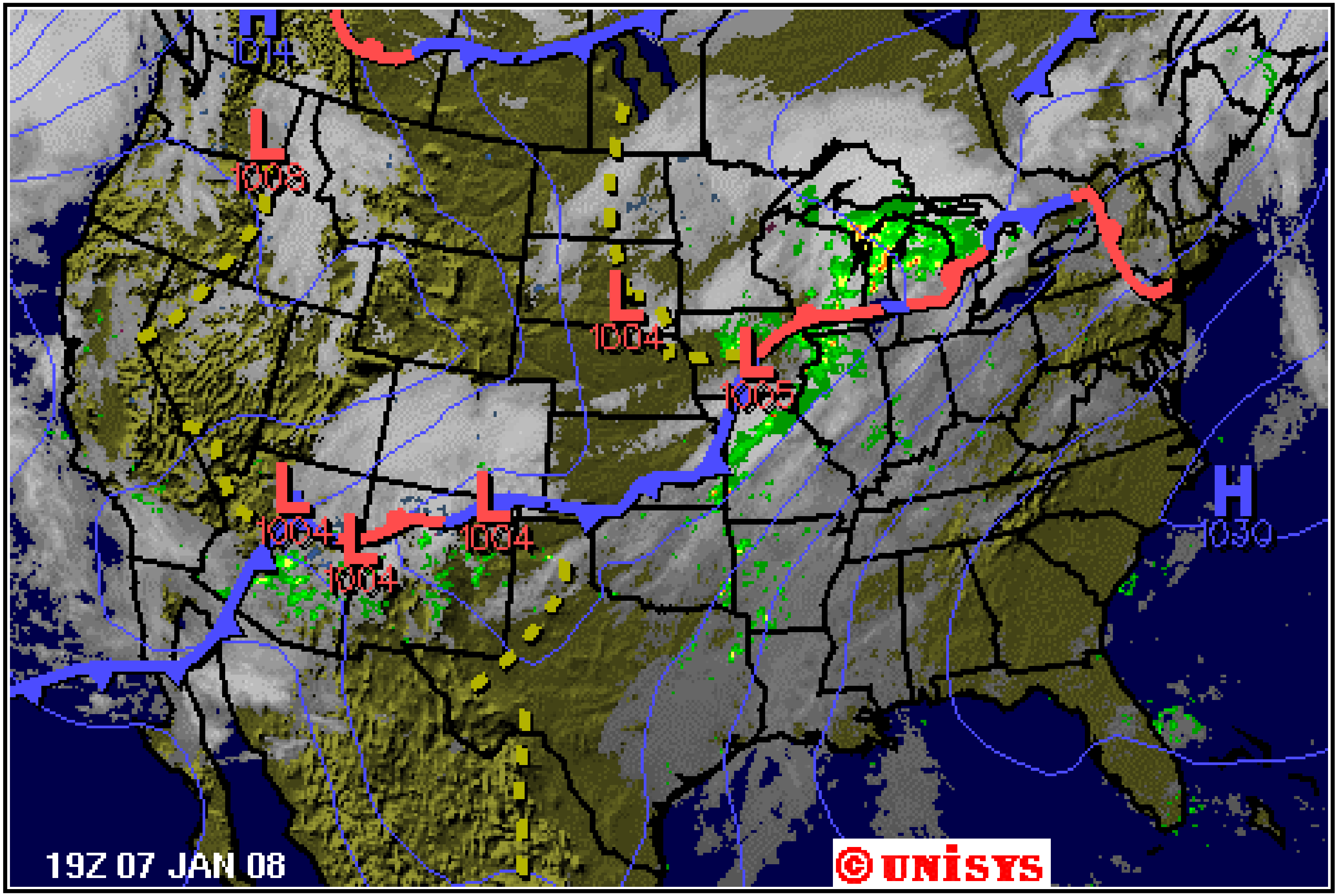


Figure 1.1.2 PM2.5 and 24 hr Back Trajectories for 1-7-08

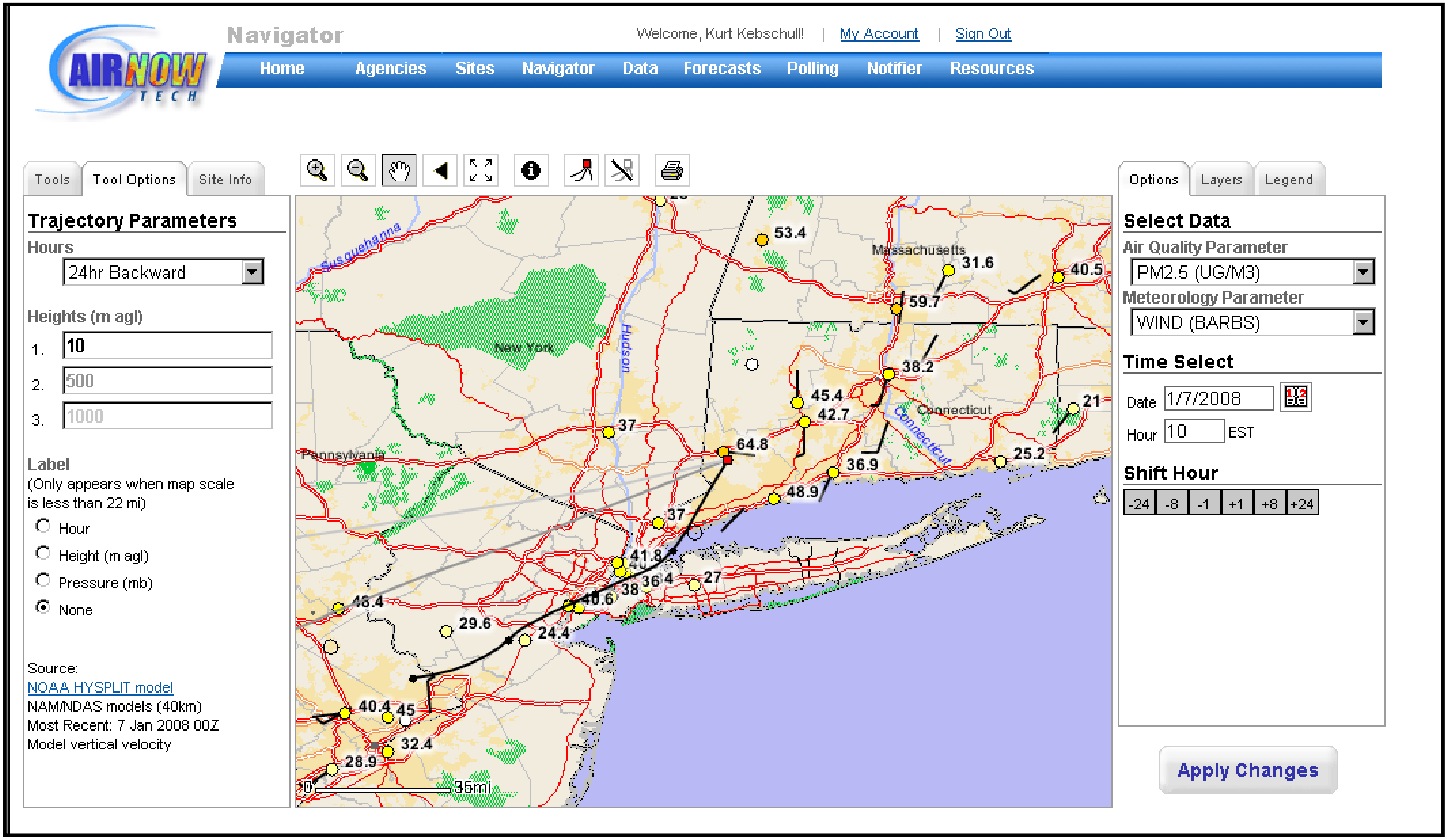


Figure 1.1.3   850 mb analysis for 1-7-08 12Z

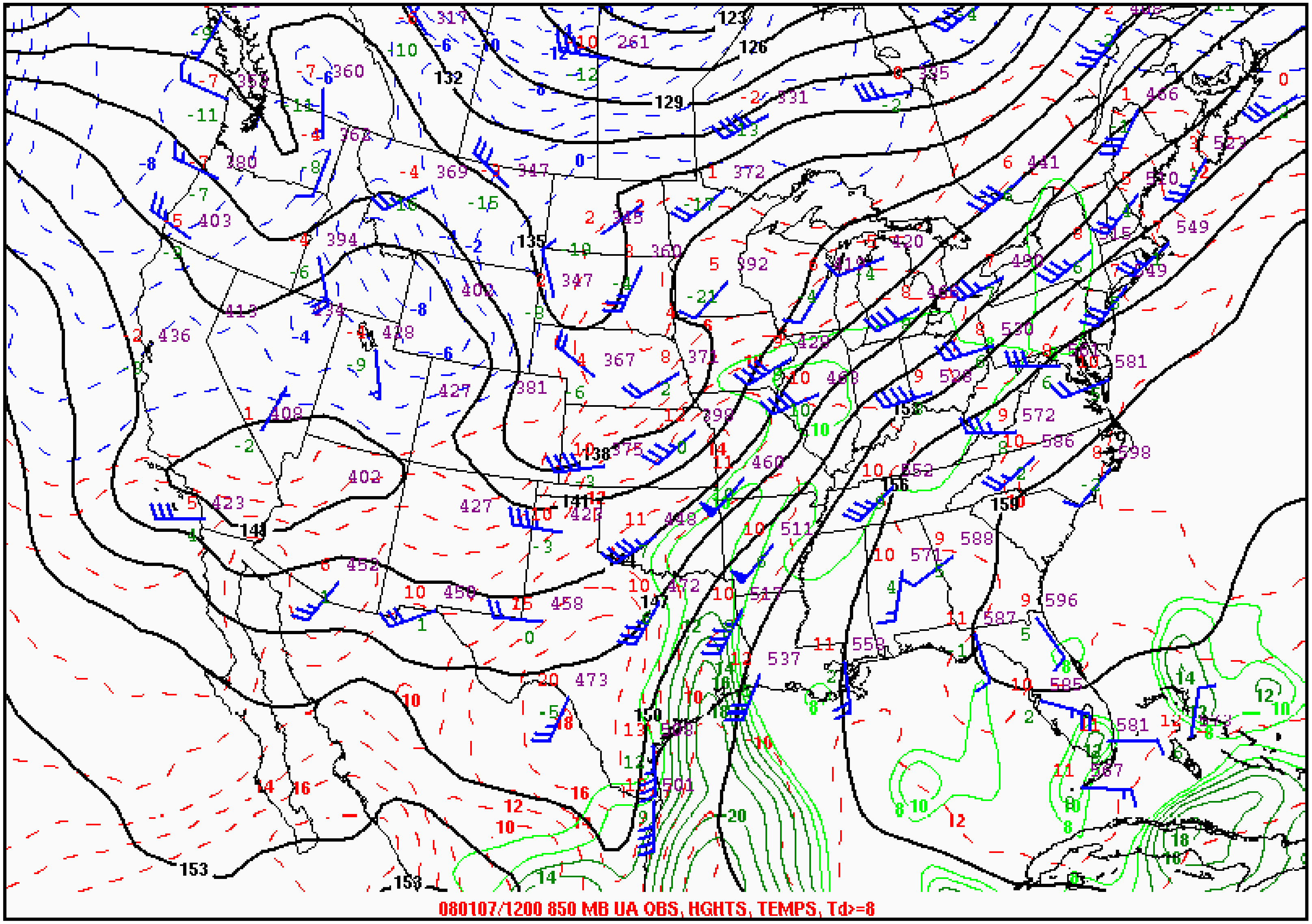


Figure1.1.4 NAM model Stability for 1/7-8/2008

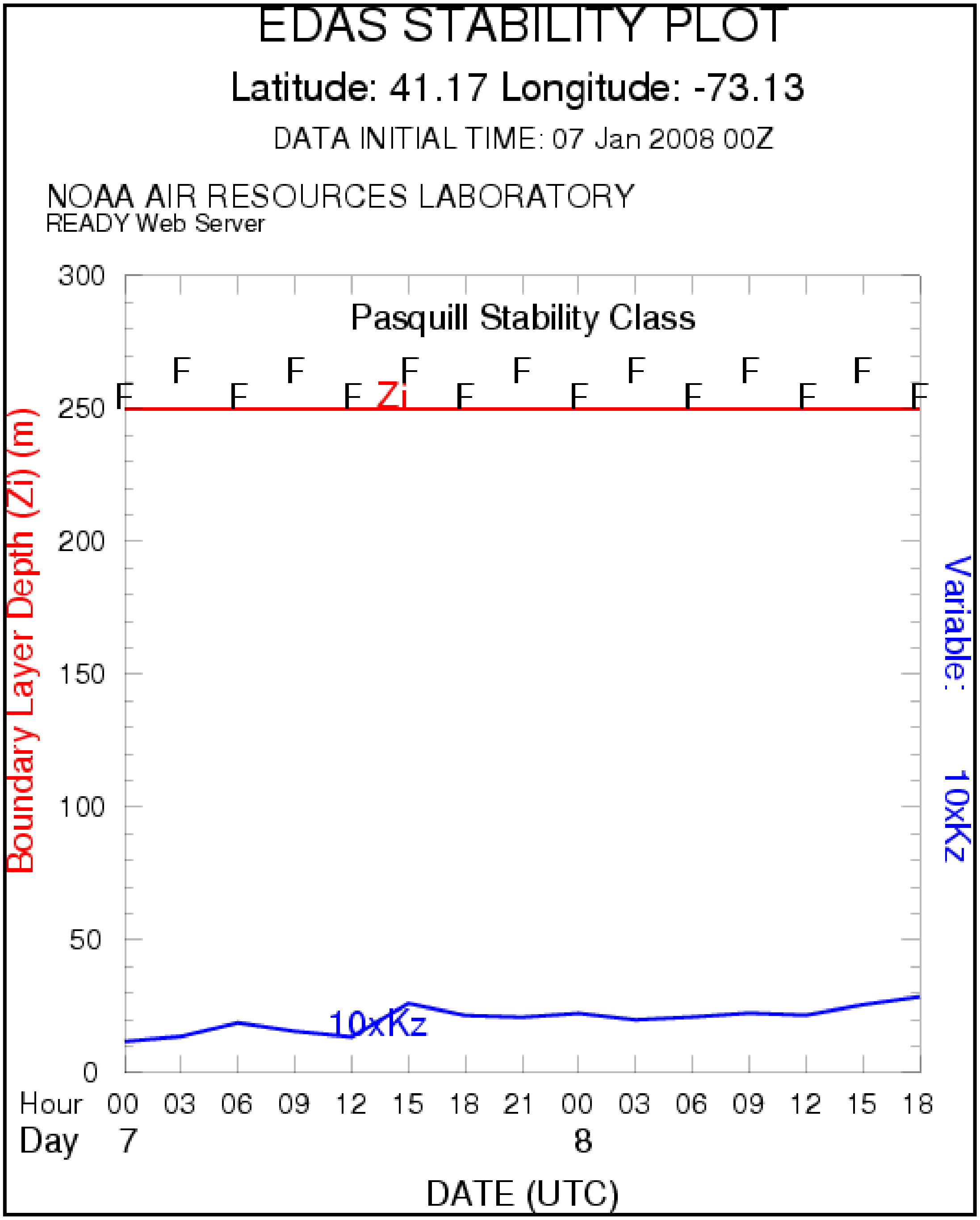
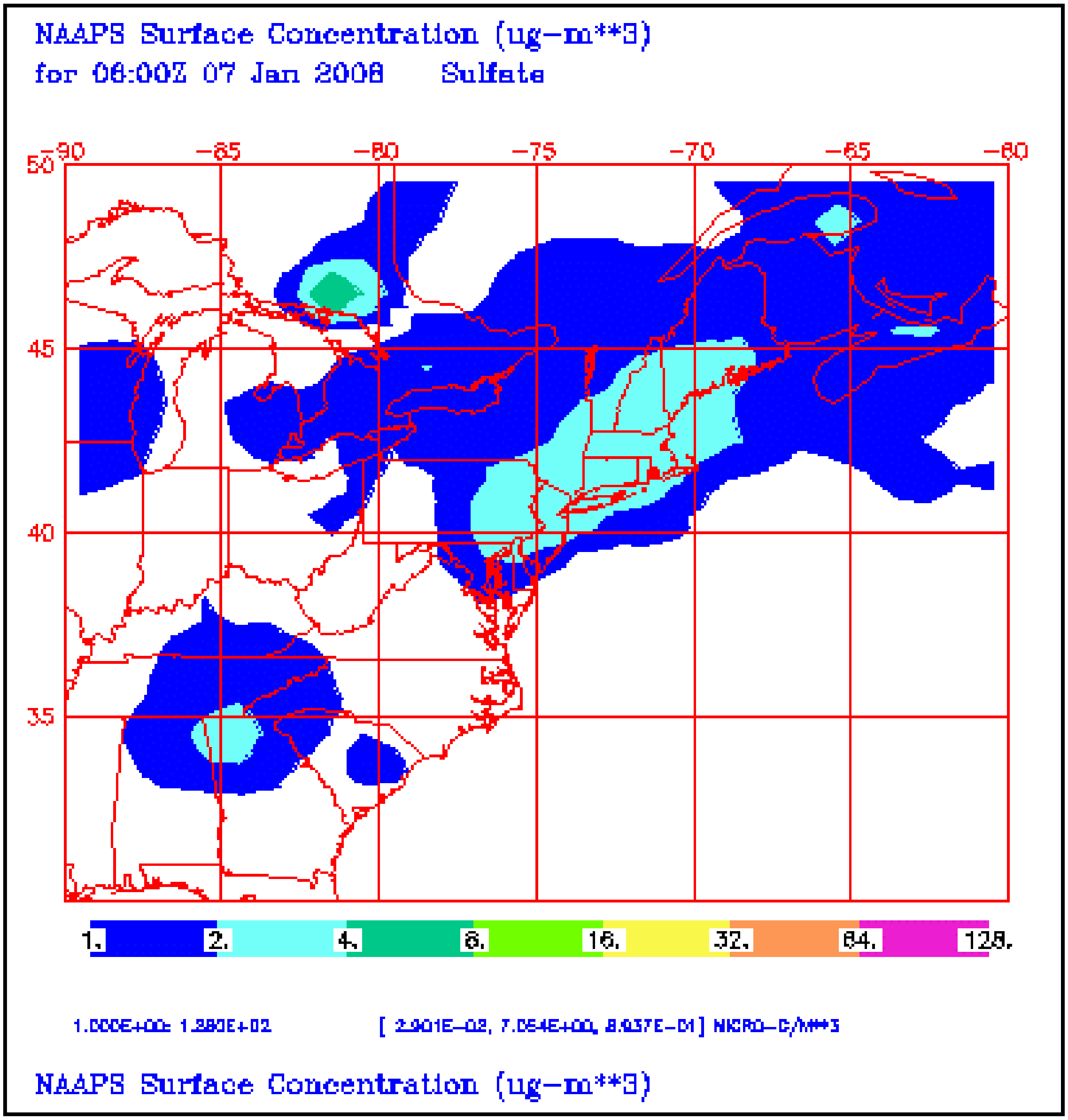


Figure 1.1.5 NRL Navy sulfate model for 1-7-2008



1.2 UNMIX receptor modeling

In their paper "Evaluation of a New Approach for Real Time Assessment of Wood Smoke PM" (Allen, Babich, and Poirot, 2006)[1] (Appendix 2C), UNMIX receptor modeling is used to differentiate a set of speciated samples between its various component sources. They used hourly measurements of particle black carbon, volatile and non volatile mass, and gaseous CO, NO, NO_2, SO_2 to detect five different source categories (aged and fresh MV, wood smoke, secondary aerosol (ammonium sulfate, ammonium nitrate, secondary organic aerosol), and residential oil combustion. A similar project was designed and is being implemented in Thomaston, CT. Data from Quarter 4, 2006 and Quarter 1, 2007 were available for analysis. The data was again analyzed using UNMIX and the component source composition results were similar to those of the previous study.

Figure 1.2.1 shows the source composition of each of the UNMIX "source" solutions in a bar chart format. Note the relatively high black carbon/deltac (difference between 2 channels of the nephelometer) contribution to wood smoke and the high volatile content of secondary aerosol (nitrate, sulfate, voc). Scatter plots (Figures 1.2.2-6) of each component vs. wind speed were made. Wood smoke and fresh MV have strong correlations with low wind speed. Aged MV, secondary aerosol, and residential oil combustion are invariant with wind speed, e.g. could be high with high wind speeds. Because of the N-S orientation of the Naugatuck river valley, winds are channeled N-S, making wind direction dependence of pollutant concentration not useful.

Time series plots are consistent with their emission and transport patterns. As will be discussed later (see Figure1.3.6) short duration peaks are analyzed for wood combustion to heat homes at night and morning rush hour fresh MV peaks. Not coincidentally, wind speeds were also low in these cases. Longer duration peaks are associated with air mass transport from the large urban areas. The presence of an air mass with higher concentrations of transport species such as aged MV, secondary aerosol, and oil combustion, are all sources that take time to form and travel from large urban areas. Stronger wind speeds are observed during these longer duration events.

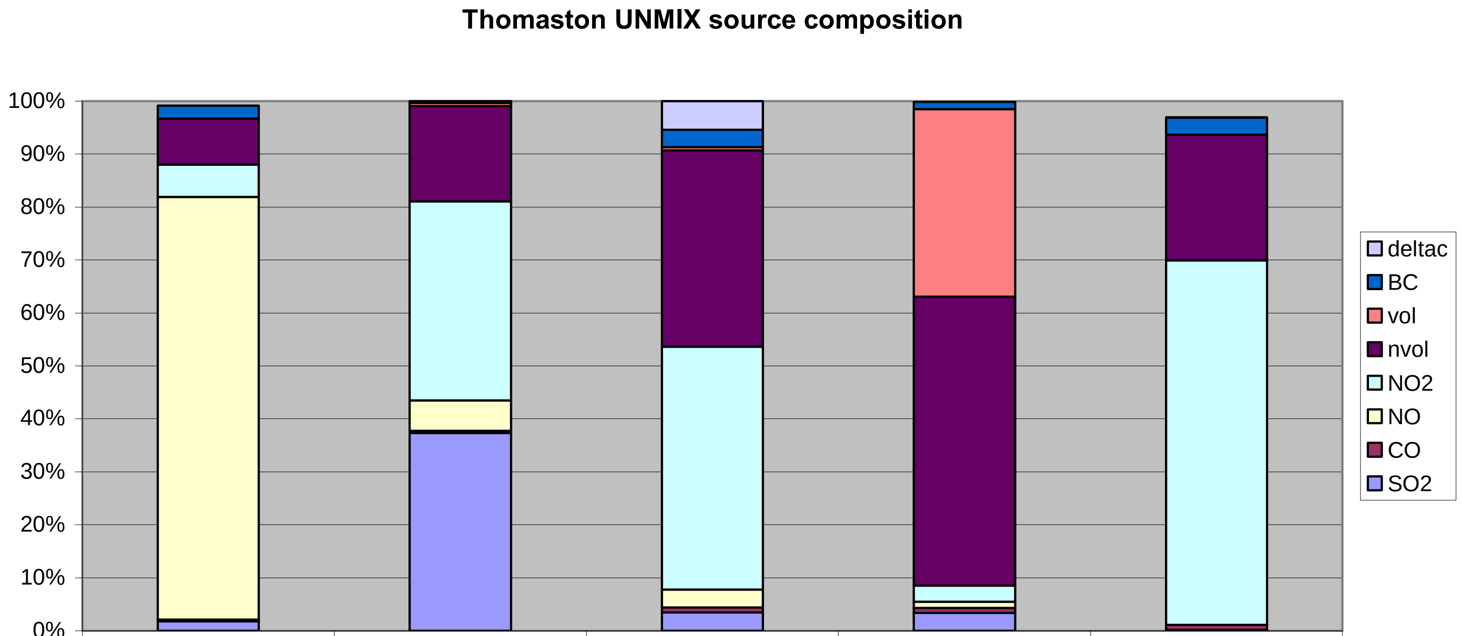
The table below (Table 1.2.1) tells the story of wintertime pollution events during the first quarter of 2007. On days above the 98^{th} percentile value of PM (essentially exceedances of the new 35 $\mu g/m^3$ standard), wood smoke is only 12.4% of the aerosol measured on those days. Local contributions are ~40% of the total. The remaining 60% are from transport, with secondary aerosol making up 28% of the mix. The conclusions are: 1. Wood smoke is not as much of a contributor on very high days, but local and transport species combine to boost concentrations on high days; 2. On moderate days above 16.2 $\mu g/m^3$, (80^{th} percentile) wood smoke can be significant (22% or 4 $\mu g/m^3$ of the total); and 3. Secondary aerosol (from EGUs and industrial facilities) is the most significant contributor on the high days, most likely transported regionally.

[1] 1. Allen, G, P. Babich, and R. Poirot, "Evaluation of a New Approach for Real Time Assessment of Wood Smoke PM" , JAWMA, 2006 "

Table 1.2.1 First Quarter Fractional Component PM2.5 at the Thomaston site

	$\mu g/m^3$	Fresh MV	Oil Combustion	Wood smoke	Secondary Aerosol	Aged MV
80^{TH} PERCENTLE PM	16.2	0.22786	0.15	0.251	0.2	0.2
98^{TH} PERCENTILE PM	32.3	0.27	0.14	0.124	0.28	0.19

Figure 1.2.1 Thomaston UNMIX Source Strength Composition for January-March 2007



	s1-fresh mv	s2-residential oil combustion	s3-woodsmoke	s4-secondary aerosol	s5-aged mv
deltac	-0.0154	0.0203	0.3307	-0.0076	0.0094
BC	0.2414	0.0018	0.1977	0.0702	0.3082
vol	-0.0624	0.0355	0.0389	1.7706	-0.044
nvol	0.8466	1.1291	2.2565	2.7308	2.2967
NO2	0.5903	2.3583	2.7954	0.1558	6.6627
NO	7.7306	0.3574	0.2052	0.0574	-0.2485
CO	0.032	0.0285	0.0533	0.0482	0.0878
SO2	0.1753	2.3416	0.2129	0.1677	0.0188

Figure 1.2.2 UNMIX Fresh Motor Vehicle Category vs Wind Speed

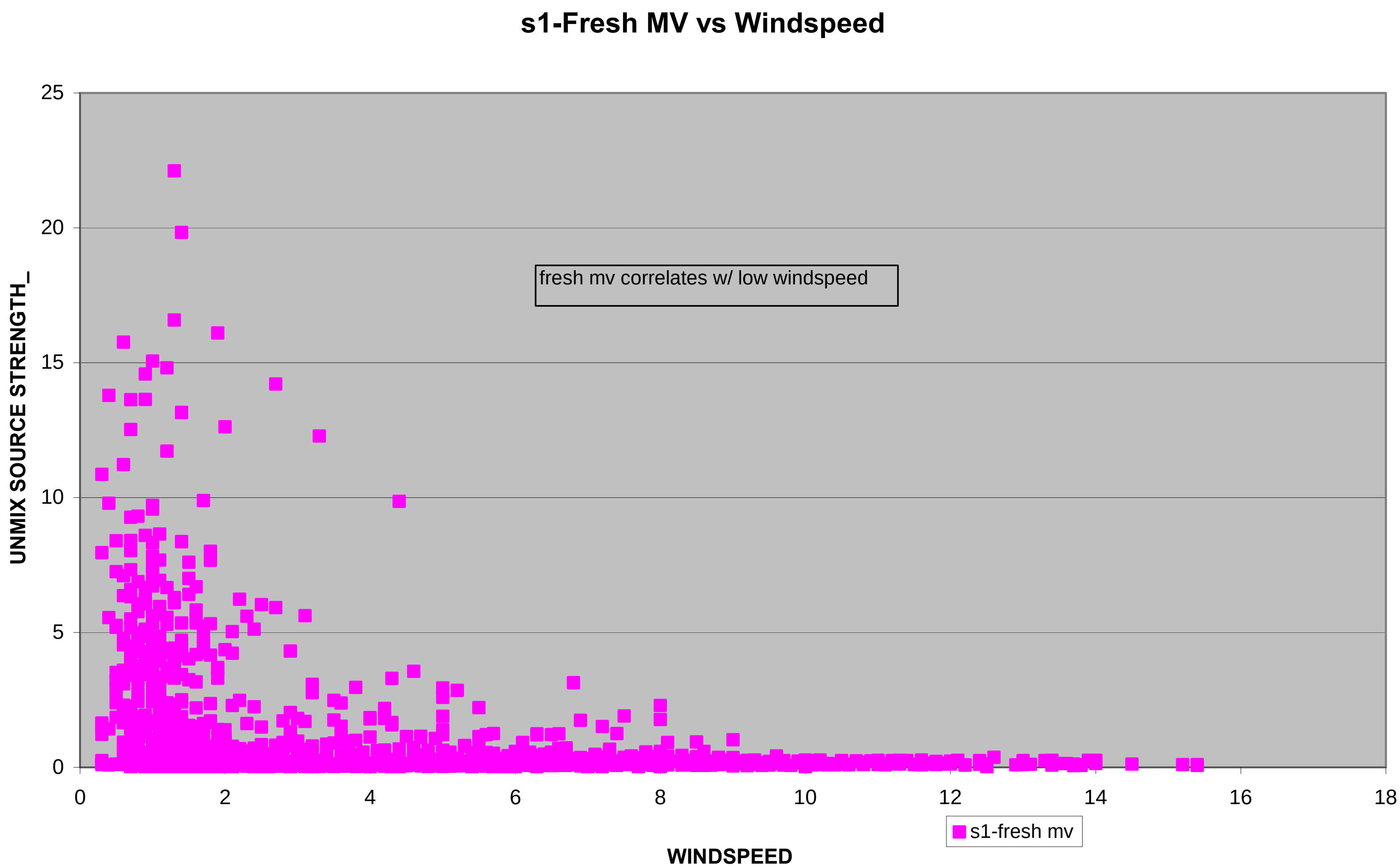


Figure 1.2.3 UNMIX Oil Combustion Category vs Wind Speed

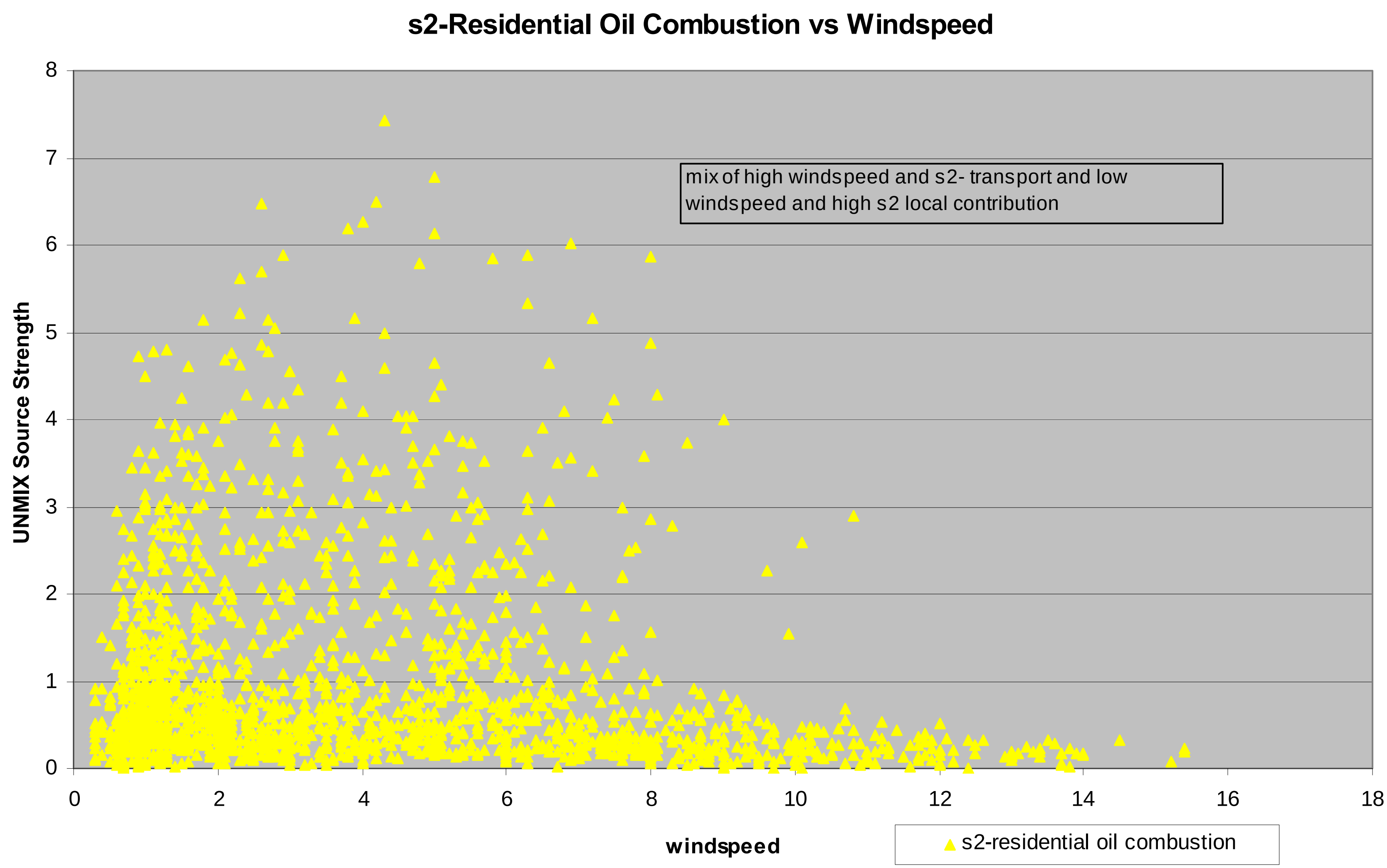


Figure 1.2.4 UNMIX Woodsmoke Category vs Wind Speed

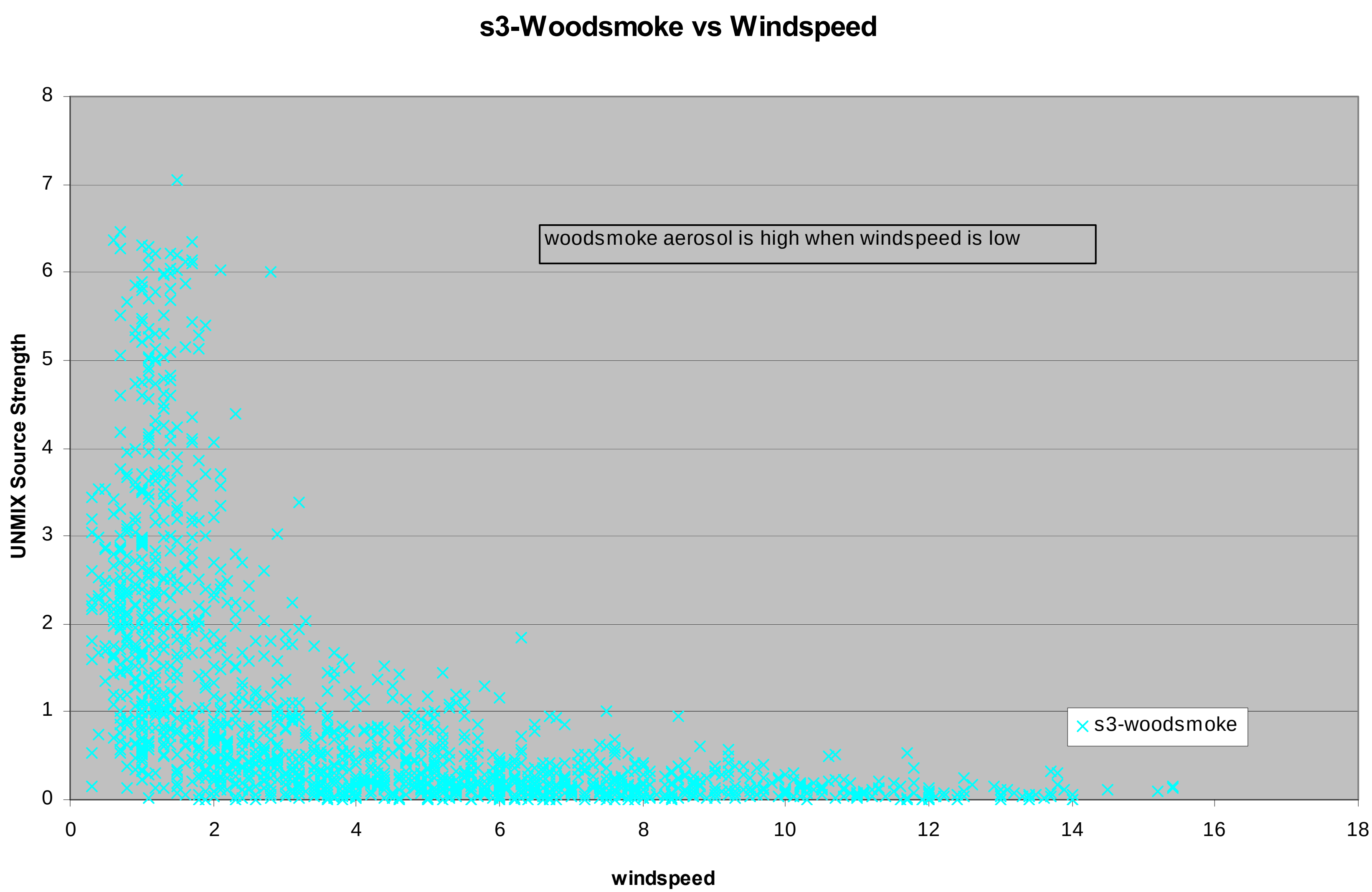


Figure 1.2.5 UNMIX Secondary Organic Category vs Wind Speed

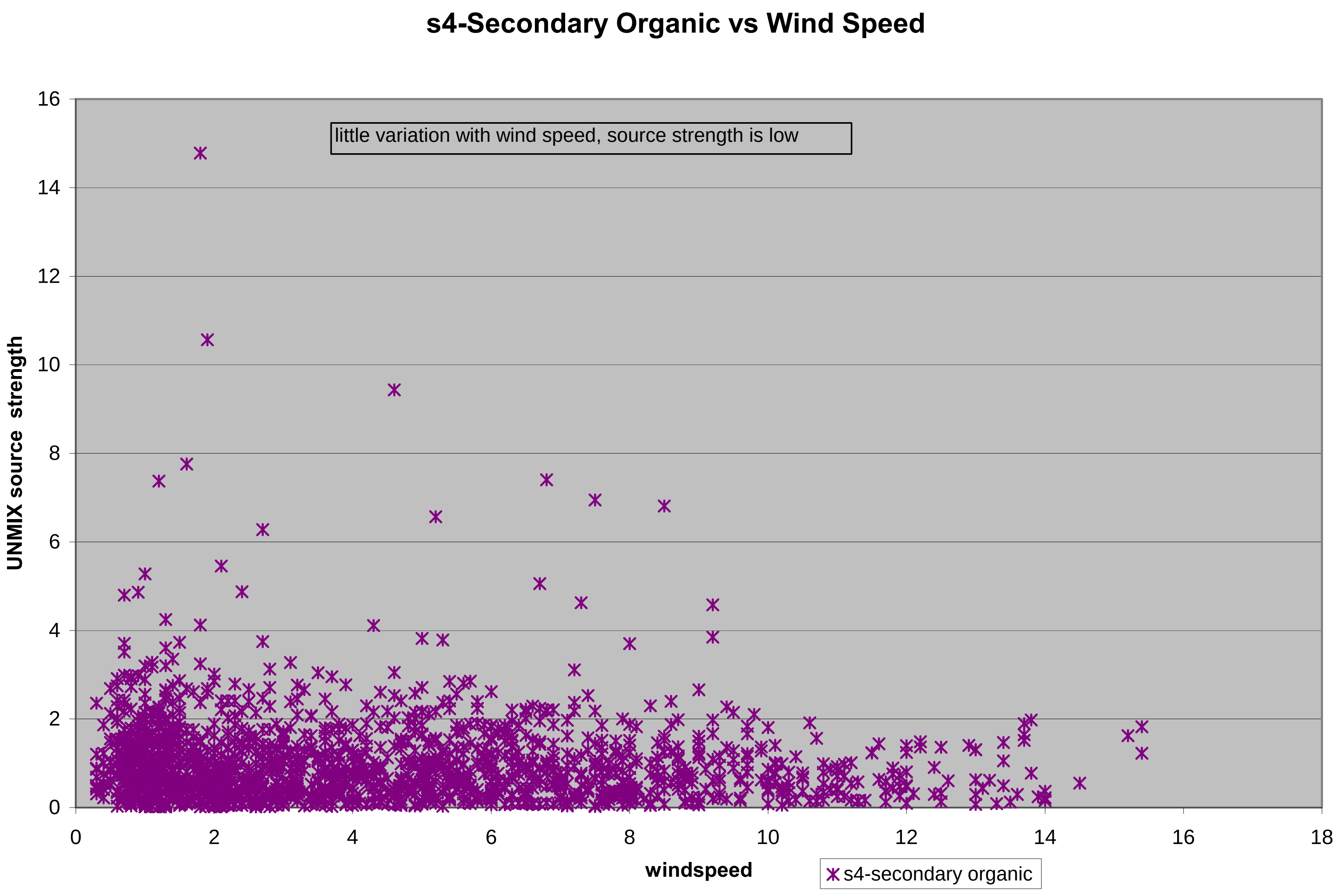
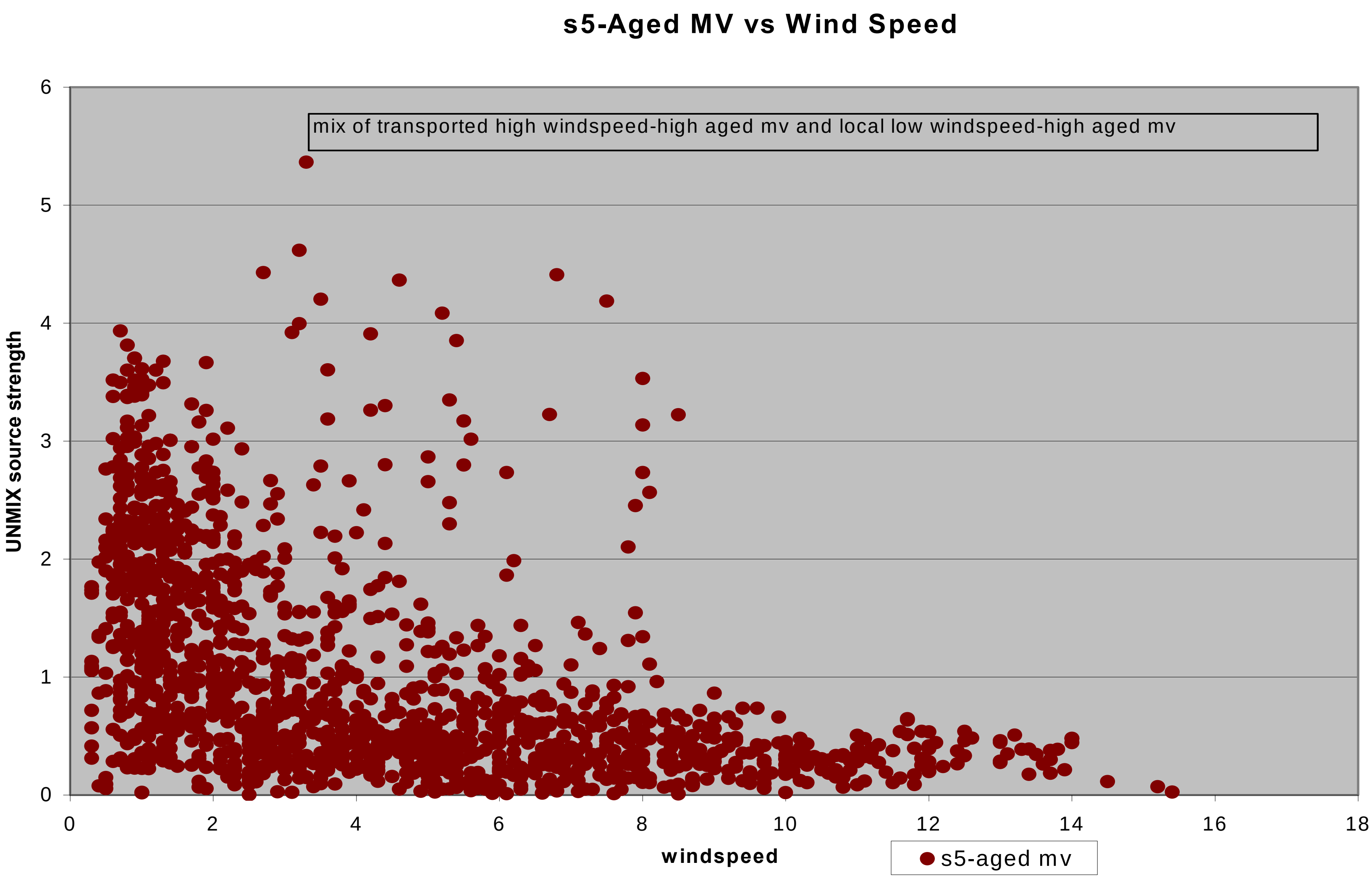


Figure 1.2.6 UNMIX Aged Motor Vehicle Category vs Wind Speed



1.3 March 14, 2007 event

An approaching warm front, cool surface temperatures, (Figure 1.3.1) SSW winds (Figure 1.3.2) and a stream of unseasonably warm overriding air (+7-8°C at 850 mb) (Figure 1.3.3) provided the stable conditions necessary for trapping pollutants in a shallow layer (250m) (Figure 1.3.4). Hourly values in excess of 80 $\mu g/m^3$ and a daily average above 44$\mu g/m^3$ were measured at the Thomaston site (Figure 1.3.5). At Thomaston, 2-wavelength nephelometer (black carbon) data, volatile and non-volatile mass, and gaseous measurements of CO, NO, NO_2, SO_2 help to resolve speciated data into categories of (aged and fresh MV, wood smoke, secondary aerosol, and residential oil combustion. The species associated most with transport to this rural site (residential oil combustion, aged mv, and secondary aerosol) are the highest combined with the highest wind speed and the broadest time series peak (Figure 1.3.6). When the wind speed was low during the early morning rush hour fresh MV and wood smoke peaked (local aerosol) for a short duration of time (short time peak). The combination of the local and transported components led to the highest wintertime PM event seen in the 2006-2008 time period of recorded data at Thomaston.

Figure 1.3.1 Surface Analysis for 3-14-2007

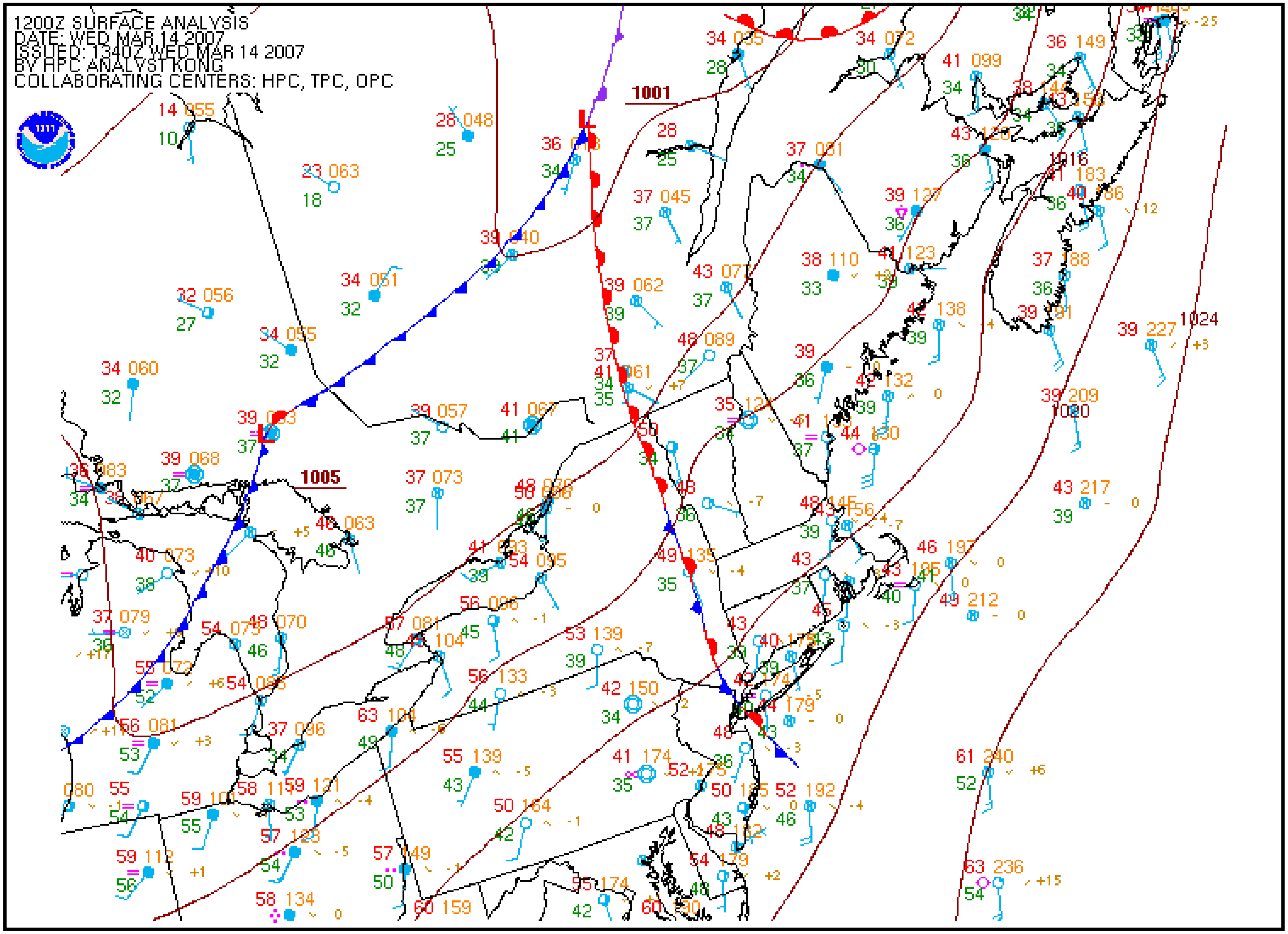


Figure 1.3.2 24-hr Back Trajectory Plot for 3-14-2007

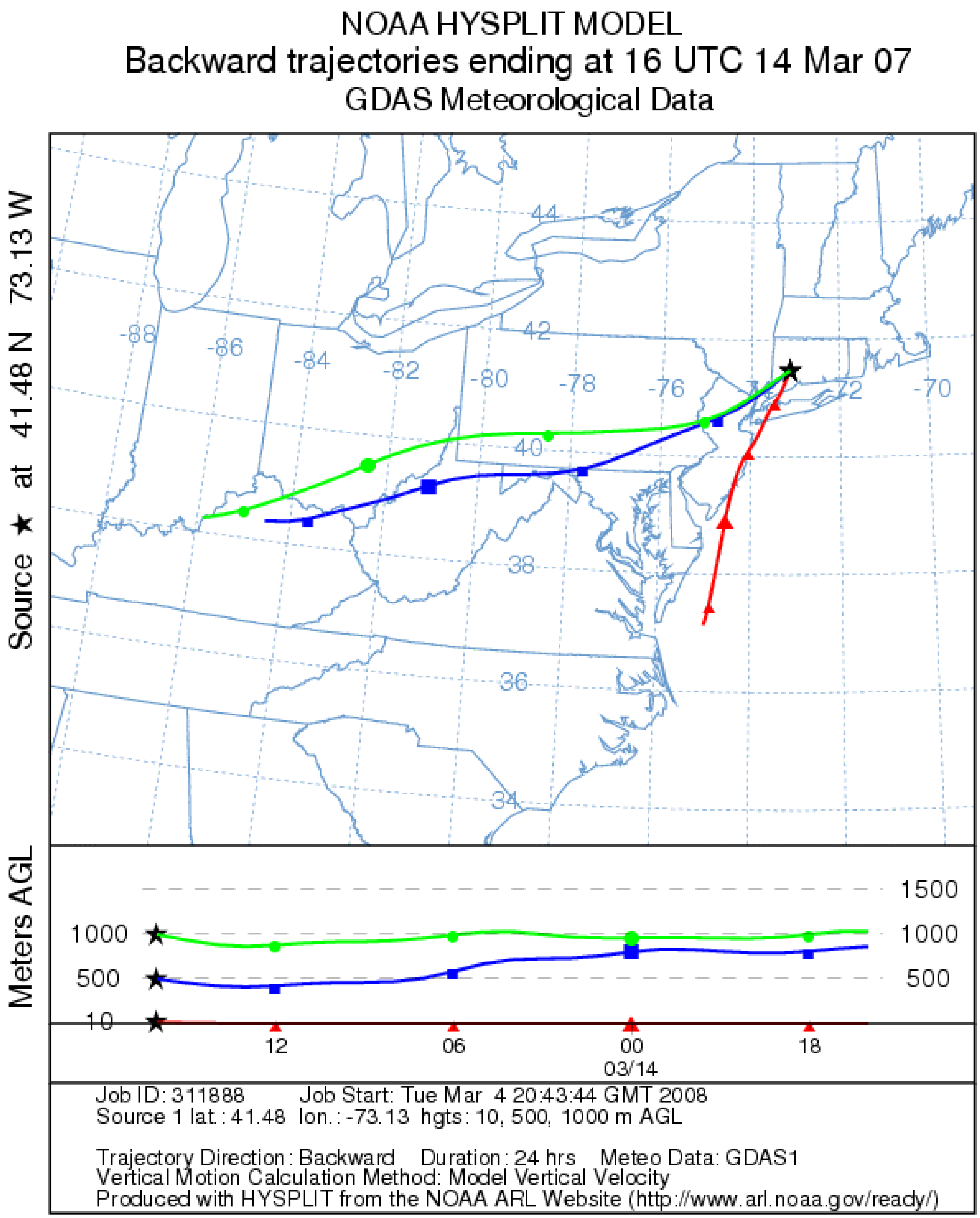


Figure 1.3.3 850 mb analysis for 03-14-2007 12Z

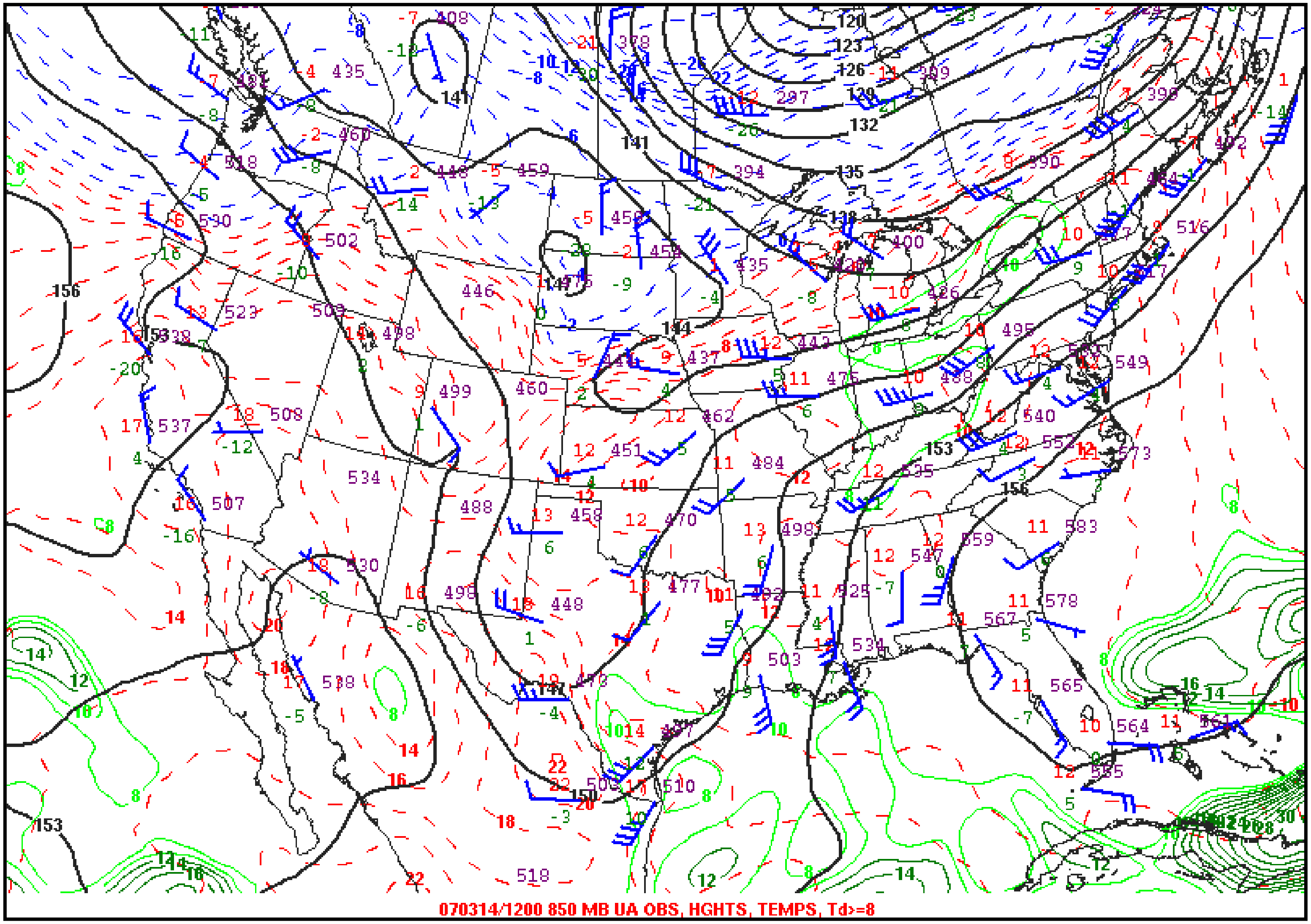


Figure 1.3.4 NAM model stability for 3-14-2007

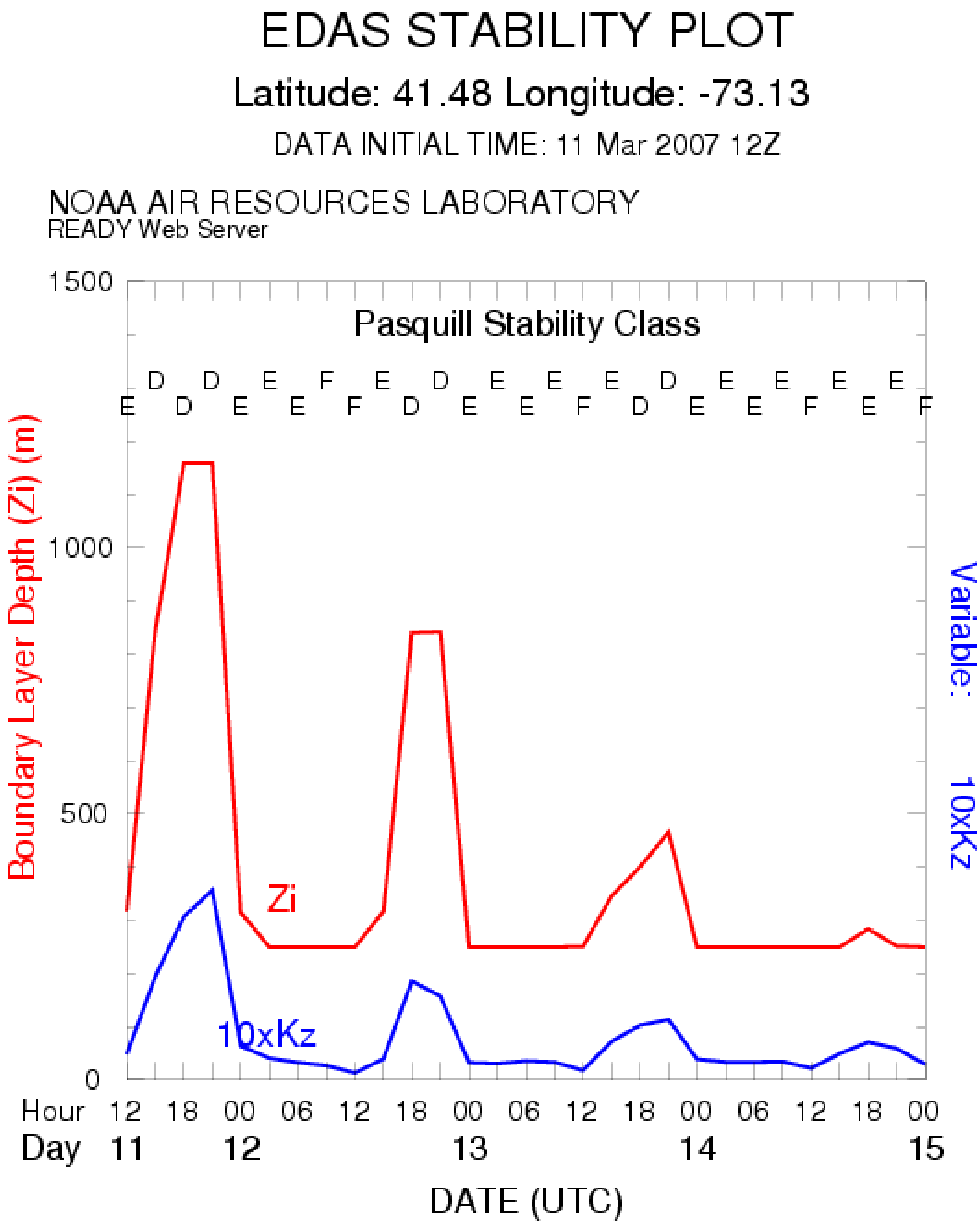


Figure 1.3.5 Thomaston Quarter 1, 2007 Hourly PM2.5 (annotated with Pasquill stability class for peak concentration times)

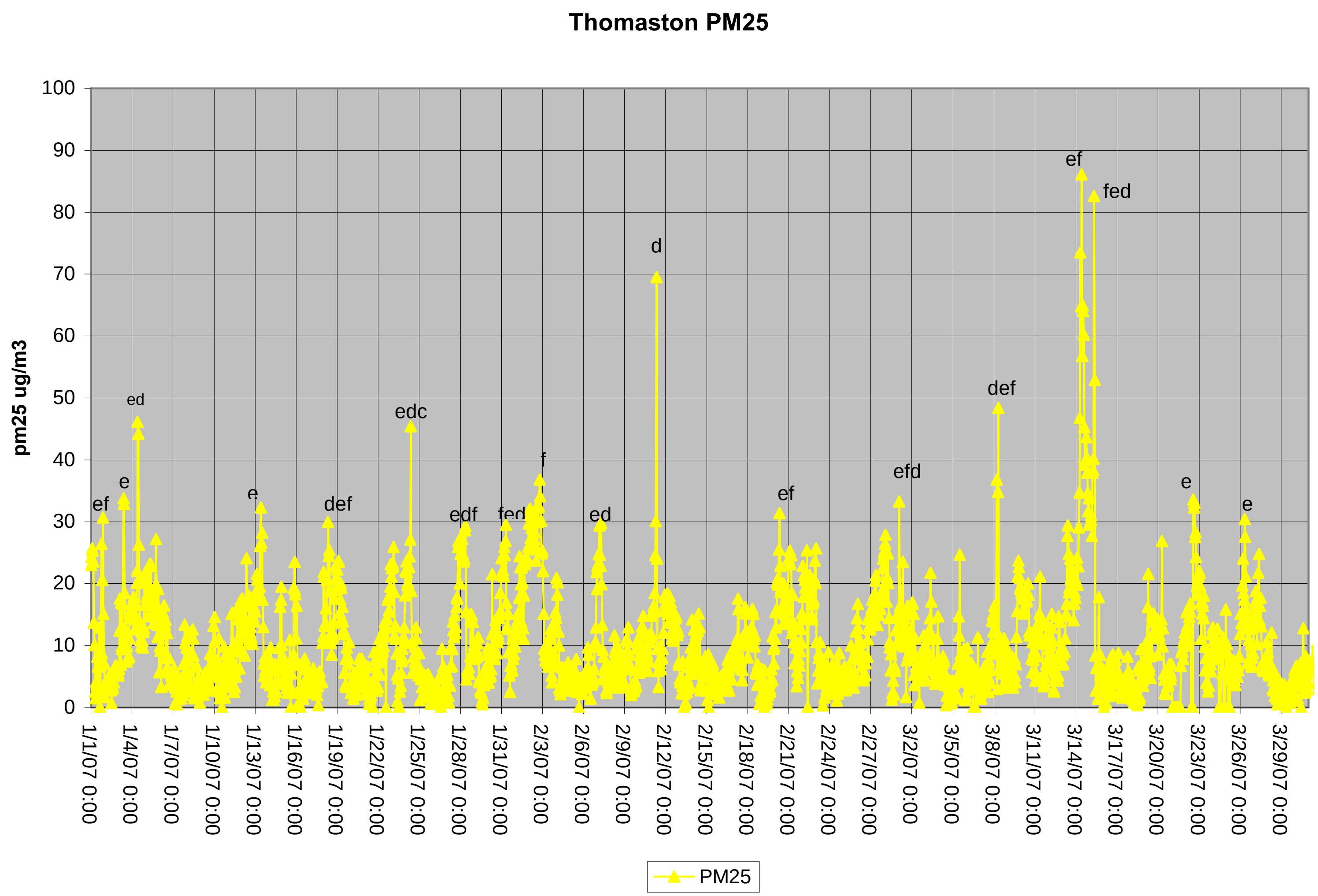
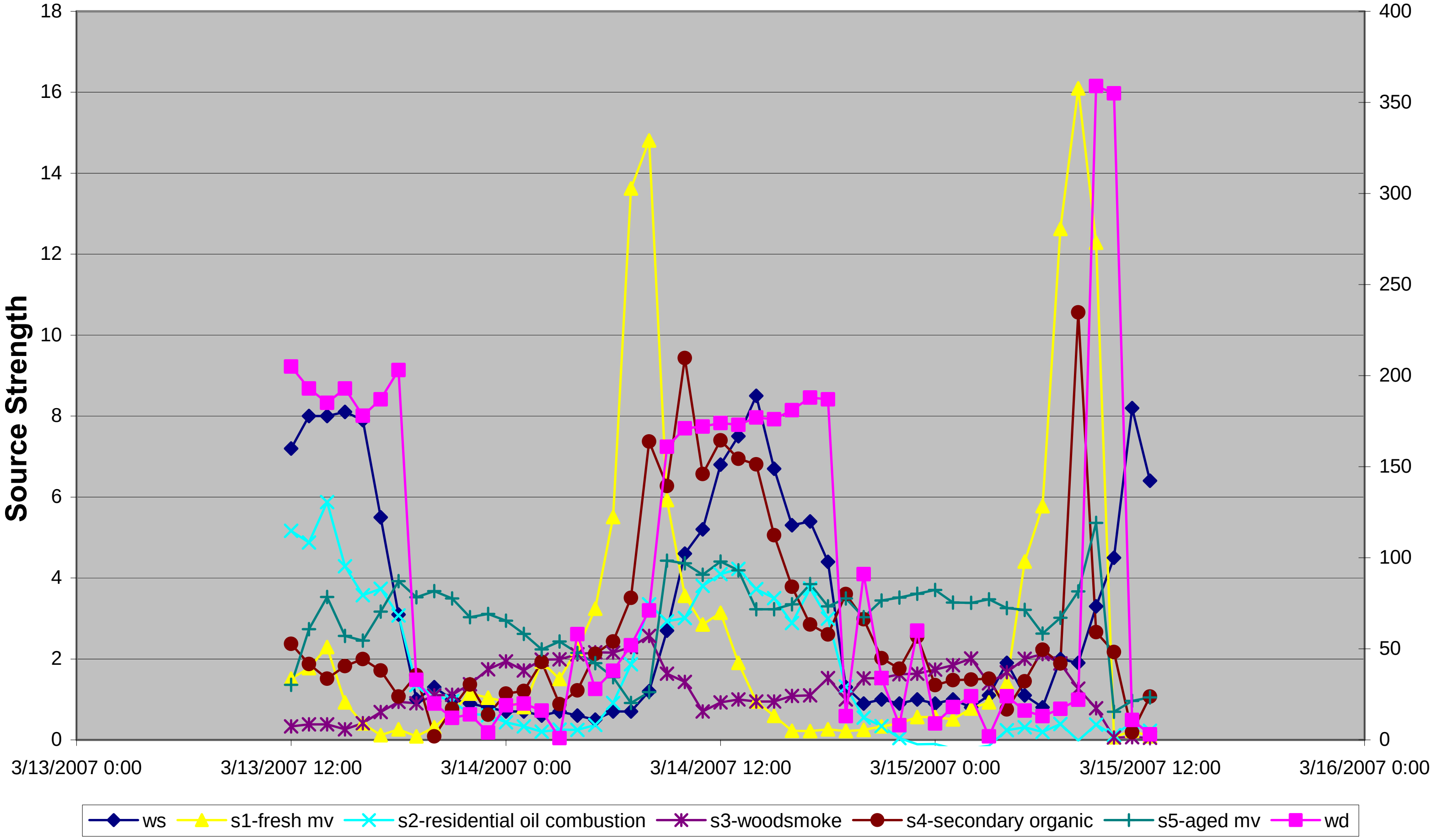


Figure 1.3.6 Thomaston Time Series of UNMIX Source Contribution for 3/13-15/2007



1.4 Summertime PM2.5 Event Examples

For the summer, highly time resolved data was not available. However speciated data was available for a rural site at Cornwall (IMPROVE network 10/01-12/04) and urban STN sites at Westport (4/02-5/03) and New Haven (6/03-present), with a 1 in 3 day time resolution. Thus some of the highest concentration days were missed by the sampling schedule.

1.4.1 UNMIX modeling of STN and IMPROVE samples

The STN and IMPROVE data records consist of 55 species taken every third day: NH_4, SO_4, NO_3, EC, OC, and many species of metals crustal materials such as Fe, Si, Ca, Al, Ti; heavy metals used in industry such as Zn, Pb, Cu, Sn, Cd and many more. In EPA's speciated modeling attainment test for PM2.5, crustal, ammonium sulfate, ammonium nitrate, elemental carbon, and organic carbon are tracked in the photochemical modeling. Species with large enough concentrations and identifiable sources would likely be targeted to design control strategies for. As before, UNMIX was used to differentiate and identify different source types from all species for all days. UNMIX modeling results for summer 2002 for both the urban STN and rural IMPROVE (Westport and Cornwall) are seen in Figures 1.4.1-2. In the first figure, UNMIX sources 1-4 are: Crustal, Coal combustion, Motor vehicle, and Oil combustion. Each has a unique combination of chemical markers and ratio of key components that make it identifiable as the sources indicated.

1.4.2 July 19, 2002

July 19, 2002 was chosen as it was the best combination of high PM and a record of speciated data from the STN urban network. As can be seen from Figure 1.4.1.1, source 2's highest peak for summer 2002 is on 7/19 (for the days sampled, two key days were missing). The total PM for that day was 34.2 $\mu g/m^3$. An approximate contribution of that source is seen in Table 1.4.2. 14.4 $\mu g/m^3$ of this source, identified as coal combustion, or 44% of the total. Source 4, oil combustion (local/regional EGU) accounted for ~9 $\mu g/m^3$, 26% of the total. With the sampler at a site along the coast with an onshore wind, it is likely transported aerosol from the northeast corridor. Sources 1 and 3 (a combination of motor vehicle exhaust, dispersed road dust from motor vehicles) account for 11 ug/m^3 or 32%. Weather maps and back trajectory plots for this day are included in Figures 1.4.2.1-4. They show that low level winds are out of the NYC area, and upper level winds from the western PA coal burning EGU's (Figure 1.4.2.2). Surface charts show a weak front draped across the area boundary with SW winds S of the front (Figures 1.4.2.1,3). The frontal boundary may have helped to trap air from moving north, setting up a convergence zone, concentrating the pollutants. Even coastal summertime mixing heights (600m) (Figure 1.4.2.4) can support the mixing down of transported aerosol from PA (500m trajectory coming from the west). Aerosol mixed down to the west (over the NY CMSA) also gets injected in the maritime boundary layer over Long Island Sound. A mixture of local, regional and long-range transport are involved in the mix of aerosol measured at Westport on the 19th of July.

The fractional breakdown of the species is shown in Figure 1.4.2.5. Sulfate captures almost all of the ammonium (very little nitrate in the sample) so 18.57 μg/m^3 of the 33.1 μg/m^3 of reconstructed fine mass is detected. Due to the humidity, 5 μg/m^3 of the sample was water. 7.695 μg/m^3 was made up of carbon (OC and EC, 6.95+ 0.74). Ammonium sulfate from EGUs appears to be the dominant species.

Table 1.4.2 UNMIX 7/19/2002 source contribution

7/19/2002	Avg UNMIX source strength	Source fraction of total	Source contribution in μg/m^3
UNMIX source 1 crustal	2.9	0.261261	8.961261
UNMIX source 2 coal combustion	4.6	0.414414	14.21441
UNMIX source 3 MV	1.6	0.144144	4.944144
UNMIX source 4 Oil combustion/ industrial	2	0.18018	6.18018

Figure 1.4.1.1 Westport UNMIX Source Composition Timeseries

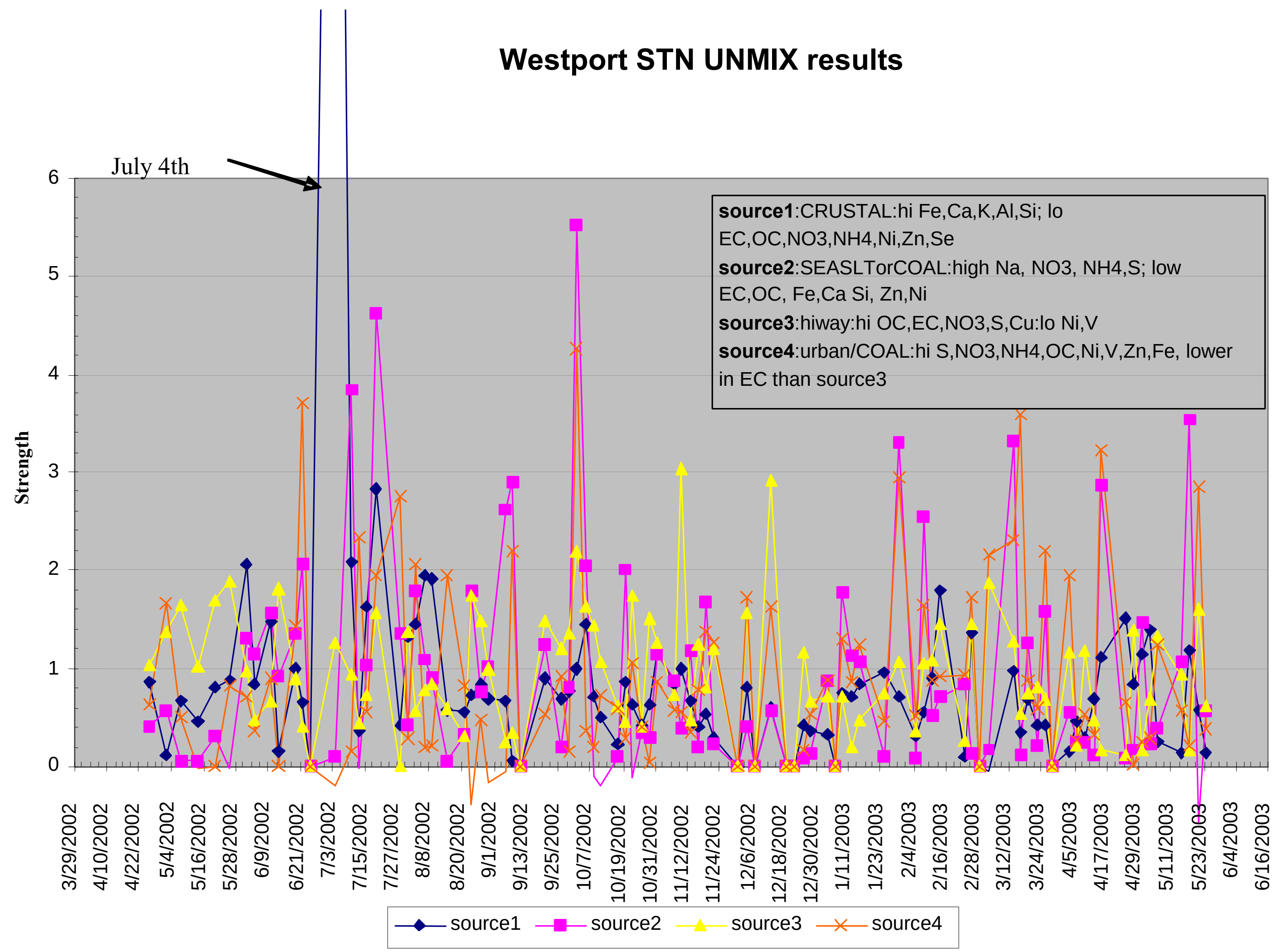
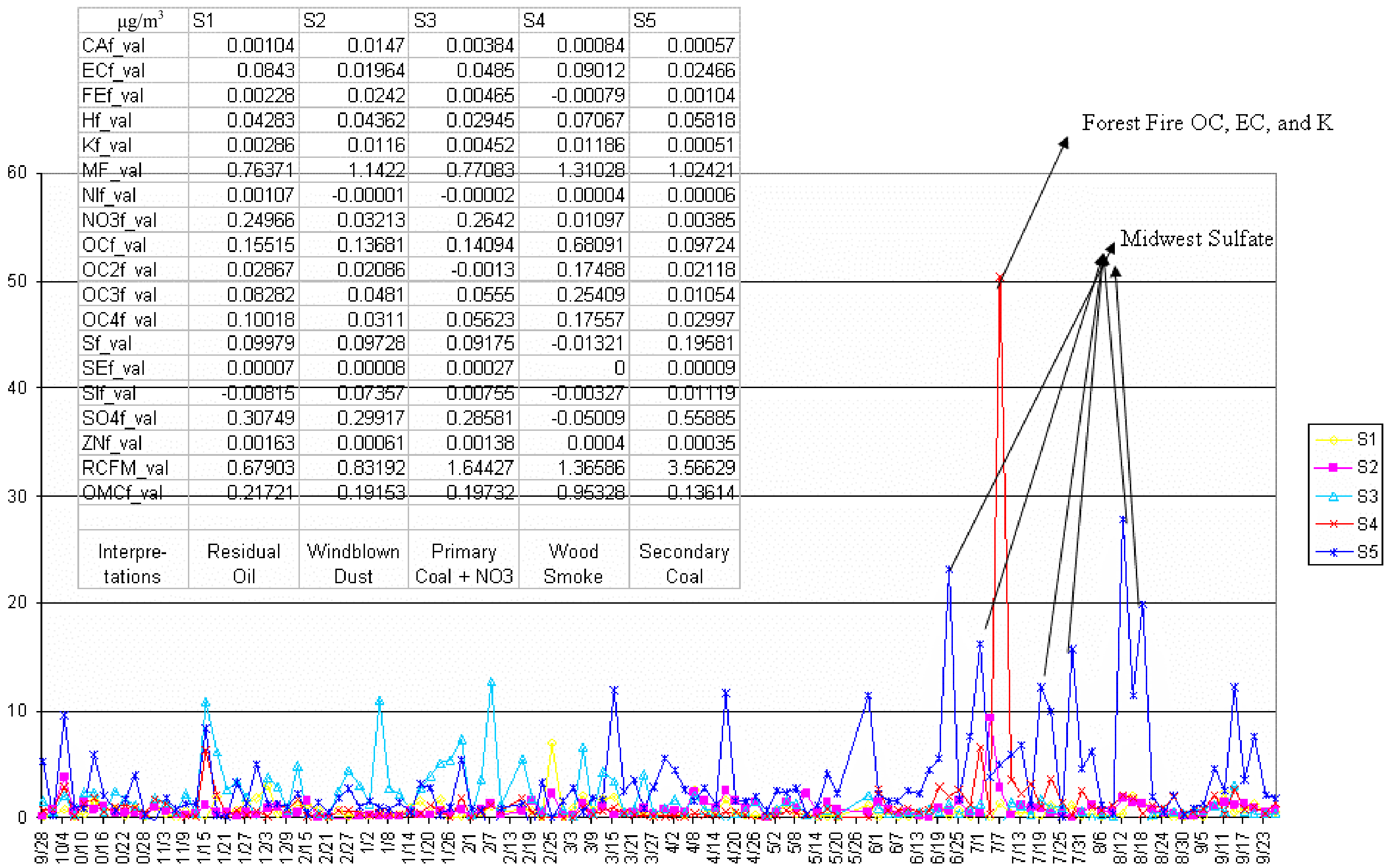


Figure 1.4.1.2 UNMIX IMPROVE Timeseries for Cornwall, CT (09/2001-09/2002)

9/01-9/02 Mohawk Mt., CT Speciated Aerosol: UNMIX Results



μg/m³	S1	S2	S3	S4	S5
CAf_val	0.00104	0.0147	0.00384	0.00084	0.00057
ECf_val	0.0843	0.01964	0.0485	0.09012	0.02466
FEf_val	0.00228	0.0242	0.00465	-0.00079	0.00104
Hf_val	0.04283	0.04362	0.02945	0.07067	0.05818
Kf_val	0.00286	0.0116	0.00452	0.01186	0.00051
MF_val	0.76371	1.1422	0.77083	1.31028	1.02421
NIf_val	0.00107	-0.00001	-0.00002	0.00004	0.00006
NO3f_val	0.24966	0.03213	0.2642	0.01097	0.00385
OCf_val	0.15515	0.13681	0.14094	0.68091	0.09724
OC2f_val	0.02867	0.02086	-0.0013	0.17488	0.02118
OC3f_val	0.08282	0.0481	0.0555	0.25409	0.01054
OC4f_val	0.10018	0.0311	0.05623	0.17557	0.02997
Sf_val	0.09979	0.09728	0.09175	-0.01321	0.19581
SEf_val	0.00007	0.00008	0.00027	0	0.00009
SIf_val	-0.00815	0.07357	0.00755	-0.00327	0.01119
SO4f_val	0.30749	0.29917	0.28581	-0.05009	0.55885
ZNf_val	0.00163	0.00061	0.00138	0.0004	0.00035
RCFM_val	0.67903	0.83192	1.64427	1.36586	3.56629
OMCf_val	0.21721	0.19153	0.19732	0.95328	0.13614
Interpre-tations	Residual Oil	Windblown Dust	Primary Coal + NO3	Wood Smoke	Secondary Coal

note: UNMIX Modeling/Analysis enhanced by Rich Poirot of VT Agency of Natural Resources

Figure 1.4.2.1 Surface Analysis for 7-19-2002 12Z

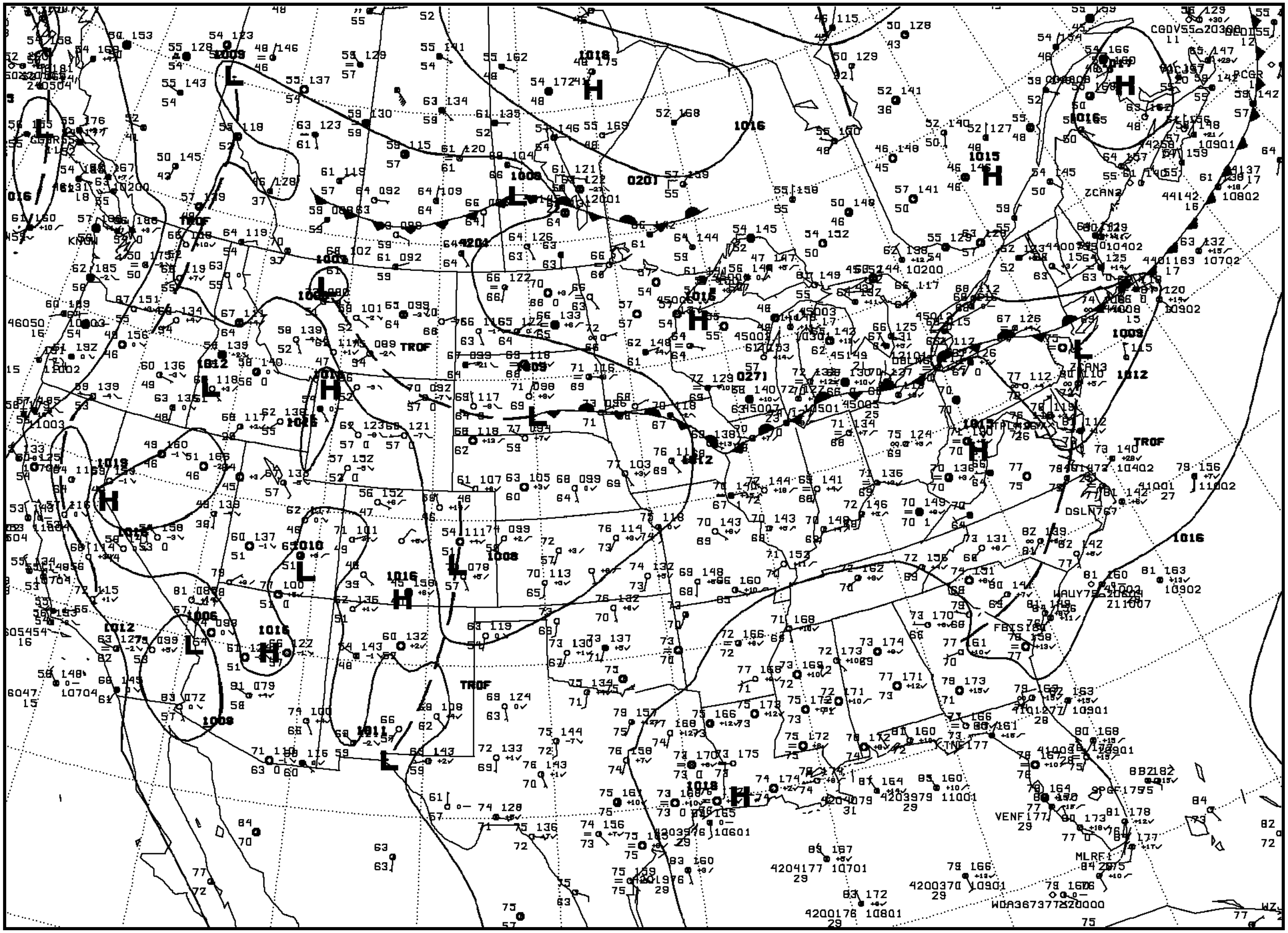


Figure 1.4.2.2 Back trajectories for Westport, CT on 7-19-2002

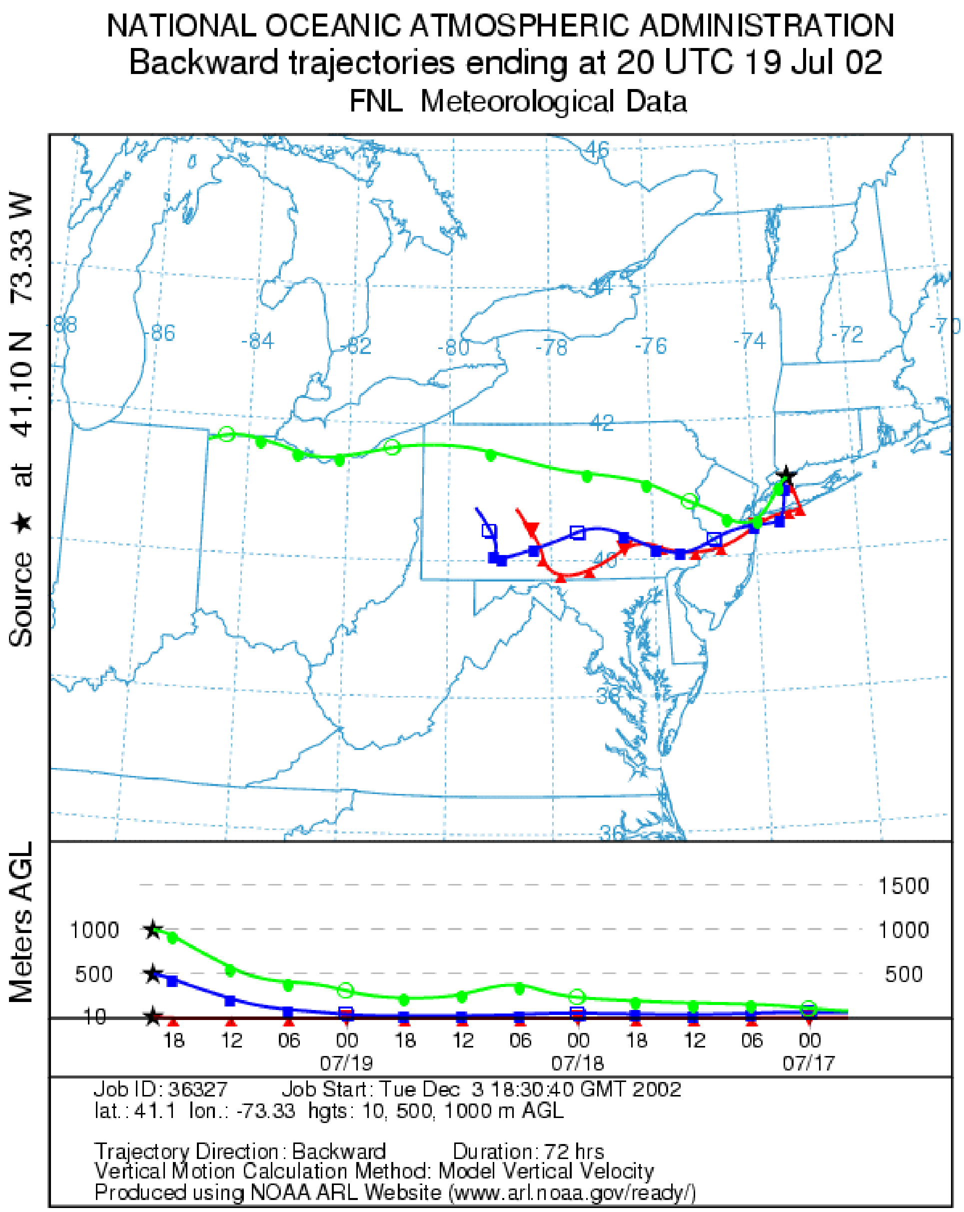
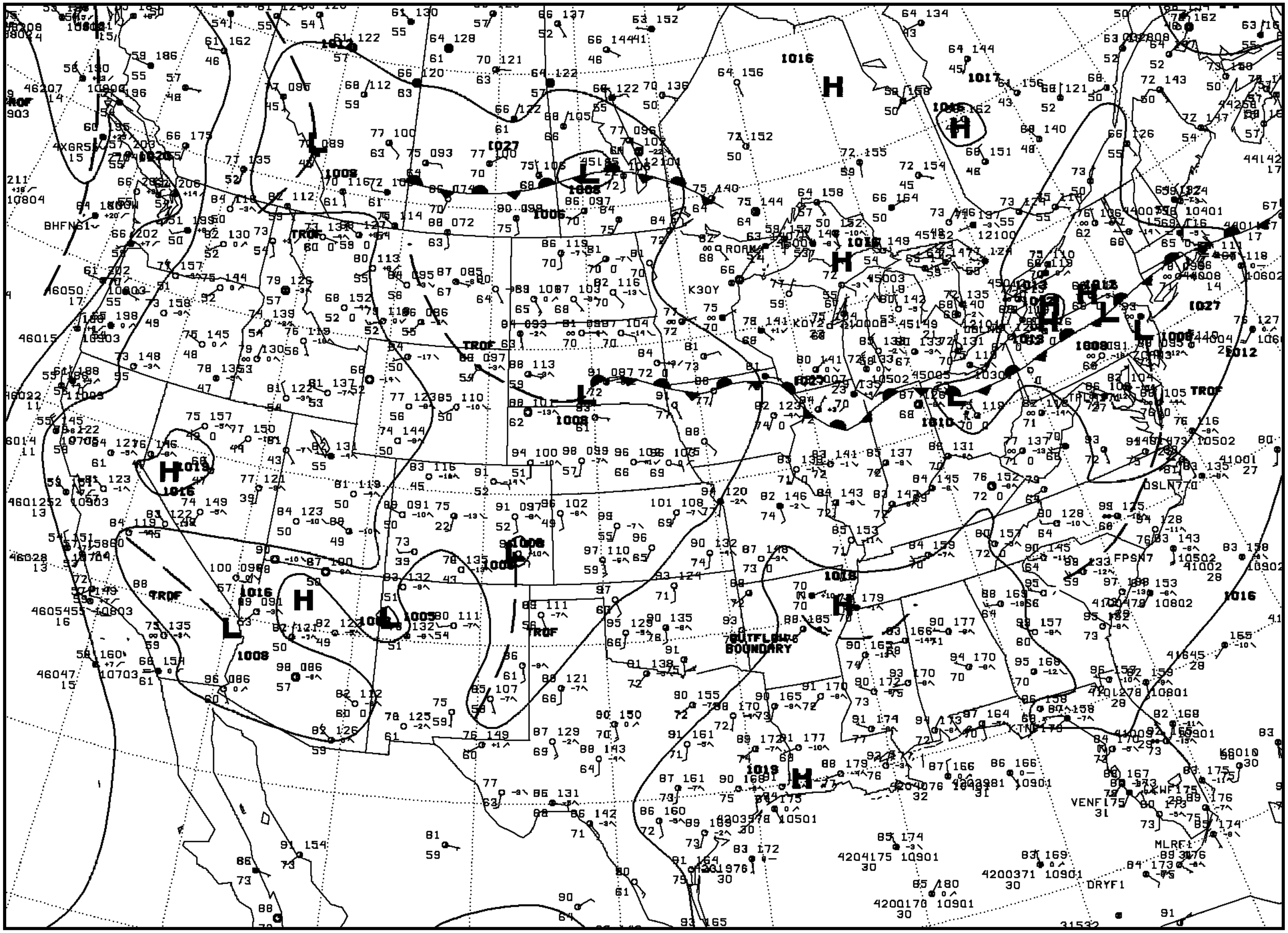


Figure 1.4.2.3 Surface Analysis for 7-19-2002 18Z



1.4.2.4 Height of Boundary Layer at Westport, CT on 7-19-2002 (FNL reanalysis)

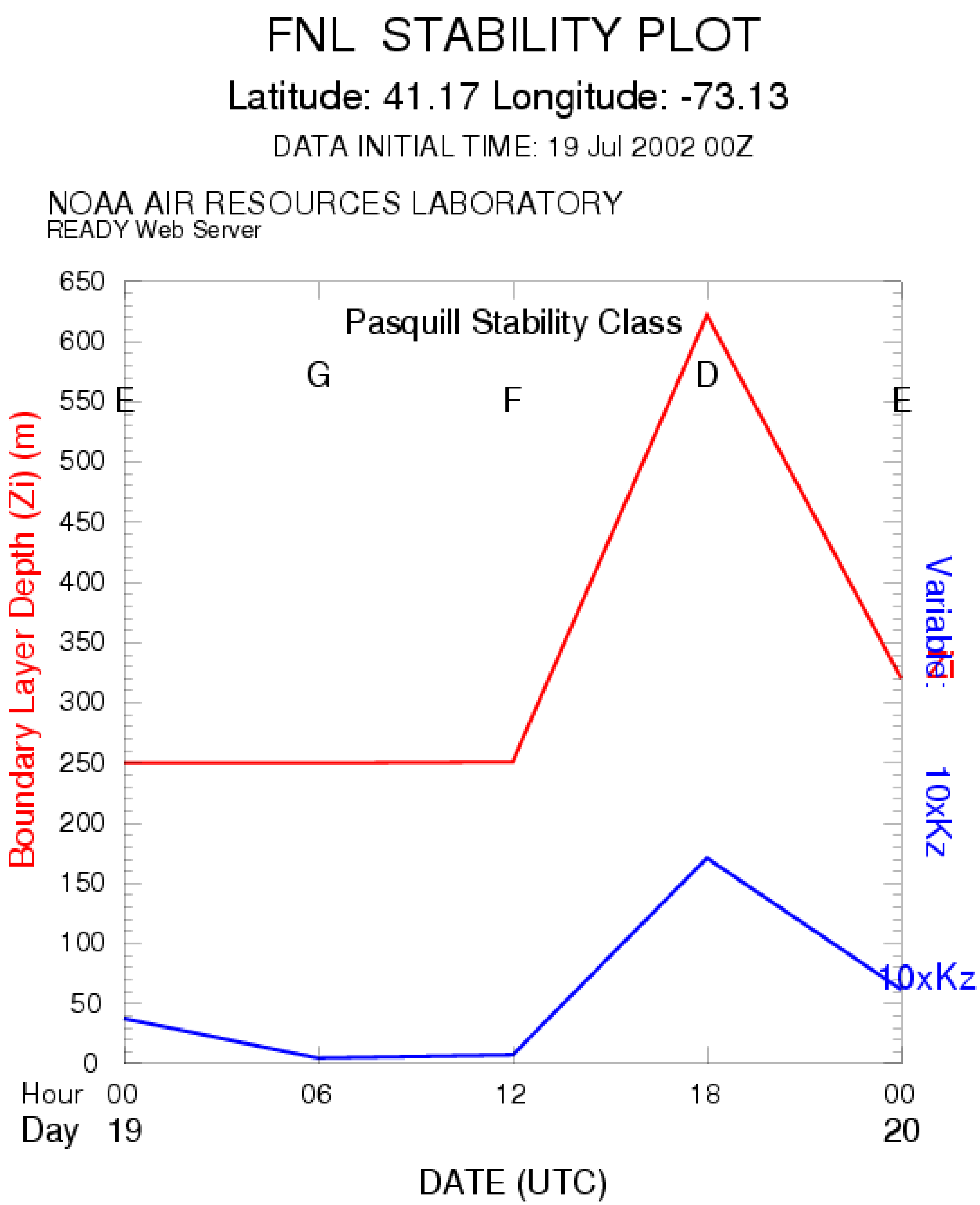
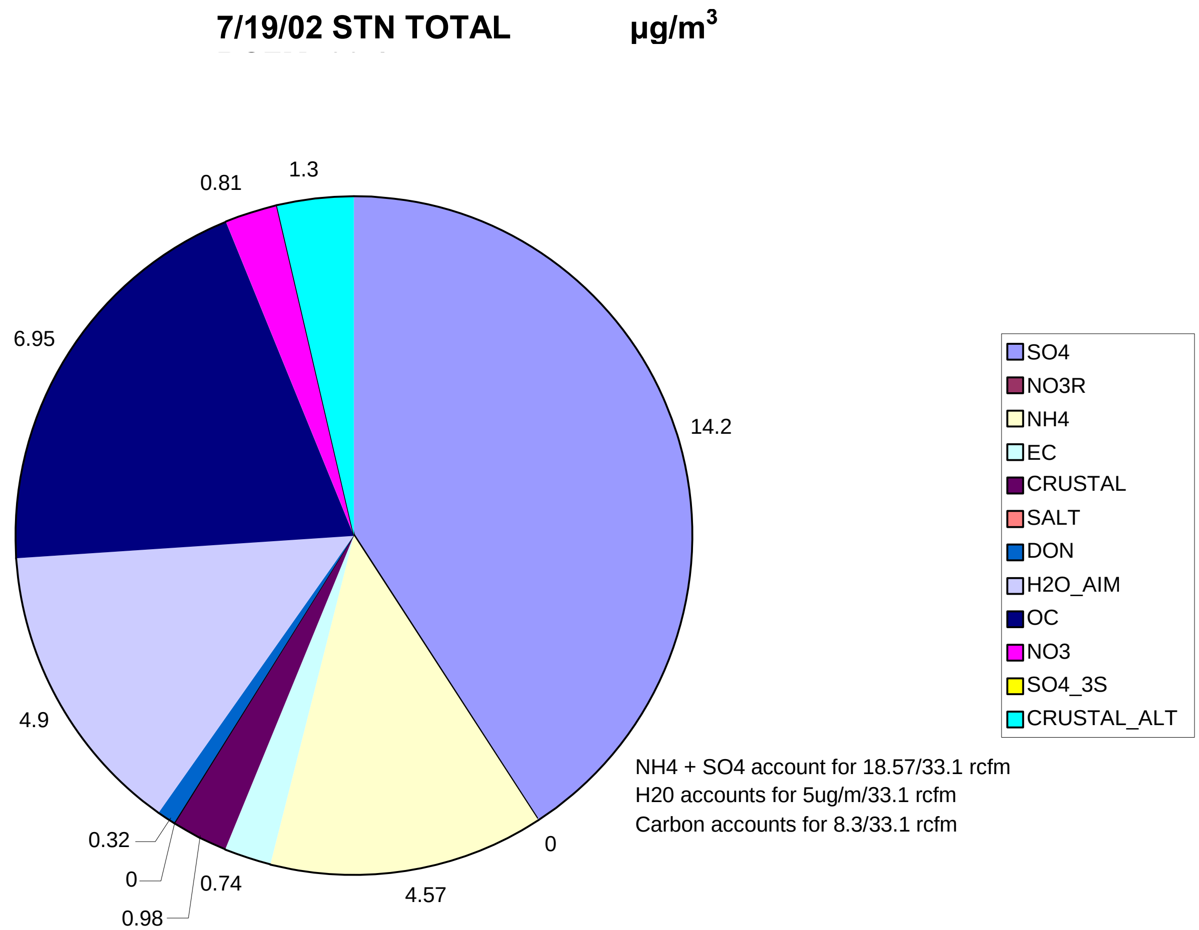


Figure 1.4.2.5 STN Speciated PM2.5 for Westport, CT on 7-19-2002



1.4.3 August 12, 2002 Event

August 12, 2002 was a classic example of an east coast regional air pollution event. A large, hot air mass laden with sulfate drifted east and was transported northeastward at all levels. The next two days, hourly values exceeded 60 $\mu g/m^3$ (Figure 1.4.3.1).

Weather conditions consisted of a hot surface Bermuda high, WSW winds (Figure 1.4.3.2), mid-level nocturnal low-level jet lee of the Appalachian mountains (Figure 1.4.3.3) and upper level westerly winds out of Pennsylvania and the Ohio River Valley (See Figures 1.4.3.4-5). Using the UNMIX IMPROVE results, 28 of the 32 $\mu g/m^3$ of fine mass was coal aerosol (Figure 1.4.3.6), and in the IMPROVE speciated data, 23/33 $\mu g/m^3$ was comprised of ammonium sulfate (Figure 1.4.3.7). This event provides further evidence that in order to reduce elevated PM levels during the summer in Connecticut, a regional pollutant reduction strategy will be needed.

Figure 1.4.3.1 PM2.5 Time Series for Cornwall and Waterbury, CT Summer 2002

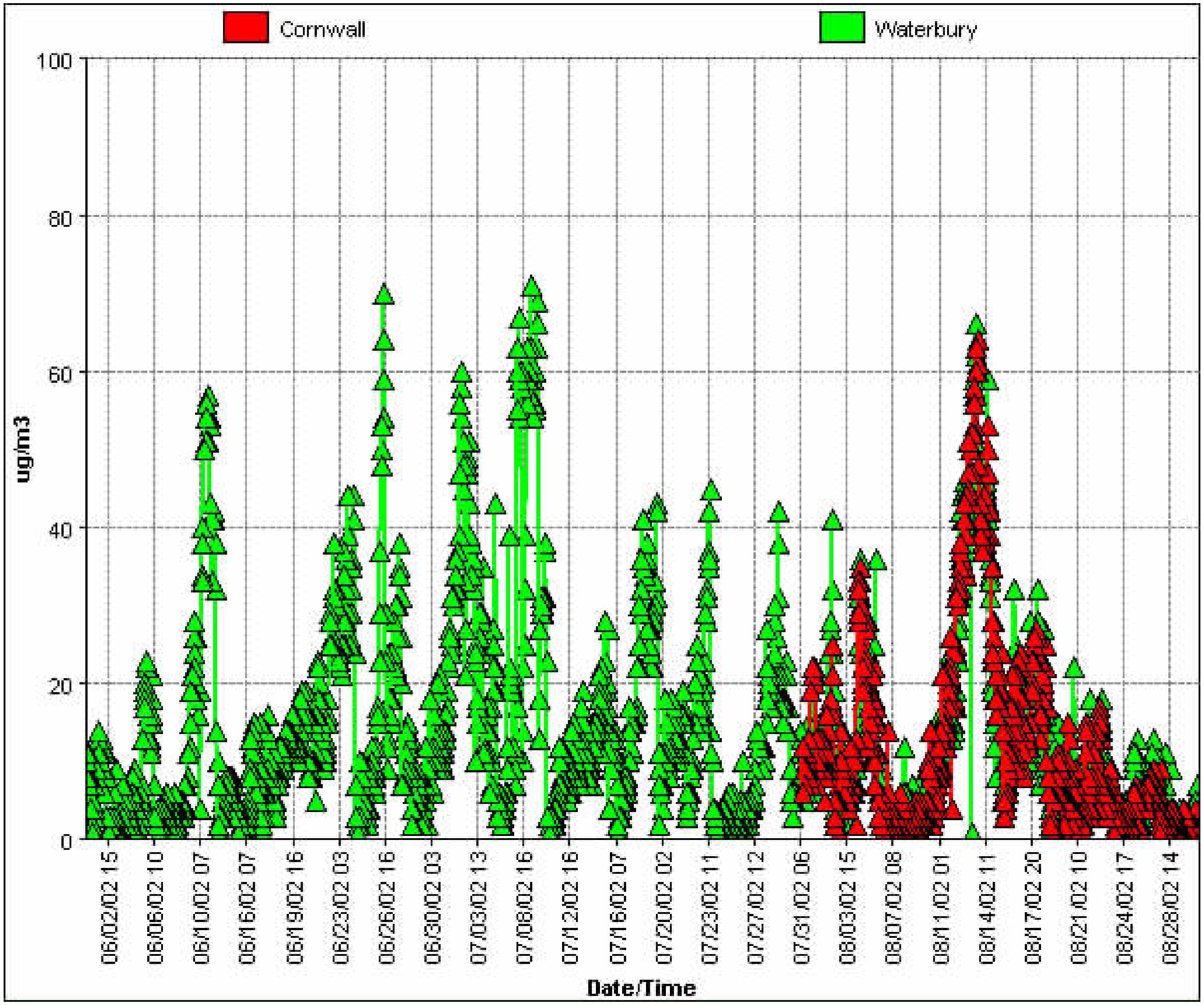


Figure 1.4.3.2 Surface Analysis for 18Z 8/12/02

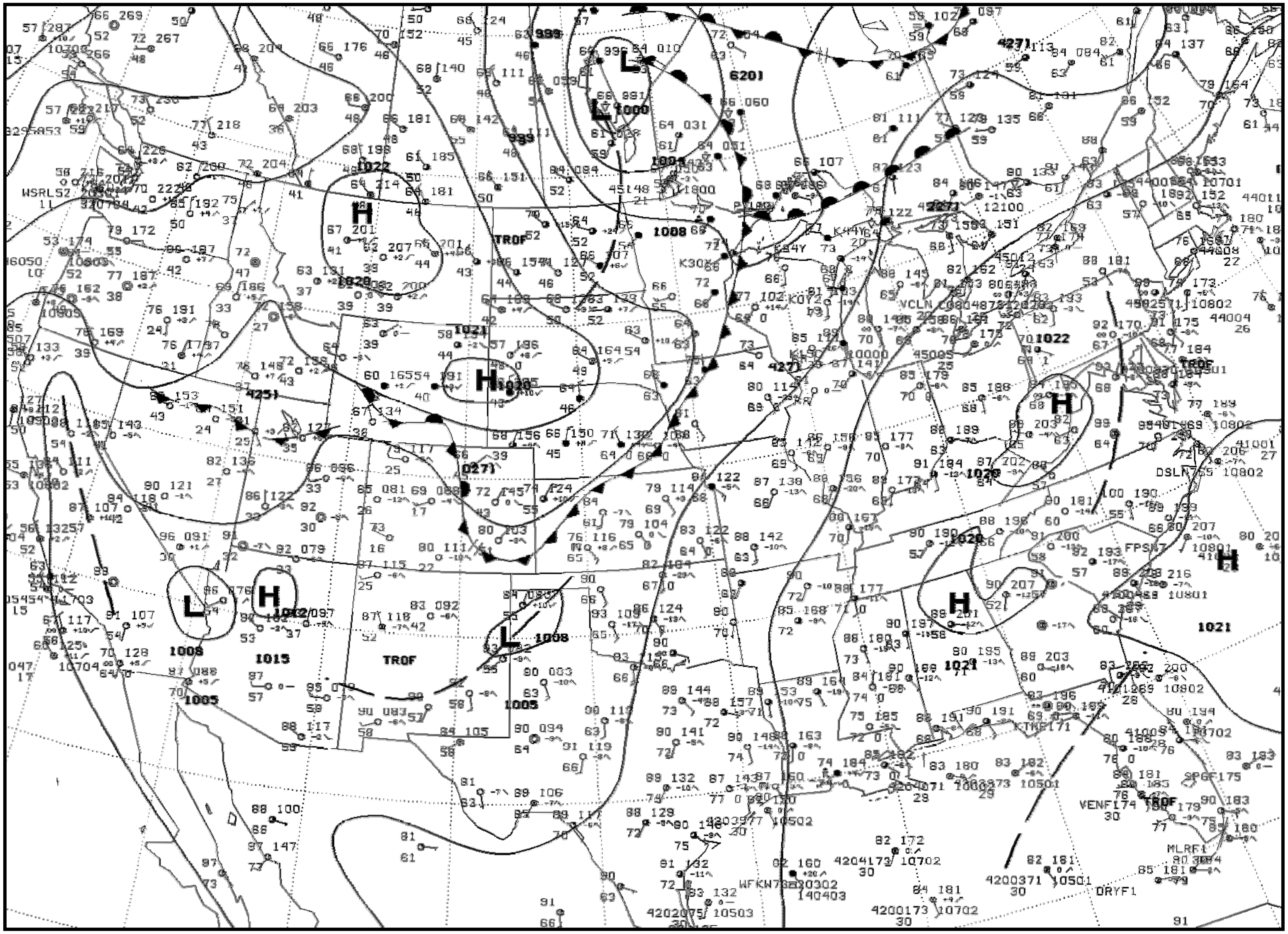


Figure 1.4.3.3 Profiler time series for New Brunswick, NJ 8-12-2002

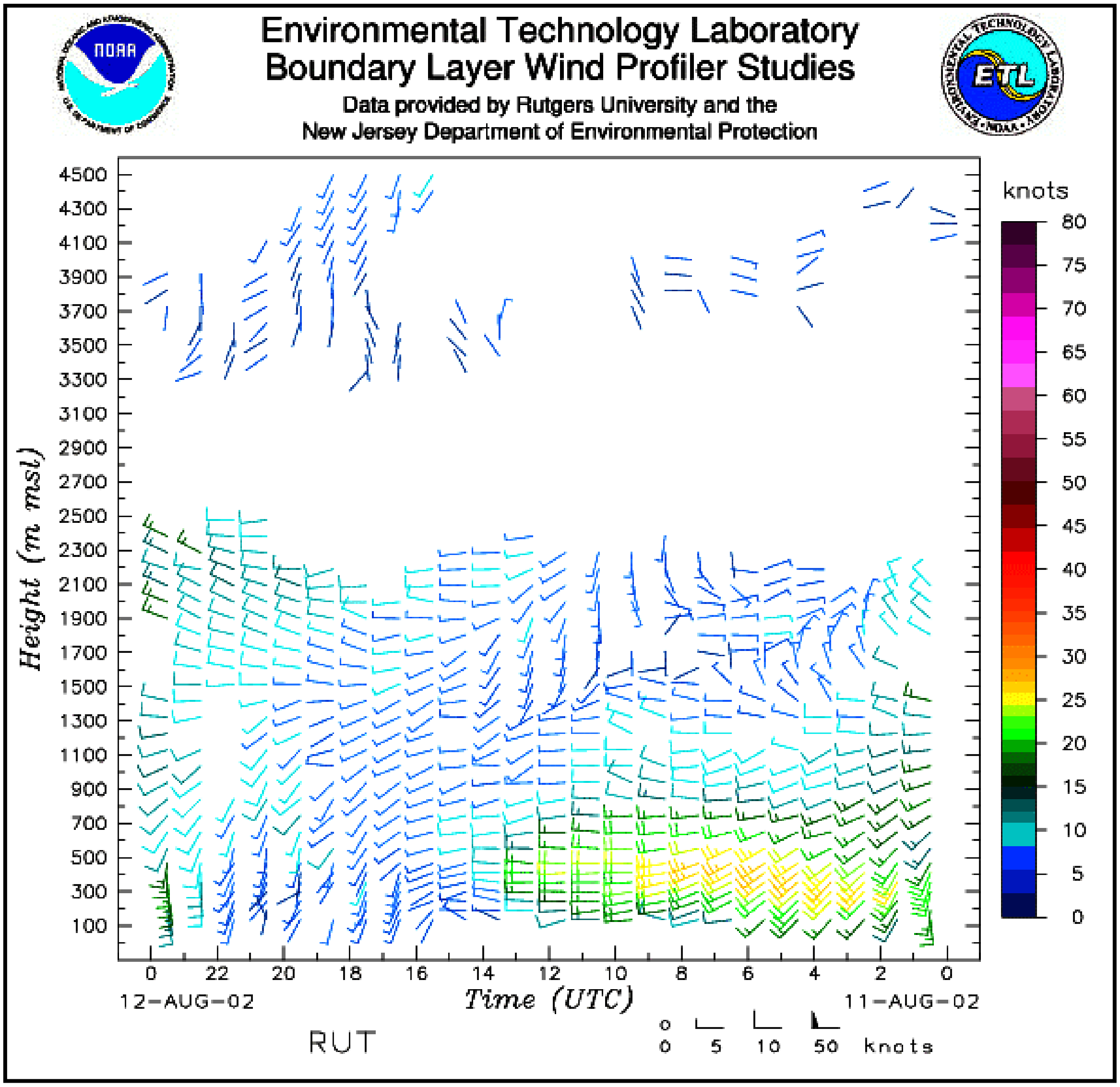


Figure 1.4.3.4 850mb Chart for 8-13-2002 0Z

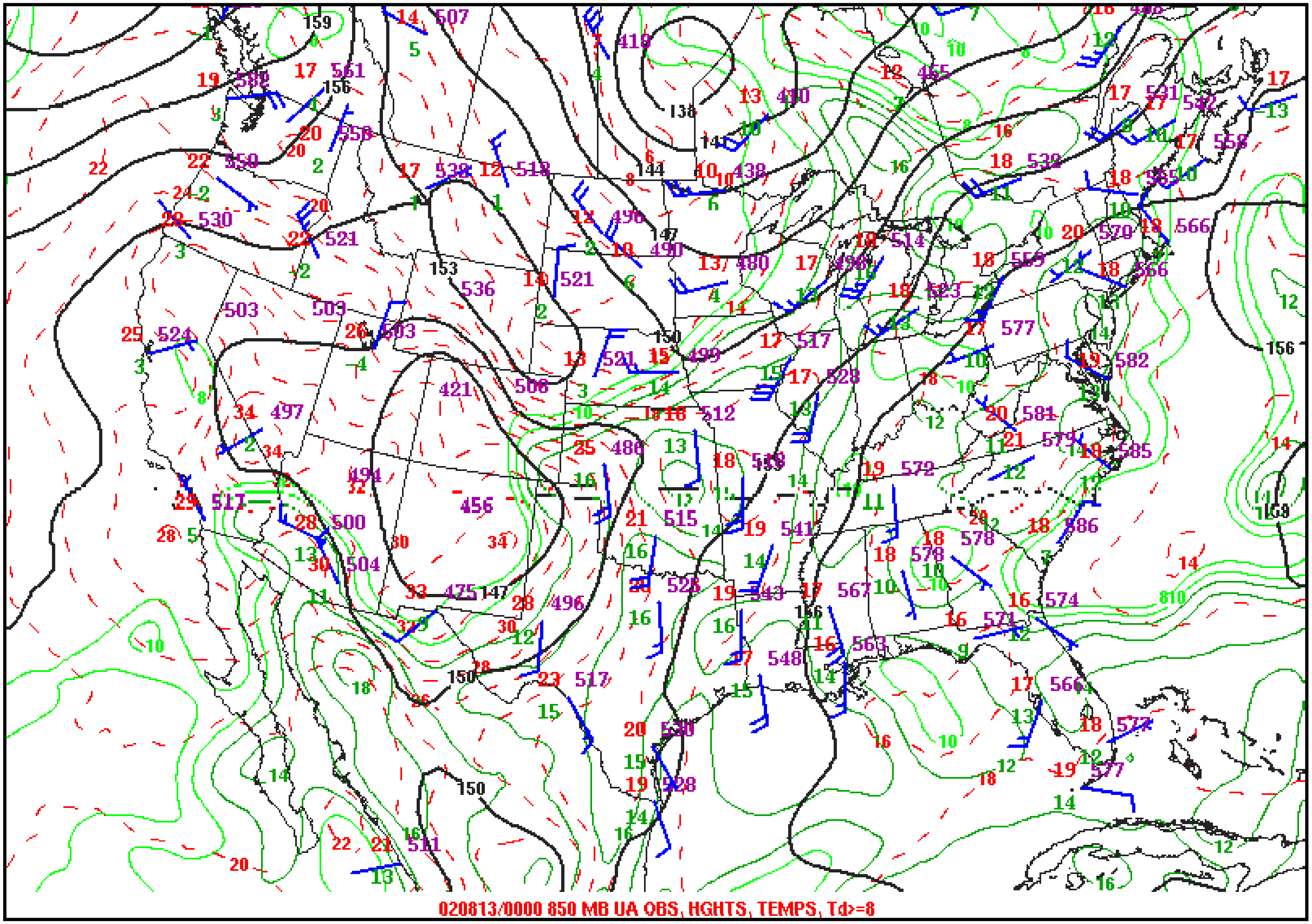


Figure 1.4.3.5 72-hr Back Trajectories for Cornwall 8-12-2002

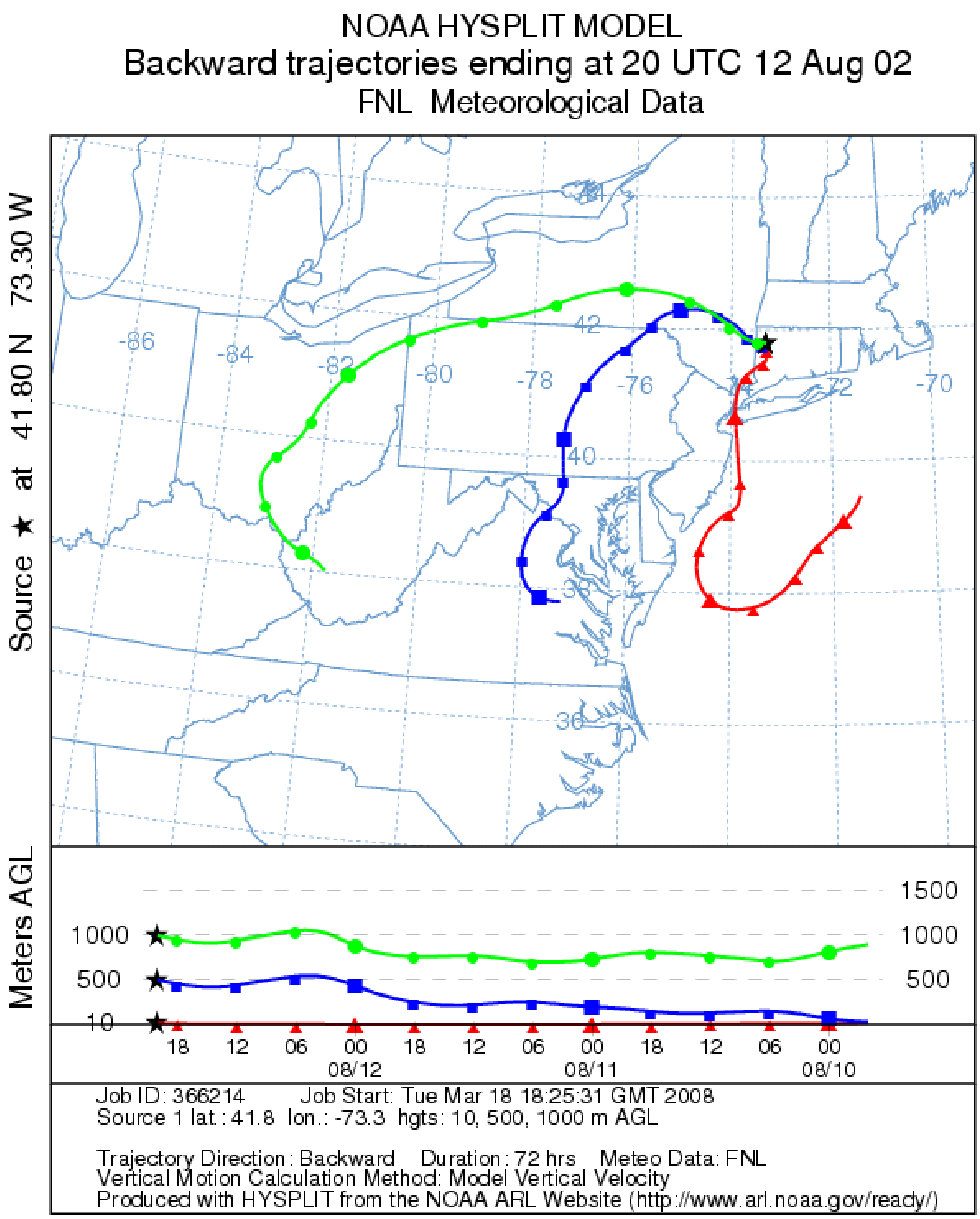
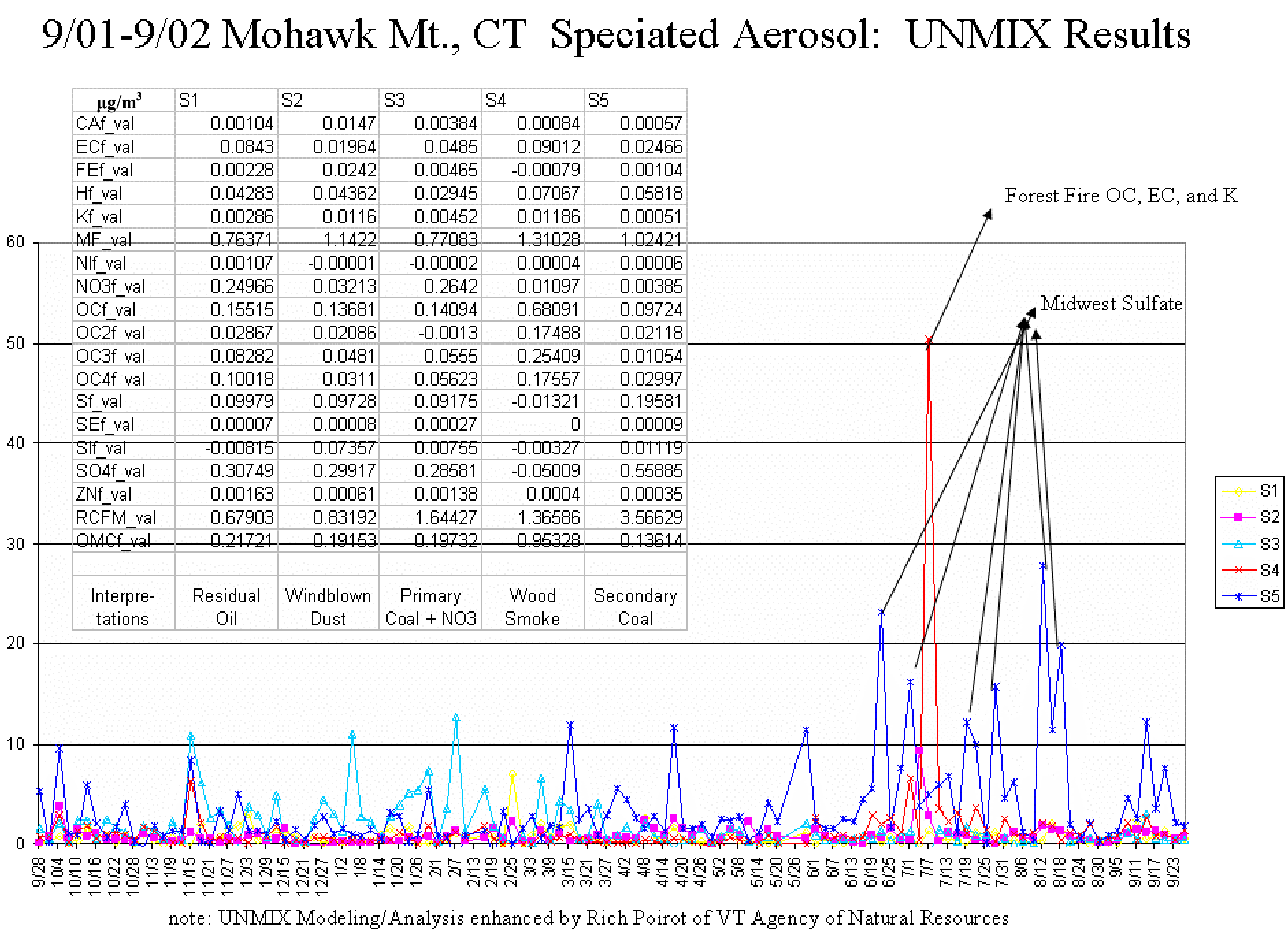
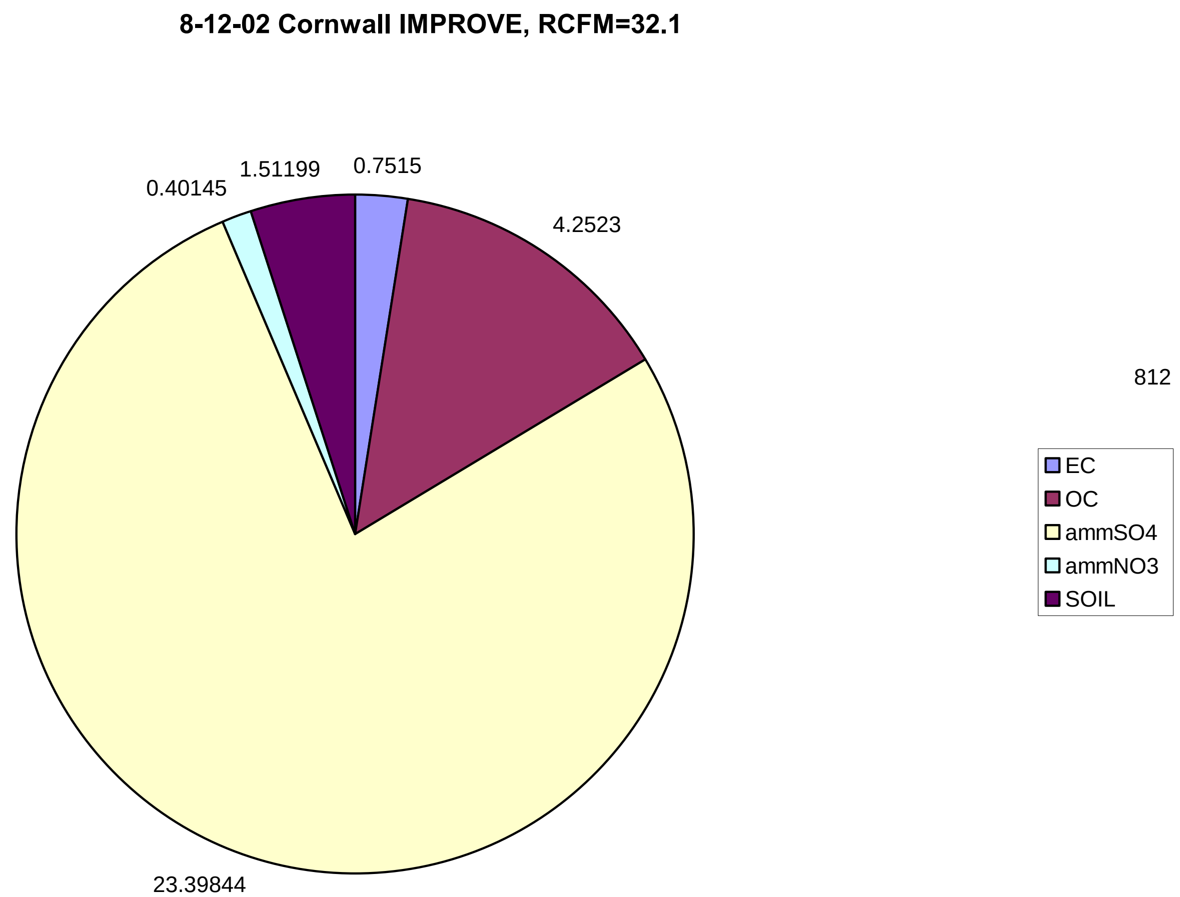


Figure 1.4.3.6 UNMIX IMPROVE Timeseries for Cornwall 9/2001-9/2002



µg/m³	S1	S2	S3	S4	S5
CAf_val	0.00104	0.0147	0.00384	0.00084	0.00057
ECf_val	0.0843	0.01964	0.0485	0.09012	0.02466
FEf_val	0.00228	0.0242	0.00465	-0.00079	0.00104
Hf_val	0.04283	0.04362	0.02945	0.07067	0.05818
Kf_val	0.00286	0.0116	0.00452	0.01186	0.00051
MF_val	0.76371	1.1422	0.77083	1.31028	1.02421
NIf_val	0.00107	-0.00001	-0.00002	0.00004	0.00006
NO3f_val	0.24966	0.03213	0.2642	0.01097	0.00385
OCf_val	0.15515	0.13681	0.14094	0.68091	0.09724
OC2f_val	0.02867	0.02086	-0.0013	0.17488	0.02118
OC3f_val	0.08282	0.0481	0.0555	0.25409	0.01054
OC4f_val	0.10018	0.0311	0.05623	0.17557	0.02997
Sf_val	0.09979	0.09728	0.09175	-0.01321	0.19581
SEf_val	0.00007	0.00008	0.00027	0	0.00009
SIf_val	-0.00815	0.07357	0.00755	-0.00327	0.01119
SO4f_val	0.30749	0.29917	0.28581	-0.05009	0.55885
ZNf_val	0.00163	0.00061	0.00138	0.0004	0.00035
RCFM_val	0.67903	0.83192	1.64427	1.36586	3.56629
OMCf_val	0.21721	0.19153	0.19732	0.95328	0.13614
Interpre-tations	Residual Oil	Windblown Dust	Primary Coal + NO3	Wood Smoke	Secondary Coal

Figure 1.4.3.7 Speciated PM25 from 8/12/2002 IMPROVE sample



Appendix 2C

Evaluation of a New Approach for Real Time Assessment of Wood Smoke PM

October 2004

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ABSTRACT
Wood smoke from forest fires or anthropogenic activities can be a significant contributor to regional haze and PM2.5, but routine methods to quantify the extent of this source's contribution to visibility impairment and ambient levels of PM2.5 have not been developed and evaluated. This paper evaluates an approach to semi-quantitatively measure the fraction of PM that is from wood smoke (WS PM) in real-time. A two-wavelength Aethalometer™ (Magee Scientific model AE42) was used to measure the optical absorption of PM-1 ambient aerosol at 880 nm (BC) and 370 nm (UV-C). Certain organic aerosol components of wood smoke PM have enhanced optical absorption at 370 relative to 880 nm ("Delta-C"). This enhanced absorption is shown to be a specific "indicator" of WS PM, but alone is not a quantitative mass measurement. Improved quantification of WS PM can be obtained when the two-channel Aethalometer is collocated with continuous PM2.5 and other measurements.

A pilot study was performed to evaluate the potential for this approach in Rutland, VT between February and July, 2004. Aethalometer measurements were made at an existing VT-DEC monitoring site, collocated with continuous PM2.5, SO2, CO, and NOx measurements. Rutland is a valley city surrounded by elevated terrain and subject to strong winter morning inversions, and winter PM2.5 sample filters from this site often exhibit a distinct "wood smoke odor". Local mobile sources also contribute to the observed PM and BC concentrations (but not Delta-C) at this site, primarily during weekday morning rush hour periods. Monitoring was performed during seasons with and without wood smoke to allow assessment of mobile source signatures without heating sources, since both have large BC components. The UNMIX model was used to apportion measured PM2.5 into several source categories; NOx and SO2 are used to distinguish PM contributions from WS, oil burning (primarily space heating), and mobile sources. WS PM was associated only with the Aethalometer Delta-C measurement even in the presence of substantial local mobile source and oil-burning aerosols.

Paper #16, presented at the Air & Waste Management Association Visibility Specialty Conference on Regional and Global Perspectives on Haze: Causes, Consequences and Controversies. Asheville, NC, October 25-29, 2004.

INTRODUCTION

Wood smoke from forest fires, wood stove space heating, or recreational fireplace use can be a significant contributor to regional haze and PM2.5. As with other combustion-related PM sources, exposure to elevated levels of wood smoke is likely to have both short and long-term adverse health effects. Particle size distributions from wood combustion are also typically highly efficient at scattering visible light, making residential wood combustion a potentially important contributor to local and regional haze, especially in lower elevation valley areas during winter. Daily PM2.5 speciation samples have been used to identify the extent of this source's contribution to levels of PM2.5. Non-soil potassium (KNON) is a reasonably specific but qualitative indicator of wood smoke PM[1]. There are potential limitations to KNON since the K is emitted as gas phase, and the amount that is transformed into aerosol phase is a function of smoke age and other parameters.

PMF and UNMIX have been used to apportion wood smoke PM using K and a variety of other input parameters[2,3]. Gao et al.'s presentation at this conference[4] updates the PMF analysis in Polissar et al.[2] Other approaches include EC/OC ratios and gas-phase indicators[5]. This work evaluates an approach to semi-quantitatively measure the fraction of PM that is from wood smoke (WS PM) in real-time. Highly time-resolved measurements (1-2 hours or shorter) provide valuable additional insight into the dynamics of sources and dispersion that allow enhanced understanding of these processes on observed concentrations. These dynamics are often lost in a daily (24-hour) integrated sample. Anecdotal reports indicate that some organic aerosol components of wood smoke PM have enhanced optical absorption at 370 nm relative to 880 nm, but often also state that diesel-related PM has a similar enhanced response. Measurements made by Hopke et al. in Philadelphia PA during the Quebec forest fire event in July, 2002 show a substantial enhancement in optical absorption at 370 relative to 880 nm.[6] In this work, we show that the enhanced absorption is a specific "indicator" of WS PM in the presence of local mobile sources, and that local diesel and spark-ignition mobile sources do not significantly contribute to this enhanced absorption signal.

METHODS

A two-wavelength Aethalometer™ (Magee Scientific model AE42, the portable version of the model AE-21) with a BGI/Magee SCC 0.732 PM-1 2 LPM inlet cyclone was used to measure the optical absorption of PM-1 ambient aerosol at 880 nm (black carbon or BC) and 370 nm (UV-C). The Aethalometer reports aerosol absorption on a quartz fiber filter, empirically scaled to units of BC in ng/m^3 for both wavelength channels[7]. The method uses a simple inverse-lambda relationship to scale the UV-C channel data relative to the BC channel. Several field studies have shown that the Aethalometer BC is well correlated to thermal measurements of EC[8,9,10]. However, neither UV-C or UV-C minus BC ("Delta-C") are direct quantitative mass measurements of anything. Improved quantification of WS PM can be obtained when the two-channel Aethalometer is collocated with continuous PM2.5 and other measurements, and generic Delta-C to WS pm factors can be determined.

A pilot study was performed to evaluate the potential for this approach in Rutland, VT between February 11 and July 19, 2004. Rutland is a valley city surrounded by elevated terrain and subject to strong winter morning inversions[11], and winter PM2.5 sample filters from this site often exhibit a distinct "wood smoke odor". Local mobile sources also contribute to the observed PM at this site, primarily during weekday morning rush hour periods. Information about and pictures from the site location are at:
http://www.anr.state.vt.us/air/Monitoring/htm/RutlandInfo.htm

Aethalometer BC and UV-C measurements were made at the existing VT-DEC Rutland monitoring site, collocated with continuous PM2.5, SO2, CO, and NOx measurements; all data were averaged to one-hour intervals. Monitoring was performed during seasons with and without wood smoke to allow assessment of mobile source signatures without heating sources, since both have large BC components. The UNMIX model[12] was used to apportion measured PM2.5 into several source categories; NOx and SO2 are used to distinguish PM contributions from WS, oil burning (primarily space heating), and mobile sources. WS was associated only with the Aethalometer Delta-C measurement even in the presence of substantial local mobile source aerosols.

UNMIX Procedures

The UNMIX receptor model (version 3.1, February 2004) was employed in a "non-traditional" manner with the specific objectives of identifying a unique wood smoke source influence on the measured fine mass, on several collocated gaseous pollutant species, and on the Aethalometer measurements (including a quantitative estimate of the ratio of wood smoke mass to Delta-C). In a more traditional application, the UNMIX model would employ both mathematical and physical constraints, where the input data would include a large number of independent mass-contributing species with the physical constraint that the resultant mass of each source be equal to the sum of its contributing species. In this case, the available measurement data included only a few mass components (volatile and non-volatile PM2.5), carbon indicators (Aethalometer BC and Delta-C) and collocated gaseous species (SO2, NO and CO). All of the above were used as input, with results normalized to the total PM2.5 mass. The gaseous species may help discern or interpret resulting sources but do not contribute directly to the apportioned source's PM2.5 mass.

The raw hourly measurement data for the period 2/11/04 through 4/30/04 were prepared for input as follows. The CO data were adjusted to remove effects of instrumental drift by fitting and removing linear trend lines to two periods of obvious upward drift. For all species, negative values were set to zero and missing data for periods with less than 4 contiguous missing hours were filled by assuming linear change between the preceding and following hours. UNMIX visual data screening tools were employed to remove occasional outlier species & observations that fell outside the relational bounds of the rest of the data. The resulting input data included 1,802 hourly observations (95% of all possible measurement hours) with valid data for eight PM-related and gaseous species for the period 2/11/04 through 4/30/04.

Various meteorological data were employed to help interpret and evaluate the UNMIX results. These include hourly ambient temperature (measured on site), hourly wind speed (from the Rutland State Airport, 5 miles to the south, obtained via the FASTNET website[13]), and every 3rd hour estimates of mixing depth and Pasquill stability class directly over the monitoring site, (obtained via the NOAA READY website[14] using archived EDAS 40 km gridded windfields).

RESULTS

Results from a 5-Source UNMIX solution are summarized in Table 1, where the average source mass contributions are expressed in µg/m^3 and the PM-related components (BC, Delta-C, non-volatile and volatile fine mass) are expressed as the percent of each source's mass contributed by each species. The gaseous species are expressed as the fraction of the total concentration of each gaseous species contributed by each source.

Table 1. Unmix Modeled Source Compositions for Rutland, VT, 2/11/04 - 4/30/04.

Source Mass Compositions and Gaseous Contributions	Wood Smoke	Oil Burning	Fresh MV	Aged MV	Secondary Aerosol
Average Fine Mass (ug/m3)	3.3	3.5	1.4	3.1	2.3
BC (% Source Mass)	4	3	18	9	0
Delta-C (% Source Mass)	7	0	0	0	0
Non-Vol Mass (% Source Mass)	95	100	99	99	20
Volatile Mass (% Source Mass)	5	0	1	1	80
SO2 (Source % of Total SO2)	12	56	25	4	1
NO (Source % of Total NO)	5	5	81	11	0
CO (Source % of Total CO)	12	1	31	55	2

The modeled sources are interpreted as:

• Wood Smoke - which accounted for 24% of the PM2.5 mass and 99% of the Delta-C, representing 7% (1/15th) of the wood smoke mass. A small fraction (5%) of this source mass was volatile. Its magnitude declines sharply as the weather warms, from 6.7 µg/m^3 in February to 1.4 µg/m^3 in April, indicating dominant contributions from residential and/or industrial space heating sources.

• Oil (and other fossil fuel) Combustion - which accounted for 26% of the PM2.5 mass and 56% of the total measured SO2. Its magnitude also declines substantially from February (4.5 µg/m^3) through April (2.5 µg/m^3), suggesting that it is influenced by primarily by winter space heating sources rather than by year-round industrial process or utility emissions.

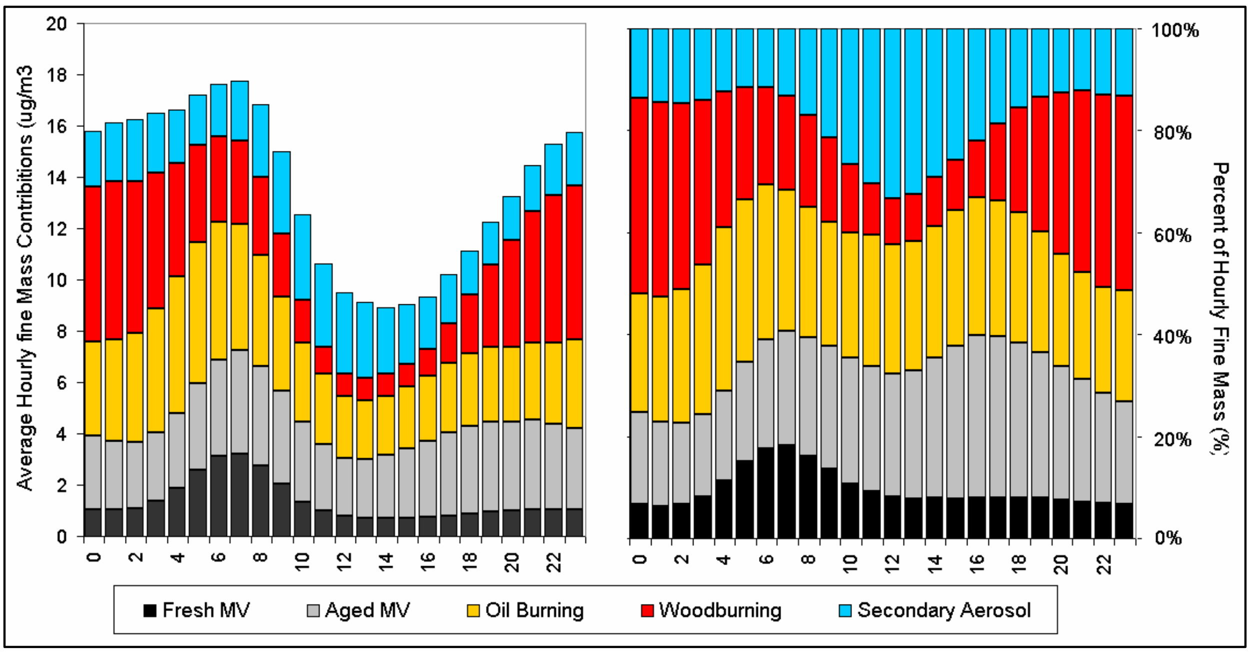
• Fresh Motor Vehicle (MV) Exhaust - which accounted for 10% of the PM2.5 mass and included a very high mass fraction (18%) of BC, suggesting a significant contribution from diesel exhaust. This source also accounted for 81%, 31% and 25% of the measured NO, CO and SO2 respectively.

• Aged Motor Vehicle Exhaust - which accounted for 23% of the PM2.5 mass and included a relatively high BC mass fraction of 9% and which accounted for 55% of the total CO but only 11% of the NO. The much higher CO:NO ratio in this "aged" source compared to the "fresh" MV suggests general influence from traffic on a city-wide scale, vs. fresh emissions from near the monitoring site.

• Secondary Aerosol - which accounted for 17% of the PM2.5 mass and for which the volatile component represented 80% of the total mass. There was virtually no BC, Delta-C or gaseous species associated with this source. Two of the highest daily contributions from this source occurred on 2/20/04 and 3/1/04 - days on which large-scale regional nitrate events have been observed at sites in the northeastern US and Southern Canada from west of the Great Lakes through Northern New England and Southern Quebec. This suggests this source may have a high nitrate content and be influenced by more distant emission sources.

Average diurnal PM2.5 mass contributions and percent contributions from the modeled sources are displayed in Figure 1. The motor vehicle sources show a distinct morning rush hour maxima and a smaller afternoon increase, the secondary aerosol source peaks at mid-day, and the wood and oil combustion sources peak at night.

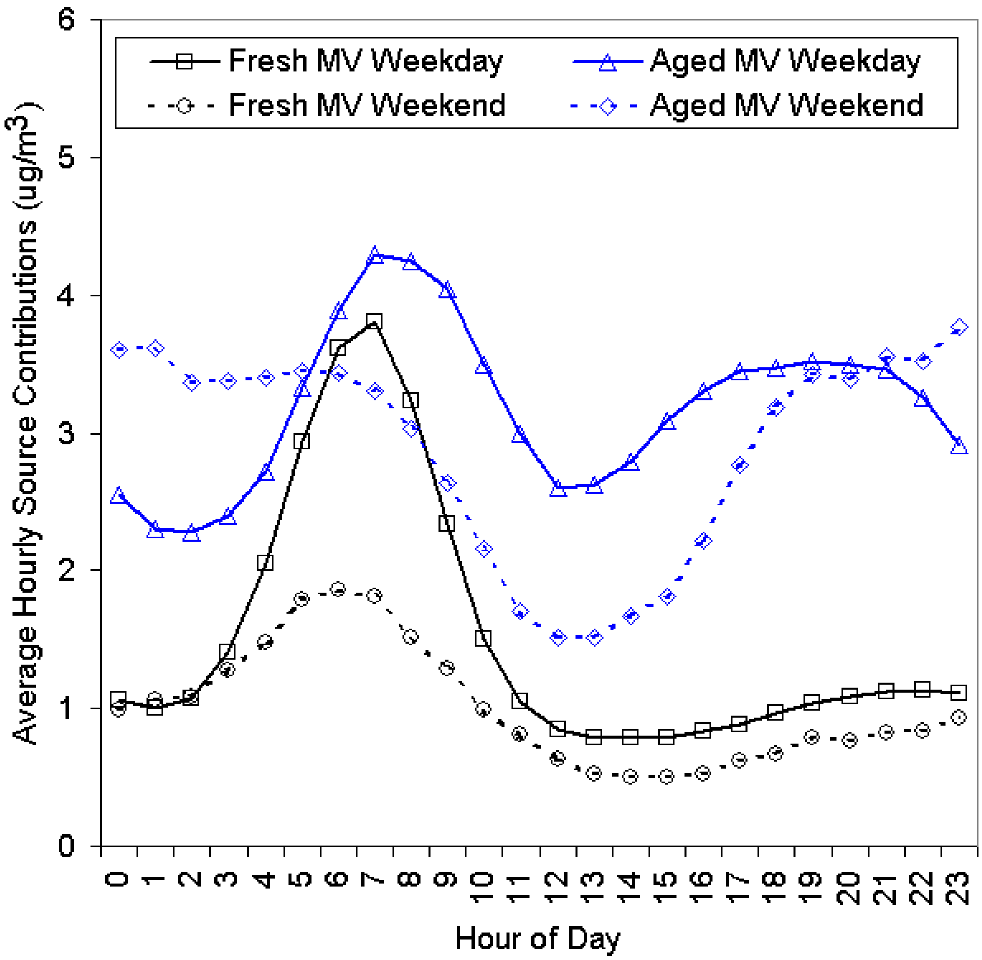
Figure 1. Absolute and Percent Source Contributions to Hourly PM2.5 Mass, by hour of day.



The wood smoke, oil and secondary aerosol sources are of similar magnitude on weekdays and weekends, but the fresh and aged motor vehicle sources exhibit distinct day of week differences. As shown in Figure 2, the fresh motor vehicle source shows a substantial reduction in morning rush-hour concentrations on weekends. The aged MV source also shows a weekend reduction in morning peak and mid-day levels compared to weekdays, but also shows an increase in late night concentrations on weekends. The very sharp weekday rush-hour peak, absence of afternoon peak, and high BC, NO and SO2 content of the fresh motor vehicle source are all suggestive of a large and nearby influence of diesel exhaust on this modeled source. The broader, more prolonged weekday morning and afternoon peaks, night-time weekend increases, lower BC, low

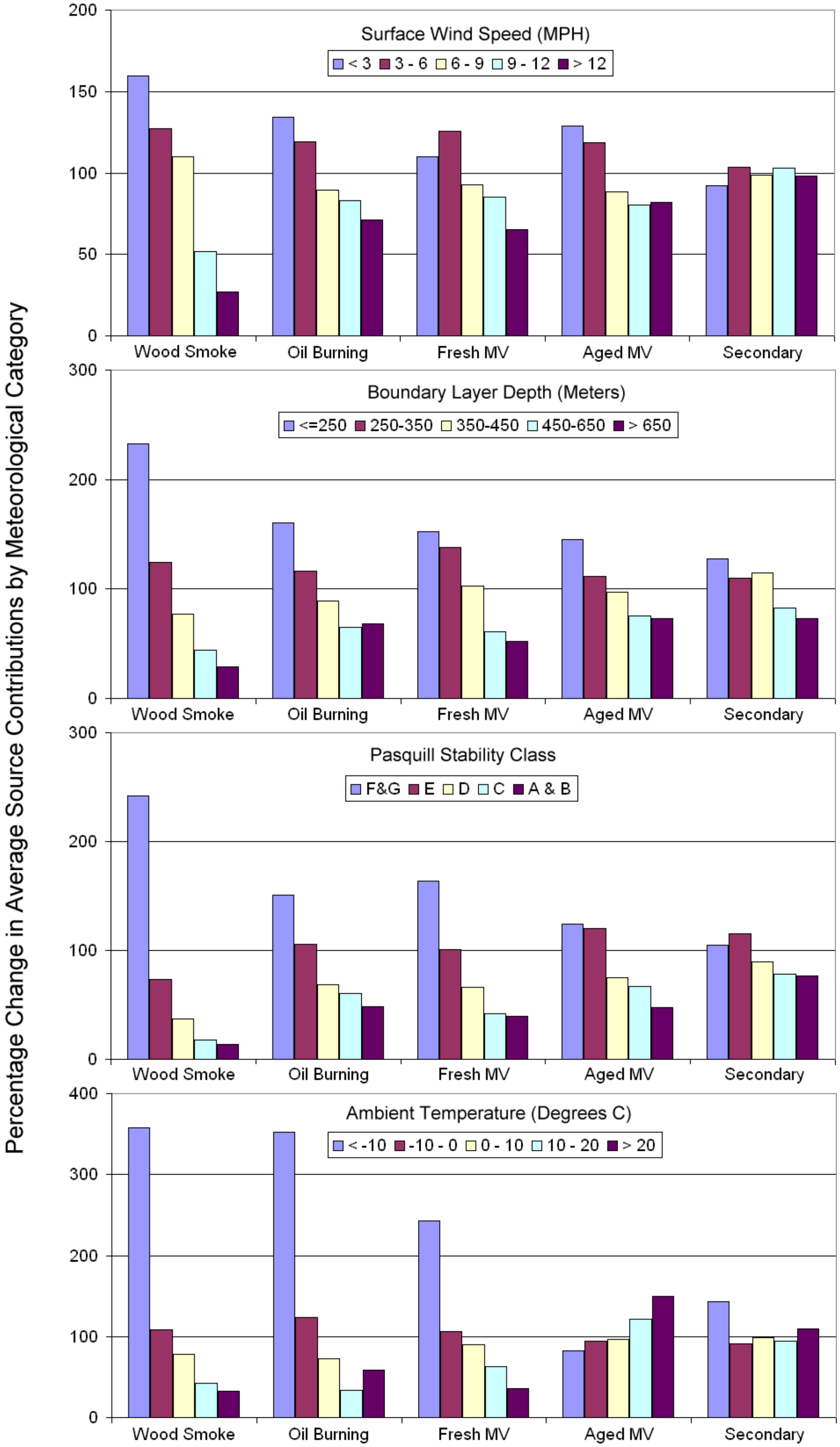
SO2 and high CO:NO ratio for the aged motor vehicle source are all consistent with a more distant (city or valley-wide) influence with a higher contribution from gasoline motor vehicle exhaust.

Figure 2. Weekday/Weekend changes in diurnal mobile source influence.



While the modeled mobile source impacts appear responsive to anthropogenic traffic emissions patterns, ambient pollutant concentrations resulting from these and other local emissions sources should also be strongly influenced by local meteorological dispersion conditions - especially during the winter in a northern valley with elevated surrounding terrain. Stable conditions and occasional strong inversions at night dissipate with daytime increases in solar radiation, temperature, wind speed and mixing depth. Figure 3 displays relative changes in the modeled source influences, sorted by various meteorological categories. In each panel of this figure, the concentrations of each individual source are normalized by expressing the source's average concentration in each meteorological category as a percentage change from its mean concentration. The objective is to show which sources respond most strongly to which changes in local meteorological conditions.

Figure 3. Relative source contribution by meteorological category.

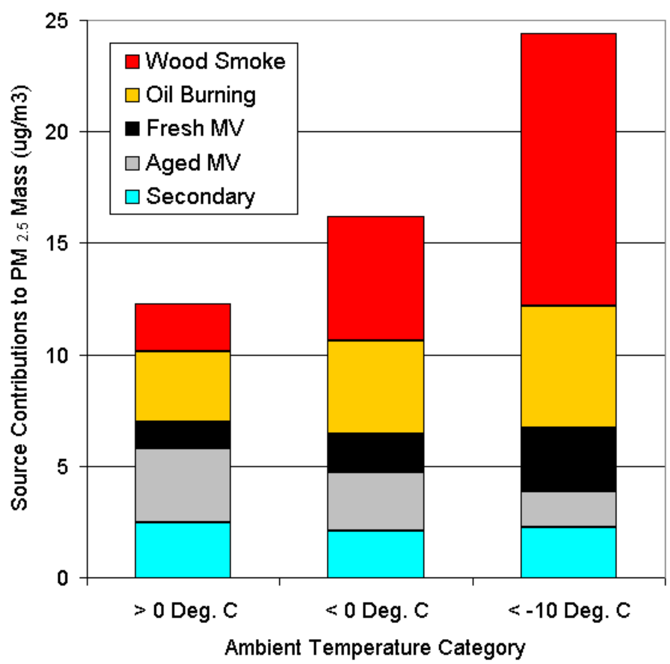


It can be noted that all sources exhibit increasing concentrations with decreases in wind speed and mixing height and with increases in atmospheric stability. Generally, the concentrations of wood smoke appear to be most responsive to changes in dispersion conditions, while the "secondary aerosol" source, which presumably has a large contribution from more distant source regions, is least responsive to local meteorology. In the lower right panel it can be noted that the coldest temperatures are associated with the largest relative increases in both the wood and oil burning source concentrations. While cold temperature is correlated with and an indicator of poor dispersion conditions, it also leads to increased heating demands and so should uniquely affect concentrations from space heating sources.

The fresh MV source also shows a moderately large increase as temperature decreases. This would be consistent with increased cold start operations and vehicle idling times (especially for diesels), and might be further enhanced by a less rapid chemical aging of fresh emissions, consistent with the opposite pattern of increase with temperature exhibited by the aged MV source. Thus the modeled sources' chemical compositions, their day of week and hourly patterns, and their changing concentrations in response to meteorological conditions are all consistent with the modeled source interpretations. This suggests that Delta-C may indeed be a useful quantitative indicator of wood smoke concentrations in the presence of other strong carbonaceous, sulfur-emitting and secondary aerosol source influences.

Figure 4 shows the absolute fine mass contributions of the modeled sources under different temperature conditions for the February through April measurement period. During this latter half of the 2004 heating season in Rutland, when the temperature was often above freezing, PM2.5 mass concentrations averaged below 13 $\mu g/m^3$, with wood smoke accounting for about 1/5 of the mass. When temperature was below freezing, fine mass exceeded 15 $\mu g/m^3$, with wood smoke accounting for about 1/3 of the mass. When temperatures dropped below -10 degrees C, fine mass averaged 25 $\mu g/m^3$, half of which was contributed by wood smoke. Under worst case conditions, wood smoke alone accounted for up to 10 $\mu g/m^3$ (daily) and 25 $\mu g/m^3$ (hourly) of PM2.5 mass.

Figure 4. Source categories contribution to PM2.5 by temperature.



The UNMIX analysis presented here is limited to heating season data. Data were collected beyond this period to include the non-space heating season. Figure 5 is a smoothed 4.5 month time series plot of SO2 and Delta-C hourly data. After about May 12, there is no significant signal in either SO2 or Delta-C, consistent with both being driven by local space heating sources. Improved dispersion in the warm weather (fewer winter valley inversions) could also be contributing to the observed seasonal pattern in these pollutants.

Figure 5. SO2 and Delta-C 24-hour running average (February through June, 2004).

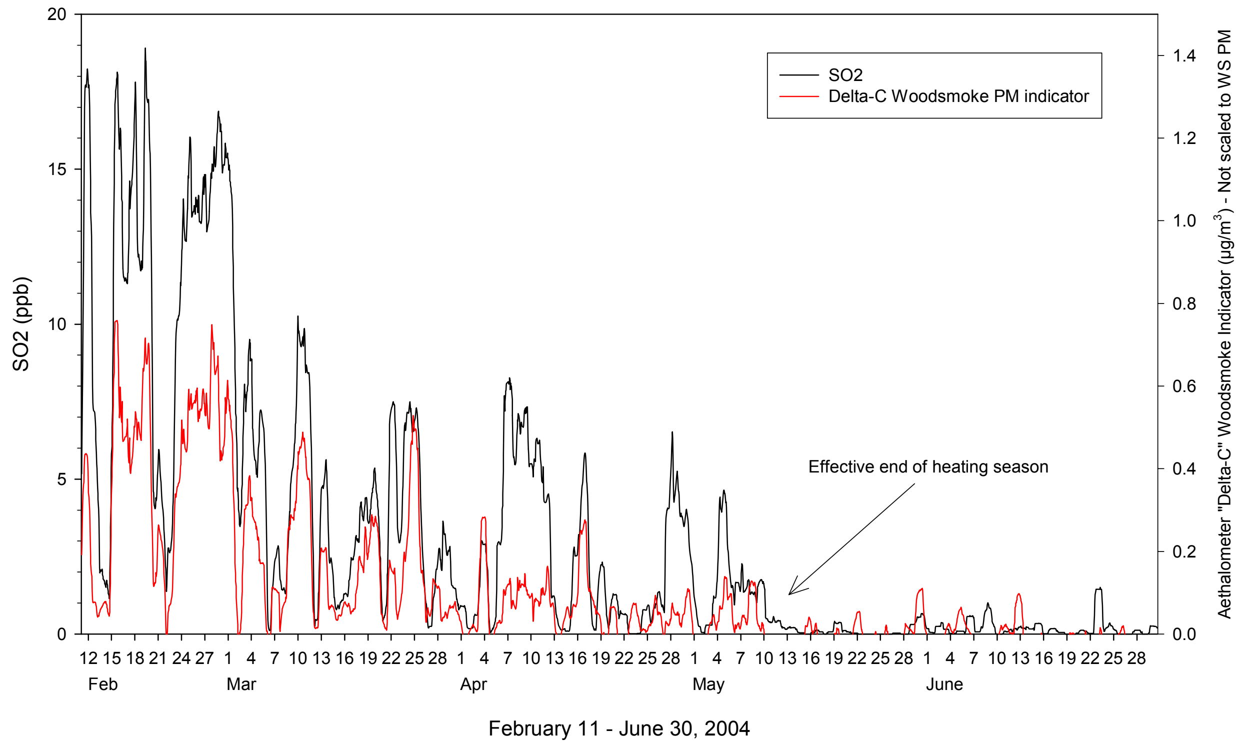
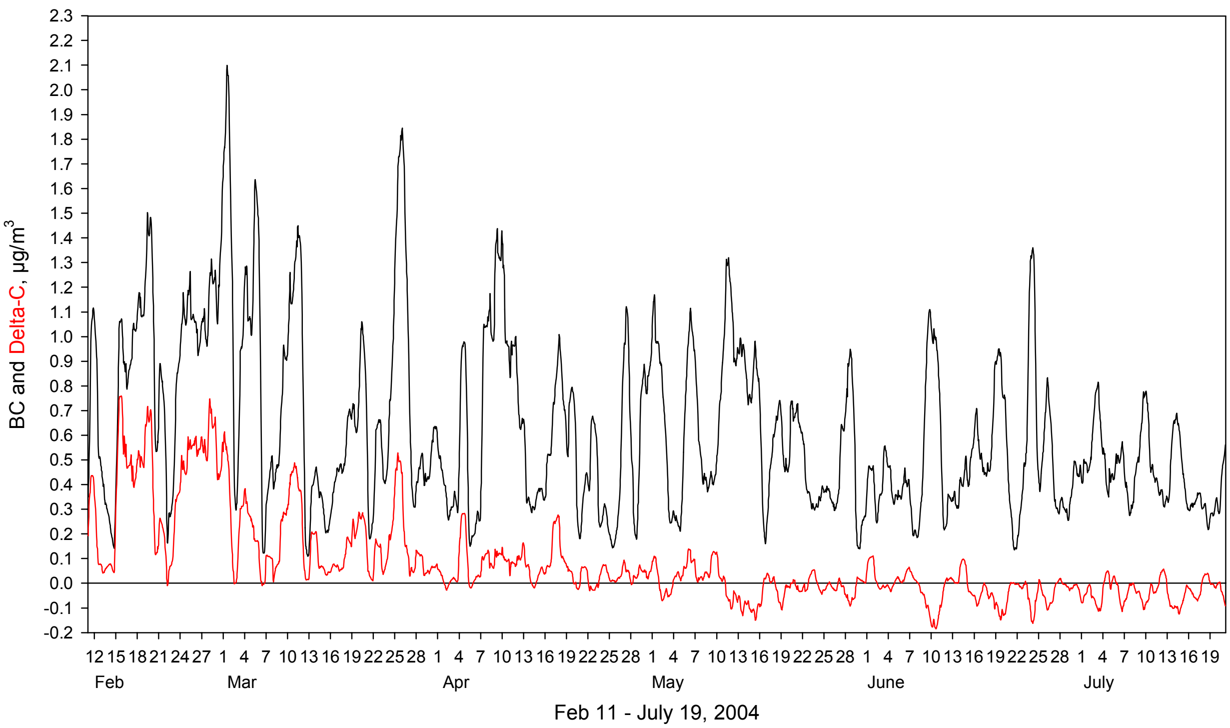


Figure 6 is a smoothed 5-month time series plot of BC and Delta-C hourly data from February to July 2004. The downward trend in Delta-C data is very pronounced, with data after the end of the heating season mid-May showing a clear negative influence of BC on Delta-C. This negative interference is typical of this method in urban areas. It is presumably due to the size of the BC particles being approximately equal to the UV-C channel wavelength of 370 nm and less than the BC channel wavelength of 880nm; the optical absorption measurement principle used by the Aethalometer is only valid for estimation of particle mass when the particles are smaller than the wavelength used. To the extent that this interference is consistent over time, it could be partially corrected for to improve the quality of the Delta-C WS indicator parameter; this would increase the measured Delta-C concentration during periods with high BC concentrations.

Figure 6. BC and Delta-C 24-hour running average (February to July, 2004).



CONCLUSIONS

The two-channel Aethalometer Delta-C signal is shown to be a specific indicator of wood smoke-related PM even in the presence of substantial local mobile aerosols and oil burning. An approximate factor of 15 can be used to semi-quantitatively convert Delta-C to WS PM, providing a method to measure WS related PM2.5 in near real-time. Additional confidence in any WS PM estimate can be gained by measuring PM2.5 at the same time.

Future work includes running UNMIX on data from the non-space heating season as well as both seasons combined to assess the stability of the mobile source parameters. The model results might be refined by additional pre-processing of the data, including corrections for BC interference on Delta-C and improved methods for correction of drift in the CO baseline. The uncertainty in the WS to PM factor has not yet been quantified, both on a short term basis and across sites, and with respect to local versus aged WS. Additional sites with less local and more regional wood smoke influence would be useful in this respect. Finally, comparison of these results against more traditional (integrated) measures of wood smoke indicators could be done.

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[Keywords]
wood smoke
PM2.5
forest fire
Aethalometer
BC, UVC
black carbon soot
UV-absorbing Carbon
UNMIX
source apportionment

Appendix 4A

List of Potential PM2.5 Control Measures Reviewed by CTDEP

List of Potential PM2.5 Control Measures Reviewed by CTDEP

	Measure Name	Pollutant			Description
		NOx	SO2	PM2.5	
Mobile Sources					
Public Outreach	Public Outreach and Education - Air Quality Action Days (Mass Marketing Campaign)	X	X	X	Encourage the public to take a variety of actions on Air Quality Action Days to reduce emissions and improve air quality (emphasizing free transit, telework, carpool). Education surrounding fueling practices. This may include implementing a Strategic Communication Campaigns to increase public awareness about reducing vehicle use (marketing efforts involving advertising campaign in print media and on world wide web.) Encourage liberal leave policys for businesses, local, state and federal employees on Air Quality Action Days, permitting employees to work from home or take unscheduled leave.
Public Outreach	Clean Commute/Try Transit Week	X	X	X	Promotes use of alternative transportation, including transit, by daily commuters for one week per year.
Public Outreach	No Drive Days	X	X	X	Odd/Even License Plate no Drive Days. Prohibit drivers from traveling during certain periods, based on vehicle tags or other easily identifiable criteria. Can be a permanent or episodic control.
I/M	Encourage Vehicle Maintenance:	X	X	X	Identify eligible high emitting vehicles between biennial smog check and offer vehicle owners financial incentives to complete the necessary repairs. Or pay motorists to relinquish any vehicles that fail a smog check emissions inspection. (Eligible vehicles must be taken to a registered dismantler to be recycled.)
Clean Vehicles	Tax incentives to encourage the purchase of hybrid, alternative fueled, electric and ZEV vehicles	X	X	X	Consider use of tax incentives to accelerate adoption of low-emission vehicles. However influence on purchasing behavior may be minimal. Most legislative sessions include such proposals.
LEV	Fleet ILEV for light-duty gasoline vehicles	X		X	Require fleets operating in nonattainment area to be comprised of a percentage of Inherently Low Emission Vehicles (ILEV).
Cleaner Fuels	Low-Sulfur On-Road Diesel Fuel		X		Require Use of Low-Sulfur On-Road Diesel Fuel
Cleaner Fuels	Low NOx Diesel Fuel and Fuel Additives to reduce NOx and SO2	X	X		Require regional use for on-road diesel fuel
Cleaner Fuels	CARB Diesel Fuel		X	X	Implement CARB Diesel Fuel Standards
Commuting	Support Development of Rail between Hartford and New Haven	X	X	X	Provide funding to develop rail services between Hartford and New Haven.
Commuting	Transportation Control Measures (Rideshare, van pools, telecommuting, rail-to-trail, park/ride, decrease drive alone, mixed development, car sharing programs etc.)	X	X	X	Encourage rideshare, van pools, telecommuting, rail-to-trial, park/ride, decrease drive alone, mixed development, etc.) May involve: HOV lanes; free reserved parking spaces for all carpools and vanpools; providing incentives for businesses to provide employee shuttle service to the nearest rail or transit stop; providing free rides home in event of unexpected emergency or unscheduled overtime to commuters using public transport; Fund incentives for new car sharing customers (i.e., Flexcar or Zipcar services). Even aggressive measures likely to provide only a very small percent of the emissions reductions needed for attainment and at considerable expense. See 2001 RACM Analysis for Southwest CT Nonattainment Area.
Commuting	Promote Bicycling and Walking as modes of Transport	X	X	X	Provide incentives to developments that improve bicycle/ pedestrian access. This includes improvements to sidewalks, curb ramps, crosswalks, lighting, funding construction of additional bicycle/pedestrian paths in the region. etc. Install bicycle racks at various locations throughout the region, including expanding existing bike lockers at train stations, install bicycle storage spaces in park-n-ride lots. Provide external bike racks on local transit buses. Conduct ongoing bike to work events. Provide outreach activities, education on the bike-to-work option, and assistance in trying bike-to-work. Encourage employers to provide one bicycle per 50 employees for mid-day business or personal use. Consider restricting private vehicle use in certain areas during business hours, encouraging pedestrian, bicycle, and transit use. Implement a safe pedestrian and bicycle routes to school program to reduce VMT.
Commuting	Changed Scheduling to reduce motor traffic demands	X	X	X	Encourage employers to adopt a shorter work week, with employees working 4 10-hour days. Extend peak-period service on so commuter trains run more frequently between 6-11 am and 3-8 pm.
Commuting	Increase Commuter Options & Frequency	X	X	X	Increase frequency of commuter service to major work centers; Expansion of regional bus services; Enhance reverse commute options; Expand express bus service; Add parking at major transit centers; Buy new busses to accommodate increases in ridership
Commuting	Transit-Flow Improvements	X	X	X	Various Options: Dedicate roadway lanes for use by buses; Construct additional HOV lanes on regional freeways; Regularly optimize traffic signals to reduce idling and low-speed emissions. From midnight until 5am, set intersection signals to flashing yellow in predominant direction and flashing red in minor direction for all low volume intersections where safety permits; Install roundabouts in place of signals at low volume intersections; Provide queue jumps for buses at over-capacity signalized intersections throughout the region.
Commuting	Enhanced Enforcement: Speed Limits	X	X	X	Speed Limit Restriction: Regional speed limit of 55 mph on all roads which previously had posted speeds of greater than 55 mph and Increase speed limit enforcement so that more vehicles are traveling at or below the posted limit. Automate speed enforcement and lower the speed limit to 55 mph for heavy duty vehicles.
Idling Reduction	Increased compliance with the anti-idling restriction; school bus and truck stop signage; state and local police enforcement	X		X	Signage and education to increase compliance is an ongoing effort. Increase enforcement of idling restrictions for on-road vehicles. DEP legislative proposal this session would add police enforcement of DEP's 3-minute idling restriction.

List of Potential PM2.5 Control Measures Reviewed by CTDEP

	Measure Name	Pollutant			Description
		NOx	SO2	PM2.5	
Idling Reduction	Promote Installation of Anti-Idling Technology	X		X	Tax Incentives for Purchase and Installation of Anti-Idling Devices and electrified parking spaces.
Idling Reduction	Episodic Voluntary or Mandatory Closures of Drive Through Windows	X	X	X	Encourage or require Closure of Drive-through Windows on Days with Poor Air Quality.
Idling Reduction	Truck stop electrification	X		X	Many states have implemented pilot projects. Costs to implement truck stop electrification vary depending on the company that installs the electrification technology and how the truck is modified. http://www.eere.energy.gov/cleancities/idle/truck_elec.html CT DOT estimates 3,000 trucks idle overnight per night in CT. If all trucks were provided electrified overnight parking, 2.23 tons of NOx and 0.12 tons of PM2.5 would be reduced per day. (W. Menz calculation assuming 10 hours of idling per day.) Significant fuel savings are also achieved. A NYS Thruway project spent $500,000 to install 44 TSE units.
Idling Reduction	Transport Refrigeration Units (TRUs)	X		X	The truck engine powers the refrigeration unit, so these trucks idle to keep their contents cold at distribution centers in residential areas and at truck stops. http://www.arb.ca.gov/diesel/tru/htm
Diesel Reduction	Electrification of airport ground-service equipment (GSE) and parking shuttles	X		X	Fifty-two commercial, certificated airports operate in the NESCAUM region. NESCAUM estimates that at least 3,369 ground service vehicles are in operation at these facilities, not including airport equipment owned and operated by foreign-based airlines, which are not accounted for in the current NESCAUM inventory. The cumulative emissions from all ground support vehicles at these facilities is considered to be significant. NJ notes that Newark Airport alone has approx. 4,700 pieces of GSE. CT 2002 inventory indicates state total annual emissions for GSE of 4.6 tons/VOC and 42.1 tons NOx.
Diesel Reduction	Restrict use of heavy-duty diesel off-road construction equipment	X		X	Contractors who use heavy duty off-road or on-road mobile equipment during the construction phase of an indirect source (such as residential dwelling units, commercial, office, retail, and roadway projects) would be required to comply with the rule. The primary compliance approach would be payment of a mitigation fee, which would be administered by CTDEP and used to purchase off-site emission reductions.
I/M	I/M for heavy-duty diesel vehicles	X		X	Decrease the weight of trucks tested to >6000 ;bs. GVW (from >26,000 lbs. GVW). The remainder of current tests and limits are identical to California. OTC MOU (1999) encourages state consistency. http://www.arb.ca.gov/msprog/hdvip/hdvip/htm
I/M	California periodic heavy-duty diesel vehicle fleet inspection program	X			As a complement to periodic roadside inspections, HDDV fleet owners are required to perform annual inspections of their vehicles for emissions and tampering; emissions limits vary with age of vehicles; fleet owners' records of maintenance and inspection are audited at random for compliance. The program has cut the failure rate for California roadside inspections in half, to 6%. The CT 2003 failure rate was 17%.
Retrofits	Retrofits	X		X	Various Programs can target local vehicles, commercial vehicles, diesel school busses, diesel state vehicles, public fleets, private fleets, tour busses etc. Fit transit buses running on ultra low sulfur diesel with a quad-catalytic filter.
Retrofits	School bus retrofits, new low-emission school buses and use of ultra low sulfur diesel fuel	X		X	Program initiated in Norwich in 2003 and now underway in various communities throughout CT (Bridgeport, New Haven, Hartford, Newington, Fairfield, Stamford, Hamden, Region 18, Mansfield, Newtown). US EPA grant money available to increase the number of municipalities participating. For New Haven, emissions reductions estimates are 40 percent for fine particulates and carbon monoxide and 45 percent for hydorcarbons. In addition, a small reduction in nitrogen oxides is expected. Emissions reductions in Norwich are estimated at 60%-90% of particulate matter as well as 60%-80% of both hydrocarbon and carbon monoxide.
Retrofits	Construction equipment retrofits with oxidation catalysts and particulate filters			X	Ongoing in CT: I95 New Haven Harbor Crossing Contract; Q-Bridge; Landfill SIP. According to NESCAUM, the construction sector is estimated to represent up to 11% of the PM and 16% of the region's total nonroad NOx emissions. In addition, much of this activity takes place during the summer months when ozone levels are at their highest. CT 2002 inventory attributes 1,425 tons VOC/yr and 7,976 tons/yr NOx to construction and mining equipment.
Diesel Vehicles	School Bus Replacement	X	X	X	All model year 2002 and older buses will be replaced with model year 2007 diesel buses
Diesel Reduction	Enhanced Enforcement of Mobile Source Regulations			X	Increase smoking vehicle enforcement. Publicize Smoking Vehicle Reporting Hotline.
I/M	Periodic Smoke Inspection Program for Heavy Duty Diesel Vehicle and Diesel Buses			X	Requiring owners of truck and bus fleets to perform annual inspection of their vehicles. Fleet owners are not required to inspect vehicles that are powered by engines in their first four model years. Random audit of fleets' maintenance and inspection records, and testing a representative sample of vehicles is performed to ensure compliance
Diesel Vehicles	Heavy Duty Diesel Fuel Program for Particulates			X	Require use of alternative fuels, such as biodiesel or emulsions, in public and publicly contracted fleets, such as Transit buses, school buses, Government Trucks, and Private Fleets to reduce emissions
Diesel Reduction	Remove Trash Trucks From Area Streets and/or Retrofit Trucks as appropriate	X	X	X	Reduce use of trash trucks through transport of trash by barge and use of retrofitted (Mandate Solid waste collection vehicles to install Diesel Oxidation Catalysts) trucks.
Diesel Vehicles	Enhance current opacity standards	X	X	X	Implementing an inspection program for units where retrofits have been added to determine if the retrofits were installed properly and in good working order
Diesel Vehicles	Opacity Cutpoint Revision	X	X	X	Age ranges and the assigned smoke opacity limits would be changed to be more restrictive on all vehicles
Diesel Vehicles	Establish a Medium Duty Vehicle Inspection Program	X	X	X	This would be a combination of On-board Diagnostics (OBD) and smoke opacity inspections for medium duty vehicles between 8,501 - 17,999 gross weight.

List of Potential PM2.5 Control Measures Reviewed by CTDEP

	Measure Name	Pollutant			Description
		NOx	SO2	PM2.5	
Financial Incentives	Fuel Tax Increase	X	X	X	Implement a fuel tax on on-road gasoline and on on-road diesel.
Financial Incentives	Green Curb Initiative	X	X	X	Restricted Access/ “Green Curb”. Differential fees and access permits applied during periods of high congestion. Target delivery/loading zones and carpool/vanpool pickup areas.
Financial Incentives	Establish Clean Air Fund	X	X	X	Sell Clean Air License Plates to fund air quality programs (similar to “Save the Sound” tags).
Financial Incentives	Financial Incentives: Mobile Source Mitigation Fees/Ozone Season VMT Surcharge/ Entry Fees/ Graduated Taxes, etc.	X	X	X	Various Options: Congestion Pricing on Low Occupancy Vehicles; Establish electronic tolling systems; Require a surcharge to be paid by drivers during the summer season based on the number of driving miles and/or collect fees from drivers to enter a pre-defined area; Assess graduated vehicle registration fee/car tax on every privately owned vehicle in the region. Households with multiple vehicles pay higher tax on each additional vehicle; Odometer Tax; Implement region-wide car tax for petroleum-fueled vehicles. Charge graduated car taxes based on a vehicle's EPA miles per gallon rating; Charge VMT fee for all vehicles registered or garaged in the region.
Financial Incentives	Financial Incentives: Make Parking Expensive to Encourage Use of Mass Transit	X	X	X	Various Options: Levy annual impact fee on every parking space in nonattainment area; Discourage developers from providing parking in excess of code minimum by imposing a graduated tax on excess spaces; Increase fees for parking garages and meter during episodes; Implement daily tax on employers providing free or discounted commuter parking spaces; daily tax on employees using commuter parking spaces.
Financial Incentives	Financial Incentives to Increase Train and/or Bus Use	X	X	X	Various Options: Develop an electronic card to allow users to pay fares on all rail and bus systems in the region (including parking in ParknRide lots) using one electronic card; Single price all public transit services with free transfers all day, 7 days per week; Institute free bus-to-rail transfer similar to free rail-to-bus transfer currently in place; Introduce discount programs reducing cost of multiple bus rides through purchase of pass books (e.g. 10-trip tickets); Free Use 10-3 on weekdays and all day on weekends.; Free transit passes for high school and college students, subsidized by schools or through student registration fee; Employers subsidize employees' monthly transit or vanpool costs and receive a tax credit for incurred expenses; Implement programs encouraging or requiring employers to provide the value of subsidized parking to employees who use alternative commute strategies.
Financial Incentives	"Cash for Clunkers" Taxicab Replacement - Conventional Vehicles	X	X	X	Replace taxicabs with new "conventional" LDGVs.
Financial Incentives	"Cash for Clunkers" Gas Caps Program	X	X	X	Provide free replacement gas caps to light- and medium-duty vehicle owners.
Clean Vehicles	Encourage Vehicle Maintenance:	X	X	X	Eliminate all waivers and exemptions in the I/M program, including the motorcycle smog check exemption; Implement a smoke testing and/or Inspection/Maintenance Program for on-road heavy-duty diesel engines; Voluntary vehicle repair programs (identify eligible high emitting vehicles between biennial smog check and vehicle owners will be offered financial incentives to complete the necessary repairs.); Accelerate fleet turnover by providing incentives to retire the oldest most polluting vehicles ("Cash for Clunkers" incentives to relinquish any vehicles that fail a smog check emissions inspection. Eligible vehicles must be taken to a registered dismantler to be recycled); Provide Assistance to Low Income Individuals to Repair Vehicles; implement program to Replace Tires and Ensure Proper Tire Inflation.
Mobile: Fugitive Dust	Roadway Dust Control: Construction Trackout Mitigation Requirements			X	Control Roadway Dust by Mitigating Trackout from Road Construction Sites and Using PM-efficient street sweepers.
NOx	NOx cap for mobile sources	X			Program administration requires considerable resources.
Smart Development	Smart Growth and Infill Development Programs	X	X	X	Change zoning ordinances to allow neigborhood-serving retail establishments in residential areas. Encourage development/redevelopment of land in designated growth areas, encouraging local governments to place greater emphasis on land development near transit stations. Include incentives for mixed-use development at transit centers to reduce sprawl and VMT. Restrict construction of new parking at employment centers based on distance from transit and urban core.
Behavior Modification	Restrict Parking at Schools	X	X	X	Restrict high school students from driving to and parking at high schools when bus service is available.
Area Sources/ Non-Road Sources					
Agriculture	Agricultural Equipment Retrofits	X	X	X	Require agricultural equipment to be retrofitted with emissions controls.
Airport	Airport GSE Initiatives	X	X	X	Subsidize adoption/retrofits of electric ground service equipment; Develop voluntary program to encourage operators to limit idling of airport ground service equipment.
Airport	Airport Emission Cap	X	X	X	Establish Agreement with Airports Authority to Cap or Reduce Emissions.
Airport Idling	Airport APU Initiatives	X	X	X	Seek voluntary agreement to reduce use of aircraft APUs through use of gate-provided services or other strategies
Airports Idling	Idling restrictions for ground transportation/support fleet at airports	X	X	X	Enforce anti-idling rules for ground transportation fleets (Airports)
Behavior Modification	Lawn and garden equipment buyback and scrappage programs	X		X	Program encourages trading of gasoline-powered mowers by providing funds to offset the purchase cost of electric mowers (corded or uncorded). Some grant funds may be available through EPA. Arizona, Maryland and Oregon have offered programs including rebates towards the purchase of "environmentally friendly" equipment.

List of Potential PM2.5 Control Measures Reviewed by CTDEP

	Measure Name	Pollutant			Description
		NOx	SO2	PM2.5	
Behavior Modification	Idling Restrictions for Lawn & Garden Equipment	X	X	X	Limit idling by commercial lawn & garden equipment.
Behavior Modification	Control Emissions from Lawn and Garden Equipment	X	X	X	Adopt measures to reduce lawn area and mower usage or encourage use of native plants as groundcover.
Behavior Modification	Low Maintenance Landscape Initiative			X	"Lawn Care for Cleaner Air": increase use of low maintenance landscapes.
Burning	Restrictions on wood stoves not subject to NSPS; no burn days			X	Prohibit wood stove use on moderate or higher ozone days, exempting stoves better controlled than EPA Phase II stoves from the prohibition. See CO Dept. of PH and Environment at : http://www.cdphe.state.co.us/ap/woodhome.asp. Prohibit sale of stoves that are not certified as EPA Phase II (= certified to meet the July 1, 1990, EPA standards). http://www.epa.gov/compliance/monitoring/programs/woodstoves/ Using emissions estimates from a MANE-VU Residential Wood Combustion Inventory, residential wood burning (includes wood stoves, fireplaces, wood-fired boilers and furnaces, chimineas, fire pits, BBQs) is responsible for annual CT VOC emissions of 41,068 tons/year; annual NOx emissions of 821 tons per year; annual PM2.5 emissions of 8,521 tons/year; and ammonia emissions of 470 tons/year.
Burning	Restrictions on outdoor wood burning furnaces	X		X	Numerous legislative proposals this session to prohibit and/or further restrict operation. One idea is to establish moratorium through Legislation on sale and distribution of new OWBs until implementation of USEPA's regulations
Burning	Encourage USEPA to establish rules or standards for OWBs.			X	The complicated process of establishing testing methods, emission limits, and control devices and the potential of having several different sets of state standards for OWBs makes national regulation the ideal way to regulate OWBs. CT can join NJ to encourage USEPA to establish rules or standards for OWBs through recommendations
Burning	Voluntary wood stove and fireplace retrofit/change-out programs			X	Voluntary wood stove and fireplace retrofit programs for units manufactured pre 1992, including but not limited to replacing fireplaces with natural gas inserts and/or with non-catalytic certified wood stoves. Program would include financial incentives and public education to promote use of Gas Logs/elimination of wood burning. Set maximum moisture content for firewood sales.
Burning	Commitment to adopt State rules for OWBs in the absence of Federal action			X	Connecticut could consider State rules or standards, if after 5 years, the USEPA has not acted to implement rules or standards for OWBs
Burning	Limit burning to times when the air quality is good			X	This measure would limit burning to those times when air quality and meteorological conditions are most suitable for reducing impacts
Control Equipment/ Cooking	Require emissions control devices on conveyorized charbroilers in restaurant cooking operations			X	Restaurant operations include charbroilers, griddles, deep fat fryers, ovens, and other equipment. CA SCAQD is the only area in the country with controls for commercial charbroiling. Only chain-driven charbroilers are regulated although underfired charbroilers make up a higher percent of the total restaurant equipment. CA SCAQD requires control efficiencies of 86% for VOC and 83% for PM10 and PM2.5. Usually requires installation of a catalytic oxidizer. Replace underfired charbroilers with Smokeless broilers or an add-on scrubber to control emissions. ESPs or wet scrubber can also be used. Implement standard that mandates usage of chain-driven charbroilers equipped with control device, such as catalytic oxidizer. Reduce exemption level and set standards for unregulated bakeries. Most sources are small businesses and cost of controls may exceed cost of charbroiler. May be infeasible. No information available on the number of CT sources. NJ has determined that reductions are only feasible from chain-driven charbroilers to create a 0.3-0.6 ton per day reduction in PM in NJ. (Source: T. Key)
Cleaner Fuels	Fuel Switch: Oil to Natural Gas or Electricity for Hot Water Heaters and Furnaces	X	X		Encourage Purchase of Hot Water Heaters that Use Natural Gas or Electricity. Encourage Purchase of Furnaces that Use Natural Gas.
Emissions Control	Low-emission Natural Gas Water Heaters	X			Adopt SCAQMD Rule 1121: Control of NOx from Residential Type Natural Gas Fired Water Heaters.
Emissions Control	Low-emission Natural Gas Furnaces	X			Adopt SCAQMD Rule 1111: NOx Emissions from Natural Gas Fired, Fan-Type Central Furnaces (no more than 40 nanograms of NOx per joule of useful heat).
Energy Efficiency	Energy conservation and "green building" for residential and commercial building construction	X	X		Voluntary program to encourage homebuilders to offer potential homeowners the option of constructing their homes with energy conservation and clean energy features prior to construction
Fugitive Dust	Strategies for controlling fugitive dust emissions (Amendment of RCSA Section 22a-174-18)			X	Strategies would control dust emissions from the following source categories: agricultural unpaved roads, agricultural windblown dust, cattle feedlot dust, harvest operations, livestock wastes, tilling dust, and windblown dust from pasture lands. Other fugitive dust sources that would be covered would include construction, demolition, excavation, extraction, carryout and trackout, etc.
Fugitive Dust	Limit application of anti-skid materials as safety permits to reduce emissions			X	Limiting the application of anti-skid materials to intersections, hills, and curves as safety permits to forming reduce emissions
Fugitive Dust	Paving unpaved roads, road shoulders, and parking areas to reduce fugitive emissions			X	Improvements such as paving will reduce fugitive dust from unpaved roads. Requiring 4 foot paved shoulders (i.e. the edges of the road) on all new or modified paved roads and 50% of existing paved roads with highest traffic. This measure will also require paved interior roads to be 100 feet long and full road width. Limit visible dust emissions to 20% opacity on unpaved parking areas receiving up to 100 trips per day. Requiring a low speed limit (25 miles) on unpaved roads particularly heavily traveled roads will reduce fugitive emissions.
Fugitive Dust	PM-efficient units for street sweeping			X	This measure would limit the purchase and/or use of new street sweepers to PM-efficient units

List of Potential PM2.5 Control Measures Reviewed by CTDEP

	Measure Name	Pollutant			Description
		NOx	SO2	PM2.5	
Fugitive Dust	Practices to reduce wind erosion and fugitive emissions			X	Practices include using cover crops (traditional crops, such as grasses, wheat, sorghum, corn, legumes and cotton) to cover soil surfaces, mulching, use of windbreaks or barriers (like shrubs, trees, grass barriers and manmade fences), use of artificial wind barriers (fences constructed of board, bamboo, willow, rock or earth), and cross wind ridges or strip-cropping. Require practices that would reduce tillage during windy conditions to reduce fugitive emissions.
Fugitive Dust	Surface treatments on unpaved roads and parking areas to reduce fugitive emissions			X	Applying surface treatments such as watering and chemical suppressants (petroleum resin (most common), asphalt emulsions, acrylics, and adhesives) on unpaved roads and parking areas to reduce fugitive emissions.
Fugitive Dust	Trackout controls to reduce fugitive emissions			X	Installing a pipe or grate grid trackout control device or gravel bed trackout to remove dirt and mud from vehicle tires
Diesel Reduction	Episodic limits on asphalt paving and traffic marketing activities	X	X	X	Prohibit road paving and traffic marking on Air Quality Action days.
Fugitive Dust	Watering and planting methods to reduce fugitive dust emissions			X	Use watering and planting methods that will reduce fugitive dust emissions. These methods include using a point planter to reduce emissions from planting cotton, corn and lettuce, Using a laser-directed land plane to reduce emissions due to planing (flattening the land), and Aerial seeding, or dropping seeds from an airplane to reduce dust formation
Marine	Electified Ports	X	X	X	Electrical power will be provided to ocean-going vessels from the land-side, allowing them to shut down auxiliary diesel generators while they are docked. Possible SECA designation for coastal areas? http://www.arb.ca.gov/msprog/offroad/marinevess/harborcraft.htm
Marine	Reduce sulfur content of fuel burned in the auxiliary engines of large marine vessels		X		CT could adopt a regulation similar to CA to reduce the sulfur content of distillate fuel burned in the auxiliary engines of large ships when they are close to the port. Sulfur content limit will be reduced from 1 to 0.5%
Marine	Reduce sulfur content of fuel burned in smaller commercial and recreational vessels		X		Reduce the sulfur content of fuels burned in smaller commercial vessels such as harbor tugs, small commercial vessels, ferries and diesel powered recreational vessels from approx. 3000ppm to 500ppm or 15 ppm
Marine	Operational changes at Ports to reduce fuel usage	X	X	X	Operational changes that reduce truck queuing and idling, such as extending port hours and providing incentives for off-peak delivery, and better use of information technology to track containers and schedule pick-ups and deliveries, would contribute to increased efficiency and reduced fuel usage.
Marine	Mandatory repower program for Marine Vessels	X		X	This measure would establish in-use emission limits for both auxiliary and propulsion diesel engines on ferries, excursion vessels, tugboats, and towboats consistent with the USEPA Tier 2 or Tier 3 marine engine standards but not Tier 4 because of size limitations on some vessels. This measure would emphasize engine replacement (repower), rather than retrofits with diesel emission control strategies for commercial harbor craft.
Marine	Marine Diesel Engine Standards	X		X	Encourage new federal marine engine emission standards (EPA 2012).
Marine	Control Recreational Marine Emissions	X		X	Provide incentives for newer boats and engines.
Marine	Retrofits for Cargo handling equipment at ship builders and ports			X	Cranes, tractors, loaders and other equipment used in port activities are diesel powered and, like construction equipment, create significant amounts of PM pollution. 2002 CT ports data not available.
Marine	Control Commercial Marine Sources	X		X	Tug/Push Boat Activity Reductions.
Non-Road Behavior Modification	Episodic Restrictions on Lawn & Garden Equipment (mandatory)	X		X	Restrict use of lawn and garden equipment during Air Quality Action days including "No Mow Policy" on Code Red Days (voluntary)
Non-Road Behavior Modification	Episodic Restrictions on Recreational Equipment Use (mandatory)	X		X	Restrict use of recreational equipment during Air Quality Action days.
Non-Road Behavior Modification	Episodic Commercial and Industrial Equipment Use Restrictions (voluntary)	X		X	Encourage restricted use of commercial and industrial equipment during Air Quality Action Days.
Non-Road Behavior Modification; Marine	Episodic Recreational Marine Equipment Use Restrictions (voluntary)	X		X	Encourage restricted use of all recreational marine equipment on Air Quality Action Days. Ban idling by recreational marine equipment on Code Red Air Quality Action Days or throughout ozone season.
Non-Road Cleaner Fuels	Low Sulfur Fuel for Off-Road Applications		X	X	Require Low-Sulfur Fuel for Off Road Applications.
Non-Road Cleaner Fuels	Retrofit/Repower Locomotives	X		X	Provide financial incentives to retrofit or repower locomotives operating in the nonattainment area for cleaner burning diesel or alternative fuels.
Non-Road Cleaner Fuels	Purchase Natural Gas Off-Road Equipment	X		X	Encourage Purchase Natural Gas Off-Road Equipment.
Non-Road Cleaner Fuels	Require low-NOx fuel for recreational equipment	X			Require recreational equipment to use low-NOx fuel additives during ozone season.
Non-Road Cleaner Fuels	Low-NOx Fuel for Lawn & Garden Equipment	X			Require diesel-fired lawn & garden equipment to use low-NOx fuel additives during ozone season.

List of Potential PM2.5 Control Measures Reviewed by CTDEP

	Measure Name	Pollutant			Description
		NOx	SO2	PM2.5	
Non-Road Cleaner Fuels	Low-NOx Fuel for Recreational Marine Equipment	X			Require diesel-fired recreational marine equipment to use low-NOx fuel additives during ozone season.
NonRoad Diesel	Emission testing and repair/maintenance program for nonroad heavy duty equipment	X		X	CTDEP could establish an emission testing and repair/maintenance program for nonroad heavy duty diesel equipment.
NonRoad Diesel	Idling reduction for locomotives	X	X	X	A statewide mandatory idling-reduction program, to eliminate all non-essential idling through the use of automatic shut-down devices (SmartStart - a microprocessor technology that automatically manages locomotive shutdowns and startups) and operational changes. Encourage new federal locomotive engine emission standards (EPA 2012).
NonRoad Diesel	California Diesel Fuel			X	California Diesel Fuel: Diesel fuel regulations to require the use of California diesel fuel in locomotives and marine vessels used exclusively in intrastate operations
Non-Road Diesel Reduction	Non-Road Diesel Engine Retrofit Program: Voluntary	X	X	X	Develop voluntary program encouraging retrofit of non-road diesel equipment in public and/or private fleets.
Non-Road Diesel Reduction	Control Off-Road Diesel Engines (smoke test)			X	Implement mandatory smoke testing program for heavy-duty (>50 hp) off-road diesel engines.
Non-Road Diesel Reduction	Control Off-Road Diesel Engines (Blue Sky)	X	X	X	Encourage the use of engines that are included in EPA's voluntary "Blue Sky Series" engine program.
Non-Road Diesel Reduction	Idling Restrictions for Commercial and Industrial Equipment	X	X	X	Limit idling by commercial and industrial equipment.
Non-Road Emissions Control	Clean Air Construction Initiative: Preference for Low-emissions Industrial Equipment	X	X	X	In bids for government contracts, award extra points to bidders using low-emission industrial equipment.
Non-Road Emissions Control	Light Commercial Equipment Retrofits	X	X	X	Require light commercial equipment to be retrofitted with emissions controls. Retrofit portable engines and generators with emission control devices.
Non-Road Emissions Control	Recreational Equipment Retrofits	X	X	X	Require recreational equipment to be retrofitted with particulate filters and/or oxidation catalysts.
Non-Road Financial Incentives	Control Recreational Equipment Emissions	X	X	X	Increase registration fee on recreational vehicles (dedicate fee to clean air fund).
Non-Road Financial Incentives	Graduated registration fees for recreational boats	X	X	X	Levee additional registration fee for registration of boats with old, high-emission engines.
Non-Road Financial Incentives	Airport Congestion Pricing	X	X	X	Charge higher aircraft landing fees during busy times of day to reduce airport delays and congestion.
Non-Road Financial Incentives	Gas and Diesel Tax Increase	X	X	X	Implement a fuel tax on off-road gasoline.
Non-Road Financial Incentives	"Cash for Clunkers" various programs	X	X	X	Implement a 2-cycle Engine Replacement Program. Offer cash for consumers to turn in old outboard motors and purchase new ones. Offer cash for consumers to turn in lawnmowers or lawn tractors and purchase electric or push mowers. Offer Cash to Construction Equipment Owners to Retire Old High Emitting Construction Equipment.
Outreach	Clean Air Partners: Public Outreach and Education	X	X	X	Implement Strategic Communication Campaigns to Increase Public Awareness (target lawnmowers, paints, refueling).
Smart Development	Implement Programs to Reduce the Urban Heat Island Effect: Roofs	X	X	X	Mitigate emissions from new development to reduce electricity demand for cooling.
Smart Development	Implement Programs to Reduce the Urban Heat Island Effect: Pavement	X	X	X	Increase Urban Tree Canopy and land use restrictions to reduce electricity demand for cooling.
Sulfur in Fuel	Home heating oil sulfur reductions		X		DEP legislative proposal to reduce the sulfur content from 3000 to 500 ppmw no later than June 1, 2010. Estimated PM reductions of more than 120 tons per year and SOx reductions of more than 10,000 tons per year. A uniform sulfur content value and maximum allowable SO2 emissions value for each of the grade of the fuel oil could be set throughout the state
Stationary Sources					
Diesel Reduction	Distributed Generation Resource General Permit			X	General Permit with particulate requirements
Agriculture	Control Agricultural Sources			X	Encourage agricultural best practices, including those that reduce pesticide use.
Behavior Modification	Solid Waste Recycling	X	X	X	Increase Recycling Rates to Reduce Trash at MSW Incinerators and reduce energy demand and associated emissions..
Cleaner Fuels	Low Sulfur Fuel Oil for Stationary Sources		X		Require Use of Low Sulfur Fuel Oil for Stationary Sources.

List of Potential PM2.5 Control Measures Reviewed by CTDEP

	Measure Name	Pollutant			Description
		NOx	SO2	PM2.5	
Cleaner Fuels	Reductions from EGUs: Fuel Switch (Coal to Oil, Natural Gas, Biodiesel)		X		Encourage EGUs to Switch from Coal to Oil, Natural Gas, or Biodiesel.
Cleaner Fuels	Expand Use of Cleaner Fuels	X	X		Expand Use of Biodiesel Fuel; Ethanol Fuel; High-Cetane Fuel; low-NOx additives, and biodiesel. Require oil-burning stationary sources to burn ThermaNOx, a low-NOx No. 2 fuel oil emulsion, during ozone season.
Control Equipment	OTC Model Rule -- Maintenance requirements for industrial boilers	X			Model rule regulates units 5-50 MM/BTU. Approximately 2,100 units in the state. Most are small with very low actual emissions. The annual cost of compliance would be $500-1,000, which may be a significant burden on the source owners/operators with little to no actual emissions reductions.
Emissions Control	Reductions from EGUs: OTC Model Rule		X		Adopt OTC Multipollutant Model Rule for EGUs. Upwind SO2 Reductions.
Emissions Control	Episodic Mandatory Facility Reductions	X	X	X	Require mandatory facility reductions on Air Quality Action Days. Require Curtailment Plan.
Emissions Control	Reductions from EGUs: Improved Start-up and Shut-down Procedures	X	X	X	Improve Start-up and Shut-down Procedures at Power Plants.
Emissions Control	Upwind SO2 Controls: Plant-by-Plant BACT Controls		X		Reduce Upwind SO2 Emissions by Requiring Facility-Specific Controls.
Emissions Control	State Multipollutant Legislation	X	X		Adopt State Multipollutant Legislation.
Emissions Control	Control Asphalt Facilities	X			Voluntary NOx emission limits on asphalt production facilities. (currenlty being worked on)
Emissions Control	Emission Reduction Credit Retirement Program	X	X		Establish program to retire emission reduction credits for stationary sources.
Emissions Control	Upwind Chemical Industry Controls	X			Reduce upwind NOx emissions limits in the manufacture of chemicals.
Emissions Control	NSR revisions to require more stringent BACT/LAER and encourage CHP and other clean technologies	X			The OTC should first consider whether or not the NSR thresholds should be revised.
Energy Efficiency	Various Renewable Energy Incentive Programs: Renewable Portfolio Standards; Solar Photovoltaic Programs; Wind Energy Purchases; Solar Hot Water Heating	X			Increase Purchases and installation of Renewable Energy (Solar Photovoltaic Programs; Wind Energy Purchases; Solar Hot Water Heating; Green Building; Ground Source Heat Pump; Energy Efficient LED Traffic Signals, LED Street Lights and Exit Signs) by Government and the Private Sector, with Commensurate Retirement of EGU NOx Allowances. Increase Use of Energy Performance Contracts in the Public and/or Private sector to Reduce Energy Consumption, with Commensurate Retirement of EGU NOx Allowances. Provide assistance to low income individuals to improve energy efficiency of residential dwellings. Require that developers offer clean energy and energy efficiency features in new homes.
Energy Efficiency	ECMB funded energy efficiency and renewable energy measures	X			Considerable barrier to obtaining credit is the NOx Budget cap; allowances would need to be retired to obtain credit. Substantial initial and continuing effort to quantify the reductions, monitor and verify the emissions reductions. Measures that are considered voluntary and emerging are limited to 6% of the needed reductions for ROP, RFP or attainment demonstration purposes. Electric grid dispatch must be taken into account to demonstrate that reductions will occur at generating facilities in the state.
Energy Efficiency	Climate Change Action Plan: Certain final recommended measures for residential, commercial and industrial sector	X	X	X	Measures include: appliance standards, appliance swapping, electric hot water heater replacement, weatherization program, Energy Star homes, high performance buildings, green campus initiative. Considerable barrier to obtaining credit is the NOx Budget cap; allowances would need to be retired to obtain credit. Substantial initial and continuing effort to quantify the reductions, monitor and verify the emissions reductions. Measures that are considered voluntary and emerging are limited to 6% of the needed reductions for ROP, RFP or attainment demonstration purposes. Electric grid dispatch must be taken into account to demonstrate that reductions will occur at generating facilities in the state.
Energy Efficiency	Emissions performance standards and NEPOOL control area tracking	X	X	X	Standards provide little to no pollutant reductions over permit requirements for in-state EGUs. Reductions are most likely to occur in out-of-state generators supplying electricity at retail in CT. Location of generator difficult to determine due to operation of electric grid and NEPOOL tight dispatch system. Demonstration of air quality benefit to CT nonattainment area challenging.
NOx	OTC-wide reduction of state NOx Budget caps	X			Without such a reduction or retirement of NOx allowances, the ability to take credit for emissions reductions for many other measures will be limited by our ability to demonstrate the reductions are surplus. What is the level of interest in pursuing this in the OTC?
NOx	Reductions on NOx RACT for non-NOx Budget units	X			Moderate-size industrial and commercial units. Reduction efforts could include emissions standards based on the OTC Model Rule for Additional NOx Control Measures, combustion modification requirements and standards for or encouragement of the use of CHP.

Appendix 4B

Ozone Transport Commission

Control Measures
Technical Support Document

OZONE TRANSPORT COMMISSION

Identification and Evaluation of Candidate Control Measures

Final

Technical Support Document

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Acronyms and Abbreviations

Acronym	Description
BOTW	Beyond-on-the-Way – refers to additional emission controls that are being considered
CAIR	Clean Air Interstate Rule
EGAS 5.0	Economic Growth Analysis System Version 5.0
EGU	Electric Generating Unit
EPA	U.S. Environmental Protection Agency
IPM	Integrated Planning Model
MANE-VU	Mid-Atlantic/Northeast Visibility Union
MARAMA	Mid-Atlantic Regional Air Management Association
MOBILE6	U.S. EPA's emission model for onroad sources
NESCAUM	Northeast States for Coordinated Air Use Management
NH3	Ammonia
NIF3.0	National Emission Inventory Input Format Version 3.0
NONROAD	U.S. EPA's emission model for certain types of nonroad equipment
NOx	Oxides of nitrogen
OTB/W	On-the-Books/On-the-Way – refers to emission control programs already adopted and proposed emission controls that will result in post-2002 emission reductions
OTC	Ozone Transport Commission
OTC 2001 model rules	Model rules developed by the OTC in 2001
OTC 2006 model rules	Model rules developed by the OTC in 2006
PM10-PRI	Particulate matter less than or equal to 10 microns in diameter that includes both the filterable and condensable components of particulate matter
PM25-PRI	Particulate matter less than or equal to 2.5 microns in diameter that includes both the filterable and condensable components of particulate matter
SIC	Standard Industrial Classification code
SIP	State Implementation Plan
SCC	Source Classification Code
SO2	Sulfur dioxide
VOC	Volatile organic compounds

1.0 EXECUTIVE SUMMARY

The States of the Ozone Transport Region (OTR) are faced with the requirement to submit attainment demonstration plans for the 8-hour ozone National Ambient Air Quality Standards (NAAQS). To accomplish this, most of the states will need to implement additional measures to reduce emissions that either directly impact their nonattainment status, or contribute to the nonattainment status in other states. As such, the Ozone Transport Commission (OTC) undertook an exercise to identify a suite of additional control measures that could be used by the OTR states in attaining their goals.

The OTC staff and member states formed several workgroups to identify and evaluate candidate control measures. Initially, the Workgroups compiled and reviewed a list of approximately 1,000 candidate control measures. These control measures were identified through published sources such as the U.S. Environmental Protection Agency's (EPA's) Control Technique Guidelines, STAPPA/ALAPCO "Menu of Options" documents, the AirControlNET database, emission control initiatives in member states as well as other states including California, state/regional consultations, and stakeholder input. The Workgroups developed a preliminary list of 30 candidate control measures to be considered for more detailed analysis. These measures were selected to focus on the pollutants and source categories that are thought to be the most effective in reducing ozone air quality levels in the Northeastern and Mid-Atlantic States.

The Workgroups discussed the candidate control measures during a series of conference calls and workshops held periodically from the spring of 2004 through the autumn of 2006. The Workgroups collected and evaluated information regarding emission benefits, cost-effectiveness, and implementation issues. Each of the candidate control measures were summarized in a series of "Control Measure Summary Sheets". Stakeholders were provided multiple opportunities to review and comment on the Control Measure Summary Sheets.

Based on the analyses by the OTC Workgroups, the OTC Commissioners made several recommendations at the June 2006 Commissioners' meeting in Boston (OTC 2006a-d) and at the November 2006 Commissioners' meeting in Richmond (OTC 2006e-g). The Commissioners recommended that States consider emission reductions from the following source categories:

- Consumer Products
- Portable Fuel Containers
- Adhesives and Sealants Application
- Diesel Engine Chip Reflash
- Cutback and Emulsified Asphalt Paving

- Asphalt Production Plants
- Cement Kilns
- Glass Furnaces
- Industrial, Commercial, and Institutional (ICI) Boilers
- Regional Fuels

Additionally, the Commissioners directed the OTC to evaluate control measures for Electric Generating Units (EGUs) and high electric demand day units (these measures will be addressed in a separate OTC report) Finally, the Commissioners requested that EPA pursue federal regulations and programs designed to ensure national development and implementation of control measures for the following categories: architectural and maintenance coatings, consumer products, ICI boilers over 100 mmBtu/hour heat input, portable fuel containers, municipal waste combustors, regionally consistent and environmentally sound fuels, small offroad engine emission regulation, and gasoline vapor recovery (OTC 2006d).

See Appendix A for a full description of the process used by the OTC to identify and evaluate candidate control measures.

Table 1-1 summarizes information about the control measures identified by the OTC Commissioners at the June 2006 and November OTC meetings. Table 1-1 identifies the sector, the source category, and a brief description of the control measure. Next is a column that identifies the recommended approach for implementing the rule, such as an OTC model rule or updates to existing state-specific rules. The next two columns show the percent reduction from 2009 emission levels. The final column provides the cost effectiveness estimate in units of dollars per ton of pollutant removed.

Table 1-2 summarizes the expected emission reductions by pollutant, control measure and State. The emission reductions listed in Table 1-2 are for 2009, and take into account only the incremental reductions from the control measures listed in Table 1-1. Figures 1-1 and 1-2 show the anticipated emission reductions by state for VOC and NOx, respectively.

Table 1-1 Summary of OTC 2006 Control Measures

Sector	Source Category	Control Measure	Implementation Method	Percent Reduction from 2009 OTB/W Emission Levels		Cost Effectiveness ($/ton)
				NOx	VOC	
Area	Adhesives, Sealants, Adhesive Primers, and Sealant Primers (Industrial)	Enact VOC content limits similar to those contained in the CARB RACT/BARCT document for adhesives and sealants (Dec. 1998)	Model Rule	---	64	VOC: 2,500
Area	Cutback and Emulsified Asphalt Paving	Prohibits the use of cutback asphalt during the ozone season Limits the use of emulsified asphalt during the ozone season to that which contains not more than 0.5 mL of oil distillate from a 200 mL sample as determined using ASTM Method D244	State Rule Update	---	State specific depending on current rules	VOC: minimal
Area	Consumer Products	Adopt the CARB 7/20/05 Amendments which sets new or revises existing VOC limits on 12 consumer product categories (does not include reductions for Tier2 shaving gels and antistatic aerosols since they have a later compliance date).	Model Rule	---	2	VOC: 4,800
Area	Portable Fuel Containers	Adopt the CARB 2006 Amendments broadening the definition of PFCs to include kerosene and diesel containers and utility jugs used for fuel, and other changes to make OTC Model Rule consistent with CARB requirements.	Model Rule	---	State specific	VOC: 800 to 1,400
Area and Point	Asphalt Production Plants	Area/Point Sources Batch Natural Gas 0.02 lb/ton or equivalent ppm Batch Distillate 0.09 lb/ton or equivalent ppm Drum Natural Gas 0.02 lb/ton or equivalent ppm Drum Distillate 0.04 lb/ton or equivalent ppm or Low NOx Burners, Best Management Practices	State Rule Update	10 - 35	---	NOx: <500 to 1,250

Sector	Source Category	Control Measure	Implementation Method	Percent Reduction from 2009 OTB/W Emission Levels		Cost Effectiveness ($/ton)
				NOx	VOC	
Area and Point	Industrial/ Commercial/ Institutional (ICI) Boilers >250 mmBtu/hour	Option 1 – Purchase current year NOx allowances equal to reductions needed to achieve the required emission rates Option 2 – Phase I 2009 emission rate equal to EGUs of similar size; Phase II 2013 emission rate equal to EGUs of similar size	Model Rule	Boiler and State specific	---	NOx: 600 to 18,000
Area and Point	ICI Boilers 100-250 mmBtu/hour	NOx Strategy #1: Nat gas: 0.10 lb/mmBtu #2, #4, #6 Oil: 0.20 lb/mmBtu Coal: 0.08 to 0.22 lb/mmBtu, depending on boiler type NOx Strategy #2: Reductions achievable through LNB/SNCR, LNB/FGR, SCR or some combination of these controls NOx Strategy #3: 60% reduction from uncontrolled NOx Strategy #4: Purchase current year CAIR allowances	State Rule Update	Boiler and State specific	---	NOx: 600 to 18,000
Area and Point	ICI Boilers 25-100 mmBtu/hour	NOx Strategy #1: Nat gas: 0.05 lb/mmBtu #2 Oil: 0.08 lb/mmBtu #4, #6 Oil: 0.20 lb/mmBtu Coal: 0.30 lb/mmBtu NOx Strategy #2: 50% reduction from uncontrolled NOx Strategy #3: Purchase current year CAIR allowances	State Rule Update	Boiler and State specific	---	NOx: 600 to 18,000
Area and Point	ICI Boilers <25 mmBtu/hour	Annual boiler tune-up	State Rule Update	State specific	---	

Sector	Source Category	Control Measure	Implementation Method	Percent Reduction from 2009 OTB/W Emission Levels		Cost Effectiveness ($/ton)
				NOx	**VOC**	
Point	Glass Furnaces	Require furnace operators to meet the emission limits in the San Joaquin Valley rule by 2009. These limits are achievable through implementation of "oxyfiring" technology for each furnace at furnace rebuild. If the operator does not rebuild the furnace by 2009 or implement measures to meet the limits in the San Joaquin Valley rule, the operator would be required to purchase NOx allowances equal to the difference between actual emissions and the limits in the San Joaquin Valley rule. Compliance with Rule 4354 will allow manufacturers to use a mix of control options to meet the suggested limits. Manufacturers may propose alternative compliance methods to meet the specified limits, including emissions averaging.	State Rule or Permit	Source specific	---	NOx: 1,254 to 2,500
Point	Cement Plants	Require existing kilns to meet a NOx emission rate of 3.88 lbs/ton clinker for wet kiln 3.44 lbs/ton clinker for long dry kiln 2.36 lbs/ton clinker for pre-heater kiln 1.52 lbs/ton clinker for pre-calciner kiln	State Rule Update	Source specific	---	NOx: <2,500
Onroad Mobile	Diesel Truck Chip Reflash	Mandatory program to upgrade the version of software in engine electronic control module (ECM), (also known as "chip reflash) to reduce off-cycle NOx emissions.	Model Rule	10	---	NOx: 20-30
Onroad Mobile	Regional Fuel based on Reformulated Gasoline Options	Extend RFG requirements to counties in OTC that currently do not have RFG.	Memorandum of Understanding - OTC	State specific	State specific	VOC: 5,200 NOx: 3,700

Table 1-2 Estimated Emission Benefits in 2009 by State Resulting from the OTC 2006 Control Measures

	VOC Emission Reduction Benefit (summer tpd)							NOx Emission Reduction Benefit (summer tpd)							
State	Adhesives & Sealants	Cutback\Emulsified Asphalt Paving	Consumer Products	PFC (Area)[a]	PFCs (Nonroad)[a]	Regional Fuels	Total VOC Reduction	Diesel Engine Chip Reflash	Regional Fuels	Asphalt Production	Cement Kilns	Glass/Fiberglass[b]	ICI Boilers Area Sources	ICI Boilers Point Sources	Total NOx Reduction
CT	4.2	4.3	0.7	0.4	0.1	0.0	9.7	3.5	0.0	0.0	0.0	0.0	2.8	2.1	8.4
DE	1.0	0.0	0.1	0.1	<0.1	0.0	1.4	0.6	0.0	0.2	0.0	0.0	1.2	0.1	2.1
DC	0.1	0.0	0.1	0.1	<0.1	0.0	0.4	0.8	0.0	0.0	0.0	0.0	0.4	0.4	1.6
ME	2.5	10.6	0.2	0.1	<0.1	9.1	22.6	1.4	0.2	0.7	0.0	0.0	1.1	2.8	6.2
MD	5.8	0.0	1.0	1.4	0.4	3.2	11.8	5.6	0.0	0.1	13.1	0.3	1.2	2.4	22.7
MA[d]	8.9	8.1	10.2	1.7	0.5	0.0	29.3	6.7	0.0	0.6	0.0	1.5	6.6	6.8	22.2
NH	2.3	4.4	0.3	0.2	0.1	4.3	11.5	2.0	0.2	0.0	0.0	0.0	3.4	1.9	7.5
NJ	9.2	4.7	1.4	1.0	0.3	0.0	16.7	9.7	0.0	1.0	0.0	4.9	0.0	3.4	19.0
NY	21.5	16.4	3.7	2.6	0.8	56.9	101.9	16.1	2.1	0.0	15.3	5.8	33.8	7.0	80.1
PA	21.9	8.4	2.1	1.6	0.5	58.0	92.3	12.4	2.0	0.2	14.0	24.3	12.2	9.8	73.9
RI	1.5	1.1	0.2	0.2	<0.1	0.0	3.0	0.8	0.0	0.0	0.0	0.5	2.1	0.5	3.9
VT	2.2	1.8	0.1	0.1	<0.1	7.9	12.1	0.9	0.3	0.0	0.0	0.0	0.9	0.4	2.5
No. VA[c]	1.0	<0.1	0.5	0.4	0.1	0.0	1.9	2.5	0.0	0.1	0.0	0.0	3.9	0.1	6.6
OTR	**82.3**	**59.8**	**20.5**	**9.9**	**3.0**	**139.4**	**314.8**	**63.0**	**4.8**	**3.0**	**42.5**	**37.3**	**69.5**	**37.7**	**257.8**

a) The table shows the estimated emission reduction that will occur in 2009; additional reductions will occur in later years as new, less-emitting PFCs that comply with the OTC 2006 control measure penetrate the market.

b) The table show the maximum emission reduction from glass/fiberglass furnaces when the OTC 2206 control measure is fully implemented. No all of the reduction shown will be achieved by 2009.

c) The following jurisdictions in Virginia are part of the OTR: Arlington County, Alexandria, Fairfax County, Fairfax City, Fall Church, Loudon County, Manassas City, Manassas Park, and Prince William County.

d) MA proposed rule has a January 1, 2009 effective date and includes the VOC limits from the OTC 2001 model rule and those in the OTC 2006 model rule. The 2009 benefit MA shows the benefit from both sets of limits. For all other States, the 2009 benefit shows the change in emissions from the OTC 2006 model rule only.

Figure 1-1 VOC Emission Reduction Benefits from OTC 2006 Control Measures in 2009

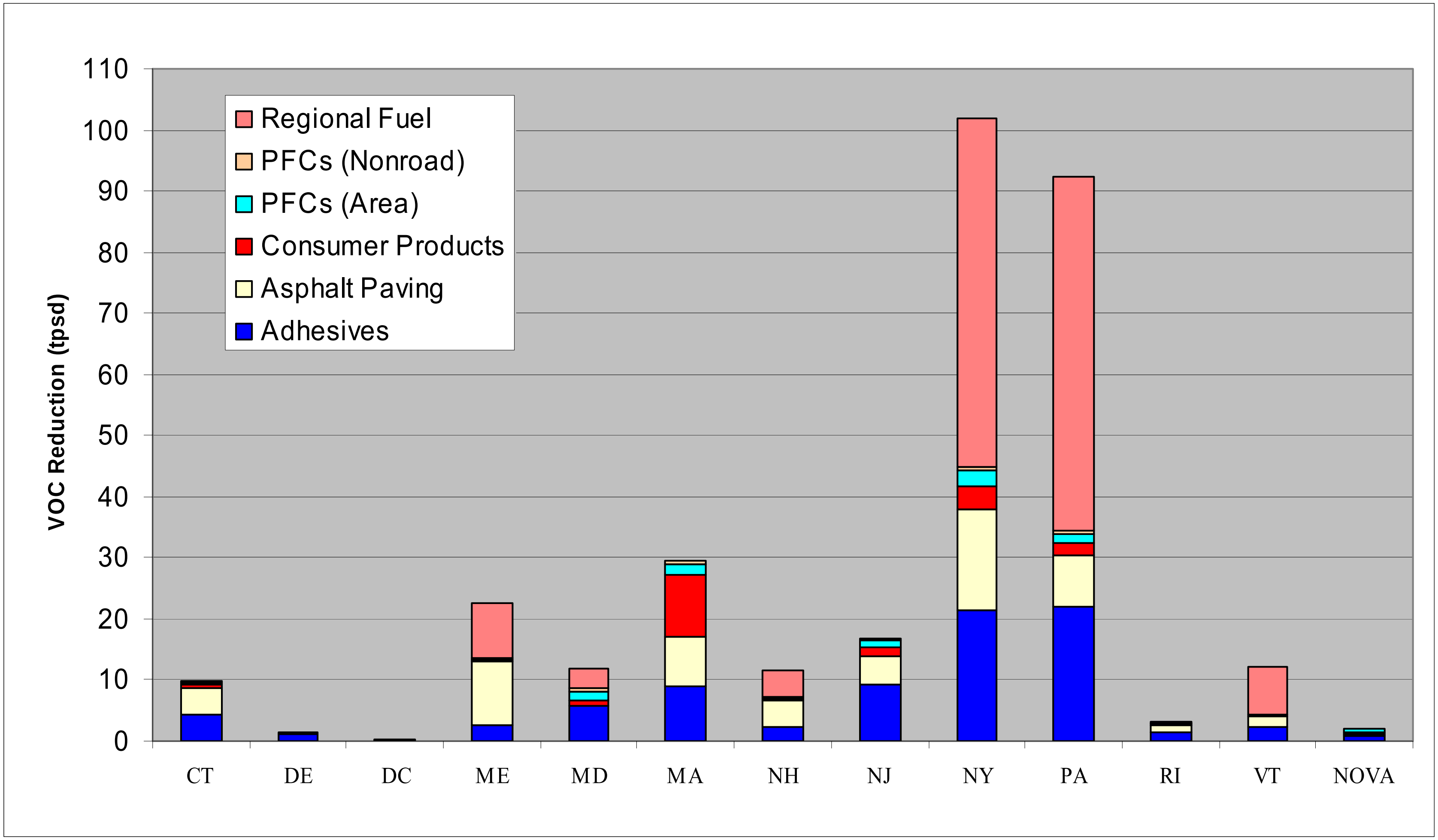
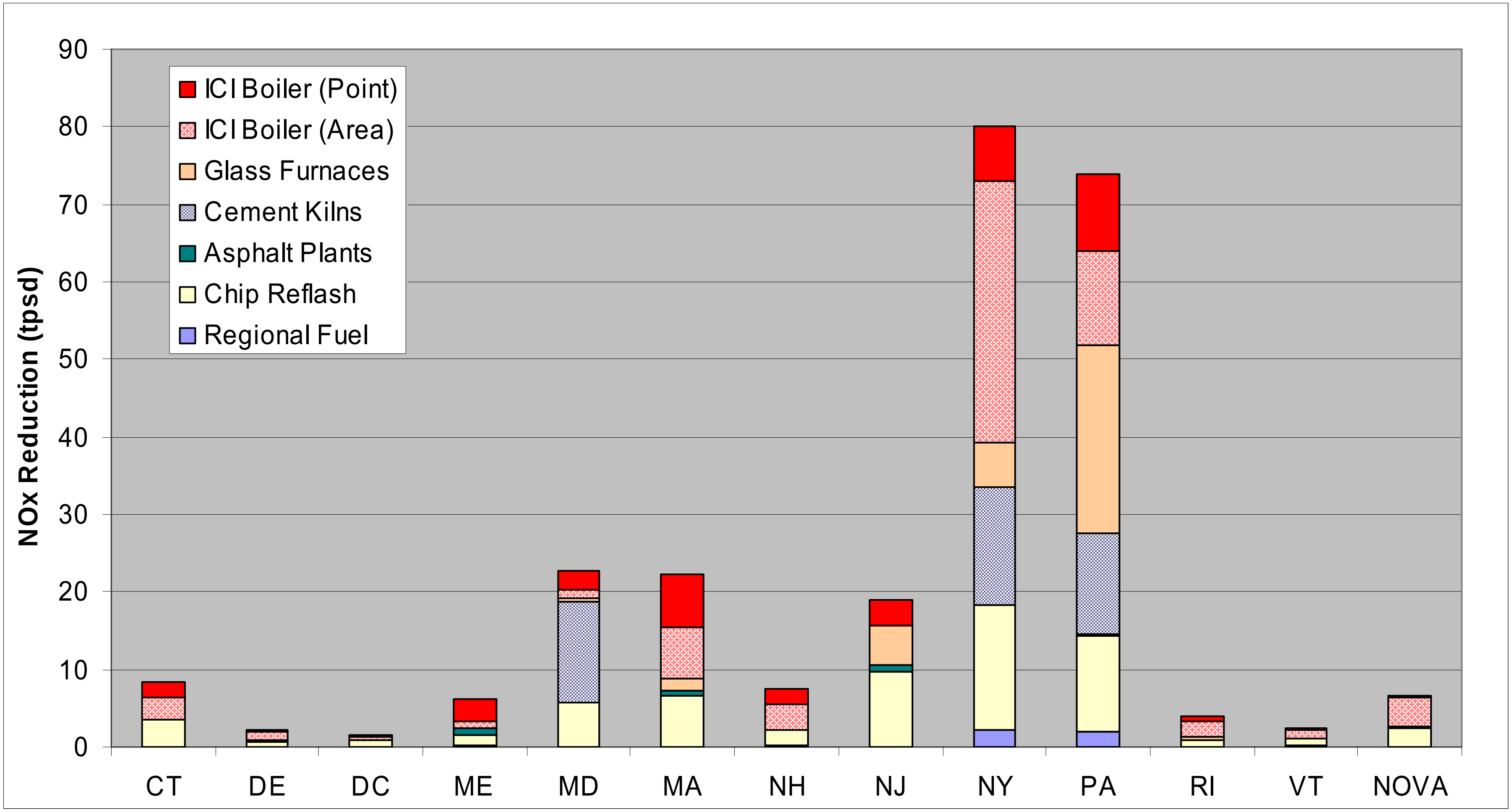


Figure 1-2 NOx Emission Reduction Benefits from OTC 2006 Control Measures in 2009



2.0 INTRODUCTION

The Ozone Transport Commission (OTC) is a multi-state organization created under the Clean Air Act (CAA). The OTC is responsible for advising EPA on transport issues and for developing and implementing regional solutions to the ground-level ozone problem in the Northeast and Mid-Atlantic regions. To supplement local and state-level efforts to reduce ozone precursor emissions, which may not alone be sufficient to attain federal standards, the OTC member states are considering control measures appropriate for adoption by all states in the region as part of their planning to attain and maintain the 8-hour ozone National Ambient Air Quality Standards (NAAQS).

The development of the control measures described in this document parallels a prior effort. The OTC developed a series of model rules in 2001 for the States to consider in adopting control measures to reduce volatile organic compound (VOC) emissions and oxide of nitrogen (NOx), which are ozone precursors, to (1) assist in the attainment of the one-hour ozone health standard, (2) address the VOC and NOx emission reduction shortfalls identified by EPA, and (3) implement the State Implementation Plans (SIP) commitments to EPA. These model rules, which have been adopted in many OTC states, will be referred to as the "OTC 2001 model rules" in this document.

The analysis in this report provides a description of the control measures identified by the OTC to help states attain the 8-hour ozone NAAQS. It also describes the associated incremental emission reductions and costs associated with each measure. The control measures analyzed in this report are those that were identified by the OTC Commissioners at the June 2006 OTC annual meeting in Boston (OTC 2006a, OTC 2006b, OTC 2006c) and at the November 2006 OTC fall meeting in Richmond (OTC 2006d, OTC 2006e, OTC 2006f). These control measures will be referred to as the "OTC 2006 control measures" in this document. For some source categories, the OTC has amended the OTC 2001 model rules or developed new model rules. These model rules will be referred to as the "OTC 2006 model rules" in this document.

The OTC 2006 model rules for volatile organic compounds (VOC) will reduce emissions from adhesives, sealants, adhesive primer, and sealant primer application; cutback and emulsified asphalt paving; consumer products; regional fuels; and portable fuel containers. The OTC 2006 control measures for oxides of nitrogen (NOx) will reduce emissions from asphalt production plants, cement kilns, diesel engine chip reflash, regional fuels, electric generating units (EGUs), glass and fiberglass furnaces, and industrial, commercial, institutional (ICI) boilers.

Section 3 describes the methods used to estimate the emission benefits of the VOC control measures. For each source category, there are subsections that describe the existing Federal and OTC State regulations that affect the VOC emissions, summarize the major elements of the control measures, discuss how the emission benefits were quantified, and present information on anticipated costs and cost-effectiveness. VOC emissions and reductions by State and source category in 2002 and 2009 are presented at the end of Section 3. Section 4 presents similar information for the NOx source categories. Section 5 presents similar information for the SO2 source categories. Section 6 provides a list of references used in developing this report.

Appendix A presents a brief description of the process that the OTC followed in identifying and evaluating candidate control measures. Appendix B lists the approximately 1,000 control measures that were initially analyzed. Appendix C contains the control measure summary sheets that were developed during this analysis. Appendices D, E, and F present the emission benefits by county for VOC, NOx, and SO2 respectively. Each appendix contains a tabulation of the 2002 base emissions, the projected 2009/2012/2018 emissions and expected emission reduction benefit from the additional control measures in 2009/2012/2018). Appendix G contains a listing of State ICI boiler regulations.

3.0 VOC ANALYSIS METHODS

This Section describes the analysis of the 2006 OTC control measures to reduce VOC emissions from five source categories: adhesives, sealants, adhesive primer, and sealant primer application; cutback and emulsified asphalt paving; consumer products; regional fuels; and portable fuel containers. For each of the five categories, there are separate subsections that discuss existing Federal/state rules, summarize the requirements of the 2006 OTC control measure, describe the methods used to quantify the emission benefit, and provide an estimate of the anticipated costs and cost-effectiveness of the control measure. At the end of Section 3, we provide the estimated emissions for 2002 and 2009 by source category and State. Appendix D provides county-by-county summaries of the emission reductions for each of the categories and projection years.

3.1 ADHESIVES, SEALANT, ADHESIVE PRIMER, AND SEALANT PRIMER APPLICATION

Adhesives, sealants, adhesive primer, and sealant primer are used in product manufacturing, packaging, construction, and installation of metal, wood, rubber, plastic, ceramics, or fiberglass materials. In general, an adhesive is any material used to bond two surfaces together. In general, a sealant is a material with adhesive properties that is used primarily to fill, seal, waterproof or weatherproof gaps or joints between two surfaces.

VOC emissions from this category result from evaporation of solvents during transfer, drying, surface preparation and cleanup operations. These solvents are the media used to solubilize the adhesive, sealant, or primer material so that it can be applied. The solvent is also used to completely wet the surface to provide a stronger bond. In plastic pipe bonding, the solvent dissolves the polyvinyl chloride pipe and reacts with the pipe to form a bond. Solvents used to clean the surface before bonding and to clean the application equipment after bonding also contribute to VOC emissions.

VOC emissions in this category are primarily from industrial and commercial operations such as wood product manufacturers, upholstery shops, adhesives retailers and architectural trades, such as building construction, floor covering installation and roof repair.

3.1.1 Existing Federal and State Rules

EPA published the consumer and commercial products rule on September 11, 1998 (40 CFR Part 59 Subpart D) under authority of Section 183(e) of the Clean Air Act. The Federal Part 59

Subpart C requirements for consumer products regulate five types of "household" adhesives (aerosols, contact, construction and panel, general purpose and structural waterproof). The VOC content limits for these products apply only to "household products", defined as "any consumer product that is primarily designed to be used inside or outside of living quarters or residences, including the immediate surroundings, that are occupied or intended for occupation by individuals." Thus, the Part 59 rule applies only to adhesives used in household settings and not to adhesives used in industrial or commercial applications.

The OTC developed a model rule for consumer and commercial products in 2001 (referred to as the "OTC 2001 model rule for consumer products" in this document) to regulate additional consumer product categories by requiring more stringent VOC content limits than the Federal rule. The OTC 2001 model rule for consumer products contains VOC limits for adhesives and sealants. However, with the exception of aerosol adhesives, the definitions of these products generally exempt products sold in larger containers. Specifically, the OTC 2001 model rule includes the following definitions (italics added for emphasis):

- Section 2(8) Adhesive. "Adhesive" means any product that is used to bond one surface to another by attachment. "Adhesive" does not include products used on humans and animals, adhesive tape, contact paper, wallpaper, shelf liners, or any other product with an adhesive incorporated onto or in an inert substrate. For "Contact Adhesive," *adhesive does not include units of product, less packaging, which consist of more than one gallon*. For "Construction, Panel, and Floor Covering Adhesive," and "General Purpose Adhesive", *adhesive does not include units of product, less packaging, which weigh more than one pound and consist of more than 16 fluid ounces*. This limitation does not apply to aerosol adhesives.

- Section 2(148) Sealant and Caulking Compound. "Sealant and Caulking Compound" means any product with adhesive properties that is designed to fill, seal, waterproof, or weatherproof gaps or joints between two surfaces. "Sealant and Caulking Compound" does not include roof cements and roof sealants; insulating foams; removable caulking compounds; clear/paintable/water resistant caulking compounds; floor seam sealers; products designed exclusively for automotive uses; or sealers that are applied as continuous coatings. *"Sealant and Caulking Compound" also does not include units of product, less packaging, which weigh more than one pound and consist of more than 16 fluid ounces.* For the purposes of this definition only, "removable caulking compounds" means a compound which temporarily seals windows or doors for three to six month time intervals, and "clear/paintable/water resistant caulking compounds" means a compound which contains no appreciable level of opaque fillers or pigments; transmits most or all visible light through the caulk when cured; is paintable; and is immediately resistant to precipitation upon application.

Thus, the same products sold in containers larger than the above thresholds are not covered by the OTC 2001 model rule for consumer products.

3.1.2 Description of the OTC 2006 Model Rule

The OTC 2006 model rule for adhesives and sealants is based on the reasonably available control technology (RACT) and best available retrofit control technology (BARCT) determination by the California Air Resources Board (CARB) developed in 1998. The OTC 2006 model rule has the following requirements:

A. Regulates the application of adhesives, sealants, adhesive primers and sealant primers by providing options for appliers to either to use a product with a VOC content equal to or less than a specified limit or to use add-on controls;

B. Limits the VOC content of aerosol adhesives to 25 percent by weight;

C. Requirements for cleanup solvents;

D. A VOC limit for surface preparation solvents;

E. An alternative add-on control system requirement of at least 85 percent overall control efficiency (capture and destruction efficiency), by weight;

F. VOC containing materials must be stored or disposed of in closed containers;

G. Prohibits the sale of any adhesive, sealant, adhesive primer or sealant primer which exceeds the VOC content limits listed in the model rule;

H. Manufacturers must label containers with the maximum VOC content as supplied, as well as the maximum VOC content on an as-applied basis when used in accordance with the manufacturer's recommendations regarding thinning, reducing, or mixing with any other VOC containing material; and

I. Prohibits the specification of any adhesive, primer, or sealant that violates the provisions of the model rule.

Several adhesive and sealant applications and products are exempt from this model rule: tire repair, assembly and manufacturing of undersea-based weapon systems, testing and evaluation associated with research and development, solvent welding operations for medical devices, plaque laminating operations, products or processes subject to other state rules, low-VOC products (less than 20 g/l), and adhesives subject to the state rules based on the OTC 2001 consumer products model rule. Additionally, the model rule provides an exemption for adhesive application operations at stationary sources that use less than 55 gallons per calendar year of noncomplying adhesives and for stationary sources that emit not more than 200 pounds of VOCs per year from adhesives operations.

3.1.3 Emission Benefit Analysis Methods

Emissions from this category are classified as both point sources and area sources. About 96 percent of adhesive and sealant VOC emissions in the OTC states fall into the area source category. The remaining four percent of the VOC emissions are included in the point source inventory.

The emission reduction benefit estimation methodology for area sources is based on information developed and used by CARB for their RACT/BARCT determination in 1998. CARB estimates that the total industrial adhesive and sealant emissions in California to be about 45 tons per day (tpd). Solvent-based emissions are estimated to be about 35 tpd of VOC and water-based adhesive and sealant emissions are about 10 tpd of VOC. CARB indicated that the emission reductions would be achieved mainly due to the switch from high-VOC to low-VOC products rather than from the use of add-on control devices. CARB estimated that emission reductions achieved by statewide compliance with the VOC limits in the RACT/BARCT determination will range from approximately 29 to 35 tpd (CARB 1998, pg. 18). These emission reductions correspond to a 64.4 to 77.8 percent reduction from uncontrolled levels. For OTC modeling purposes, we used the lower end of this range (i.e., 64.4 percent reduction) to estimate the emission benefit for area sources due to the OTC 2006 model rule.

For point sources, we first identified those sources that were applying adhesives and sealants (using the source classification code of 4-02-007-xx, adhesives application). Next, we reviewed the MANEVU inventory to determine whether sources had existing capture and control systems. Several sources reported capture and destruction efficiencies in the 70 to 99 percent range. A few sources reported capture and destruction efficiencies of 99+ percent. Most of the controlled sources reported capture and destruction efficiencies in the 90-98 percent range. Sources with existing control systems that exceed an 85 percent overall capture and destruction efficiency would meet the OTC 2006 model rule provision for add-on air pollution control equipment; no additional reductions were calculated for these sources. For point sources without add-on control equipment, we used the 64.4 percent reduction discussed in the previous paragraph based on the CARB determination.

3.1.4 Cost Estimates

The cost of complying with the new requirements includes the cost of using alternative formulations of low-VOC or water-based adhesives, sealants, adhesive primers, and sealant primers and cleanup products. Based on information provided by the Ventura County Air Pollution Control District, CARB determined that the cost-effectiveness of their adhesives rule ranges from a savings of $1,060 per ton to a cost of $2,320 per ton of VOC reduced (CARB 1998, pg. 17). These costs are likely to be less in the OTR, because some of the one-time research and reformulation costs incurred for products sold in California will not have to be incurred again for products sold in the OTR. CARB also reports a cost-effectiveness of $9,000 to $110,000 per ton of VOC reduced for the use of add-on control equipment to comply with the requirements.

3.2 CUTBACK AND EMULSIFIED ASPHALT PAVING

Asphalt paving is used to pave, seal and repair surfaces such as roads, parking lots, drives, walkways and airport runways. Asphalt paving is grouped into three general categories: hot-mix, cutback, and emulsified. Hot-mix asphalt is the most commonly used paving asphalt. Hot-mix asphalt produces minimal VOC emissions because its organic components have high molecular weights and low vapor pressures. Cutback asphalt is used in tack and seal operations, in priming roadbeds for hot-mix application and for paving operations for pavements up to several inches thick. In preparing cutback asphalt, asphalt cement is blended or “cut back” with a diluent, typically from 25 to 45 percent by volume of petroleum distillates, depending on the desired viscosity. Emulsified asphalt is used in most of the same applications as cutback asphalt but is a lower emitting alternative to cutback asphalt. Instead of blending asphalt cement with petroleum distillates, emulsified asphalts use a blend of asphalt cement, water and an emulsifying agent, such as soap. Some emulsified asphalts contain virtually no VOC diluents; however, some emulsified asphalts may contain up to 12 percent VOC by volume.

3.2.1 Existing Federal and State Rules

The EPA published a Control Technique Guideline (CTG) for the use of cutback asphalt in December 1977. The CTG recommended replacing cutback asphalt binders with emulsified asphalt during the ozone season. In 1979, EPA added a specification for emulsified asphalt to the CTG recommendations to limit the content of oil distillate in emulsified asphalt to no higher than 7 percent oil distillate.

Table 3-1 summarizes the current asphalt paving rules for the 13 OTR states. Most of the states in the OTR have adopted the CTG banning cutback asphalt in the ozone season. Some states have exemptions to this rule, allowing the use of cutback asphalt with up to 5 percent VOC. For emulsified asphalt, the requirements vary greatly. The VOC content of emulsified asphalt is limited to 0-12 percent, depending on the State and the type of emulsified asphalt. Delaware completely bans the use of emulsified asphalt that contains any VOC.

Table 3-1 Summary of OTC State Rules for Cutback and Emulsified Asphalt

State	Cutback Asphalt	Emulsified Asphalt
CT	22a-174-20 (k): VOC content limited to 5% during June, July, August, and September	Nothing specified
DE	Reg. No. 24, Section 34: Ban during ozone season	Reg. No. 24, Section 34: Ban on use of emulsified asphalt that contains any VOC
DC	Chapter 7 Section 8-2:707(k): Ban during the months of April, May, June, July, August, and September	Nothing specified
ME	Chapter 131: Ban during the period May 1 through September 15, with some exceptions	Chapter 131: VOC content limited to 3-12%, depending on the type of use
MD	COMAR 26.11.11.02: Ban during the period April 16 through October 14	COMAR 26.11.11.02: Allowed upon approval of the Department; no VOC content limit specified
MA	310 CMR 7.18(9): Ozone season ban on cutback asphalt with VOC content greater than 5% by weight with exemptions including use as prime coat	Nothing Specified
NH	Env-A 1204.42: Ban during the months of June through September; cutback with up to 5% VOC allowed upon approval of Department	Env-A 1204.42: VOC content limited to 3-12%, depending on the type of use
NJ	7:27-16.19: Ban from April 16 through October 14, with some exemptions	7:27-16.19: VOC content limited to 8% by volume
NY	Part 211: Ban from May 2 through October 15	Part 211: VOC content limited to 2-12%, depending on the type of ASTM grade
PA	25 Pa. Code Section 129.64: Ban from May 1 to October 30	25 Pa. Code Section 129.64: VOC content limited to 0-12%, depending on type
RI	Reg. No. 25: Ban from April 1 to September 30, with some exemptions	Reg No. 25: VOC content limited to 3-12%, depending on application/use
VT	5-253.15: Ban on cutback asphalt with VOC content greater than 5% by weight, with some exemptions	5-253.15: Ban on emulsified asphalt with VOC content greater than 5% by weight
VA	Chapter 40, Article 39: Ban during April through October	Chapter 40, Article 39: VOC content limited to 6% by volume

3.2.2 Description of the OTC 2006 Model Rule

The OTC 2006 model rule for the asphalt paving control measure prohibits the use of cutback asphalt during the ozone season and limits the use of emulsified asphalt to that which contains not more than 0.5 mL of oil distillate from a 200 mL sample (as determined using American Society for Testing and Materials {ASTM} Method D244 - Test Methods for Emulsified Asphalts) regardless of application. This is equivalent to a VOC content of 0.25 percent. Exemptions may be granted under certain circumstances upon the approval of the State commissioner.

3.2.3 Emission Benefit Analysis Methods

The OTC 2006 control measure for asphalt paving calls for a complete ban on the use of cutback asphalt during the ozone season. As shown in Table 3-1, current state regulations generally ban the use of cutback asphalt during the ozone season. However, there are exemptions from the ban and as a result there are VOC emissions from the use of cutback asphalt during the ozone season. The OTC 2006 control measure eliminates any exemptions and totally eliminates any VOC emissions from the use of cutback asphalt during the ozone season.

The emission reductions resulting from OTC 2006 control measure for emulsified asphalt vary by State. The two percent VOC content limit on emulsified asphalt depend on the baseline VOC content of emulsified asphalt. The control measure limits emulsified asphalt to not more than 0.5 mL of oil distillate from a 200 mL sample as determined using ASTM Method D244. This is equivalent to a VOC content of 0.25 percent. The baseline VOC content may range from 0 to 12 percent. New Jersey used a VOC content of 8 percent in their baseline emission calculations (based on the 8 percent limit in their current rule). Reducing the VOC content to 0.25 percent in New Jersey will result in a 96.9 percent reduction. Delaware already bans the use of emulsified asphalt that contains any VOC, so there is no reduction in Delaware. Several other states used an average VOC content of 2.5 percent when developing their emission inventory. Thus, reducing the average VOC content from 2.5 percent to 0.25 percent results in a 90 percent reduction in VOC emissions. For States that did not supply a baseline VOC content for asphalt paving, we used the 90 percent reduction in VOC emissions from emulsified asphalt paving during the ozone season.

3.2.4 Cost Estimates

Low-VOC alternatives are currently available and no additional costs are expected from their use.

3.3 CONSUMER PRODUCTS

Consumer and commercial products are those items sold to retail customers for personal, household, or automotive use, along with the products marketed by wholesale distributors for use in commercial or institutional settings such as beauty shops, schools and hospitals. VOC emissions from these products are the result of the evaporation of propellant and organic solvents during use. Consumer and commercial products include hundreds of individual products, including personal care products, household products, automotive aftermarket products, adhesives and sealants, FIFRA-related insecticides, and other miscellaneous products.

3.3.1 Existing Federal and State Rules

EPA published the Federal consumer and commercial products rule on September 11, 1998 (40 CFR Part 59 Subpart D) under authority of Section 183(e) of the Clean Air Act. This rule limits the VOC content of 24 product categories representing 48 percent of the consumer and commercial products inventory nationwide. According to EPA, VOC emissions from those 24 product categories were reduced by 20 percent. But since over half of the inventory is unaffected by the rule, the Federal rule is estimated to yield VOC reductions of 9.95 percent of the total consumer products inventory (Pechan 2001, pg 7).

Since over half of the inventory is unregulated by the Federal Part 59 rule, the OTC developed a model rule for consumer and commercial products in 2001 (referred to as the "OTC 2001 model rule for consumer products" in this document) to be used by the OTC jurisdictions to develop regulations for additional consumer product categories and to specify more stringent VOC content limits than the Federal rule. The VOC content limits and products covered in the OTC 2001 model rule are similar to the rules developed by CARB in the late 1990s. The OTC 2001 model rule for consumer products provides background for OTC jurisdictions to develop programs to regulate approximately 80 consumer product categories and includes technologically feasible VOC content limits. The emission reductions for state programs based on the OTC 2001 model rule are estimated to be 14.2 percent of the total consumer product inventory beyond the national rule reduction (Pechan 2001, pg. 8).

Most, but not all, states in the OTR have adopted regulatory programs based on the OTC 2001 model rule for consumer products. Table 3-2 summarizes the adoption status for the 13 OTR jurisdictions.

Table 3-2 Status of OTC State's Promulgation of the OTC 2001 Model Rule for Consumer Products.

State	Effective Date of VOC Limits	Regulatory Citation
CT [a]	Initiated process to adopt in 2006	R.C.S.A. section 22a-174-40
DE	Effective January 1, 2005	Regulation Number 41
DC	Effective June 30, 2004	Regulation 719
ME	Effective May 1, 2005	Chapter 152
MD	Effective January 1, 2005	COMAR 26.11.32
MA [b]	In progress – proposed effective date is January, 2009	310 CMR 7.25(12)
NH	Effective January 1, 2007	Chapter Env-A 4100
NJ	Effective Janaury 1, 2005	Chapter 27, Subchapter 24
NY	Effective January 1, 2005	Chapter 3, Part 235
PA	Effective January 1, 2005	25 Pa. Code Chapter 130, Subchapter B
RI	Intend to develop in 2006	n/a
VT	Under Consideration	n/a
VA [c]	Effective July 1, 2005	Chapter 40, Article 50

a) Connecticut's proposed rule includes both the VOC limits from the OTC 2001 model rule and the new and revised VOC emissions limits and related provisions that were adopted by the California Air Resources Board on July 20, 2005. These new and revised VOC limits are identical to those in the OTC 2006 model rule.

b) Massachusett's proposed rule includes the VOC limits from the OTC 2001 model rule and those in the OTC 2006 model rule.

c) Virginia's rule applies only in Northern Virginia VOC Emission Control Area (10 northern Virginia jurisdictions in the OTR)

3.3.2 Description of the OTC 2006 Model Rule

The OTC 2001 model rule for consumer products closely mirrored a series of five CARB consumer products rules. CARB recently amended their consumer products rules in July 2005. As shown in Table 3-3, these amendments to the CARB rule affected 18 categories of consumer products (14 new categories, including subcategories, with new product category definitions and VOC limits; one previously regulated category with a more restrictive VOC limit; and two previously regulated categories with additional requirements).

Table 3-3 Consumer Products Affected by CARB's July 2005 Rule Amendments

New Categories with VOC Limits for Regulation	
Adhesive Remover	Footwear or Leather Care Product
– 4 subcategories	Hair Styling Product[a]
Anti-Static Product	Graffiti Remover
Electrical Cleaner	Shaving Gel
Electronic Cleaner	Toilet/Urinal Care Product
Fabric Refresher	Wood Cleaner
Previously Regulated Category with More Restrictive Limit	
Contact Adhesive[b]	
Previously Regulated Categories with Additional Requirements	
Air Fresheners	General Purpose Degreasers

a) This product category will incorporate Hair Styling Gel and include additional forms of hair styling products (i.e., liquid, semi-solid, and pump spray) but does not include Hair Spray Product or Hair Mousse.

b) This product category has been separated into 2 subcategories: General Purpose and Special Purpose

Most of these new CARB limits become effective in California by December 31, 2006. Two of the limits, anti-static products (aerosol) and shaving gels, have effective dates in either 2008 or 2009. For shaving gels, there is a VOC limit that becomes effective on December 31, 2006, with a more stringent second tier limit that becomes effective on December 31, 2009. The anti-static product (aerosol) limit becomes effective on December 31, 2008.

The OTC 2006 model rule will modify the OTC 2001 model rule based on the CARB July 20, 2005 amendments. The OTC is not including the anti-static aerosol products and the second tier shaving gel limit in its revisions to the OTC 2001 model rule because of industry concerns that meeting these limits may not be feasible. CARB acknowledged these concerns by requiring a technology review of these product categories in 2008 to determine whether the limits are achievable.

3.3.3 Emission Benefit Analysis Methods

The emission reduction benefit estimation methodology is based on information developed by CARB. CARB estimates 6.05 tons per day of VOC reduced in California from their July 2005 amendments (CARB 2004a, pg. 8), excluding the benefits from the two products (anti-static products and shaving gels) with compliance dates in 2008 or 2009. This equates to about 2,208 tons per year in California. The population of California as of July 1, 2005 is 36,132,147

(Census 2006). On a per capita basis, the emission reduction from the CARB July 2005 amendments equals 0.122 lbs/capita.

Since the OTC's 2006 control measure is very similar to the CARB July 2005 amendments (with the exclusion of the anti-static products and shaving gel 2008/2009 limits), the per capita emission reductions are expected to be the same in the OTR. The per capita factor after the implementation of the OTC 2001 model rule is 6.06 lbs/capita (Pechan 2001, pg. 8). The percentage reduction from the OTC's 2006 control measure was computed as shown below:

Current OTC Emission Factor	=	6.06 lbs/capita
Benefit from CARB 2005 amendments	=	0.122 lbs/capita
Percent Reduction	=	100%*(1 - (6.06 – 0.122)/6.06)
	=	2.0%

3.3.4 Cost Estimates

CARB estimates that the cost effectiveness of VOC limits with an effective date of December 31, 2006, to be about $4000 per ton of VOC reduced (CARB 2004, pg. 21). CARB further estimates that the average increase in cost per unit to the manufacturer to be about $0.16 per unit. Assuming CARB's estimates for the OTR provides a conservative estimate, because some of the one-time research and reformulation costs incurred for products sold in California will not have to be incurred again for products sold in the OTR.

3.4 PORTABLE FUEL CONTAINERS

Portable fuel containers (PFCs) are designed for transporting and storing fuel from a retail distribution point to a point of use and the eventual dispensing of the fuel into equipment. Commonly referred to as "gas cans," these products come in a variety of shapes and sizes with nominal capacities ranging in size from less than one gallon to over six gallons. Available in metal or plastic, these products are widely used to refuel residential and commercial equipment and vehicles when the situation or circumstances prohibits direct refueling at a service station. PFCs are used to refuel a broad range of small off-road engines and other equipment (e.g., lawnmowers, chainsaws, personal watercraft, motorcycles, etc.). VOC emissions from PFCs are classified by five different activities:

- **Transport-spillage** emissions from PFCs occur when fuel escapes from PFCs that are in transit.
- **Diurnal** emissions result when stored fuel vapors escape to the air through any possible openings while the container is subjected to the daily cycle of increasing and decreasing

ambient temperatures. Diurnal emissions depend on the closed- or open- storage condition of the PFC.

- **Permeation** emissions are produced after fuel has been stored long enough in a container for fuel molecules to infiltrate and saturate the container material, allowing vapors to escape through the walls of containers made from plastic.
- Equipment refueling **vapor displacement** and **spillage** emissions result when fuel vapor is displaced from nonroad equipment (e.g., lawnmowers, chainsaws, personal watercraft, motorcycles, etc.) and from gasoline spillage during refueling of the equipment with PFCs. These VOC emissions are already taken into account in the nonroad equipment emission inventory by the NONROAD model.

Diurnal evaporative emissions are the largest category.

3.4.1 Existing Federal and State Rules

The OTC developed a model rule for PFCs in 2001. The OTC 2001 model rule was very similar to a rule adopted by CARB in 2000. The OTC 2001 model rule provides background for OTC jurisdictions to develop regulatory programs that require spill-proof containers to meet performance standards that reduce VOC emissions. The performance standards include a requirement that all PFCs to have an automatic shut-off feature preventing overfilling and an automatic closing feature so the can will be sealed when it is not being used. The performance standards also eliminate secondary venting holes and require new plastics to reduce vapor permeation through container walls. There is no requirement for owners of conventional PFCs to modify their PFCs or to scrap them and buy new ones. Compliance will be accomplished primarily through attrition. As containers wear out, are lost, damaged, or destroyed, consumers will purchase new spill-proof containers to replace the conventional containers. CARB determined that the average useful life of a PFC is five years. The OTC chose to assume a more conservative ten-year turnover rate, with 100 percent rule penetration occurring 10 years after adoption of the rule.

CARB estimated that the performance standards would reduce VOC emissions by 75 percent. CARB's 2004 analysis (CARB 2004b) reevaluated the estimate reductions due to some unforeseen issues with the new cans and new survey information. Based on CARB's updated data, CARB estimated that VOC emissions would be reduced by 65 percent from the first set of amendments.

CARB has also adopted a second set of amendments in two phases. The first phase was filed on January 13, 2006, effective February 12, 2006. For Phase I, CARM amended their PFC regulation to address the use of utility jugs and kerosene containers that are sometimes used by consumers for gasoline. The second phase of the amendments was filed on September 11, 2006, effective October 11, 2006. These amendments (CARB 2006) will:

- Establish a mandatory certification program and accompanying test procedures;
- Amend the existing performance standards to eliminate the automatic shutoff performance standard effective July 1, 2007;
- Amend the existing performance standards to eliminate the fill height and flow rate performance standards;
- Amend the existing PFC pressure standard;
- Amend the current test methods;
- Change the permeability standard from 0.4 to 0.3 grams/gallon-day;
- Establish a voluntary consumer acceptance-labeling program that allows participating manufacturers to label their PFCs with an ARB "Star Rating" indicating how consumers rate their products' ease of use; and
- Combine the currently separate evaporation requirement and permeation standard and test method into a single diurnal standard and test method.

In February 2007, EPA finalized a national regulation to reduce hazardous air pollutant emissions from mobile sources. Included in the final rule are standards that would reduce PFC emissions from evaporation, permeation, and spillage. EPA included a performance-based standard of 0.3 grams per gallon per day of hydrocarbons, determined based on the emissions from the can over a diurnal test cycle specified in the rule. The standard applies to containers manufactured on or after January 1, 2009. The standards are based on the performance of best available control technologies, such as durable permeation barriers, automatically closing spouts, and cans that are well-sealed.

3.4.2 Description of the OTC 2006 Model Rule

As shown in Table 3-4, most states in the OTR have already adopted PFC regulations based on the OTC 2001 model rule. The OTC 2001 model rule for PFCs closely mirrors the 2000 version of CARB's PFC rule. CARB recently amended their gas can regulation as discussed above in Section 3.4.1. The OTC 2006 model rule closely mirrors these CARB amendments. The 2006 amendments are estimated to reduce VOC emissions by 18.4 tons per day in California at full implementation in the year 2015, in addition to the benefits from the existing regulation. The OTC 2006 model rule will modify the OTC 2001 model rule based on the recent CARB amendments.

Table 3-4 Status of OTC State's Promulgation of the OTC 2001 Model Rule for Portable Fuel Containers

State	Date When New Containers are Required	Regulatory Citation
CT	Effective May 1, 2004	Section 22a-174-43
DE	Effective January 1, 2004	Reg. No. 41, Section 3
DC	Effective November 15, 2003	Rule 720
ME	Effective January 1, 2004	Chapter 155
MD	Effective January 1, 2003	COMAR 26.11.13.07
MA[a]	In progress (effective date will be January 1, 2009)	n/a
NH	Effective March 1, 2006	Env-A 4000
NJ	Effective January 1, 2005	Subchapter 24 (7:27-24.8)
NY	Effective January 1, 2003	Part 239
PA	Effective January 1, 2003	25 Pa. Code Chapter 130, Subchapter A
RI	In progress (late 2006 target date for final rule)	n/a
VT	Under Consideration	n/a
VA[b]	Effective January 1, 2005	Chapter 40, Article 42

a) Massachusetts' proposed rule will be based only on the OTC 2006 model rule; Massachessetts will not adopt the OTC 2001 model rule.

b) Virginia's rule applies only in Northern Virginia VOC Emission Control Area (10 northern Virginia jurisdictions in the OTR)

3.4.3 Emission Benefit Analysis Methods

Emissions from PFCs are accounted for in both the area and nonroad source inventories. The NONROAD model accounts for equipment refueling vapor displacement and spillage emissions result when fuel vapor is displaced from nonroad equipment (e.g., lawnmowers, chainsaws, personal watercraft, motorcycles, etc.) and from gasoline spillage during refueling of the equipment with PFCs. The area source inventory accounts for diurnal and permeation emissions associated with the fuel present in stored PFCs and transport-spillage emissions associated with refueling of a gas can at the gasoline pump. Based on the OTC 2001 model rule (Pechan 2001, pg. 11) roughly 70 percent of the VOC emissions are accounted for in the area source inventory, while the remaining 30 percent is from equipment refueling vapor displacement and spillage that is accounted for in the nonroad inventory.

The emission benefits have been calculated for the emissions accounted for in both the area and nonroad source inventory. Emissions from the nonroad category were estimated to be 30 percent of the PFC emissions accounted for in the area source inventory.

Also note that the OTC baseline emissions (i.e., 2002 emissions) do not include changes to the emission estimation methodology made by CARB in 2004. CARB conducted a new survey of PFCs in 2004, which included kerosene containers and utility jugs. Using this survey data, CARB adjusted their baseline emissions; a similar adjustment to the OTC baseline inventory has not been made.

Estimated emission reductions were based on information compiled by CARB to support their recent amendments. CARB estimated that PFC emissions in 2015 will be 31.9 tpd in California with no additional controls or amendments to the 2000 PFC rules (CARB 2005a, pg. 10). CARB further estimates that the 2006 amendment will reduce emission from PFCs by 18.4 tpd in 2015 in California compared to the 2000 PFC regulations (CARB 2005a, pg. 23). Thus, at full implementation, the expected incremental reduction is approximately 58 percent, after an estimated 65 percent reduction from the original 2000 rule.

The OTC calculations assume that States will adopt the rule by July 2007 (except in Massachusetts) and provide manufacturers one year from the date of the rule to comply. Thus, new compliant PFCs will not be on the market until July 2008. Assuming a 10-year turnover to compliant cans, only 10 percent of the existing inventory of PFCs will comply with the new requirements in the summer of 2009. Therefore, only 10 percent of the full emission benefit estimated by CARB will occur by 2009 – the incremental reduction will be 5.8 percent in 2009.

3.4.4 Cost Estimates

CARB estimates that the cost-effectiveness of the 2005/2006 amendments will range from $0.40 to $0.70 per pound of VOC reduced, or $800 to $1,400 per ton of VOC reduced (CARB 2005a, pg. 27). Assuming CARBs costs for the OTR provides a conservative estimate, because some of the one-time research and reformulation costs incurred for products sold in California will not have to be incurred again for products sold in the OTR.

3.5 REGIONAL FUELS

The Clean Air Act Amendments of 1990 required significant changes to conventional fuels used by motor vehicles. Beginning in 1995, “reformulated” gasoline must be sold in certain non-attainment areas and other states with non-attainment areas are permitted to opt-in.

Reformulated gasoline results in lower VOC emissions than would occur from the use of normal "baseline" gasoline.

3.5.1 Existing Federal and State Rules

All but two states in the OTR are participating, in whole or in part, with the federal reformulated gasoline program. However, nearly one-third of the gasoline sold in the OTR is not reformulated gasoline. NESCAUM has estimated the following fraction of gasoline that is reformulated by State:

State	Current RFG Fraction	State	Current RFG Fraction
CT	100%	NJ	100%
DC	100%	NY	54%
DE	100%	PA	24%
MA	100%	RI	100%
MD	86%	NoVA	100%
ME	0%	VT	0%
NH	64%		

3.5.2 Description of the OTC 2006 Control Measure

The Energy Policy Act of 2005 provides the opportunity for the OTR to achieve a single clean-burning gasoline and is consistent with what OTR states have promoted through the long debate over MTBE/ethanol/RFG. Approximately one-third of the gasoline currently sold in the OTR is not reformulated. The new authority plus the potential for emission reductions from the amount of non-reformulated gasoline sold in the OTR provides an opportunity for additional emission reductions in the region as well as for a reduced number of fuels, and possibly a single fuel, to be utilized throughout the region. The OTC Commissioners recommended that the OTC member states pursue a region fuel program consistent with the Energy Act of 2005 (OTC 2006b).

3.5.3 Emission Benefit Analysis Methods

Emission benefits resulting from extending reformulated gasoline to all areas of the OTR have been calculated for 2006 by NESCAUM (NESCAUM 2006a).

3.5.4 Cost Estimates

According to USEPA's regulatory impact analysis for reformulated gasoline (USEPA 1993), the cost per ton of VOC reduced for Phase I RFG is \$5,200 to \$5,900. USEPA also estimated the cost of Phase II RFG was $600 per ton of VOC reduced – this reflects the incremental cost over the cost of implementing Phase I of the RFG program.

3.6 VOC EMISSION REDUCTION SUMMARY

The results of the emission benefit calculations for the OTC states are described in this subsection. The starting point for the quantification of the emission reduction benefits is the MANEVU emission inventory, Version 3 (Pechan 2006, MACTEC 2006a) and the VISTAS emission inventory, BaseG (MACTEC 2006b), for the northern Virginia counties that are part of the OTR. The MANEVU and VISTAS inventories include a 2002 base year inventory as well as projection inventories for 2009 and 2018 (MANEVU also has projections for 2012, but VISTAS does not). The projection inventories account for growth in emissions based on growth indicators such as population and economic activity. The projection inventories also account for "on-the-books/on-the-way" (OTB/W) emission control regulations that have (or will) become effective between 2003 and 2008 that will achieve post-2002 emission reductions. For example, many States have already adopted the 2001 OTC model rules for consumer products and portable fuel containers. The emission reduction benefit from the 2001 OTC model rules are already accounted for in the MANEVU and VISTAS projection inventories. Emission reductions from existing regulations are already accounted for to ensure no double counting of emission benefits occurs.

Note that the emission reductions contained in this Section are presented in terms of tons per summer day. The MANEVU base and projection emission inventories do not contain summer day emissions for all States and source categories; the VISTAS inventory only contains annual values. When States provided summer day emissions in the MANEVU inventory, these values were used directly to quantify the emission benefit from the 2006 OTC control measure. When summer day emissions were missing from the MANEVU or VISTAS inventories, the summer day emissions were calculated using the annual emissions and the seasonal throughput data from the NIF Emission Process table. If the seasonal throughput data was missing, the summer day emissions were calculated using the annual emissions and a summer season adjustment factor derived from the monthly activity profiles contained in the SMOKE emissions modeling system.

Tables 3-5 to 3-10 show State summaries of the emission benefits from the OTC 2006 VOC control measures described previously in this Section. For each of the source categories, the Tables show four columns: (1) the actual 2002 summer daily emissions; (2) the summer daily emissions for the 2009 OTB/W scenario that accounts for growth and for the emission control regulations that have (or will) become effective between 2003 and 2008 that will achieve post-2002 emission reductions; (3) the summer daily emissions for 2009 with the implementation of the OTC 2006 control measures identified in this Section, and (4) the emission benefit in 2009 resulting from the OTC 2006 control measure. Table 3-11 shows the same information for the total of all six source categories.

The largest estimated VOC emission reductions are in the most populous States – New York and Pennsylvania. The emission benefits listed for Virginia just include the Virginia counties in the northern Virginia area that are part of the OTR. Benefit estimates for all other States include the entire state. The emission benefits also assume that all OTC members will adopt the rules as described in the previous sections.

The requirement for a regional fuel throughout the OTR provides the largest emission benefit, about 139.4 tons per day across the OTR. The adhesives and sealants application model rule provides the second largest emission benefit in 2009 – 82.3 tons per day across the OTR. The incremental benefits accrued from the amendments to State's existing consumer products and portable fuel container model rules are not as large, since the States already have accrued substantial benefits from the adoption of these rules.

Appendix D provides county-by-county summaries of the VOC emission benefits from the OTC 2006 VOC model rules described previously in this Section. Appendix D also provides additional documentation regarding the data sources and emission benefit calculations that were performed. These tables can be used by the States to create additional summaries, for example, by nonattainment area.

Table 3-5 OTC 2006 VOC Model Rule Benefits by State for 2009 Adhesives and Sealants Application

State	Adhesives/Sealants Application Summer VOC Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	4.8	6.6	2.4	4.2
DE	1.4	1.6	0.6	1.0
DC	0.2	0.2	0.1	0.1
ME	3.1	3.9	1.4	2.5
MD	6.9	9.1	3.3	5.8
MA	10.6	14.7	5.8	8.9
NH	2.5	3.6	1.3	2.3
NJ	14.9	15.2	6.0	9.2
NY	24.7	33.4	11.9	21.5
PA	25.5	34.0	12.2	21.8
RI	1.8	2.4	0.9	1.5
VT	2.4	3.4	1.2	2.2
NOVA	1.2	1.6	0.6	1.0
OTR	**99.8**	**129.8**	**47.5**	**82.3**

2002 Actual emissions based on the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are based on the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

Table 3-6 OTC 2006 VOC Model Rule Benefits by State for 2009
Cutback and Emulsified Asphalt Paving

State	Cutback and Emulsified Asphalt Paving Summer VOC Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT*	4.5	4.5	0.3	4.3
DE	0.1	0.1	0.1	0.0
DC	0.0	0.0	0.0	0.0
ME	8.6	10.6	0.0	10.6
MD	0.0	0.0	0.0	0.0
MA*	8.4	8.6	0.5	8.1
NH	3.8	4.8	0.5	4.4
NJ	4.9	4.8	0.1	4.7
NY	15.4	18.3	1.8	16.4
PA	7.7	9.3	0.9	8.4
RI	1.0	1.2	0.1	1.1
VT	1.4	1.8	0.0	1.8
NOVA	<0.1	<0.1	<0.1	<0.1
OTR	**55.9**	**64.0**	**4.3**	**59.8**

2002 Actual emissions based on the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are based on the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

* CT and MA provided revised emission estimates that differ from those in the MANEVU Version 3 inventories.

Table 3-7 OTC 2006 VOC Model Rule Benefits by State for 2009 Consumer Products

State	Consumer Products Summer VOC Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	40.1	35.4	34.7	0.7
DE	7.3	6.7	6.5	0.1
DC	5.7	5.1	5.0	0.1
ME	10.9	9.7	9.5	0.2
MD	52.8	48.4	47.4	1.0
MA*	62.2	64.1	53.9	10.2
NH	13.7	12.6	12.4	0.3
NJ	82.9	71.9	70.5	1.4
NY	209.6	183.3	179.6	3.7
PA	119.6	104.4	102.4	2.1
RI	10.6	9.3	9.1	0.2
VT	6.1	5.6	5.5	0.1
NOVA	21.5	23.0	22.5	0.5
OTR	**642.9**	**579.5**	**559.0**	**20.5**

2002 Actual emissions based on the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are based on the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

* MA proposed rule has a January 1, 2009 effective date and includes the VOC limits from the OTC 2001 model rule and those in the OTC 2006 model rule. The 2009 benefit for MA shows the benefit from both sets of limits. For all other States, the 2009 benefit shows the change in emissions from the OTC 2006 model rule only.

Table 3-8 OTC 2006 VOC Model Rule Benefits by State for 2009
Portable Fuel Containers – Area Sources

State	Portable Fuel Containers Summer VOC Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	9.7	6.5	6.1	0.4
DE	3.0	2.1	1.9	0.1
DC	3.6	2.5	2.4	0.1
ME	3.6	2.4	2.3	0.1
MD	39.6	24.5	23.1	1.4
MA*	18.1	18.6	16.9	1.7
NH	3.6	3.0	2.8	0.2
NJ	24.4	17.7	16.7	1.0
NY	76.6	45.0	42.4	2.6
PA	47.0	27.6	26.0	1.6
RI	3.0	2.7	2.5	0.2
VT	1.7	1.5	1.5	0.1
NOVA	8.6	6.1	5.7	0.4
OTR	**242.5**	**160.1**	**150.3**	**9.9**

2002 Actual emissions based on the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are based on the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

Note: The table shows the estimated emission reduction that will occur in 2009; additional reductions will occur in later years as new, less-emitting PFCs that comply with the OTC 2006 control measure penetrate the market.

* MA PFC regulation will be based on only the OTC 2006 model rule (which updates the provisions of the OTC 2001 model rule) and will have an effective date of January 1, 2009. The 2009 base emissions in MA are uncontrolled emissions. The 2009 emission benefits represent the total emission reductions from the MA rule.

Table 3-9 OTC 2006 VOC Model Rule Benefits by State for 2009
Portable Fuel Containers – Nonroad Sources

State	Portable Fuel Containers Summer VOC Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	2.9	1.9	1.8	0.1
DE	0.9	0.6	0.6	0.0
DC	1.1	0.8	0.7	0.0
ME	1.1	0.7	0.7	0.0
MD	11.9	7.4	6.9	0.4
MA*	5.4	5.6	5.1	0.5
NH	1.1	0.9	0.8	0.1
NJ	7.3	5.3	5.0	0.3
NY	23.0	13.5	12.7	0.8
PA	14.1	8.3	7.8	0.5
RI	0.9	0.8	0.8	0.0
VT	0.5	0.5	0.4	0.0
NOVA	2.6	1.8	1.7	0.1
OTR	**72.8**	**48.0**	**45.1**	**3.0**

2002 Actual emissions estimated to be 30 percent of area source emissions (based on Pechan 2001, pg. 11)

2009 Base Inventory emissions estimated to be 30 percent of area source emissions, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

Note: The table shows the estimated emission reduction that will occur in 2009; additional reductions will occur in later years as new, less-emitting PFCs that comply with the OTC 2006 control measure penetrate the market.

* MA PFC regulation will be based on only the OTC 2006 model rule (which updates the provisions of the OTC 2001 model rule) and will have an effective date of January 1, 2009. The 2009 base emissions in MA are uncontrolled emissions. The 2009 emission benefits represent the total emission reductions from the MA rule.

Table 3-10 OTC 2006 VOC Model Rule Benefits by State for 2009 Regional Fuels

State	Regional Fuels Summer VOC Emissions (tpd)			
	2006 Actual	2006 Base	2006 Control	2006 Benefit
CT	87.9	87.9	87.9	0.0
DE	26.6	26.6	26.6	0.0
DC	9.1	9.1	9.1	0.0
ME	56.2	56.2	47.1	9.1
MD	158.7	158.7	155.6	3.2
MA	148.6	148.6	148.6	0.0
NH	45.3	45.3	41.0	4.3
NJ	219.6	219.6	219.6	0.0
NY	465.0	465.0	408.1	56.9
PA	363.0	363.0	305.0	58.0
RI	22.2	22.2	22.2	0.0
VT	35.9	35.9	27.9	7.9
NOVA	54.9	54.9	54.9	0.0
OTR	**1693.1**	**1693.1**	**1553.7**	**139.4**

Note: NESCAUM analysis was only completed for 2006. Data for 2002 and 2009 are not currently available

Table 3-11 OTC 2006 VOC Model Rule Benefits by State for 2009
All Six VOC Categories

State	All Six Categories Summer VOC Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	149.9	142.9	133.2	9.7
DE	39.3	37.7	36.3	1.4
DC	19.6	17.6	17.2	0.4
ME	83.5	83.6	60.9	22.6
MD	270.0	248.1	236.3	11.8
MA	253.3	260.1	230.8	29.3
NH	70.0	70.3	58.8	11.5
NJ	354.1	334.6	317.9	16.7
NY	814.2	758.4	656.5	101.9
PA	576.8	546.7	454.3	92.3
RI	39.5	38.6	35.6	3.0
VT	48.0	48.7	36.5	12.1
NOVA	88.8	87.4	85.4	1.9
OTR	**2,807.0**	**2,674.6**	**2,359.8**	**314.8**

2002 Actual emissions based on the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions based on the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section. Assumes that 2009 reductions from RFG are the same as those calculated for 2006.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions). Assumes that 2009 reductions from RFG are the same as those calculated for 2006.

4.0 NOx ANALYSIS METHODS

This Section describes the analysis of the 2006 OTC control measures to reduce NOx emissions from six source categories: diesel engine chip reflash, regional fuels, asphalt production plants, cement kilns, glass/fiberglass furnaces, ICI boilers. For each of the categories, there are separate subsections that discuss existing Federal/state rules, summarize the requirements of the 2006 OTC control measure, describe the methods used to quantify the emission benefit, and provide an estimate of the anticipated costs and cost-effectiveness of the control measure. At the end of Section 4, we provide the estimated emissions for 2002 and 2009 by source category and State. Appendix E provides county-by-county summaries of the emission reductions for each of the categories.

4.1 HEAVY-DUTY TRUCK DIESEL ENGINE CHIP REFLASH

In the mid-1990s, the U.S. Department of Justice (DOJ), EPA, and CARB determined that seven major engine manufacturers had designed their 1993 through 1998 model heavy-duty diesel engines to operate with advanced electronic engine controls that resulted in excessive NOx emissions. when these engines were operated in the vehicle under "real world" conditions, the electronic calibration would change, altering the fuel delivery characteristics and resulting in elevated NOx levels. DOJ, EPA and ARB developed Consent Decrees that required the manufacturers to provide software (the "Low-NOx Rebuild Kit" or "chip reflash") that modifies the injection timing adjustment that caused the excess NOx emissions. The kits are to be installed at the time the vehicle is brought in for a major engine rebuild/overhaul. The rate of rebuild has been considerably lower than what was envisioned under the Consent Decrees; the primary reasons being that engine rebuilds occur at considerably higher elapsed vehicle mileage than what was contemplated when the Consent Decrees were negotiated, and there is no federal oversight program to ensure that individual rebuilds are occurring at the time of rebuild. In response to this low rebuild rate, CARB has adopted a mandatory program, not tied to the time of rebuild, but rather to a prescribed period of time, within which owners must bring their vehicles into the dealer to have the reflash operation performed, with all costs borne by the engine manufacturers. (NESCAUM 2006b).

4.1.1 Existing Federal and State Rules

California entered into Settlement Agreements, separate from the federal Consent Decrees, but with analogous requirements for low-NOx rebuilds. The slow rate of progress in

California mirrored the progress nationally. Accordingly, California embarked upon its own program, by rule, to accelerate and ultimately complete the rebuilds for trucks registered in California and for out-of-state registered trucks traveling on roadways within the state. The ARB rule, effective March 21, 2005, mandates that rebuilds occur over a prescribed time period, with a final rebuild compliance date of December 31, 2006. The CARB mandatory program faced two separate legal challenges, alleging that CARB has breached its settlement agreement and alleging that CARB is illegally establishing different emissions standards on "new engines". The Sacramento County Superior Court ruled that the Low NOx Software Upgrade Regulation is invalid. CARB indicates that it will not appeal that ruling and is suspending further enforcement of this regulation.

4.1.2 Description of the OTC 2006 Control Measure

NESCAUM developed a model rule for consideration by its member states to implement a low-NOx rebuild program, similar California's program. The regulation applies to the engine manufacturers and to owners, lessees, and operators of heavy-duty vehicles powered by the engines that are required to have the low-NOx rebuild. Consistent with the Consent Decrees, the engine manufacturers are required to provide the rebuild kits at no cost to dealers, distributors, repair facilities, rebuild facilities, owners, lessees, and operators, upon their request and to reimburse their authorized dealers, distributors, repair facilities and rebuild facilities for their labor costs.

4.1.3 Emission Benefit Analysis Methods

NESCUAM estimated potential NOx emissions reductions (tons per day) if the Northeast States were to adopt a rebuild program similar to the California program. These estimates are based on the ratio of Northeast to California in-state heavy-duty vehicle registrations, and ARB-estimated California NOx reductions of 35 TPD (NESCAUM 2006b, pg. 5). NESCAUM also estimated potential NOx emissions reductions for the Mid-Atlantic States by scaling the NESCAUM projections based on population. For the Mid-Atlantic States, the NOx benefit was calculated based on the per capita factors of a one ton per day reduction for each one million people (NESCAUM 2005).

4.1.4 Cost Estimates

The cost associated with the reflash has been estimated at $20-$30 per vehicle, which is borne by the engine manufacturer. There may be costs associated with potential downtime to the trucking firms, and record-keeping requirements on the dealer performing the reflash and the vehicle owner. The MRPO estimated cost effectiveness to be $1,800 to $2,500 (depending on vehicle size) due to incremental "fuel penalty" of 2 percent increase in fuel consumption (ENVIRON 2006).

4.2 REGIONAL FUELS

The Clean Air Act Amendments of 1990 required significant changes to conventional fuels used by motor vehicles. Beginning in 1995, "reformulated" gasoline (RFG) must be sold in certain non-attainment areas and other states with non-attainment areas are permitted to opt-in. Reformulated gasoline results in lower VOC emissions than would occur from the use of normal "baseline" gasoline. Phase II of the RFG program began in 2000.

4.2.1 Existing Federal and State Rules

All but two states in the OTR are participating, in whole or in part, with the federal RFG program. However, nearly one-third of the gasoline sold in the OTR is not RFG. NESCAUM has estimated the following fraction of gasoline that is reformulated by State:

State	Current RFG Fraction	State	Current RFG Fraction
CT	100%	NJ	100%
DC	100%	NY	54%
DE	100%	PA	24%
MA	100%	RI	100%
MD	86%	NoVA	100%
ME	0%	VT	0%
NH	64%		

4.2.2 Description of the OTC 2006 Control Measure

The Energy Policy Act of 2005 provides the opportunity for the OTR to achieve a single clean-burning gasoline and is consistent with what OTR states have promoted through the long debate over MTBE/ethanol/RFG. Approximately one-third of the gasoline currently sold in the OTR is not reformulated. The new authority plus the potential for emission reductions from the amount of non-reformulated gasoline sold in the OTR provides an opportunity for additional emission reductions in the region as well as for a reduced number of fuels, and possibly a single fuel, to be utilized throughout the region. The OTC Commissioners recommended that the OTC member states pursue a region fuel program consistent with the Energy Act of 2005 (OTC 2006b).

4.2.3 Emission Benefit Analysis Methods

Emission benefits resulting from extending reformulated gasoline to all areas of the OTR have been calculated for 2006 by NESCAUM (NESCAUM 2006a).

4.2.4 Cost Estimates

According to USEPA's regulatory impact analysis for reformulated gasoline (USEPA 1993), the cost per ton of NOx reduced for Phase II RFG is $5,200 to $3,700.

4.3 ASPHALT PAVEMENT PRODUCTION PLANTS

Hot mix asphalt (HMA) is created by mixing and heating size-graded, high quality aggregate (which can include reclaimed asphalt pavement) with liquid asphalt cement. HMA can be manufactured by batch mix, continuous mix, parallel flow drum mix, or counterflow drum mix plants. The dryer operation is the main source of pollution at hot mix asphalt manufacturing plants. Dryer burner capacities are usually less than 100 mmBtu/hr, but may be as large as 200 mmBtu/hr. Natural gas is the preferred source of heat used by the industry, although oil, electricity and combinations of fuel and electricity are used. The reaction of nitrogen and oxygen in the dryer creates nitrogen oxide (NOx) emissions in the combustion zone,

4.3.1 Existing Federal and State Rules

Only two of the OTR states have regulations that specifically address NOx emissions from asphalt pavement manufacturing plants. New Hampshire limits NOx emissions to 0.12 pound per ton of asphalt produced, or 0.429 lb per mmBtu {Chapter Env-A 1211.08 (c)} for units greater than 26 mmBTU/hour in size. New Jersey limits NOx emissions to 200 ppmvd at seven percent oxygen {7:27-19.9(a)}. Asphalt plants in other OTR states are subject to more general fuel combustion requirements or case-by-case RACT determinations.

4.3.2 Description of the OTC 2006 Control Measure

NOx emissions from asphalt plants can be reduced through installation of low-NOx burners and flue gas recirculation (FGR). The OTC Commissioners recommended that OTC member states pursue as necessary and appropriate state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies that are consistent with the guidelines shown in Table 4.1 (OTC 2006b).

Table 4.1 Addendum to OTC Resolution 06-02 Emission Guidelines for Asphalt Plants

Plant Type	Emission Rate (lbs NOx/ton asphalt produced)	% Reduction
Area/Point Sources		
Batch Mix Plant – Natural Gas	0.02	35
Batch Mix Plant – Distillate/Waste Oil	0.09	35
Drum Mix Plant – Natural Gas	0.02	35
Drum Mix Plant – Distillate/Waste Oil	0.04	35
or Best Management Practices		

Industry leaders have identified a number of Best Management Practices that allow for substantial reduction in plant fuel consumption and the corresponding products of combustion including NOx. Best management practices include:

- **Burner tune-ups**: A burner tune-up may reduce NOx emissions by up to 10 percent and may also help reduce fuel consumption. In other words, there can be a direct pay-back to the business from regular burner tune-ups.
- **Effective stockpile management to reduce aggregate moisture content**: Current information indicates that effective stockpile management can reduce aggregate moisture content by about 25 percent, corresponding to a reduction in fuel consumption by approximately 10 - 15 percent. There are a number of ways to reduce aggregate moisture: covering stockpiles, paving under stockpiles, and sloping stockpiles are all ways that prevent aggregate from retaining moisture. Best Practices are plant- and geographic locale-specific.
- **Lowering mix temperature**: A Technical Working Group of FHWA is currently investigating a number of newer formulation technologies, to understand the practicality and performance of lowering mix temperatures. Substantial reductions in mix temperatures, on the order of 20 percent or more, appear to be plausible. Lowering mix temperatures, by this amount, may reduce fuel consumption, as less heat is needed to produce the mix.
- **Other maintenance and operational best practices**: Additional practices can be employed throughout the plant to help optimize production and operations. For example, regular inspection of drum mixing flites and other measures can be taken – all in the effort to make a plant operate more efficiently, thereby using less fuel.

4.3.3 Emission Benefit Analysis Methods

The emission rates and percent reductions estimates shown above for major sources were developed the state of New York based on the use of low-NOx burners and FGR. For minor sources, the requirement is the use of low-NOx burner technology. NOx emissions can be reduced by 35 to 50 percent with low-NOx burners and FGR, and by 25 to 40 percent with low-NOx burners alone. For modeling purposes, a 35 percent reduction was assumed to apply all types of asphalt plants.

The reductions estimated for this category only include emissions included in the MANEVU point source emission inventory. Only emissions from major point sources are typically included in the MANEVU point source database. Emissions from non-major sources are not explicitly contained in the area source inventory. The emissions from non-major asphalt plants are likely lumped together in the general area source industrial and commercial fuel use category. Reductions from area source emissions at asphalt production plants are included in the ICI boiler source category. Therefore, there is some uncertainty regarding the actual reductions that will occur as no accurate baseline exists for both major and minor facilities.

4.3.4 Cost Estimates

The anticipate costs for control are similar to those of small to midsize boilers or process heaters. Low NOx burners range from $500 to $1,250 per ton and low-NOx burners in combination with FGR range from $1,000 to $2,000 per ton. These cost-effectiveness data were provided by NYSDEC. These control efficiencies and cost-effectiveness estimates for low-NOx burners plus FGR are generally consistent EPA's published data for small natural gas-fired and oil-fired process heaters and boilers (Pechan 2005).

4.4 CEMENT KILNS

Portland cement manufacturing is an energy intensive process in which cement is made by grinding and heating a mixture of raw materials such as limestone, clay, sand and iron ore in a rotary kiln. Nationwide, about 82 percent of the industry's energy requirement is provided by coal. Waste-derived fuels (such as scrap tires, used motor oils, surplus printing inks, etc.) provide about 14 percent of the energy. NOx emissions are generated during fuel combustion by oxidation of chemically-bound nitrogen in the fuel and by thermal fixation of nitrogen in the combustion air.

There are four main types of kilns used to manufacture portlant cement: long wet kilns, long dry kilns, dry kilns with preheaters, dry kilns with precalciners. Wet kilns tend to be older units and are often located where the moisture content of feed materials from quarries tends to be high.

Cement kilns are located in Maine, Maryland, New York, and Pennsylvania. There are no cement kilns in the other OTR states. According to the MANEVU 2002 inventory (Pechan 2006), the number of cement kilns operating in 2002 by size and type was:

State	Number of Facilities	Number of Long Wet Kilns	Number of Long Dry Kilns	Number of Preheater or Precalciner Kilns
Maine	1	1	0	0
Maryland	3	2	2	0
New York	3	2	1	0
Pennsylvania	10	5	11	5

4.4.1 Existing Federal and State Rules

The NOx SIP Call required states to submit revisions to their SIPs to reduce the contribution of NOx from cement kilns. All kilns in the OTR, except for the one kiln in Maine, are subject to the NOx SIP Call. Based on its SIP Call analysis, EPA determined 30 percent reduction of baseline uncontrolled emission levels was highly cost-effective for cement kilns emitting greater than 1 ton/day of NOx. Some states elected to include cement kilns in their NOx Budget Trading Programs. For example, requirements in Pennsylvania's regulations in 25 Pa. Code Chapter 145 set a kiln allowable limit of 6 pounds per ton of clinker produced, and require sources to purchase NOx allowances for each ton of NOx actual emissions that exceed the allowable limits. Maryland did not include kilns in the trading program but instead provided two options for reducing NOx emissions:

- Option 1 – for long wet kilns, meet NOx emission limit of 6.0 pounds per ton of clinker produced; for long dry kilns, meet limit of 5.1 pounds per ton of clinker produced; and for pre-heater/pre-calciner or pre-calciner kilns, meet limit of 2.8 pounds per ton of clinker produced;
- Option 2 – install low NOx burners on each kiln or modify each kiln to implement mid-kiln firing.

The one kiln in Maine is a wet process cement kiln and has been licensed to modernize by converting to the more efficient dry cement manufacturing process. The new kiln is subject to BACT requirements.

4.4.2 Description of the OTC 2006 Control Measure

There is a wide variety of proven control technologies for reducing NOx emissions from cement kilns. Automated process control has been shown to lower NOx emissions by moderate amounts. Low-NOx burners have been successfully used, especially in the precalciner kilns. CemStarSM is a process that involves adding steel slag to the kiln, offering moderate levels of NOx reduction by reducing the required burn zone heat input. Mid-kiln firing of tires provides moderate reductions of NOx emissions while reducing fuel costs and providing an additional revenue stream from receipt of tire tipping fees. SNCR technology has the potential to offer significant reductions on some precalciner kilns. SNCR is being used in numerous cement kilns in Europe. A recent study (EC 2001a) indicates that there are 18 full-scale SNCR installations in Europe. Most SNCR installations are designed and/or operated for NOx reduction rates of 10-50% which is sufficient to comply with current legislation in some countries. Two Swedish plants installed SNCR in 1996/97 and have achieved a reduction of 80-85%. A second recent study (ERG 2005) of cement kilns in Texas has identified a variety of NOx controls for both wet and dry cement kilns, with reductions in the 40 to 85% range.

The OTC Commissioners recommended that OTC member states pursue, as necessary and appropriate, state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies that are consistent with the guidelines shown in Table 4.2 (OTC 2006b). The guidelines were presented in terms of both an emission rate (lbs/ton of clinker by kiln type) as well as a percent reduction from uncontrolled levels.

Table 4.2 OTC Resolution 06-02 Emission Guidelines for Cement Kilns

Kiln Type	Emission Rate (lbs NOx/ton of clinker produced)	% Reduction from Uncontrolled
Wet Kiln	3.88	60
Long Dry Kiln	3.44	60
Pre-heater Kiln	2.36	60
Pre-calciner Kiln	1.52	60

4.4.3 Emission Benefit Analysis Methods

To calculate the additional reductions from the OTC 2006 Control Measure, MACTEC calculated the 2002 emission rate (lbs NOx per ton of clinker produced) for each kiln. The 2002 emission rate was compared to the OTC 2006 control measure emission rate list above to calculate a kiln-specific percent reduction. The kiln-specific percent reduction was then applied to the 2002 actual emissions to calculate the emissions remaining after implementation of the control measure.

4.4.4 Cost Estimates

The TCEQ study (ERG 2005) estimated a cost-effectiveness of $1,400-1,600 per ton of NOx removed for an SNCR system achieving a 50 percent reduction on modern dry preheat precalcination kilns. The study also estimate a cost-effectiveness of $2,200 per ton of NOx removed for SNCR systems achieving a 35 percent reduction on wet kilns. The most recent EPA report (EC/R 2000) shows data for two SNCR technologies, biosolids injection and NOXOUT®. These technologies showed average emission reductions of 50 and 40 percent, respectively. The cost effectiveness was estimated to be $1,000-2,500/ton depending on the size of the kiln. Costs and the cost effectiveness for a specific unit will vary depending on the kiln type, characteristics of the raw material and fuel, uncontrolled emission rate, and other source-specific factors.

4.5 GLASS/FIBERGLASS FURNACES

The manufacturing process requires raw materials, such as sand, limestone, soda ash, and cullet (scrap and recycled glass), be fed into a furnace where a temperature is maintained in the 2,700°F to 3,100°F range. The raw materials then chemically react creating a molten material, glass. The reaction of nitrogen and oxygen in the furnace creates NOx emissions.

The main product types are flat glass, container glass, pressed and blown glass, and fiberglass. In the OTR, the preponderance of glass manufacturing plants is in Pennsylvania. New York and New Jersey also have several plants. Massachusetts, Maryland, and Rhode Island each have one glass manufacturing plant.

4.5.1 Existing Federal and State Rules

Only Massachusetts and New Jersey have specific regulatory limits for NOx emissions from glass melting furnaces. Massachusetts has a 5.3 pound per ton of glass removed limit for container glass melting furnaces having a maximum production of 15 tons of glass per day or greater. New Jersey has a 5.5 pound per ton of glass limit for commercial container glass manufacturing furnaces and an 11 pound per ton of glass for specialty container glass manufacturing furnaces. New Jersey also required borosilicate recipe glass manufacturing furnaces to achieve at least a 30 percent reduction from 1990 baseline levels by 1994. The regulations for other states with glass furnaces (Maryland, New York, Pennsylvania, and Rhode Island) do not contain specific emission limitation requirements, but rather require RACT emission controls as determined on a case-by-case basis.

4.5.2 Description of the OTC 2006 Control Measure

Several alternative control technologies are available to glass manufacturing facilities to limit NOx emissions (MACTEC 2005). These options include combustion modifications (low NOx burners, oxy-fuel firing, oxygen-enriched air staging), process modifications (fuel switching, batch preheat, electric boost), and post combustion modifications (fuel reburn, SNCR, SCR). Oxyfiring is the most effective NOx emission reduction technique and is best implemented with a complete furnace rebuild. This strategy not only reduces NOx emissions by as much as 85 percent, but reduces energy consumption, increases production rates by 10-15 percent, and improves glass quality by reducing defects. Oxyfiring is demonstrated technology and has penetrated into all segments of the glass industry.

The OTC Commissioners recommended that OTC member states pursue, as necessary and appropriate, state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies that are consistent with the guidelines shown in Table 4.3 (OTC 2006g). The guidelines were presented in terms of both an emission rate (lbs/ton of glass produced) as well as a percent reduction from uncontrolled levels for the different types of glass manufactured.

Table 4.3 Addendum to OTC Resolution 06-02 Guidelines for Glass Furnaces

Type of Glass	Emission Rate (lbs NOx/ton of glass pulled) Block 24-hr Ave.	Emission Rate (lbs NOx/ton of glass pulled) Rolling 30-day Ave.
Container Glass	4.0	n/a
Flat Glass	9.2	7.0
Pressed/blown Glass	4.0	n/a
Fiberglass	4.0	n/a

Note: Compliance date is 2009. NOx allowances may be surrendered in lieu of meeting the emission rate based on a percentage of the excess emissions at the facility, at the discretion of the State.

4.5.3 Emission Benefit Analysis Methods

The NOx emission reduction benefit calculation varied by State depending upon the availability of data:

- New Jersey DEP evaluated the existing controls at each facility. NJDEP identified furnaces that have closed, indicated whether the facility requested banking of emissions, and specified whether the emissions from the closed furnace should remain in the projection year inventory. NJDEP also identified furnace-specific projected emission rates based on the use of oxyfuel technology.
- Pennsylvania DEP provided 2002 throughput (tons of glass pulled) and emission rate data (lbs NOx/ton of glass pulled). The 2002 emission rate was compared to the OTC 2006 control measure emission rate list above to calculate a furnace-specific percent reduction. The furnace-specific percent reduction was then applied to the 2002 actual emissions to calculate the emissions remaining after implementation of the control measure. If a furnace had an emission rate below the OTCC 2006 control measure emission rate, then no incremental reduction was calculated. PADEP also identified several furnaces that have shut down – emissions from these furnaces were set to zero in the projection year inventory.
- For all other States with glass furnaces (MA, MD, NY, and RI), furnace specific data were not available. The NOx emission reduction benefit was calculated by applying an 85 percent reduction for oxyfiring technology to the projected 2009 base inventory. This approach does not take into account existing controls at the facilities.

4.5.4 Cost Estimates

A recent study by the European Commission (EC 2001b) reports a 75 to 85 percent reduction in NOx based on oxyfiring technology, resulting in emission rates of 1.25 to 4.1 pounds of NOx per ton of glass produced. The cost effectiveness was determined to be $1,254 to $2,542 depending on the size of the furnace. EPA's Alternative Control Techniques Document (USEPA 1994) estimated an 85 percent reduction in NOx emissions for oxyfiring with a cost-effectiveness of $2,150 to $5,300.

Other technologies may be used to meet the limits in Table 4.3. The costs associated with meeting those limits are source-specific and depend on the existing controls in place and the emission rates being achieved. Site-specific factors greatly influence the actual achievable performance level and control costs at a particular facility.

4.6 ICI BOILERS

Industrial/commercial/institutional (ICI) boilers combust fuel to produce heat and process steam for a variety of applications. Industrial boilers are routinely found in applications the chemical, metals, paper, petroleum, food production and other industries. Commercial and institutional boilers are normally used to produce steam and heat water for space heating in office buildings, hotels, apartment buildings, hospitals, universities, and similar facilities. Industrial boilers are generally smaller than boilers in the electric power industry, and typically have a heat input in the 10-250 mmBtu/hr range; however, industrial boilers can be as large as 1,000 mmBtu/hr or as small as 0.5 mmBtu/hour. Most commercial and institutional boilers generally have a heat input less than 100 mmBtu/hour. It is estimated that 80 percent of the commercial/institutional population is smaller than 15 mmBtu/hour. The ICI boiler population is highly diverse – encompassing a variety of fuel types, boiler designs, capacity utilizations and pollution control systems – that result in variability in emission rates and control options.

For emission inventory purposes, emissions from ICI boilers are included in both the point and area source emission inventories. Generally, the point source emission inventory includes all ICI boilers at major facilities. The point source inventory lists individual boilers, along with their size and associated emissions. The area source inventory generally includes emissions for ICI boilers located at non-major facilities. It does not provide emissions by the size of boiler, as is done in the point source inventory. Area sources emissions are calculated based on the fuel use not accounted for in the point source inventory. This is done by taking the total fuel consumption for the state (by fuel type and category), as published by the U.S. Department of Energy, and subtracting out the fuel usage reported in the point source inventory. Emissions are then calculated on a county-by-county basis using the amount of fuel not accounted for in the point source inventory and average emission factors for each fuel type.

4.6.1 Existing Federal and State Rules

ICI boilers are subject to a variety of Clean Air Act programs. Emission limits for a specific source may have been derived from NSPS, NSR, NOx SIP Call, State RACT rules, case-by-case RACT determinations, or MACT requirements. Thus, the specific emission limits and control requirements for a given ICI boiler vary and depend on fuel type, boiler age, boiler size, boiler design, and geographic location.

The OTC developed a draft model rule in 2001 with the following thresholds and limits:

OTC 2001 Model Rule ICI Boiler Thresholds and Limits		
Applicability Threshhold	**Emission Rate Limit**	**Percent NOx Reduction**
5-50 mmBtu/hr	None	Tune-up Only
50-100 mmBtu/hr	Gas-fired: 0.10 lbs/mmBtu Oil-fired: 0.30 lbs/mmBtu Coal-fired: 0.30 lbs/mmBtu	50%
100-250 mmBtu/hr	Gas-fired: 0.10 lbs/mmBtu Oil-fired: 0.20 lbs/mmBtu Coal-fired: 0.20 lbs/mmBtu	50%
>250 mmBtu/hr*	Gas-fired: 0.17 lbs/mmBtu Oil-fired: 0.17 lbs/mmBtu Coal-fired: 0.17 lbs/mmBtu	50%

* Only for boilers not subject to USEPA's NOx SIP Call

Implementation of the OTC 2001 model rule limits varied by State – some OTC states adopted these limits while others did not. MACTEC researched current State regulations affecting ICI boilers and summarized the rules in Appendix F. The specific requirements for each state were organized into a common format to efficiently include the State-by-State differences by fuel type and boiler size. This organization oversimplifies the source categories and size limitations that differ from State-to-State. This simplification was necessary to match the rules to the organization of the emission data bases (i.e., Source Classification Codes) being used in the analysis.

4.6.2 Description of the OTC 2006 Control Measure

The OTC Commissioners recommended that OTC member states pursue as necessary and appropriate state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies for ICI boilers (OTC 2006b). These guidelines have undergone revision based on a more refined analyses. Table 4.4 provides the current OTC proposal for ICI boilers.

4.6.3 Emission Benefit Analysis Methods

The emission reduction benefits resulting from the OTC ICI boiler control measure were calculated differently for point and area sources. For point sources, the emission reductions were estimated by comparing the emission limits in the existing (2006) state regulations with the limits contained in the OTC ICI boiler proposal.

Table 4.4 Addendum to OTC Resolution 06-02 Guidelines for ICI Boilers

ICI Boiler Size (mmBtu/hr)	Control Strategy/ Compliance Option	NOx Control Measure
5-25		Annual Boiler Tune-Up
25-100	Option #1	Natural Gas: 0.05 lb NOx/mmBtu #2 Fuel Oil: 0.08 lb NOx/mmBtu #4 or #6 Fuel Oil: 0.20 lb NOx/mmBtu Coal: 0.30 lb NOx/mmBtu**
	Option #2	50% reduction in NOx emissions from uncontrolled baseline
	Option #3	Purchase current year CAIR NOx allowances equal to reducted needed to acheiv the required emission rates
100-250	Option #1	Natural Gas: 0.10 lb NOx/mmBtu #2 Fuel Oil: 0.20 lb NOx/mmBtu #4 or #6 Fuel Oil: 0.20 lb NOx/mmBtu Coal: Wall-fired 0.14 lb NOx/mm Btu Tangential 0.12 lb NOx/mm Btu Stoker 0.22 lb NOx/mm Btu Fluidized Bed 0.08 lb NOx/mm Btu
	Option #2	LNB/SNCR, LNB/FGR, SCR, or some combination of these controls in conjunction with Low NOx Burner technology
	Option #3	60% reduction in NOx emissions from uncontrolled baseline
	Option #4	Purchase current year CAIR NOx allowances equal to reducted needed to acheiv the required emission rates
>250	Option #1	Purchase current year CAIR NOx allowances equal to reducted needed to acheiv the required emission rates
	Option #2	Phase I – 2009 Emission rate equal to EGUs of similar size Phase II – 2012 Emission rate equal to EGUs of similar size

Tables 4-5 through 4-10 shows the current state emission limits by size range and fuel type, and the percentage reduction from the OTC proposed limits to the current state requirement. In cases where a state did not have a specific limit for a given size range, then the more general percent reduction from uncontrolled values in Table 4-4 was used. The fuel types/boiler types shown in Tables 4-5 through 4-10 were matched to SCCs in the point source inventory. MACTEC used the SCC and design capacity (mmBtu/hour) from the MANEVU and VISTAS emission inventories to apply the appropriate state specific reduction factor to estimate the emission reduction benefit.

The emission limits shown in Tables 4-5 through 4-10 generally apply only to ICI boilers located at major sources (i.e. point sources). ICI boilers located at minor sources (i.e., area sources) are generally not subject to the emissions limits. In general, emissions from area source ICI boilers are uncontrolled (except possibly for an annual tune-up requirement). The one exception is New Jersey: beginning on March 7, 2007, N.J.A.C. 27.27-19.2 requires any ICI boiler of at least 5 mmBtu/hr heat input to comply with applicable NOx emission limits whether or not it is located at a major NOx facility.

To calculate the reductions from area source ICI boilers, MACTEC applied the general percent reduction from uncontrolled values in Table 4-4 to the area source inventory (i.e., 10 percent reduction for annual tune-ups for boilers < 25 mmBtu/hr, and a 50 percent reduction for boilers between 25 and 100 mmBtu/hr).

The area source inventory does not provide information on the boiler size. To estimate the boiler size distribution in the area source inventory, we first assumed that there were no boilers > 100 mmBtu/hr in the area source inventory. Next, we used boiler capacity data from the USDOE's Oak Ridge National Laboratory (EEA 2005) to estimate the percentage of boiler capacity in the < 25 mm Btu/hr and 25-100 mm Btu/hr categories. Third, we assumed that emissions were proportional to boiler capacity. Finally, we calculated the weighted average percent reduction for area source ICI boilers based on the capacity in each size range and the percent reduction by size range discussed in the previous paragraph. For industrial boilers, the weighted average reduction was 34.5 percent; for commercial/institutional boilers, the weighted average reduction was 28.1 percent.

Table 4.5 Current State Emission Limits and Percent Reduction Estimated from Adoption of OTC ICI Boiler Proposal

Point Source Natural Gas-Fired Boilers

State	Current 2006 NOx RACT Limit (lbs/mmBtu) (from State regulations) Applicability Threshold mmBtu/hour Heat Input						OTC 2006 Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold mmBtu/hour Heat Input				
	> 250*	100 to 250	50 to 100	25 to 50	5 to 25		> 250*	100 to 250	50 to 100	25 to 50	<25
						OTC Limits (lbs/mmBtu):	0.12	0.10	0.05	0.05	NL
CT	0.20	0.20	0.20	0.20	0.20		40.0	50.0	75.0	75.0	10.0
DE	0.10	0.10	LNB	NL	NL		0.0	0.0	0.0	0.0	0.0
DC	0.20	0.20	NL	NL	NL		40.0	50.0	50.0	50.0	10.0
ME	0.20	NL	NL	NL	NL		40.0	60.0	50.0	50.0	10.0
MD	0.20	0.20	0.20	0.20	0.20		40.0	50.0	75.0	75.0	10.0
MA	0.20	0.20	0.10	NL	NL		40.0	50.0	50.0	50.0	10.0
NH	0.10	0.10	0.10	NL	NL		0.0	0.0	50.0	50.0	10.0
NJ	0.10	0.10	0.10	NL	NL		0.0	0.0	50.0	50.0	10.0
NY	0.20	0.20	0.10	NL	NL		40.0	50.0	50.0	50.0	10.0
PA	Source Specific NOx RACT						29.4	50.0	50.0	50.0	10.0
SE PA	0.17	0.10	Source Specific RACT				29.4	0.0	50.0	50.0	10.0
RI	0.10	0.10	0.10	NL	NL		0.0	0.0	50.0	50.0	10.0
VT	0.20	NL	NL	NL	NL		40.0	60.0	50.0	50.0	10.0
NOVA	0.2	0.2	0.2	0.2	0.2		40.0	50.0	75.0	75.0	10.0

NL indicates no limit specified in a state rule; in those cases, the more general percent reduction from Table 4-4 was used.

Source Specific NOx RACT indicates that there are no specific limits in the States' rule (i.e., limits were determined on a case-by-case basis); in those cases, the more general percent reduction from Table 4-4 was used.

SE PA refers to the five southeastern Pennsylvania counties (Bucks, Chester, Delaware, Montgomery, and Philadelphia) affected by Pennsylvania's Addition NOx Requirements (129.201)

NOVA refers to the following jurisdictions in Virginia are part of the OTR: Arlington County, Alexandria, Fairfax County, Fairfax City, Fall Church, Loudon County, Manassas City, Manassas Park, and Prince William County.

Table 4.6 Current State Emission Limits and Percent Reduction Estimated from Adoption of OTC ICI Boiler Proposal

Point Source Distillate Oil-Fired Boilers

State	Current 2006 NOx RACT Limit (lbs/mmBtu) (from State regulations) Applicability Threshold mmBtu/hour Heat Input						OTC 2006 Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold mmBtu/hour Heat Input				
	> 250*	100 to 250	50 to 100	25 to 50	5 to 25		> 250*	100 to 250	50 to 100	25 to 50	<25
						OTC Limits (lbs/mmBtu):	0.12	0.20	0.08	0.08	NL
CT	0.20	0.20	0.20	0.20	0.20		40.0	0.0	60.0	60.0	10.0
DE	0.10	0.10	LNB	NL	NL		0.0	0.0	0.0	0.0	0.0
DC	0.30	0.30	0.30	NL	NL		60.0	33.3	73.3	50.0	10.0
ME	0.20	0.30	0.30	NL	NL		40.0	33.3	73.3	50.0	10.0
MD	0.25	0.25	0.25	0.25	0.25		52.0	20.0	68.0	68.0	10.0
MA	0.25	0.30	0.12	NL	NL		52.0	33.3	33.3	50.0	10.0
NH	0.30	0.30	0.12	NL	NL		60.0	33.3	33.3	50.0	10.0
NJ	0.20	0.20	0.12	NL	NL		40.0	0.0	33.3	50.0	10.0
NY	0.25	0.30	0.12	NL	NL		52.0	33.3	33.3	50.0	10.0
PA	Source Specific NOx RACT						29.4	33.3	33.3	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	0.0	33.3	50.0	10.0
RI	0.12	0.12	0.12	NL	NL		0.0	0.0	33.3	50.0	10.0
VT	0.30	NL	NL	NL	NL		60.0	60.0	50.0	50.0	10.0
NOVA	0.25	0.25	0.25	0.25	0.25		52.0	20.0	68.0	68.0	10.0

NL indicates no limit specified in a state rule; in those cases, the more general percent reduction from Table 4-4 was used.

Source Specific NOx RACT indicates that there are no specific limits in the States' rule (i.e., limits were determined on a case-by-case basis); in those cases, the more general percent reduction from Table 4-4 was used.

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NOVA refers to the following jurisdictions in Virginia are part of the OTR: Arlington County, Alexandria, Fairfax County, Fairfax City, Fall Church, Loudon County, Manassas City, Manassas Park, and Prince William County.

Table 4.7 Current State Emission Limits and Percent Reduction Estimated from Adoption of OTC ICI Boiler Proposal

Point Source Residual Oil-Fired Boilers

	Current 2006 NOx RACT Limit (lbs/mmBtu) (from State regulations) Applicability Threshold mmBtu/hour Heat Input						OTC 2006 Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold mmBtu/hour Heat Input				
State	**> 250***	**100 to 250**	**50 to 100**	**25 to 50**	**5 to 25**		**> 250***	**100 to 250**	**50 to 100**	**25 to 50**	**<25**
						OTC Limits (lbs/mmBtu):	**0.12**	**0.20**	**0.20**	**0.20**	**NL**
CT	0.25	0.25	0.25	0.25	0.25		52.0	20.0	20.0	20.0	10.0
DE	0.10	0.10	LNB	NL	NL		0.0	0.0	0.0	0.0	0.0
DC	0.30	0.30	0.30	NL	NL		60.0	33.3	33.3	50.0	10.0
ME	0.20	0.30	0.30	NL	NL		40.0	33.3	33.3	50.0	10.0
MD	0.25	0.25	0.25	0.25	0.25		52.0	20.0	20.0	20.0	10.0
MA	0.25	0.30	0.30	NL	NL		52.0	33.3	33.3	50.0	10.0
NH	0.30	0.30	0.30	NL	NL		60.0	33.3	33.3	50.0	10.0
NJ	0.20	0.20	0.30	NL	NL		40.0	0.0	33.3	50.0	10.0
NY	0.25	0.30	0.30	NL	NL		52.0	33.3	33.3	50.0	10.0
PA	Source Specific NOx RACT						29.4	33.3	33.3	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	0.0	50.0	50.0	10.0
RI	LNB/FGR	LNB/FGR	LNB/FGR	NL	NL		0.0	0.0	0.0	50.0	10.0
VT	0.30	NL	NL	NL	NL		60.0	60.0	50.0	50.0	10.0
NOVA	0.25	0.25	0.25	0.25	0.25		52.0	20.0	20.0	20.0	10.0

NL indicates no limit specified in a state rule; in those cases, the more general percent reduction from Table 4-4 was used.

Source Specific NOx RACT indicates that there are no specific limits in the States' rule (i.e., limits were determined on a case-by-case basis); in those cases, the more general percent reduction from Table 4-4 was used.

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NOVA refers to the following jurisdictions in Virginia are part of the OTR: Arlington County, Alexandria, Fairfax County, Fairfax City, Fall Church, Loudon County, Manassas City, Manassas Park, and Prince William County.

Table 4.8 Current State Emission Limits and Percent Reduction Estimated from Adoption of OTC ICI Boiler Proposal

Point Source Coal Wall-Fired Boilers

State	Current 2006 NOx RACT Limit (lbs/mmBtu) (from State regulations) Applicability Threshold mmBtu/hour Heat Input						OTC 2006 Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold mmBtu/hour Heat Input				
	> 250*	100 to 250	50 to 100	25 to 50	5 to 25		> 250*	100 to 250	50 to 100	25 to 50	<25
						OTC Limits (lbs/mmBtu):	0.12	0.14	0.30	0.30	NL
CT	0.38	0.38	0.38	0.38	0.38		68.4	63.2	21.1	21.1	10.0
DE	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
DC	0.43	0.43	NL	NL	NL		72.1	67.4	50.0	50.0	10.0
ME	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
MD	0.38	0.65	0.38	0.38	0.38		68.4	78.5	21.1	21.1	10.0
MA	0.45	0.45	NL	NL	NL		73.3	68.9	50.0	50.0	10.0
NH	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NJ	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NY	0.45	0.5	NL	NL	NL		73.3	72.0	50.0	50.0	10.0
PA	Source Specific NOx RACT						29.4	72.0	50.0	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	30.0	50.0	50.0	10.0
RI	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
VT	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NOVA	0.38	0.38	0.38	0.38	0.38		68.4	63.2	21.1	21.1	10.0

n/a indicates that there are no coal-fired ICI boilers in the state.

NL indicates no limit specified in a state rule; in those cases, the more general percent reduction from Table 4-4 was used.

Source Specific NOx RACT indicates that there are no specific limits in the States' rule (i.e., limits were determined on a case-by-case basis); in those cases, the more general percent reduction from Table 4-4 was used.

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NOVA refers to the following jurisdictions in Virginia are part of the OTR: Arlington County, Alexandria, Fairfax County, Fairfax City, Fall Church, Loudon County, Manassas City, Manassas Park, and Prince William County.

Table 4.9 Current State Emission Limits and Percent Reduction Estimated from Adoption of OTC ICI Boiler Proposal

Point Source Coal Tangential-Fired Boilers

State	Current 2006 NOx RACT Limit (lbs/mmBtu) (from State regulations) Applicability Threshold mmBtu/hour Heat Input						OTC 2006 Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold mmBtu/hour Heat Input				
	> 250*	100 to 250	50 to 100	25 to 50	5 to 25		> 250*	100 to 250	50 to 100	25 to 50	<25
						OTC Limits (lbs/mmBtu):	0.12	0.12	0.30	0.30	NL
CT	0.20	0.20	0.20	0.20	0.20		40.0	40.0	0.0	0.0	10.0
DE	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
DC	0.43	0.43	NL	NL	NL		72.1	72.1	50.0	50.0	10.0
ME	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
MD	0.38	0.65	0.38	0.38	0.38		68.4	81.5	21.1	21.1	10.0
MA	0.38	0.38	NL	NL	NL		68.4	68.4	50.0	50.0	10.0
NH	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NJ	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NY	0.42	0.5	NL	NL	NL		71.4	76.0	50.0	50.0	10.0
PA	Source Specific NOx RACT						29.4	76.0	50.0	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	40.0	50.0	50.0	10.0
RI	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
VT	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NOVA	0.38	0.38	0.38	0.38	0.38		68.4	68.4	21.1	21.1	10.0

n/a indicates that there are no coal-fired boilers in the state.

NL indicates no limit specified in a state rule; in those cases, the more general percent reduction from Table 4-4 was used.

Source Specific NOx RACT indicates that there are no specific limits in the States' rule (i.e., limits were determined on a case-by-case basis); in those cases, the more general percent reduction from Table 4-4 was used.

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NOVA refers to the following jurisdictions in Virginia are part of the OTR: Arlington County, Alexandria, Fairfax County, Fairfax City, Fall Church, Loudon County, Manassas City, Manassas Park, and Prince William County.

Table 4.10 Current State Emission Limits and Percent Reduction Estimated from Adoption of OTC ICI Boiler Proposal

Point Source Coal-Fired Stoker Boilers

	Current 2006 NOx RACT Limit (lbs/mmBtu) (from State regulations) Applicability Threshold mmBtu/hour Heat Input						OTC 2006 Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold mmBtu/hour Heat Input				
State	**> 250***	**100 to 250**	**50 to 100**	**25 to 50**	**5 to 25**		**> 250***	**100 to 250**	**50 to 100**	**25 to 50**	**<25**
						OTC Limits (lbs/mmBtu):	**0.12**	**0.22**	**0.30**	**0.30**	**NL**
CT	0.20	0.20	0.20	0.20	0.20		40.0	0.0	0.0	0.0	10.0
DE	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
DC	0.43	0.43	NL	NL	NL		72.1	48.8	50.0	50.0	10.0
ME	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
MD	0.38	0.65	0.38	0.38	0.38		68.4	66.2	21.1	21.1	10.0
MA	0.33	0.33	NL	NL	NL		63.6	33.3	50.0	50.0	10.0
NH	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NJ	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NY	0.3	0.3	NL	NL	NL		60.0	26.7	50.0	50.0	10.0
PA	Source Specific NOx RACT						29.4	26.7	50.0	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	0.0	50.0	50.0	10.0
RI	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
VT	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NOVA	0.4	0.4	0.4	0.4	0.4		70.0	45.0	25.0	25.0	10.0

n/a indicates that there are no coal-fired boilers in the state.

NL indicates no limit specified in a state rule; in those cases, the more general percent reduction from Table 4-4 was used.

Source Specific NOx RACT indicates that there are no specific limits in the States' rule (i.e., limits were determined on a case-by-case basis); in those cases, the more general percent reduction from Table 4-4 was used.

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NOVA refers to the following jurisdictions in Virginia are part of the OTR: Arlington County, Alexandria, Fairfax County, Fairfax City, Fall Church, Loudon County, Manassas City, Manassas Park, and Prince William County.

4.6.4 Cost Estimates

The OTC recently completed an analysis of ICI boiler NOx control cost estimates (Bodnarik 2006) using detailed information on direct capital equipment costs, direct installation costs, indirect capital costs, and direct and indirect operating costs. The analysis examined five types of NOx control technologies – low-NOx burners (LNB), ultra low-NOx burners (ULNB), LNB plus flue gas recirculation (LNB+FGR), LNB plus selective non-catalytic reduction (LNB+SNCR), and selective catalytic reduction (SCR). The analysis also considered various fuel types – coal, residual oil, distillate oil, and natural gas. The cost effectiveness varies by fuel type, boiler size, current regulatory requirements, current control technology, and boiler firing type. The annual cost-effectiveness was found as low as $600 per ton and as high as $18,000 per ton. In general, for most scenarios the cost effectiveness was estimated to be less than $5,000 per ton of NOx removed.

4.7 NOx EMISSION REDUCTION SUMMARY

The results of the emission benefit calculations for the OTC states are described in this subsection. The starting point for the quantification of the emission reduction benefits is the MANEVU emission inventory, Version 3 (Pechan 2006, MACTEC 2006a) and the VISTAS emission inventory, BaseG (MACTEC 2006b), for the northern Virginia counties that are part of the OTR. The MANEVU and VISTAS inventories include a 2002 base year inventory as well as projection inventories for 2009 and 2018 (MANEVU also has projections for 2012, but VISTAS does not). The projection inventories account for growth in emissions based on growth indicators such as population and economic activity. The projection inventories also account for “on-the-books/on-the-way” (OTB/W) emission control regulations that have (or will) become effective between 2003 and 2008 that will achieve post-2002 emission reductions. Emission reductions from existing regulations are already accounted for to ensure no double counting of emission benefits occurs.

Note that the emission reductions contained in this Section are presented in terms of tons per summer day. The MANEVU base and projection emission inventories do not contain summer day emissions for all States and source categories; the VISTAS inventory only contains annual values. When States provided summer day emissions in the MANEVU inventory, these values were used directly to quantify the emission benefit from the 2006 OTC control measure. When summer day emissions were missing from the MANEVU or VISTAS inventories, the summer day emissions were calculated using the annual emissions and the seasonal throughput data from the NIF Emission Process table. If the seasonal throughput data was missing, the summer day emissions were calculated using the annual emissions and a summer season adjustment factor derived from the monthly activity profiles contained in the SMOKE emissions modeling system.

Tables 4-11 to 4-17 show State summaries of the emission benefits from the OTC 2006 NOx control measures described previously in this Section. For each of the seven source categories, the Tables show four emission numbers: (1) the actual 2002 summer daily emissions; (2) the summer daily emissions for the 2009 OTB/W scenario that accounts for growth and for the emission control regulations that have (or will) become effective between 2003 and 2008 that will achieve post-2002 emission reductions; (3) the summer daily emissions for 2009 with the implementation of the OTC 2006 control measures identified in this Section, and (4) the emission benefit in 2009 resulting from the OTC 2006 control measure. Table 4-18 shows the same information for the total of all seven source categories.

The largest estimated NOx emission reductions are in the more industrialized States – New York and Pennsylvania – which have most of the cement kilns and glass furnaces in the OTR. These two states also have a large population of ICI boilers. The emission benefits listed for Virginia just include the Virginia counties in the northern Virginia area that are part of the OTR. Benefit estimates for all other States include the entire state. The emission benefits also assume that all OTC members will adopt the rules as described in the previous sections.

Appendix E provides county-by-county summaries of the NOx emission benefits from the OTC 2006 NOx control measures described previously in this Section. Appendix E also provides additional documentation regarding the data sources and emission benefit calculations that were performed. These tables can be used by the States to create additional summaries, for example, by nonattainment area.

Table 4-11 OTC 2006 NOx Model Rule Benefits by State for 2009 Heavy-Duty Truck Diesel Engine Chip Reflash

State	Heavy-Duty Truck Diesel Engine Chip Reflash Summer NOx Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	66.7	n/a	n/a	3.5
DE	21.8	n/a	n/a	0.6
DC	8.1	n/a	n/a	0.8
ME	82.8	n/a	n/a	1.4
MD	105.0	n/a	n/a	5.6
MA	152.7	n/a	n/a	6.7
NH	30.5	n/a	n/a	2.0
NJ	133.5	n/a	n/a	9.7
NY	177.6	n/a	n/a	16.1
PA	437.1	n/a	n/a	12.4
RI	8.3	n/a	n/a	0.8
VT	13.7	n/a	n/a	0.9
NOVA	16.6	n/a	n/a	2.5
OTR	**1254.5**	**0.0**	**0.0**	**63.0**

n/a – not available due to lack of 2009 emissions data for on-road vehicles in NIF format.

Table 4-12 OTC 2006 NOx Model Rule Benefits by State for 2009 Regional Fuels

State	Regional Fuels Summer NOx Emissions (tpd)			
	2006 Actual	2006 Base	2006 Control	2006 Benefit
CT	81.3	81.3	81.3	0.0
DE	24.8	24.8	24.8	0.0
DC	8.4	8.4	8.4	0.0
ME	44.1	44.1	43.8	0.2
MD	144.0	144.0	144.0	0.0
MA	137.4	137.4	137.4	0.0
NH	38.4	38.4	38.2	0.2
NJ	204.2	204.2	204.2	0.0
NY	381.3	381.3	379.1	2.1
PA	284.8	284.8	282.9	2.0
RI	20.5	20.5	20.5	0.0
VT	26.3	26.3	26.0	0.3
NOVA	50.8	50.8	50.8	0.0
OTR	**1446.2**	**1446.2**	**1441.4**	**4.8**

NESCAUM analysis was only completed for 2006. Data for 2002 and 2009 are not currently available

Table 4-13 OTC 2006 NOx Model Rule Benefits by State for 2009 Asphalt Pavement Production Plants

State	Asphalt Pavement Production Plants Summer NOx Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	0.0	0.0	0.0	0.0
DE	0.6	0.6	0.4	0.2
DC	0.0	0.0	0.0	0.0
ME	1.7	2.0	1.3	0.7
MD	0.2	0.2	0.1	0.1
MA	1.1	1.8	1.2	0.6
NH	0.0	0.0	0.0	0.0
NJ	1.3	2.8	1.8	1.0
NY	0.0	0.1	0.0	0.0
PA	0.6	0.7	0.5	0.2
RI	0.1	0.1	0.1	0.0
VT	0.0	0.0	0.0	0.0
NOVA	0.3	0.3	0.2	0.1
OTR	**5.9**	**8.6**	**5.6**	**3.0**

2002 Actual emissions come from the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

Table 4-14 OTC 2006 NOx Model Rule Benefits by State for 2009 Cement Kilns

State	Cement Kilns Summer NOx Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	0.0	0.0	0.0	0.0
DE	0.0	0.0	0.0	0.0
DC	0.0	0.0	0.0	0.0
ME	4.7	4.7	4.7	0.0
MD	17.2	17.2	4.1	13.1
MA	0.0	0.0	0.0	0.0
NH	0.0	0.0	0.0	0.0
NJ	0.0	0.0	0.0	0.0
NY	35.1	35.1	19.8	15.3
PA	44.7	44.7	30.7	14.0
RI	0.0	0.0	0.0	0.0
VT	0.0	0.0	0.0	0.0
NOVA	0.0	0.0	0.0	0.0
OTR	**101.9**	**101.9**	**59.4**	**42.5**

2002 Actual emissions come from the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are the emissions forecasted to be the same as in 2002 (i.e., no growth was assumed).

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

Table 4-15 OTC 2006 NOx Model Rule Benefits by State for 2009 Glass/Fiberglass Furnaces

State	Glass/Fiberglass Furnace Summer NOx Emissions (tpd)			
	2002 Actual	2009 Base	Maximum Control	Maximum Benefit
CT	0.0	0.0	0.0	0.0
DE	0.0	0.0	0.0	0.0
DC	0.0	0.0	0.0	0.0
ME	0.0	0.0	0.0	0.0
MD	0.3	0.3	0.1	0.3
MA	1.4	1.8	0.3	1.5
NH	0.0	0.0	0.0	0.0
NJ	7.7	7.1	2.2	4.9
NY	6.1	6.8	1.0	5.8
PA	36.3	44.3	20.0	24.3
RI	0.7	0.5	0.1	0.5
VT	0.0	0.0	0.0	0.0
NOVA	0.0	0.0	0.0	0.0
OTR	**52.5**	**60.9**	**23.6**	**37.3**

2002 Actual emissions come from the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

Maximum Control Inventory emissions are the emissions remaining after full implementation of the beyond-on-the-way control measures described in this Section. Not all of the anticipated reductions from the glass/fiberglass OTC 2006 control measure will be achieved by 2009. This column shows the emissions remaining after full implementation of the measure, which may not occur until 2012 or 2018.

Maximum Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the base emissions and the maximum control emissions).

Note: The table shows the maximum emission reduction from glass/fiberglass furnaces when the OTC 2006 control measure is fully implemented. Not all of the reduction shown will be achieved by 2009.

Table 4-16 OTC 2006 NOx Model Rule Benefits by State for 2009
ICI Boilers – Area (Minor) Source

State	ICI Boilers – Area (Minor) Sources Summer NOx Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	8.9	9.4	6.5	2.8
DE	3.4	3.5	2.3	1.2
DC	1.3	1.6	1.1	0.4
ME	5.0	5.3	4.2	1.1
MD	3.5	4.0	2.9	1.2
MA	24.4	25.8	19.1	6.6
NH	21.3	24.2	20.8	3.4
NJ	20.5	15.6	15.6	0.0
NY	105.2	112.2	78.4	33.8
PA	38.0	39.8	27.6	12.2
RI	6.6	7.3	5.3	2.1
VT	2.3	2.9	1.9	0.9
NOVA	11.8	11.9	8.1	3.9
OTR	**252.0**	**263.4**	**193.9**	**69.5**

2002 Actual emissions come from the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

Table 4-17 OTC 2006 NOx Model Rule Benefits by State for 2009
ICI Boilers – Point (Major) Source

State	ICI Boilers – Point (Major) Sources Summer NOx Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	5.8	5.6	3.5	2.1
DE	7.7	7.3	7.3	0.0
DC	1.0	1.1	0.8	0.4
ME	10.2	12.8	10.1	2.8
MD	14.2	11.2	8.8	2.4
MA	13.8	15.4	8.7	6.8
NH	3.9	4.8	2.9	1.9
NJ	12.9	10.8	7.4	3.4
NY	31.4	30.8	23.8	7.0
PA	33.4	36.5	26.7	9.8
RI	4.2	4.9	4.3	0.5
VT	0.7	0.9	0.5	0.4
NOVA	0.2	0.2	0.0	0.1
OTR	**139.3**	**142.3**	**104.6**	**37.7**

2002 Actual emissions come from the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

Table 4-18 OTC 2006 NOx Model Rule Benefits by State for 2009
All Seven NOx Categories

State	All Seven NOx Categories Summer NOx Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	162.7	n/a	n/a	8.4
DE	58.2	n/a	n/a	2.1
DC	18.8	n/a	n/a	1.6
ME	148.5	n/a	n/a	6.2
MD	284.4	n/a	n/a	22.7
MA	330.8	n/a	n/a	22.2
NH	94.1	n/a	n/a	7.5
NJ	380.0	n/a	n/a	19.0
NY	736.8	n/a	n/a	80.1
PA	874.9	n/a	n/a	74.9
RI	40.5	n/a	n/a	3.9
VT	42.9	n/a	n/a	2.5
NOVA	79.6	n/a	n/a	6.6
OTR	**3252.3**	**n/a**	**n/a**	**257.8**

n/a – not available due to lack of 2009 emissions data for on-road vehicles in NIF format.

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Appendix A – Process for Identifying and Evaluating Control Measures

Background

The States of the Ozone Transport Region (OTR) are faced with the requirement to demonstrate attainment with the 8-hour ozone NAAQS 8-hour ozone National Ambient Air Quality Standards (NAAQS) by June 15, 2008. To accomplish this, most of the states will need to implement additional measures to reduce emissions that either directly impact their nonattainment status, or contribute to the nonattainment status in other states. In addition, the States are conducting attainment planning work to support development of PM2.5 and regional haze State Implementation Plans (SIPs). As such, the Ozone Transport Commission (OTC) undertook an exercise to identify a suite of additional control measures that could be used by the OTR states in attaining their goals.

In March 2005, the Ozone Transport Commission (OTC) established the Control Strategies Committee as an ad-hoc committee to assist with coordination of the attainment planning work. The Control Strategies Committee works with three other OTC committees. The Stationary and Area Source (SAS) Committee evaluates control measures for specific stationary source sectors or issues. The Mobile Source Committee examines control measures for on-road and non-road mobile sources. And the Modeling Committee develops and implements a strategic plan for SIP-quality modeling runs to support attainments demonstrations.

The SAS Committee is comprised of various workgroups that evaluate control measures for specific sectors or issues. These workgroups included:

- Control Measures Workgroup focuses on stationary area sources;
- Reasonably Available Control Technology (RACT) workgroup focuses on major point sources;
- Multi-Pollutant Workgroup focuses on electric generating units (EGUs);
- High Electric Demand Day (HEDD) examines EGU peaking units; and
- Industrial, Commercial, and Institutional (ICI) Boiler Workgroup focuses on control technologies for different fuels and boiler size ranges.

The OTC also issued a contract to MACTEC to help the SAS Committee identify and evaluate candidate control measures as well as to quantify expected emission reductions for each control measure.

Workgroup Activities

Initially, the Workgroups compiled and reviewed a list of approximately 1,000 candidate control measures. These control measures were identified through published sources such as the U.S. Environmental Protection Agency's (EPA's) Control Technique Guidelines, STAPPA/ALAPCO "Menu of Options" documents, the AirControlNET database, emission control initiatives in member states as well as other states including California, state/regional consultations, and stakeholder input. Appendix B provides the initial list of control measures that were evaluated.

Based on the review of the 1,000 candidate control measures, the Workgroups developed a short list of measures to be considered for more detailed analysis. These measures were selected to focus on the pollutants and source categories that are thought to be the most effective in reducing ozone air quality levels in the Northeastern and Mid-Atlantic States. The Workgroups reviewed information on current emission levels, controls already in place, expected emission reductions from the control measures, when the emission reductions would occur, preliminary cost and cost-effectiveness data, and other implementation issues. Each of the candidate control measures on the short list were summarized in a series of "Control Measure Summary Sheets". The Control Measure Summary Sheets are contained in Appendix C. The Workgroups discussed the candidate control measures during a series of conference calls and workshops to further refine the emission reduction estimates, the cost data, and any implementation issues. The Workgroups also discussed comments from stakeholders. The Workgroups prioritized the control measures and made preliminary recommendations regarding which measures to move forward on.

OTC Commissioners' Recommendations

Based on the analyses by the OTC Workgroups, the OTC Commissioners made several recommendations at the Commissioner's meeting in Boston June 2006 and November 2006. The Commissioners recommended that States consider emission reductions from the following source categories:

- Consumer Products
- Portable Fuel Containers
- Adhesives and Sealants Application
- Diesel Engine Chip Reflash
- Cutback and Emulsified Asphalt Paving
- Asphalt Production Plants

- Cement Kilns
- Glass Furnaces
- Industrial, Commercial, and Institutional (ICI) Boilers
- Regional Fuels
- Electric Generating Units (EGUs)

Additionally, the Commissioners requested that EPA pursue federal regulations and programs designed to ensure national development and implementation of control measures for the following categories: architectural and maintenance coatings, consumer products, ICI boilers over 100 mmBtu/hour heat input, portable fuel containers, municipal waste combustors, regionally consistent and environmentally sound fuels, small offroad engine emission regulation, and gasoline vapor recovery. The various recommendations by the OTC Commissioners made from 2004 to 2006 are summarized in Table A-1.

Stakeholder Input

Stakeholders were provided multiple opportunities to review and comment on the Control Measure Summary Sheets. Table A-2 lists the public meetings that were held as an opportunity for stakeholders to review and respond to the Control Measure Summary Sheets and Commissioner's recommendations. Stakeholders provided written comments, as listed in Table A-3. In addition to submitting written comments, the Workgroups conducted teleconferences with specific stakeholder groups to allow stakeholders to vocalize their concerns directly to state staff and to discuss the control options. These stakeholder conference calls and meeting are listed in Table A-4. The OTC staff and state Workgroups carefully considered the verbal and written comments received during this process.

Table A-1: OTC Formal Actions, 2004-2006

Date	Action/Synopsis
Nov. 10, 2004	*Charge to Stationary and Area Sources Committee* Directs SAS Committee to continue to seek out innovative programs to address emissions from all stationary and area sources.
Nov. 10, 2004	*Charge to Stationary and Area Sources Committee Regarding Multi-Pollutant Emission Control for Electrical Generating Units and Large Industrial Sources* Directs the SAS Committee to develop an implementation strategy for to implement the OTC's multi—pollutant position, recommend methods for allocating NOx and SO2 caps, assess methods to advance the OTC's Multi0Pollutant position beyond the OTR, develop a program implementation structure, and present a Memorandum of Understanding for consideration by the Commission.
Nov. 10, 2004	*Charge to the Mobile Source Committee* Directs the Mobile Source Committee to identify selected scenarios to be modeled and evaluate strategies including anti-idling programs, voluntary and regulatory retrofit programs, VMT growth strategies, port and marine engine programs, national mobile source programs, California Low Emission Vehicle programs, and model incentive programs.
Nov. 10, 2004	*Statement on OTC Modeling* Directs the Modeling Committee to coordinate inventories and modeling needed for ozone, regional haze, and PM; seek input for air directors and OTC committees on regional strategies for modeling; continue to use CALGRID as a screening tool; and continue to explore application of emerging tools.
June 8, 2005	*Resolution of the States of the Ozone Transport Commission Regarding Development of a Regional Strategy for the Integrated Control of Ozone Precursors and Other Pollutants of Concern from Electrical Generating Units (EGUs) and Other Large Sources* Resolves that member States: develop a regional Multi-Pollutant program to assist in attaining and maintaining the 8-hour ozone NAAQS; seek to gain support from other states for a broader inter-regional strategy; develop an emissions budget and region-wide trading program; explore all feasible options to utilize the CAIR framework; and develop implementation mechanisms including a Memorandum of Understanding among the states.
Nov. 3, 2005	*Statement of the Ozone Transport Commission With Regard to Advancement of Potential Regional Control Measures for Emission Reduction from Appropriate Sources and State Attain Planning Purposes* Directs the staff of the OTC to continue investigation and modeling work associated with all potential regional control measures.
Feb. 23, 2006	*Action Items* Directs OTC staff to continue efforts on the following issues: Letter to EPA on Small Engines, Consumer Products, Architectural/Industrial Maintenance Coatings (AIM), Chip Reflash, Diesel Emissions Reductions, Modeling Efforts.
June 7, 2006	*Memorandum of Understanding Among the States of the Ozone Transport Commission on a Regional Strategy Concerning the Integrated Control of Ozone Precursors from Various Sources* Commits OTC States to continue to

Date	Action/Synopsis
	work with interested stakeholders and pursue state-specific rulemakings as needed and appropriate regarding the following sectors to reduce emission of ozone precursors: Consumer Products, Portable Fuel Containers, Adhesives and Sealants, and Diesel Engine Chip Reflash.
June 7, 2006	*Statement of the Ozone Transport Commission Concerning Multi-Pollutant Emission Control of Electric Generating Units* Directs OTC staff and its workgroups to continue to formulate a program beyond CAIR to address emissions from this sector and to evaluate and recommend options to address emissions associated with high electrical demand days during the ozone season.
June 7 2006	*Resolution 06-02 of the Ozone Transport Commission Concerning Coordination and Implementation of Regional Ozone Control Strategies for Certain Source Categories* Resolves that OTC States continue to work with interested stakeholders and pursue state-specific rulemakings as needed to establish emission reduction percentages, emission rates or technologies as appropriate for the following source categories: asphalt paving (cutback and emulsified), asphalt plants, cement kilns, regional fuels, glass furnaces, and ICI boilers.
June 7, 2006	*Resolution 06-03 of the Ozone Transport Commission Concerning Federal Guidance and Rulemaking for Nationally-Relevant Ozone Control Measures* Resolves that OTC States request that EPA pursue federal regulations and programs for national implementation of control measures comparable to the levels the OTC has adopted; these areas include AIM Coatings, Consumer Products, ICI Boilers over 100 MMBTU, Portable Fuel Containers, Municipal Waste Combustors, Regional Fuels, Small Engine Emission Regulation, and Gasoline Vapor Recovery.
Nov. 15, 2006	*Modified Charge of the Ozone Transport Commission to the Stationary Area Source Committee Regarding Electric Generating Units* Directs the SAS Committee and workgroups to continue work on EGU emission reduction strategies to incorporate “CAIR Plus” and High Energy Demand Day (HEDD) emission reduction strategies.
Nov. 15, 2006	*Statement of the Ozone Transport Commission Concerning Regional and State Measures to Address Emissions from Mobile Sources* Supports the aggressive implementation of a suite of controls through the OTC Clean Corridor Initiative including: diesel retrofits, the Smartways program, California Low Emission Vehicle programs, anti-idling programs, low-NOx diesel alternatives, transportation demand management to reduce the growth in VMT, and voluntary action and outreach programs.
Nov. 15, 2006	*Addendum to Resolution 06-02 of the Ozone Transport Commission Concerning Coordination and Implementation of Regional Ozone Control Strategies for Various Sources* Resolves that OTC States continue to pursue state-specific rulemakings as needed to establish emission reduction percentages, emission rates or technologies as appropriate for the following source categories: asphalt plants, glass furnaces, and ICI boilers.

OTC formal actions can be found on the OTC website at the following address:

http://www.otcair.org/document.asp?fview=Formal

Table A-2: OTC Control Measures Public Meetings, 2004-2006

Date	**Meeting**	**Location**
June 8-9, 2004	OTC/MANE-VU Annual Meeting	Red Bank, NJ
Nov. 9-10, 2004	OTC Fall Meeting	Annapolis, MD
Apr. 21-22, 2005	OTC Stationary and Area Source/Mobile Source Committee Meeting	Linthicum, MD
June 7-8, 2005	OTC Annual Meeting	Burlington, VT
Oct. 5, 2005	OTC Control Strategy Committee Meeting	Linthicum, MD
Nov. 2-3, 2005	OTC Fall Meeting	Newark, DE
Jan. 24, 2006	OTC Control Strategy Committee Meeting	Linthicum, MD
Feb. 22-23, 2006	OTC Special Meeting	Washington, DC
Apr. 5-6, 2006	OTC Control Strategy Committee Meeting	Linthicum, MD
June 6-7, 2006	OTC Annual Meeting	Boston, MA
July 28, 2006	OTC/RTO/ISO Meeting	Herndon, VA
Sep. 18, 2006	OTC High Energy Demand Day Workgroup Meeting	Herndon, VA
Sep. 19, 2006	OTC Stationary and Area Source Committee Meeting	Herndon, VA
Nov. 2, 2006	OTC Control Strategies and Stationary and Area Source Committee Meeting	Linthicum, MD
Nov. 15, 2006	OTC Fall Meeting	Richmond, VA
Dec. 5-6, 2006	OTC High Energy Demand Day Workgroup Meeting	Hartford, CT

Meeting agendas and presentations can be found on the OTC website at the following address:

http://www.otcair.org/document.asp?fview=meeting

Table A-4: Stakeholder Comments on OTC Control Strategies

Stakeholder	Source Category
Adhesive and Sealant Council	Adhesives and Sealants
National Paint & Coatings Association (NPCA)	Adhesives and Sealants
Ameron International	AIM Coatings
McCormick Paints	AIM Coatings
National Paint and Coatings Association (NPCA)	AIM Coatings
Painting and Decorating Contractors of America (PDCA)	AIM Coatings
PROSOCO, Inc.	AIM Coatings
RUDD Company Inc.	AIM Coatings
TEX COTE	AIM Coatings
The Master Painters Institute (MPI)	AIM Coatings
The Society for Protective Coatings (SSPC)	AIM Coatings
Wank Adams Slavin and Associates, LLC (WASA)	AIM Coatings
NAPA Asphalt Production	Asphalt Production
MATRIX Systems Auto Refinishing	Auto Refinishing
Portland Cement Association (PCA)	Cement Kilns
St Lawrence Cement	Cement Kilns
Consumer Specialty Products Association (CSPA)	Consumer Products
Cosmetic, Toiletry and Fragrance Association (CTFA)	Consumer Products
National Paint & Coatings Association (NPCA)	Consumer Products
Clean Air Task Force	Diesel Retrofits
Center for Energy and Economic Development, Inc. (CEED)	EGUs
Chesapeake Bay Foundation	EGUs
Clean Air Task Force	EGUs
Conectiv Energy	EGUs
Dominion	EGUs
Exelon	EGUs
International Brotherhood of Electrical Workers , United Mine Workers of America, Center for Energy & Economic Development, Inc., Pennsylvania Coal Association	EGUs
NRG	EGUs
PPL Services	EGUs
The Clean Energy Group	EGUs
National Lime Association (NLA)	Lime Kilns
Debra Jacobson, Prof. Lecturer in Energy Law	NOx Sources
Flexible Packaging Association (FPA)s	Printing/Graphic Arts
Graphic Arts Coalition Flexography Air Regulations	Printing – Flexography
Graphic Arts Coalition Printing & Graphic Arts	Printing/Graphic Arts
Graphic Arts Coalition Screen Litho Air Regulations	Printing – Lithography

Stakeholder comments can be found on the OTC website at the following address:
http://www.otcair.org/projects_details.asp?FID=95&fview=stationary

Table A-4: OTC Conference Calls and Meetings with Stakeholders, 2006

Source Category	Date(s)	Industry Lead
Adhesives and Sealants	Aug. 30, 2006	Adhesives Council
Asphalt Paving	Mar. 30, 2006	National Asphalt Paving Association (meeting)
	Sep. 21, 2006	National Asphalt Paving Association
	Sep. 28, 2006	Asphalt Emulation Manufacturers Association
	Oct. 13, 2006	Asphalt Emulation Manufacturers Association
Asphalt Production	Oct. 25, 2006	National Asphalt Paving Association (meeting)
Consumer Products	Mar. 24, 2006	Consumer Specialty Products Association
	June 22, 2006	American Solvents Council (meeting)
	June 22, 2006	Consumer Specialty Products Association
	Aug. 29, 2006	Consumer Specialty Products Association
Glass Manufacturers	July 5, 2006	North American Insulation Manufacturers Assoc.
	Aug. 16, 2006	North American Insulation Manufacturers Assoc.
	Sep. 14, 2006	Glass Association of North America
	Oct. 19, 2006	Glass Association of North America
ICI Boilers	Mar. 14, 2006	Council of Industrial Boiler Owners
	Mar. 24, 2006	Institute of Clean Air Companies
	July 18, 2006	Council of Industrial Boiler Owners (meeting)
	Aug. 1, 2006	Council of Industrial Boiler Owners (conference)

Appendix B – Initial List of Control Measures

The comprehensive list of control measures can be found at:

http://www.otcair.org

Appendix B – Initial List of Control Measures

Measure	Pollutant	Description	Source	Source Code
"CashforClunkers"lawn&gardenprogram		Offer $75 for owners to turn in old, 2 and 4-stroke lawn & garden equipment and purchase electric or push mower	Non-road	DC RACM - 2003
"Southern"reformulatedgasoline(verylowRVP)	VOC	Very Low RVP	On-road	MA Strategies - 2004
1RegenerativeThermalOxidizer	VOC	Process vent gas treatment	Stationary	NEET Database - ongoing
1ThermalOxidizers	VOC	Process vent gas treatment	Stationary	NEET Database - ongoing
3RCleanMultiFuels-CLEANCOAL	VOC	Work practices (general)	Pollution Prevention	NEET Database - ongoing
3RMultiVenturiOffgasScrubber		Emission capture systems	Stationary	NEET Database - ongoing
4DayWorkWeek/FlexibleWorkSchedules		Encourage employers to adopt a shorter work week, with employees working 4 10-hour days	Mobile	DC RACM - 2003
AcceleratedimplementationofEnhancedI/M	VOC			MA Strategies - 2004
AcceleratedVehicleRetirement	NOx/VOC	Implement an accelerated vehicle retirement, or "scrappage" program in conjunction with an I/M program.	Mobile	EPA Measures - 1999
AccesstoJobsProgram		Identifies gaps in transit service between places of residence and places of work for low wage workers	Mobile	DC RACM - 2003
AcetalResinsProduction	VOC		Stationary	EPA Measures - 1999
AcrylicFibers/MonoacrylicFibersProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/gmact/gmactpg.html	Stationary	EPA Measures - 1999
Acrylicplastisols2	VOC	Acrylic plastisols are being investigated as a new type of low-solvent industrial coating. Acrylic polymers offer a number of distinct advantages over polyvinyl chloride such as superior exterior durability and a more favorable environmental image.	Stationary	Regulatory Impact Analysis - 1997
Acrylonitrile-Butadiene-StyreneProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr4/pr4pg.html	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
AdaptiveControlTechniquesforEngineManagement25	NOx/VOC	Non-linear adaptive control techniques control air/fuel ratios more precisely over a wider range of operating conditions and operate catalytic converters over the narrow range in which they are efficient. Adapts to aging or faulty engines and to varying fuel properties such as volatility.		Regulatory Impact Analysis - 1997
AdditionalTransitStores		Establish additional stationary transit stores in the region	Mobile	DC RACM - 2003
Addozonealerttocountywebsite				EACs - 2004
Addselectivecatalyticreduction(SCR)	NOx/PM		Diesel locomotives	Regulatory Impact Analysis - 1997
AdhesiveApplications	VOC	VOC content limits for compliant adhesives + Emission capture and control system for non-compliant adhesives + Transfer efficiency requirements for adhesive applicators + Solvent cleaning, storage and disposal comply with Rule 1171	Stationary	EPA Measures - 1999
Adhesives-industrial	VOC	SCAQMD Rule 1168	Stationary	EPA Measures - 1999
AdipicAcidManufacturing	NOx	Thermal Reduction	Stationary	EPA Measures - 1999
AdipicAcidManufacturing	NOx	Extended Absorption	Stationary	EPA Measures - 1999
Adoptaschoolbusprogram				EACs - 2004
Adoptlocalcleanairpolicy				EACs - 2004
Adoptmeasurestoreducelawnareaandmowerusagethroughxeriscaping	NOx		Landuse	SAQMD Clean Air Plan - 2003
AdvancedAcetylenicGlycol(AAG)technology9	VOC	To address the need for substrate wetting in waterborne systems, a new-generation surfactant has been developed based on Advanced Acetylenic Glycol (AAG) technology. The AAG technology provides greater flexibility and mobility, as well as other benefits.		Regulatory Impact Analysis - 1997
AdvancedAirfoilRetrofit	NOx/VOC	Rather than using airfoils designed originally for		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		the airline industry, systems using airfoils designed specifically for wind towers offer substantial savings. One estimate is that substitution of such airfoils onto existing towers causes a 20 - 30 percent increase in electricity generation.		
Aerodynamicdevices	NOx		Non-road	Regulatory Impact Analysis - 1997
Acrylonitrile-Butadiene-StyreneProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr4/pr4pg.html	Stationary	EPA Measures - 1999
AdaptiveControlTechniquesforEngineManagement25	NOx/VOC	Non-linear adaptive control techniques control air/fuel ratios more precisely over a wider range of operating conditions and operate catalytic converters over the narrow range in which they are efficient. Adapts to aging or faulty engines and to varying fuel properties such as volatility.		Regulatory Impact Analysis - 1997
AdditionalTransitStores		Establish additional stationary transit stores in the region	Mobile	DC RACM - 2003
Addozonealerttocountywebsite				EACs - 2004
Addselectivecatalyticreduction(SCR)	NOx/PM		Diesel locomotives	Regulatory Impact Analysis - 1997
AdhesiveApplications	VOC	VOC content limits for compliant adhesives + Emission capture and control system for non-compliant adhesives + Transfer efficiency requirements for adhesive applicators + Solvent cleaning, storage and disposal comply with Rule 1171	Stationary	EPA Measures - 1999
Adhesives-industrial	VOC	SCAQMD Rule 1168	Stationary	EPA Measures - 1999
AdipicAcidManufacturing	NOx	Thermal Reduction	Stationary	EPA Measures - 1999
AdipicAcidManufacturing	NOx	Extended Absorption	Stationary	EPA Measures - 1999
Adoptaschoolbusprogram				EACs - 2004
Adoptlocalcleanairpolicy				EACs - 2004

Measure	Pollutant	Description	Source	Source Code
Adoptmeasurestoreducelawnareaandmowerusagethroughxeriscaping	NOx		Landuse	SAQMD Clean Air Plan - 2003
AdvancedAcetylenicGlycol(AAG)technology9	VOC	To address the need for substrate wetting in waterborne systems, a new-generation surfactant has been developed based on Advanced Acetylenic Glycol (AAG) technology. The AAG technology provides greater flexibility and mobility, as well as other benefits.		Regulatory Impact Analysis - 1997
AdvancedAirfoilRetrofit	NOx/VOC	Rather than using airfoils designed originally for the airline industry, systems using airfoils designed specifically for wind towers offer substantial savings. One estimate is that substitution of such airfoils onto existing towers causes a 20 - 30 percent increase in electricity generation.		Regulatory Impact Analysis - 1997
Aerodynamicdevices	NOx		Non-road	Regulatory Impact Analysis - 1997
AerosolMetalsMonitor		Ambient Monitoring	Monitoring	NEET Database - ongoing
AerosolPaints	VOC	Bay Area Air Quality Management District's (BAAQMD's) rule + additional reductions from standards similar to those of SCAQMD.	Stationary	EPA Measures - 1999
AerospaceAssemblyandComponentManufacturing Operations	VOC	VOC content limits for coatings, adhesives, and maskents + Cleaning operations and solvent storage and disposal comply with Rule 1171	Stationary	EPA Measures - 1999
AerospaceIndustries	VOC	See Website - http://www.epa.gov/ttn/uatw/aerosp/aeropg.html	Stationary	EPA Measures - 1999
AerospaceManufacturingandRework	VOC	EPA's National Emission Standard for Hazardous Air Pollutant (NESHAP) + area-specific limits for specialty coatings to reflect local plant operations.	Stationary	EPA Measures - 1999
AgriculturalBurning	NOx	Seasonal Ban (Ozone Season)	Stationary	EPA Measures - 1999
Agriculturaldieselengineelectrification	NOx		Offroad	SAQMD Clean Air Plan - 2003
Agriculturaldieselengineelectrification	VOC		Offroad	SAQMD Clean Air Plan - 2003
Agriculturalequipmentretrofits		Require agricultural equipment to be retrofitted	Non-road	DC RACM - 2003

Measure	Pollutant	Description	Source	Source Code
		with emissions controls		
Agriculturalequipmentuserestrictions		Mandatory restrictions on use of agricultural equipment during Code Red Ozone Action Days	Non-road	DC RACM - 2003
Agriculture:Ammoniarestrictionsonconfinedanimalfeedingoperations	PM2.5		Area	CT Memo - 2005
AIMSurfaceCoatings				CT RACM - 2001
Aircraft:ReduceEmissionsbyAlteringOperations(e.g.,Taxiing)	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
AircraftNon-GateIdling		Sign MOUs with airlines to limit idling of aircraft while taxiing	Area	DC RACM - 2003
AircraftNon-GateIdling				EACs - 2004
Aircraftsurfacecoating	VOC	MACT	Stationary	EPA Measures - 1999
Aircurtaindestructor-landclearing				EACs - 2004
AirportCleanAirPlan				EACs - 2004
AirportCongestionPricing		Charge higher aircraft landing fees during busy times of day to reduce airport delays and congestion	Area	DC RACM - 2003
AirQualityOutreachandActionDays				EACs - 2004
AirStripping/SoilDecontamination	VOC		Stationary/Area	SAQMD Clean Air Plan - 2003
Aliphaticisocyanates17	VOC	Urethane technology provides strong linkage for molecules in coatings, and is finding its way into high-solid, powder, and waterborne technologies. For example, isophorone diisocyanate is gathering strength in the powder coatings market, while use of hexamethylene diisocyanate in waterbased coatings is expected to grow. A family of low-temperature unblocking isocyanates as also been developed, and is being marketed to the painting		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		and coating industry.		
AlkalineFuelCells(AFC)6	NOx/VOC	Long used by NASA on space missions, these cells can achieve power generating efficiencies of up to 70 percent. They use alkaline potassium as the electrolyte. Until recently they were too costly for commercial applications, but several companies are examining ways to reduce costs and improve operating flexibility.		Regulatory Impact Analysis - 1997
AllowDistricttoOptintoTest-onlyProgram	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
Alternatecommuteinfrastructure				EACs - 2004
Alternateworkschedules				EACs - 2004
Alternativefuelforcountyfleets				EACs - 2004
alternativefuelshuttlebuses	NOx		Landuse	SAQMD Clean Air Plan - 2003
Alternativefuelvehicles				EACs - 2004
AluminumRollingMills	VOC	Add-on controls achieving a 95-percent reduction in VOC emissions and/or VOC-content standards for lubricants	Stationary	EPA Measures - 1999
AmbientEngineeringBiofilters	VOC	Emission capture systems	Stationary	NEET Database - ongoing
AminoResinsProductions	VOC	See Website - http://www.epa.gov/ttn/uatw/amino/aminopg.html	Stationary	EPA Measures - 1999
Ammonia-NaturalGas-FiredReformers	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
Ammonia-NaturalGas-FiredReformers	NOx	Oxygen Trim + Water Injection	Stationary	EPA Measures - 1999
Ammonia-NaturalGas-FiredReformers	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
Ammonia-NaturalGas-FiredReformers	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
Ammonia-NaturalGas-FiredReformers	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
AmmoniaPlants	NOx	Controls based on those for process heaters and industrial boilers	Stationary	EPA Measures - 1999
AmmoniaProduction;FeedstockDesulfurization	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
Amorphoussilicon(a-Si)	NOx/VOC	A solar film on which research efforts is focused because of its potential for increased unit efficiency and ease of manufacturing. Efficiency gains are evident: from less than one percent in 1974 to 10.2 percent in 1994. Researchers are currently seeking laboratory efficiency ratings of 13 percent. Lower efficiency ceiling of a-Si compared to crystalline silicon offset by lower manufacturing costs.		Regulatory Impact Analysis - 1997
Announceozoneactiondaysonradio				EACs - 2004
AnnualGasolineVehiclePollutionFee		Levy an annual fee on petroleum-powered vehicles based on mileage driven and emission rates.	Mobile	DC RACM - 2003
Anti-idlingprovisions-dieselengines-				EACs - 2004
Applicationofagriculturalpesticides	VOC	Water based carriers for pesticides	Stationary	EPA Measures - 1999
AppointOzoneActionCoordinator-				EACs - 2004
Askgaragestolimitidling				EACs - 2004
Asphalt/CoalTarApplications-MetalPipes	VOC	Pending	Stationary	EPA Measures - 1999
AsphalticConcrete;RotaryDryer;ConversionPlant	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
AsphaltProcessing	VOC	Pending	Stationary	EPA Measures - 1999
AsphaltRoofingManufacturing	VOC	Pending	Stationary	EPA Measures - 1999
AugmenttruckandBusInspectionswithCommunity-basedInspections	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
AutoandLightDutyTruck(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999
AutobodyRefinishing	VOC	High-volume, low pressure (HVLP) spray systems + gun-cleaning equipment + proper disposal for clean-up solvents + California's Best Available Retrofit Control Technology limits.	Stationary	EPA Measures - 1999
AutobodyRefinishingControls				EACs - 2004
AutomatedElectricVehicleChargingSystem15	NOx/VOC	Development of an automated system that would dock, or couple, an EV to a battery charging system. The project will address inductively and		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		conductively coupled systems. This project is expected to build on previous research into such an automated system, resulting in a prototype test unit of a commercially viable system. This project, if successful, will improve the perceived convenience and, thus, commercial viability of EVs.		
Automatespeedenforcementandlowerthespeedlimit to55mphforheavydutyvehicles	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
AutomaticVehicleLocatorSystem		System would provide bus location information to WMATA dispatchers. This would decrease wait time and improve on-time arrival/departure.	Mobile	DC RACM - 2003
AutomobileandLight-dutytrucksurfacecoatingoperations	VOC	Low solvent coatings	Stationary	EPA Measures - 1999
AutomobileAssembly	VOC	Spray booth abatement at 5.8 lbs/gal solids applied + without spray booth abatement, a 10-lbs/gal level	Stationary	EPA Measures - 1999
AutomobileInsuranceisChargedatthepumporinsuranceismileagebased	NOx			SAQMD Clean Air Plan - 2003
Automobilerefinishing	VOC	Federal Rule	Stationary	EPA Measures - 1999
Automobilerefinishing	VOC	FIP Rule (VOC content & TE)	Stationary	EPA Measures - 1999
Automobilerefinishing	VOC	CARB BARCT limits	Stationary	EPA Measures - 1999
Availability/ExtentofNOxControls	NOx		Stationary	EPA Measures - 1999
BACTandoffsetsfornewormodifiedpointsources				EACs - 2004
Bakeries		Adopt SCAQMD Rule 1153: Commercial Bakery Ovens	Area	DC RACM - 2003
Banactivitiessuchas2-strokeengines	NOx		Offroad	SAQMD Clean Air Plan - 2003
Banactivitiessuchas2-strokeengines	VOC		Offroad	SAQMD Clean Air Plan - 2003
Banopenburningduringozoneaction				EACs - 2004
Banorlimitopenburning				EACs - 2004
Banorrestrictuseofrecreationalvehicles	NOx		Offroad	SAQMD Clean Air Plan - 2003

Measure	Pollutant	Description	Source	Source Code
Banorrestrictuseofrecreationalvehicles	VOC		Offroad	SAQMD Clean Air Plan - 2003
BantheuseofVOC-bornepesticidesonspare-the-airdays	VOC		Area	SAQMD Clean Air Plan - 2003
BantransfersystemsinPetroleumDryCleaning	VOC		Stationary/Area	SAQMD Clean Air Plan - 2003
BanVehiclesfromDowntownStreets		Restrict private vehicle use in certain downtown areas during business hours , encouraging pedestrian and bicycle use instead.	Mobile	DC RACM - 2003
BatchProcesses	VOC	Current technologies achieving 98-percent control efficiency with exemptions based on considerations of volatility, annual emissions and flow rate.	Stationary	EPA Measures - 1999
BEPs				EACs - 2004
BestAvailableRetrofitControlTechnology(BARCT)for10tpyVOCsources	VOC			MA Strategies - 2004
Bestmgtpractices-engines				EACs - 2004
Bestpracticesforfueling				EACs - 2004
BeverageCanCoating	VOC	Incineration	Stationary	EPA Measures - 1999
Beveragecansurfacecoatingindustry	VOC	Low solvent inks or Incineration	Stationary	EPA Measures - 1999
Biodiesel(On-Road)		Require regional use of biodiesel fuel for on-road vehicles	Mobile	DC RACM - 2003
Biodieselreadytrucks				EACs - 2004
Bio-dieselsolidwastetrucks				EACs - 2004
BiofiltrationofGaseousEffluents	VOC	Process vent gas treatment	Stationary	NEET Database - ongoing
Biomimeticcoatings1	VOC	Synthetic routes are being developed for new water soluble polymers to enable the formulation of effective and durable waterborne protective coatings. The aim is to develop novel water-soluble polymers which on evaporation of water undergo a phase transformation similar to protein		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		molecules where hydrophobic moieties, present in the polymer, form the matrix of the film. This approach to produce zero-VOC solvent systems avoids the water sensitivity and reductions in performance and durability experienced by the current generation of water-based coatings.		
Blowdowncontrolsatnaturalgaspipelinecompressor stations	NOx/VOC		Stationary	CT Memo - 2005
BoatManufacturing	VOC	Pending	Stationary	EPA Measures - 1999
BoilersandProcessHeatersinPetroleumRefineries	NOx	NOx emission limit + Approved Alternative Emission Control Plan + Continuous NOx stack monitoring	Stationary	EPA Measures - 1999
BoseAnti-AirPollutantandEnergyConservationSystem		Fund trial of Bose system in local vehicle fleets. The Bose system is a mechanical system that uses high-speed centrifugal separation to remove light combustible gases from the exhaust stream. The system can be used with all types of fuel.	Mobile	DC RACM - 2003
Brownfielddevelopment				EACs - 2004
BuildPark&RideLotsatMajorIntersectionsofCommuterHighways		Construct new park & ride commuter lots along HOV facilities	Mobile	DC RACM - 2003
Bulkgasolineterminals	VOC	Vapor collection systems + Vapor tight tank trucks, Water-based cements	Stationary	EPA Measures - 1999
BulkTerminals	VOC	Balanced/Adsorber/Testing	Stationary	EPA Measures - 1999
burningduringtheozoneseason	NOx		Area	SAQMD Clean Air Plan - 2003
burningduringtheozoneseason	VOC		Area	SAQMD Clean Air Plan - 2003
BusTraffic-SignalPre-emption	NOx		Landuse	SAQMD Clean Air Plan - 2003
ButylRubberProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr1/pr1pg.html	Stationary	EPA Measures - 1999
Buyinbulk;lesspackaging				EACs - 2004
By-ProductCokeManufacturing;OvenUnderfiring	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
C.G.S.section29-252			Stationary	CT Memo - 2005
Cadmiumtelluride	NOx/VOC	A solar film on which research effort is focused due to its likely ease of production, likely improved efficiency and ability to compete with crystalline silicon modules. Laboratory efficiency ratings have reached 16 percent with commercial efficiency of 6 percent. Research indicates manufacturing techniques are likely very low cost, including electrodeposition, spraying, and high rate evaporation.		Regulatory Impact Analysis - 1997
CaliforniaLowEmissionVehiclePhase2(CALEV2)	NOx/VOC		Mobile	CT Memo - 2005
CaliforniaLow-EmissionVehicles	NOx/VOC	Adopt the California low-emission vehicle program	Mobile	EPA Measures - 1999
Californiaperiodicheavy-dutydieselvehiclefleetinspectionprogram	PM2.5		Mobile	CT Memo - 2005
CaliforniaSpark-IgnitionEngines(Dec2000)				TX SIP - 2000-2004
CANSOLVRegenerableSO2ControlTechnology	PM	Emission capture systems	Stationary	NEET Database - ongoing
CapandTradeEmissionsReductionProgramsimilartoRECLAIM	NOx		Stationary	SAQMD Clean Air Plan - 2003
CapandTradeEmissionsReductionProgramsimilartoRECLAIM	VOC		Stationary	SAQMD Clean Air Plan - 2003
CARBDieselFuel(On-Road)		Implement CARB diesel fuel standards	Mobile	DC RACM - 2003
CarbonBlackManufacture	VOC	Flare	Stationary	EPA Measures - 1999
CarbonBlackProduction	VOC	Pending	Stationary	EPA Measures - 1999
CarbonylSulfideProduction(Misc.OrganicNESHAP)	VOC	Pending	Stationary	EPA Measures - 1999
CARBsetstighterrequirementsformanufacturerstocertifyemissionsfromnewpassengervehicles	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
CARBsetstighterrequirementsfornewpassengervehicles(LEVIII)	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003

Measure	Pollutant	Description	Source	Source Code
Cargohandlingequipmentatshipbuildersandports	PM2.5		Mobile	CT Memo - 2005
CarSharingProgram		Fund incentives for new car sharing customers (I.e. Flexcar or Zipcar services)	Mobile	DC RACM - 2003
CarSharingPrograms	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
CatalyticOxidationwithHeatrecovery	VOC	Emission capture systems	Stationary	NEET Database - ongoing
CelluloseAcetateManufacture	VOC	Carbon Adsorption	Stationary	EPA Measures - 1999
CelluloseFoodCasingManufacturing	VOC	Pending	Stationary	EPA Measures - 1999
Cement	NOx	Production procedures + SCR -2.8lb/ton	Stationary	EPA Measures - 1999
CementKilnEmissionLimits(March2003)				TX SIP - 2000-2004
CementKilns	NOx	Continuous monitoring and recording of NOx emissions + NOx emission limit	Stationary	EPA Measures - 1999
CementKilns	NOx	Require combustion controls and post-combustion controls (SNCR) to achieve reductions of up to 70 percent on certain processes	Stationary	EPA Measures - 1999
CementManufacturing-Dry	NOx	Selective Non-Catalytic Reduction - NH3 Based	Stationary	EPA Measures - 1999
CementManufacturing-Dry	NOx	Mid-Kiln Firing	Stationary	EPA Measures - 1999
CementManufacturing-Dry	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
CementManufacturing-Dry	NOx	Selective Non-Catalytic Reduction - Urea Based	Stationary	EPA Measures - 1999
CementManufacturing-Dry	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
CementManufacturing-Wet	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
CementManufacturing-Wet	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
CementManufacturing-Wet	NOx	Mid-Kiln Firing	Stationary	EPA Measures - 1999
CeramicClayManufacturing;Drying	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
CeramicTechnologyforAdvancedHeatEngines4		Ceramic engine components are desirable for their durability and longevity.		Regulatory Impact Analysis - 1997
Certainfinalrecommendedmeasuresforresidential,commercialandindustrialsector			Stationary	CT Memo - 2005

Measure	Pollutant	Description	Source	Source Code
Cetaneadditivestodieselfuel				EACs - 2004
Changeworkschedule				EACs - 2004
ChangeZoningOrdinancestoEncourageIn-fill	NOx		Landuse	SAQMD Clean Air Plan - 2003
CHANOxRemovalSystem34	NOx	This system removes NOx pollutants from small stationary diesel engines. There are currently no feasible controls for these engines.		Regulatory Impact Analysis - 1997
CharcoalManufacturing	VOC	Incineration	Stationary	EPA Measures - 1999
CleanAirPartnersProgram		This program motivates individuals to take voluntary actions to reduce emissions on Ozone Action Days	Mobile	DC RACM - 2003
CleanFuelsfromMunicipalSolidWaste,Biomass,andOtherWasteFuels22	NOx/VOC	Development and demonstration of technologies and/or production processes to synthesize clean alternative fuels from various energy-rich, renewable sources, such as biomass, municipal solid waste, landfill gas, and other low cost or “free” waste fuels. The project is expected to result in pilot-scale production demonstrations, scale-up process design and cost analysis, overall environmental impact analysis, and projections for ultimate clean fuel costs and availability, for alternative fuels that are determined to offer the most promise		Regulatory Impact Analysis - 1997
Cleaningsolvents	VOC	Disposal practices for waste solvents	Stationary	EPA Measures - 1999
Clearcoatpowder21	VOC	The Low Emission Paint Consortium is researching the development of a powder clearcoat, although this type of coating has many difficulties to overcome in terms of durability and appearance in comparison with current methods. A trade-off with powder coatings is that powder requires higher bake requirements and new equipment and application systems.		Regulatory Impact Analysis - 1997
Clusterdevelopment,SmartGrowth,				EACs - 2004

Measure	Pollutant	Description	Source	Source Code
CNGRefuseHaulers		Purchase new CNG powered trash trucks instead of conventional diesel vehicles	Mobile	DC RACM - 2003
CNGRentalCars		Purchase CNG rental cars for use in the region	Mobile	DC RACM - 2003
CNGTaxicabs		Replace regional taxicabs 7 years or older with CNG or other alternative fuel vehicles	Mobile	DC RACM - 2003
CoalCleaning-ThermalDryer;FluidizedBed	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
CoatingofMetalPartsandProducts	VOC	VOC content limits for coatings + Solvent cleaning and storage comply with Rule 1171 + Emission collection and control system for non-compliant coatings	Stationary	EPA Measures - 1999
Coemployees-restrictmowingduring				EACs - 2004
CokeBy-ProductPlants	VOC	Pending	Stationary	EPA Measures - 1999
CokeOvens:Pushing,QuenchingandBatteryStacks	VOC	Pending	Stationary	EPA Measures - 1999
CokeOvens:TopSideandDoorLeaks	VOC	Established MACT and LAER emission limits for coke batteries	Stationary	EPA Measures - 1999
Coldcleaning	VOC	NESHAP/MACT	Stationary	EPA Measures - 1999
Coldcleaning	VOC	Airtight degreasing system	Stationary	EPA Measures - 1999
Coldcleaning	VOC	SCAQMD 1122 (VOC content limit)	Stationary	EPA Measures - 1999
Coldlensblockingmethods("LoctiteColdBloc")6	VOC	New uv-curing "cold" blocking adhesive enables optical manufacturers to produce lens surfaces that are practically distortion free, and virtually eliminates the environmental concerns (solvents) of the current technique. This technique facilitates easy debonding using a variety of debonding agents and techniques. The adhesive is a significant advance in the lens blocking process, as it eliminates heat-induced blocking strain, which is the most significant problem encountered with current hot pitch blocking methods. Process reduces costly processing time, and is compatible with existing tooling.		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
Combifilter-ActiveDieselParticulateFilter	VOC/PM	Emission capture systems	Stationary	NEET Database - ongoing
CombustionTurbines	VOC	Pending	Stationary	EPA Measures - 1999
Commercial,InstitutionalIncinerators	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
CommercialEthyleneOxideSterilization	VOC	Control emissions from the main sterilizer vent and vacuum pump drains at 99-percent from ethylene oxide (EtO) sterilizers using greater than 600 pounds of Et0 per year.	Stationary	EPA Measures - 1999
Community-basedshuttlesystem	NOx		Landuse	SAQMD Clean Air Plan - 2003
Commuteemissionreductionprogram				EACs - 2004
CommuterChoiceProgram				EACs - 2004
CommuterChoiceTaxCredit		Employers subsidize employees' monthly transit or vanpool costs and receive a tax credit for incurred expenses.	Mobile	DC RACM - 2003
Commutesolutionsprograms-				EACs - 2004
Compatibleinnovativecoatings27	VOC	Ciba is working on developing compatible powder, high solid and waterborne epoxy systems. Examples of areas of research include: new high flow solid epoxy resin for powder coating applications with smoother appearance; and new waterborne epoxy resins and epoxy hardeners with environmental advantages.		Regulatory Impact Analysis - 1997
comprees;carpool,flexible,etc				EACs - 2004
ComputerizedTrafficSignals	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Congestionmitigation-trafficsignal				EACs - 2004
CongestionPricingonLowOccupancyVehicles		Impose a fee on vehicles containing two or fewer persons that use designated roadways during the peak AM period	Mobile	DC RACM - 2003
Conserveenergyincountyproperty				EACs - 2004
Constructionequipment				EACs - 2004

Measure	Pollutant	Description	Source	Source Code
Constructionequipmentretrofitswithoxidationcatalystsandparticulatefilters	NOx/VOC		Mobile	CT Memo - 2005
Constructionequipmentuserestrictions		Restrict use of construction equipment during expected ozone exceedance days	Non-road	DC RACM - 2003
Constructionretrofits		Require construction equipment operating on state and local contracts to be retrofitted with particulate fitlers and/or oxidation catalysts	Non-road	DC RACM - 2003
Consumer&commercialproducts				CT RACM - 2001
Contractincentivesforlowemissionvehicles				EACs - 2004
ControlandPowerElectronics	NOx/VOC	Manual adjustment of individual controls on individual tower systems is expensive and time consuming. By using computers and electronic components on the systems it becomes possible to manipulate an entire farm in real time. It is expected that systems would also able to adjust to extreme weather conditions independently, thus avoiding catastrophic failures.		Regulatory Impact Analysis - 1997
ControlExtendedIdlingofBusesandTrucks		Step-up enforcement of existing regulations to prevent extended vehicle idling	Mobile	DC RACM - 2003
ControlICengines>500HP				EACs - 2004
ControlofGaseousEmissionsfromActiveLandfills	VOC	Landfill sampling and monitoring requirements + Collection system with treatment and control device for VOC	Stationary	EPA Measures - 1999
ControlParkingatSchools		Restrict high school students from driving to and parking at high schools when bus service is available.	Mobile	DC RACM - 2003
ControlsonPowerPlantsOutsideNonattainmentArea		Require power plants operating in counties adjacent to Washington nonattainment area to install nonattainment area controls	Stationary	DC RACM - 2003
Conv.CoatingofProduct;AcidCleaningBath	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ConvenienceCommercialCentersinResidentialArea		Change zoning ordinances to allow neigborhood-	Mobile	DC RACM - 2003

Measure	Pollutant	Description	Source	Source Code
s		serving retail establishments in residential areas		
ConversiontoAlternativeFueledVehiclesProgram	NOx/VOC	Tax credits or deductions to for conversion to or purchase of alternative fueled vehicles and alternative fuel stations	Mobile	EPA Measures - 1999
Convertoff-roaddieselequipmenttozeroemission,e.g.,electrification,battery,solar,orfuelcell	NOx		Offroad	SAQMD Clean Air Plan - 2003
Convertoff-roaddieselequipmenttozeroemission,e.g.,electrification,battery,solar,orfuelcell	VOC		Offroad	SAQMD Clean Air Plan - 2003
Converttouseoflow-sulfurgasoline				EACs - 2004
Coolcitiesprogram				EACs - 2004
Copperindiumdiselenide(CIS)	NOx/VOC	A solar film on which research effort is focused due to its ability to withstand outdoor exposure without significant deterioration. This film also appears easier to produce and gain efficiencies than alternatives. In 1995, a laboratory efficiency rate of 17.1 percent was recorded with 10.2 percent for a production prototype module.		Regulatory Impact Analysis - 1997
CRT(R)Filter	PM		Mobile	NEET Database - ongoing
CrystallineSilicon	NOx/VOC	Silicon crystals were the first technology explored and applied to market devices. Research continues because it is the only technology with demonstrated long term reliability, competitive cost, and high efficiency. Newer cells have demonstrated a 24% efficiency rating. Commercial production modules are expected with an efficiency of 14%.		Regulatory Impact Analysis - 1997
CTNOx“RACT”Regulation	NOx		Stationary	CT Memo - 2005
CutbackAsphalt	VOC	VOC content limit	Stationary	EPA Measures - 1999
CutbackAsphalt	VOC	Switch to emulsified asphalts	Stationary	EPA Measures - 1999
CutbackAsphalt				EACs - 2004

Measure	Pollutant	Description	Source	Source Code
CutbackAsphalt:IncreasedRuleEffectiveness	VOC		Stationary	CT Memo - 2005
DecliningCapRule	VOC	Cap and Trade program with an allowable emissions cap for major VOC sources set below a baseline. Emission allotments for each cap can be sold and traded for emission reductions below the assigned cap.	Stationary	EPA Measures - 1999
Degreasing	VOC	Alternative cleaners or cleaning processes.	Stationary	EPA Measures - 1999
Delay/reschedulelandscaping				EACs - 2004
DemonstrationoftheUseofFastChargedElectricGroundSupportEquipmentasaMeansofReducingAirportEmissions	NOx/PM	Fugitive emission controls	Stationary	NEET Database - ongoing
Developandfundaprogramforneighborhoodelectric vehicles	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
Developastationcar/lowemissionvehicleshareprogram	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
DiaphragmSensors(FiberOptics)26				Regulatory Impact Analysis - 1997
DieselandGasolineTrucksandBusesRetrofitwith3-waycatalystsongasoline-burningheavydutytrucksthatcurrentlyhave2-waycatalystsornocatalysts	NOx		Mobile	SAQMD Clean Air Plan - 2003
DirectInjection(DI)DieselV66	VOC	Targeted for the executive car, minivan, multipurpose, and sport utility market, cost effective features include electronic rotary fuel injection, fixed-geometry inlet prot, conventional wastegated turbocharger, cooled EGR, with advanced control algorithms, and an oxidation catalyst. As with the CIDI engine, the V6 DI engine will benefit from current DI engine research of light weight engines and parts and emission control technologies.		Regulatory Impact Analysis - 1997
DiscountMulti-TripBusFares		Introduce discount programs reducing cost of multiple bus rides through purchase of pass books	Mobile	DC RACM - 2003

Measure	Pollutant	Description	Source	Source Code
		(e.g. 10-trip tickets)		
Distributedgenerators--R.C.S.A.section22a-174-42	NOx/VOC		Stationary	CT Memo - 2005
Downtownshuttles;rapidtransitbus				EACs - 2004
Drive-throughfacilitiesonozone				EACs - 2004
drivingtoschool				EACs - 2004
DryCleaning-Perchloroethylene	VOC	MACT (condensers/adsorbers)	Stationary	EPA Measures - 1999
Drycleaning-petroleum	VOC	MACT	Stationary	EPA Measures - 1999
Dual-curephotocatalysttechnology12	VOC	Low-solvent, low-VOC coatings are being developed that use photocatalysts to react with the coating material and accelerate the curing process. These photocatalysts allow the coatings to cure from liquids to solids quickly under UV or visible light. A family of such photocatalysts is being developed and tested. Major uses include tape adhesives and protective topcoats for aircraft. Development of solventless backing saturants for electrical tape backings has essentially been completed. Optimal dual cure resin formulations have been identified and utilized in preparing complete tape constructions.		Regulatory Impact Analysis - 1997
Dual-curephotocatalysttechnology4	VOC	Dual-cure photocatalyst technology is being researched for a variety of coating and adhesive uses, such as aerospace topcoats, aerospace primers, and solventless manufacture of tape backings. Significant progress has been made in improving the performance of the urethane/acrylate formulation being used for the aerospace topcoat application. Technical challenges have continued with the aerospace primer formulation.		Regulatory Impact Analysis - 1997
Dualfueldiesel/LNGpower	NOx		Diesel locomotives	Regulatory Impact Analysis - 1997
EarlyBusEngineReplacement		Replaces high-polluting diesel engines in	Mobile	DC RACM - 2003

Measure	Pollutant	Description	Source	Source Code
		WMATA buses with new diesel engines		
EastmanAQ1350polymer2	VOC	A new water-dispersible hot-melt adhesive raw material, which can form the basis for use in a variety of applications including nonwoven products such as disposable diapers, packaging, bookbinding and labels. Products containing the water-dispersible adhesive are more easily repulped or recycled.		Regulatory Impact Analysis - 1997
EB-curableepoxyresinsforcomposites9	VOC	Major advancement in the formulation of epoxy resin systems capable of being cured (cross-linked) by ionizing radiation. This development could be the link in making polymer matrix composites and adhesives a cost-effective system for manufacturing a broad range of products in both high-tech and high-volume commercial applications. Further optimization of these resin systems is currently being performed for specific aircraft, aerospace, and defense applications. Substantially reduced manufacturing costs (25-65% less expensive) and curing times; and improvements in part quality and performance.		Regulatory Impact Analysis - 1997
ECMBfundedenergyefficiencyandrenewableenergymeasures	NOx/VOC		Stationary	CT Memo - 2005
EDV®WetScrubbingSystem	NOx/PM	Emission capture systems	Stationary	NEET Database - ongoing
EK35®	PM	Fugitive emission controls	Stationary	NEET Database - ongoing
Electrical/electroniccoating	VOC	SCAQMD Rule	Stationary	EPA Measures - 1999
Electrical/electroniccoating	VOC	MACT	Stationary	EPA Measures - 1999
Electricforklifts-county				EACs - 2004
Electricnewforkliftpurchasesandforkliftrentals	NOx		Offroad	SAQMD Clean Air Plan - 2003
Electricnewforkliftpurchasesandforkliftrentals	VOC		Offroad	SAQMD Clean Air Plan - 2003
Electrificationandsingleenginetaxiing	NOx		Offroad	SAQMD Clean Air Plan - 2003

Measure	**Pollutant**	**Description**	**Source**	**Source Code**
ElectrificationorUseofAlternateFuelsinAirportServiceEquipment	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
ElectronBeam(EB)curing8	VOC	EB curing with existing technology has already been shown to dramatically reduce or eliminate solvent emissions in wood finishing. Currently, new advances in EB equipment and processes are being developed, including a new, lower-energy EB system and a new transport system for the EB treatment of powders. EB processes result in improved product performance and higher productivity, but require different curing equipment, and in some cases, application may be more difficult.		Regulatory Impact Analysis - 1997
ElectronicFuelInjectionforCNG,LNG,LPG,Hydrogen	NOx/VOC		Mobile	NEET Database - ongoing
EliminateTimedParking	NOx		Landuse	SAQMD Clean Air Plan - 2003
Eliminatevehiceemissioncontrol				EACs - 2004
Emission-basedparkingfees	NOx		Landuse	SAQMD Clean Air Plan - 2003
Emission-basedregistrationfees	NOx		Landuse	SAQMD Clean Air Plan - 2003
EmissionsfromDecontaminationofSoil	VOC	Approved VOC mitigation plan + Monitor for VOC contamination	Stationary	EPA Measures - 1999
EmissionsfromPetroleumStorageTanks		Adopt SCAQMD Rule 1178: Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities	Area	DC RACM - 2003
EmployeeCommuteOptions	NOx/VOC	In areas not already required to implement an ECO program, evaluate the potential emission reductions to be achieved by implementing such a program and consider its implementation to achieve additional reductions and stabilize mobile source emissions.	Mobile	EPA Measures - 1999
EmployerMetroShuttleBusServices		Provide incentives for businesses to provide employee shuttle service to the nearest rail or	Mobile	DC RACM - 2003

Measure	Pollutant	Description	Source	Source Code
		transit stop		
EmployerOutreach(PrivateSector)		Provide regional outreach to encourage large private-sector employers to voluntarily implement alternative commute strategies to reduce vehicle trips to work sites	Mobile	DC RACM - 2003
EmployerOutreach(PublicSector)		Provide regional outreach to encourage public-sector employers to voluntarily implement alternative commute strategies to reduce vehicle trips to work sites	Mobile	DC RACM - 2003
EmptytheERCbank	VOC			MA Strategies - 2004
EmulsifiedAsphalt	VOC	VOC content limit	Stationary	EPA Measures - 1999
Encourage55duringpeakozone				EACs - 2004
Energizer-reducevehiclefleet;90%offorklifts-battery				EACs - 2004
Energyconservation-33citybuildings				EACs - 2004
Energyconservationatcobldgs				EACs - 2004
Energyconservationplan				EACs - 2004
Energyefficientbuildings				EACs - 2004
Energyefficientpublicbuildings				EACs - 2004
Energyefficienyprograms				EACs - 2004
Energyreduction-LNB;waterbasedpaints				EACs - 2004
EngineTestFacilities	VOC	Pending	Stationary	EPA Measures - 1999
EnhancedRuleComplianceatExistingStationarySources	NOx	Step up enforcement of and compliance with existing rules for emissions control by stationary sources	Stationary	DC RACM - 2003
EnhancedRuleEffectiveness				CT RACM - 2001
Enhancerealtimetrafficinformationtoallowdriverstomakebetterdecisionsaboutwhenandwheretotravel	NOx		Landuse	SAQMD Clean Air Plan - 2003

Measure	Pollutant	Description	Source	Source Code
EnsureemissionreductionsinSEPs,				EACs - 2004
EnviroKleen®	PM	Adhesives and sealants	Pollution Prevention	NEET Database - ongoing
EOLYSSystem33	PM	Combines the use of a particulate trap with the action of the catalytic additive to ensure that particulates are destroyed during combustion.		Regulatory Impact Analysis - 1997
EPANOxSIPcall				CT RACM - 2001
EpichlorohydrinElastomersProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr1/pr1pg.html	Stationary	EPA Measures - 1999
EpoxyResinsProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr2/pr2pg.html	Stationary	EPA Measures - 1999
EquipmentleaksforVOCinthesyntheticorganicchemicalmanufacturingindustry	VOC	Monitoring and repair	Stationary	EPA Measures - 1999
EquipmentleaksofVOCfromon-shorenaturalgasprocessingplants	VOC	Inspection and repair	Stationary	EPA Measures - 1999
EquipmentleaksofVOCinpetroleumrefineries	VOC	Inspection and repair	Stationary	EPA Measures - 1999
EstablishaHeavy-DutySmogCheckProgram	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
Establishcleanairlabeling,energyconservationandpubliceducationprograms	NOx		Offroad	SAQMD Clean Air Plan - 2003
EstablishCleanFleetRequirementsforpublicfleets	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
Ethanolalternativefuelvehicles				EACs - 2004
EthyleneProcesses	VOC	Pending	Stationary	EPA Measures - 1999
Ethylene-PropyleneRubberProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr1/pr1pg.html	Stationary	EPA Measures - 1999
ExhaustGasRecirculation27	NOx	This specific technology makes EGR more effective by ensuring EGR is applied at the high loads heavy-duty diesel engines (HDDEs) often run at, and providing an acceptable air flow to ensure		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		the fuel is being burnt efficiently. Continuing work includes assessments of EGR on engine durability, particulate emissions improvements, and transient engine performance.		
ExplosivesProduction	VOC	Pending	Stationary	EPA Measures - 1999
Extendenergyefficiencyrequirements				EACs - 2004
ExtendRampMetering		Install signals to control flow of vehicles at selected freeway ramp entrances to maintain level of service	Mobile	DC RACM - 2003
FabricCoating	VOC	Incineration	Stationary	EPA Measures - 1999
FederalMotorVehicleControlprogram				CT RACM - 2001
FederalNon-roadGasolineEngines				CT RACM - 2001
FederalNon-roadHeavyDutydieselengines				CT RACM - 2001
FerroalloysProduction:SilicomanganeseandFerroManganese	VOC	National emission standards for hazardous air pollutants (NESHAP) for production of ferroalloys	Stationary	EPA Measures - 1999
FiberglassManufacturing;Textile-TypeFiber;RecupFurnaces	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
Flares	VOC	Fugitive emission controls	Stationary	NEET Database - ongoing
FlexiblePolyurethaneFoamFabricationOperations	VOC	Pending	Stationary	EPA Measures - 1999
FlexiblePolyurethaneFoamProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/foam/foampg.html	Stationary	EPA Measures - 1999
FlexibleVinylandUrethaneCoatingandPrinting	VOC	Low solvent coatings or Incineration	Stationary	EPA Measures - 1999
FluidCatalyticCrackingUnits;CrackingUnit	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
Foam-controlagents11	VOC	More sophisticated foam-control agents are being developed and used as formulators move from solvent-based to waterborne coating systems. Foam is a common problem in waterborne systems, and it can adversely affect the coating's appearance and durability. Prudent use of foam control agents can minimize or eliminate the adverse effects of		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		foam without impacting other surface properties.		
Formregionalstakeholdersgroup				EACs - 2004
FuelCellTechnologies7	NOx/VOC	Development and demonstration of fuel cell technologies for on- and off-road mobile sources to improve the commercial viability of fuel cells, including improvements in power density, fuel storage, reformer efficiency, system integration, and cost reduction. This program is expected to result in several projects that would support promising fuel cell technologies for on- and off-road vehicles. Fuel cell technologies that will be considered include proton exchange membrane, solid oxide, direct methanol, phosphoric acid, and molten carbonate. Mobile source applications that will be considered in this category include light-, medium-, and heavy-duty on-road vehicles, locomotives, ships, utility vehicles, neighborhood electric vehicles, and other off-road equipment applications. Peripheral technologies involving fuel infrastructure, on-board fuel storage, and hydrogen reforming shall be included if they have potential to advance the commercial viability of fuel cell applications.		Regulatory Impact Analysis - 1997
FuelCellVehicle8	NOx/VOC	Chrysler is teaming with Delphi Energy and Engine Management Systems to build within two years a "proof of concept" fuel cell vehicle that runs on gasoline. The technology will be a five-step process to refine gasoline on-board a vehicle. This could improve fuel efficiency by 50 percent, provide up to 400 miles range, be at least 90 percent cleaner, and cost no more than a current mid-size car.		Regulatory Impact Analysis - 1997
FuelFiredEquipment;ProcessHeaters,PropaneGas	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
FugitiveEmissions:Oil&GasProductionFacilities&	VOC	Identify all major & critical equipment + I & M	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
ConveyingStations		Program		
Galliumarsenide	NOx/VOC	It is possible to increase any solar cell's efficiency by focusing a more direct source of solar energy on it. In application, cells need to withstand extreme conditions in order to see an efficiency increase. This alloy demonstrated an efficiency of 28 percent under concentrated sunlight.		Regulatory Impact Analysis - 1997
Garbagetruckregulation	PM2.5		Mobile	CT Memo - 2005
GasChromatograph	VOC	Ambient Monitoring	Monitoring	NEET Database - ongoing
Gascollectionsystem-solidwastelandfill				EACs - 2004
Gaseous-andLiquid-FueledInternalCombustionEngines	VOC	VOC and NOx emission limits for stationary and portable engines	Stationary	EPA Measures - 1999
Gas-firedWaterHeaters,SmallBoilers,andProcessHeaters(Dec2002)				TX SIP - 2000-2004
GasolineDistribution(Stage1)	VOC	Improved seals on storage tanks and performing leak detection and repair of vapor and liquid leaks from equipment used to transfer gasoline Vapor processors are to collect and treat or recover vapors displaced during cargo tank loading operations.	Stationary	EPA Measures - 1999
GasolineLoadingRacks:IncreasedRuleEffectiveness	VOC		Stationary	CT Memo - 2005
GasProductionandfromPetroleumProduction	VOC		Industrial Process	SAQMD Clean Air Plan - 2003
GasTaxIncrease		Increase state and local gas taxes to add 10% to purchase price of gasoline. Use proceeds to fund regional transit operations.	Mobile	DC RACM - 2003
GasTurbines	NOx	Detailed equations 40 CFR 60.332	Stationary	EPA Measures - 1999
GasTurbines	NOx	Limits for turbines burning natural gas at 25-42 ppm and as low as 9-15 ppm.+ limits for turbines burning distillate oil at 65 ppm or below, and as	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
		low as 25-42 ppm..		
GasTurbines	NOx	Turbines >25 MW: Wet injection + SCR - 9 ppm (0.04 lb/mm Btu & 8-25 MW: Low NOx combustion - 42 ppm	Stationary	EPA Measures - 1999
GasTurbines-JetFuel	NOx	Selective Catalytic Reduction + Water Injection	Stationary	EPA Measures - 1999
GasTurbines-JetFuel	NOx	Water Injection	Stationary	EPA Measures - 1999
GasTurbines-NaturalGas	NOx	Steam Injection	Stationary	EPA Measures - 1999
GasTurbines-NaturalGas	NOx	Selective Catalytic Reduction + Low NOx Burners	Stationary	EPA Measures - 1999
GasTurbines-NaturalGas	NOx	Selective Catalytic Reduction + Steam Injection	Stationary	EPA Measures - 1999
GasTurbines-NaturalGas	NOx	Selective Catalytic Reduction + Water Injection	Stationary	EPA Measures - 1999
GasTurbines-NaturalGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
GasTurbines-NaturalGas	NOx	Water Injection	Stationary	EPA Measures - 1999
GasTurbines-Oil	NOx	Selective Catalytic Reduction + Water Injection	Stationary	EPA Measures - 1999
GasTurbines-Oil	NOx	Water Injection	Stationary	EPA Measures - 1999
Gearbox	NOx/VOC	The turbine blades' rotation causes wear on a system's gearbox. By using improved gearboxes, it is possible to lower total system cost (gearboxes are approximately 20 percent of total system cost). If as projected, infinitely variable speed tower systems become available, then it would no longer be necessary to maintain a gearbox in a tower system. Improved design and use of composite materials will reduce system cost by increasing the system's life span.		Regulatory Impact Analysis - 1997
Glass	NOx	Pressed / blown - LNB 13 lb/ton & Container - LNB 6 lb/ton & Flat - SNCR 9.5 lb.ton	Stationary	EPA Measures - 1999
GlassForming	VOC	Silicon-water emulsions replacement for petroleum-based lubricants	Stationary	EPA Measures - 1999
GlassFurnaces	NOx	Combustion modifications, process changes and post-combustion controls (SNCR) + RACT limits	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
		of 5.3-5.5 lbs NOx/ton of glass removed with limits as low as 4.0 lb NOx/ton of glass removed + coordinate installation of controls with routine furnace rebuilds		
GlassMeltingFurnaces	NOx	NOx emission limit + Continuous NOx monitoring from unit + Alternative Emission Control Plan	Stationary	EPA Measures - 1999
GraphicArts	VOC	VOC content of graphic art materials + VOC content limit for fountain solutions + Emission control system for non-compliant materials + Solvent cleaning and storage and disposal of VOC-containing materials comply with Rule 1171	Stationary	EPA Measures - 1999
GraphicArts-RotogravureandFlexographicPrinting	VOC	Permanent total enclosures, where possible + VOC limits for inks + low-solvent clean-up solutions	Stationary	EPA Measures - 1999
HazardousOrganicNESHAP(CoveringManufactureOfSeveralOrganicCompounds)	VOC	See Website - http://www.epa.gov/ttn/uatw/hon/honpg.html	Stationary	EPA Measures - 1999
Heavy-DutyDieselEngineStandards--R.C.S.A.section22a-174-36a	NOx/VOC		Mobile	CT Memo - 2005
heavydutydieselstrategies				EACs - 2004
Heavy-DutyDieselVehicleControlsandFuels	VOC		Mobile	CT Memo - 2005
Heavy-DutyDieselVehicles:FuelAdditivesToReduceEmissions	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:IntermodalFreightEfficiency	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:PreventiveMaintenance/RebuildRequirementsatSpecificMileage	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:ReduceTruckIdling	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:RequireLowSulfurDieselFuelEarlierThanEPAMayRequire	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
Heavy-DutyDieselVehicles:RequireUseOfOxydieselFuel	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:Upgrading/RetrofitEquipment	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyEngineECMRecalibration	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
HeavyTransitRail	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
HighAirFlowBio-airVENT	VOC	Process vent gas treatment	Stationary	NEET Database - ongoing
Highcetanedieselfuelforonroadvehicles		Require onroad diesel vehicles to use high cetane fuel	Mobile	DC RACM - 2003
Highsolidsaliphaticpolyurethanecoatings16	VOC	Three novel approaches to high solids aliphatic polyurethane coatings have been developed: a 100% solids, VOC free, instant setting, aliphatic polyurethane coating system; a high solids mix-and-apply aliphatic polyurethane coating system; and a high solids single component aliphatic polyurethane coating system.		Regulatory Impact Analysis - 1997
HighwayPaints	VOC	VOC content limits	Stationary	EPA Measures - 1999
HighwayVehicles-Gasoline	NOx/VOC	Transportation Control Package	Mobile	EPA Measures - 1999
HighwayVehicles-Gasoline	NOx/VOC	Federal Reformulated Gasoline	Mobile	EPA Measures - 1999
HighwayVehicles-LDGasoline	NOx/VOC	High Enhanced I/M	Mobile	EPA Measures - 1999
HighwayVehicles-LDGasoline	NOx/VOC	Fleet ILEV	Mobile	EPA Measures - 1999
HighwayVehicles-LDGasTrucks	NOx/VOC	Tier 2 Standards	Mobile	EPA Measures - 1999
Homeheatingoilsulfurreductions	PM2.5		Mobile	CT Memo - 2005
Hotmeltspraytool1	VOC	A newly-redesigned, solvent-free, hot melt spray tool is under to development to reduce VOC emissions. Further details not available.		Regulatory Impact Analysis - 1997
HOVlanes-I-24,40				EACs - 2004
HRVOCWebpage(Dec2004)				TX SIP - 2000-2004

Measure	Pollutant	Description	Source	Source Code
Hybridvehicles				EACs - 2004
HydrazineProduction	VOC	Pending	Stationary	EPA Measures - 1999
Hyper-immobilizingAbsorbentDeactivatingPowder	VOC	Manufacturing (general)	Pollution Prevention	NEET Database - ongoing
HazardousOrganicNESHAP(CoveringManufactureOfSeveralOrganicCompounds)	VOC	See Website - http://www.epa.gov/ttn/uatw/hon/honpg.html	Stationary	EPA Measures - 1999
Heavy-DutyDieselEngineStandards--R.C.S.A.section22a-174-36a	NOx/VOC		Mobile	CT Memo - 2005
heavydutydieselstrategies				EACs - 2004
Heavy-DutyDieselVehicleControlsandFuels	VOC		Mobile	CT Memo - 2005
Heavy-DutyDieselVehicles:FuelAdditivesToReduceEmissions	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:IntermodalFreightEfficiency	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:PreventiveMaintenance/RebuildRequirementsatSpecificMileage	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:ReduceTruckIdling	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:RequireLowSulfurDieselFuelEarlierThanEPAMayRequire	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:RequireUseOfOxydieselFuel	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:Upgrading/RetrofitEquipment	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyEngineECMRecalibration	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
HeavyTransitRail	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
HighAirFlowBio-airVENT	VOC	Process vent gas treatment	Stationary	NEET Database - ongoing
Highcetanedieselfuelforonroadvehicles		Require onroad diesel vehicles to use high cetane fuel	Mobile	DC RACM - 2003
Highsolidsaliphaticpolyurethanecoatings16	VOC	Three novel approaches to high solids aliphatic polyurethane coatings have been developed: a 100% solids, VOC free, instant setting, aliphatic polyurethane coating system; a high solids mix-and-apply aliphatic polyurethane coating system; and a high solids single component aliphatic polyurethane coating system.		Regulatory Impact Analysis - 1997
HighwayPaints	VOC	VOC content limits	Stationary	EPA Measures - 1999
HighwayVehicles-Gasoline	NOx/VOC	Transportation Control Package	Mobile	EPA Measures - 1999
HighwayVehicles-Gasoline	NOx/VOC	Federal Reformulated Gasoline	Mobile	EPA Measures - 1999
HighwayVehicles-LDGasoline	NOx/VOC	High Enhanced I/M	Mobile	EPA Measures - 1999
HighwayVehicles-LDGasoline	NOx/VOC	Fleet ILEV	Mobile	EPA Measures - 1999
HighwayVehicles-LDGasTrucks	NOx/VOC	Tier 2 Standards	Mobile	EPA Measures - 1999
Homeheatingoilsulfurreductions	PM2.5		Mobile	CT Memo - 2005
Hotmeltspraytool1	VOC	A newly-redesigned, solvent-free, hot melt spray tool is under to development to reduce VOC emissions. Further details not available.		Regulatory Impact Analysis - 1997
HOVlanes-I-24,40				EACs - 2004
HRVOCWebpage(Dec2004)				TX SIP - 2000-2004
Hybridvehicles				EACs - 2004
HydrazineProduction	VOC	Pending	Stationary	EPA Measures - 1999
Hyper immobilizingAbsorbentDeactivatingPowder	VOC	Manufacturing (general)	Pollution Prevention	NEET Database - ongoing
I/Mforheavy-dutydieselvehicles	PM2.5		Mobile	CT Memo - 2005
ICEngines	NOx	Lean burn - LEC 2 gm/bhp-hr & Rich Burn - SNCR 2 gm/bhp-hr & Diesel -SCR 2 gm/bhp-hr	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
ICEngines-Gas,Diesel,LPG	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICEngines-Gas,Diesel,LPG	NOx	Ignition Retard	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Cyclone	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Cyclone	NOx	Natural Gas Reburn	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Cyclone	NOx	Coal Reburn	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Cyclone	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/FBC	NOx	Selective Non-Catalytic Reduction - Urea	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Stoker	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Wall	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Wall	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Wall	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-Coke	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coke	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-Coke	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-DistillateOil	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-DistillateOil	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-DistillateOil	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-DistillateOil	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-LiquidWaste	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-LiquidWaste	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-LiquidWaste	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-LiquidWaste	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-LPG	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-LPG	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-LPG	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
ICIBoilers-LPG	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-MSW/Stoker	NOx	Selective Non-Catalytic Reduction - Urea	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Oxygen Trim + Water Injection	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-ProcessGas	NOx	Oxygen Trim + Water Injection	Stationary	EPA Measures - 1999
ICIBoilers-ProcessGas	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-ProcessGas	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-ProcessGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-ResidualOil	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-ResidualOil	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-ResidualOil	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-ResidualOil	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Wood/Bark/Stoker	NOx	Selective Non-Catalytic Reduction - Urea	Stationary	EPA Measures - 1999
I/Mforheavy-dutydieselvehicles	PM2.5		Mobile	CT Memo - 2005
ICEngines	NOx	Lean burn - LEC 2 gm/bhp-hr & Rich Burn - SNCR 2 gm/bhp-hr & Diesel -SCR 2 gm/bhp-hr	Stationary	EPA Measures - 1999
ICEngines-Gas,Diesel,LPG	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICEngines-Gas,Diesel,LPG	NOx	Ignition Retard	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Cyclone	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Cyclone	NOx	Natural Gas Reburn	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Cyclone	NOx	Coal Reburn	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Cyclone	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/FBC	NOx	Selective Non-Catalytic Reduction - Urea	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
ICIBoilers-Coal/Stoker	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Wall	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Wall	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Wall	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-Coke	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coke	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-Coke	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-DistillateOil	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-DistillateOil	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-DistillateOil	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-DistillateOil	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-LiquidWaste	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-LiquidWaste	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-LiquidWaste	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-LiquidWaste	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-LPG	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-LPG	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-LPG	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-LPG	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-MSW/Stoker	NOx	Selective Non-Catalytic Reduction - Urea	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Oxygen Trim + Water Injection	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
ICIBoilers-ProcessGas	NOx	Oxygen Trim + Water Injection	Stationary	EPA Measures - 1999
ICIBoilers-ProcessGas	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-ProcessGas	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-ProcessGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-ResidualOil	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-ResidualOil	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-ResidualOil	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-ResidualOil	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Wood/Bark/Stoker	NOx	Selective Non-Catalytic Reduction - Urea	Stationary	EPA Measures - 1999
Idlingrestriction-heavy-dutydiesel				EACs - 2004
Idlingrestrictionsforconstructionequipment		Limit idling by construction equipment	Non-road	DC RACM - 2003
Idlingrestrictionsforlawn&gardenequipment		Limit idling by commercial lawn & garden equipment	Non-road	DC RACM - 2003
Implementaprogramtoreplacecatalystsinlightdutyvehiclesandtrucks,includingSUVs	NOx		On-Road Mobile Light Duty Vehicle Technology Control Measures	SAQMD Clean Air Plan - 2003
ImplementNOxRACTBeyondNonattainmentArea		Take credit for reductions due to implementation of NOx RACT rules beyond nonattainment area	Area	DC RACM - 2003
ImplementOTCBeyondNonattainmentArea		Take credit for reductions due to implementation of OTC measures beyond nonattainment area	Area	DC RACM - 2003
Implementregistrationandinspectionprogramforheavy-duty(>50hp)off-roaddieselengines	NOx		Offroad	SAQMD Clean Air Plan - 2003
Implementregistrationandinspectionprogramforheavy-duty(>50hp)off-roaddieselengines	VOC		Offroad	SAQMD Clean Air Plan - 2003
Implementsteps-purchasealternative				EACs - 2004

Measure	Pollutant	Description	Source	Source Code
Implementtollboothsandpay-to-driveroads	NOx		Landuse	SAQMD Clean Air Plan - 2003
Implementtrafficcalmingmeasurestoreducevehiclespeedandencouragebicycleandpedestrianactivity	NOx		Landuse	SAQMD Clean Air Plan - 2003
ImplementVOCRACTBeyondNonattainmentArea		Take credit for reductions due to implementation of VOC RACT rules beyond nonattainment area	Area	DC RACM - 2003
ImprovedAirfoilMaterials	NOx/VOC	Utilization of wind power necessitates a device (airfoil) which will capture wind energy. By using newer materials and changing the number of blades, improved energy generation and lower costs may be achieved. Improved airfoil design using composite materials (fiberglass, wood/epoxy) and fewer blades (2-3) will reduce system cost while increasing energy conversions/efficiencies.		Regulatory Impact Analysis - 1997
Incidentmgt/Intelltrans.System				EACs - 2004
Includefuelefficiency/emission				EACs - 2004
IncludeNOxscreeningintheHeavy-DutyVehicleInspectionProgram	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
Increasedcompliancewiththeanti-idlingrestriction;schoolbusandtruckstopsignage;stateandlocalpoliceenforcement	PM2.5		Mobile	CT Memo - 2005
Increasesthepriceofgasolinetopayfordamagesofpollution,costofglobalwarming(greenhousegases),andcostofpetroleumdependency	NOx		Landuse	SAQMD Clean Air Plan - 2003
IncreaseVehicleRegistrationFeeandTrafficandParkingViolationFines	NOx		Landuse	SAQMD Clean Air Plan - 2003
Industrial,InstitutionalandCommercialBoilers,SteamGenerators,andProcessHeaters	NOx	NOx emission limit, methods to meet the limit is not specified	Stationary	EPA Measures - 1999
IndustrialandCommercialBoilers	NOx	Limits for boilers larger than 100 mmBtu/hr at levels of 0.t 5 lb/mmBtu or below for coal and 0.05 lb/mmBtu for oil and gas + limits for mid-size boilers between 50-100 mmBtu/hr at 0.10	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
		lb/mmBtu for gas, 0.12 lb/mmBtu for distillate oil and 0.30 lb/mmBtu for residual oil, 0.38 lb/mmBtu for coal + boilers smaller than 50 mmBtu/hr make annual "tune-ups" to minimize excess air		
IndustrialBoilers	VOC	Pending	Stationary	EPA Measures - 1999
IndustrialCoalCombustion	NOx	RACT to 50 tpy (Low NOx Burners)	Stationary	EPA Measures - 1999
IndustrialCoalCombustion	NOx	RACT to 25 tidy (Low NOx Burners)	Stationary	EPA Measures - 1999
Industrialequipmentretrofits		Require industrial equipment to be retrofitted with emissions controls	Non-road	DC RACM - 2003
IndustrialIncinerators	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
Industrialmaintenancecoating	VOC	AIM Coating Federal Rule	Stationary	EPA Measures - 1999
Industrialmaintenancecoating	VOC	South Coast Phase II	Stationary	EPA Measures - 1999
Industrialmaintenancecoating	VOC	South Coast Phase I	Stationary	EPA Measures - 1999
Industrialmaintenancecoating	VOC	South Coast Phase III	Stationary	EPA Measures - 1999
IndustrialNaturalGasCombustion	NOx	RACT to 25 tpy (Low NOx Burners)	Stationary	EPA Measures - 1999
IndustrialNaturalGasCombustion	NOx	RACT to 50 tpy (Low NOx Burners)	Stationary	EPA Measures - 1999
IndustrialOilCombustion	NOx	RACT to 25 tpy (Low NOx Burners)	Stationary	EPA Measures - 1999
IndustrialOilCombustion	NOx	RACT to 50 tpy (Low NOx Burners)	Stationary	EPA Measures - 1999
IndustrialProcessCoolingTowers	VOC	See Website - http://www.epa.gov/ttn/uatw/mactfnl.html	Stationary	EPA Measures - 1999
Industrialsurfacecoating:Largeappliances	VOC	Low solvent coatings	Stationary	EPA Measures - 1999
Industrialsurfacecoating:surfacecoatingofplasticpartsforbusinessmachines	VOC	Low VOC coatings	Stationary	EPA Measures - 1999
IndustrialWastewaterTreatment	VOC	Wastewater stream enclosed to point of treatment + require 95-percent control of volatiles + regulations on wastewater streams with lower VOC concentration than those identified in EPA's Control Techniques Guideline (CTG)	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
IndustrialWastewaterTreatment/PubliclyOwnedTreatmentWorks	NOx/VOC		Area	CT Memo - 2005
Injector/IntensifierSystem24	NOx	This system is designed to reduce NOx emissions from heavy-duty diesel vehicles through a new natural gas fuel injector system. The natural gas injector system will be fabricated installed and certified.		Regulatory Impact Analysis - 1997
In-Process;BituminousCoal;CementKiln	NOx	Selective Non-Catalytic Reduction - Urea based	Stationary	EPA Measures - 1999
In-Process;BituminousCoal;LimeKiln	NOx	Selective Non-Catalytic Reduction - Urea based	Stationary	EPA Measures - 1999
In-Process;ProcessGas;CokeOven/BlastFurnaces	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
In-Process;ProcessGas;CokeOvenGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
In-ProcessFuelUse;BituminousCoal;General	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
In-ProcessFuelUse;NaturalGas;General	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
In-ProcessFuelUse;ResidualOil;General	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
Installpassivegasvents-landfill				EACs - 2004
InstallRemoteSensingtoIdentifyHigh-EmittingVehicles	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Institutional/CommercialBoilers	VOC	Pending	Stationary	EPA Measures - 1999
IntegratedIronandSteelManufacture	VOC	Pending	Stationary	EPA Measures - 1999
IntellidyneFuelEconomizer	NOx/VOC	Other	Stationary	NEET Database - ongoing
InternalCombustionEngines-Gas	NOx	Ignition Retard	Stationary	EPA Measures - 1999
InternalCombustionEngines-Gas	NOx	Air-to-Fuel Ratio	Stationary	EPA Measures - 1999
InternalCombustionEngines-Gas	NOx	Air-to-Fuel Ratio + Ignition Retard	Stationary	EPA Measures - 1999
InternalCombustionEngines-Gas	NOx	L-E (Medium Speed)	Stationary	EPA Measures - 1999
InternalCombustionEngines-Gas	NOx	L-E (Low Speed)	Stationary	EPA Measures - 1999
InternalCombustionEngines-Gas	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
InternalCombustionEngines-Oil	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
InternalCombustionEngines-Oil	NOx	Ignition Retard	Stationary	EPA Measures - 1999
IntroducelowNOxenginesearly	NOx		M3 On-road heavy duty diesel	Regulatory Impact Analysis - 1997
Iron&SteelMills-Annealing	NOx	Low NOx Burners + Selective Catalytic Reduction	Stationary	EPA Measures - 1999
Iron&SteelMills-Annealing	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
Iron&SteelMills-Annealing	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
Iron&SteelMills-Annealing	NOx	Low NOx Burners + Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
Iron&SteelMills-Annealing	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
Iron&SteelMills-Annealing	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
Iron&SteelMills-Galvanizing	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
Iron&SteelMills-Galvanizing	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
Iron&SteelMills-Reheating	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
Iron&SteelMills-Reheating	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
Iron&SteelMills-Reheating	NOx	LEA	Stationary	EPA Measures - 1999
IronandStealIndustry/SinterPlants	VOC	Deoiling control limit on oil and grease for mill scale.	Stationary	EPA Measures - 1999
IronandSteelFoundries	VOC	SCAQMD's rule for combustion gas limiting the discharge of carbon monoxide	Stationary	EPA Measures - 1999
IronandSteelMills	NOx	Low NOx burners and FGR for reheat furnaces + SCR and low NOx burners for annealing furnaces + low NOx burners and FGR for galvanizing furnaces	Stationary	EPA Measures - 1999
IronFoundries	VOC	Pending	Stationary	EPA Measures - 1999
IronProduction;BlastFurnace;BlastHeatingStoves	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
KraftPulpMills	NOx	Industrial boilers regulated same as Industrial and Commercial Boilers + SNCR for recovery boilers + lime kilns regulated same as Cement Kilns	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
LABSORB(tm)RegenerativeSO2scrubbing	PM	Emission capture systems	Stationary	NEET Database - ongoing
LandDevevelopmentCode/Tree				EACs - 2004
LandfillGases	VOC	New Source Performance Standard + lower size cutoff based on area's major source definition + regulating landfills with more than 500,000 tons in place.	Stationary	EPA Measures - 1999
Landscape/treeordinances				EACs - 2004
Landscapeordinance-noresid				EACs - 2004
LargeAppliance(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999
LargeWaterHeatersandSmallBoilers	NOx	NOx emission limit + Compliance Certification Program for equipment manufacturers + Retrofit Compliance Certification Program	Stationary	EPA Measures - 1999
LaserRemoteSensing	NOx	Real-time monitoring/information display	Models and Environmental Software	NEET Database - ongoing
LaserRemoteSensing	NOx	Ambient modeling/simulation	Models and Environmental Software	NEET Database - ongoing
LasIR	NOx	Emissions Monitoring	Monitoring	NEET Database - ongoing
Lawn&gardenequipmen:				EACs - 2004
Lawnandgardenequipmentbuybackandscrappageprograms	NOx/VOC		Mobile	CT Memo - 2005
LawnMowerandGardenReplacementProgram	NOx/VOC	Voluntary program to replace gasoline powered lawn and garden equipment with electric powered equipment	Mobile	EPA Measures - 1999
LeanBurnCatalysts31	NOx	Major challenges in this project are the development of a catalyst with the three following attributes: 1) Sufficient and selective lean NOx activity; 2) Robustness, particularly hydrothermal durability; and 3) economically practical.		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		Development of a lean burn catalyst is critical for the commercialization of the lean burn engine.		
LeatherTanningandFinishingOperations	VOC	Pending	Stationary	EPA Measures - 1999
LimeKilns	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
LimeKilns	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
LimeKilns	NOx	Selective Non-Catalytic Reduction - Urea Based	Stationary	EPA Measures - 1999
LimeKilns	NOx	Selective Non-Catalytic Reduction - NH3Based	Stationary	EPA Measures - 1999
LimeKilns	NOx	Mid-Kiln Firing	Stationary	EPA Measures - 1999
Limitingpleasurecraft/vehicleuseabove100F	VOC		Offroad	SAQMD Clean Air Plan - 2003
LNGCombustionTechnologyforLocomotives23	NOx/VOC	Develop and demonstrate, via the GasRail USA program, LNG combustion technology for locomotives capable of reducing NOx emissions by 75% or more compared to conventional diesel technology. In partnership with Southwest Research Institute, the project would optimize a newly developed combustion technology in a multi-cylinder locomotive engine. This will be followed by integration of the combustion system into one or more Metrolink passenger locomotives for operation in the SCAQMD Basin.		Regulatory Impact Analysis - 1997
LongerTermEngineRetrofitorAftertreatment	NOx		Offroad	SAQMD Clean Air Plan - 2003
LoTOx(tm)Technology	NOx	Emission capture systems	Stationary	NEET Database - ongoing
LowEmission,AlternativeFuelTechnologiesforOn-RoadApplications21	NOx/VOC	Development and demonstration of low-emission, alternative fuel technologies for light-, medium-, and heavy-duty mobile sources. Alternative clean fuels that will be considered include, but are not necessarily limited to, natural gas, propane, methanol, ethanol, hydrogen, and Hythane. In addition, reformulated gasoline and diesel fuels have been developed that produce lower emissions. When used in conjunction with advanced emission controls, additives, and new engine technologies,		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		these appear to have promise to meet some CARB LEV standards.		
Low-EmissionAsphalt		Adopt SCAQMD Rules 1108: Cutback Asphalt (less than 0.5% VOC evaporating at 260F) and 1108.1: Emulsified Asphalt (less than 3% VOC evaporating at 260F)	Area	DC RACM - 2003
Lowemissiondieselforfleets				EACs - 2004
Low-EmissionFurnaces		Adopt SCAQMD Rule 1111: NOx Emissions from Natural Gas Fired, Fan-Type Central Furnaces (no more than 40 nanograms of NOx per joule of useful heat)	Area	DC RACM - 2003
Low-emissionsagriculturalequipment		Require sale of low-emissions agricultural equipment in region	Non-road	DC RACM - 2003
Low-emissionsconstructionequipment		Require sale of low-emissions construction equipment in region	Non-road	DC RACM - 2003
Low-EmissionWaterHeaters		Adopt SCAQMD Rule 1121: Control of NOx from Residential Type Natural Gas Fired Water Heaters	Area	DC RACM - 2003
Loweremissionstandardsforgasolinetrucks	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
Lowerspeedlimit-55fortrucksduring				EACs - 2004
Low-NOxDieselFuel(On-Road)		Require regional use of low-NOx fuel for on-road diesel vehicles	Mobile	DC RACM - 2003
lowNOxlimitsforboilers/heatersintheheatinputrangeof75,000to2,000,000Btu/hr	NOx		Stationary	SAQMD Clean Air Plan - 2003
LowReidVaporPressureGas				EACs - 2004
LowSfuels-asap				EACs - 2004
Low-SulfurFuelforElectricGeneratingUnits--R.C.S.A.section22a-174-19a	PM2/5		Stationary	CT Memo - 2005
LowSulfurFuelOil(340ppm);80percentReductioninSOxEmissions	NOx		Marine (commercial)	Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
Low-sulfurTypeIIfuelsinallvehicles				EACs - 2004
LowVOCstripingmaterial				EACs - 2004
LABSORB(tm)RegenerativeSO2scrubbing	PM	Emission capture systems	Stationary	NEET Database - ongoing
LandDevevelopmentCode/Tree				EACs - 2004
LandfillGases	VOC	New Source Performance Standard + lower size cutoff based on area's major source definition + regulating landfills with more than 500,000 tons in place.	Stationary	EPA Measures - 1999
Landscape/treeordinances				EACs - 2004
Landscapeordinance-noresid				EACs - 2004
LargeAppliance(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999
LargeWaterHeatersandSmallBoilers	NOx	NOx emission limit + Compliance Certification Program for equipment manufacturers + Retrofit Compliance Certification Program	Stationary	EPA Measures - 1999
LaserRemoteSensing	NOx	Real-time monitoring/information display	Models and Environmenta l Software	NEET Database - ongoing
LaserRemoteSensing	NOx	Ambient modeling/simulation	Models and Environmenta l Software	NEET Database - ongoing
LasIR	NOx	Emissions Monitoring	Monitoring	NEET Database - ongoing
Lawn&gardenequipmen:				EACs - 2004
Lawnandgardenequipmentbuybackandscrappagepr ograms	NOx/VOC		Mobile	CT Memo - 2005
LawnMowerandGardenReplacementProgram	NOx/VOC	Voluntary program to replace gasoline powered lawn and garden equipment with electric powered equipment	Mobile	EPA Measures - 1999
LeanBurnCatalysts31	NOx	Major challenges in this project are the development of a catalyst with the three following attributes: 1) Sufficient and selective lean NOx		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		activity; 2) Robustness, particularly hydrothermal durability; and 3) economically practical. Development of a lean burn catalyst is critical for the commercialization of the lean burn engine.		
LeatherTanningandFinishingOperations	VOC	Pending	Stationary	EPA Measures - 1999
LimeKilns	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
LimeKilns	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
LimeKilns	NOx	Selective Non-Catalytic Reduction - Urea Based	Stationary	EPA Measures - 1999
LimeKilns	NOx	Selective Non-Catalytic Reduction - NH3Based	Stationary	EPA Measures - 1999
LimeKilns	NOx	Mid-Kiln Firing	Stationary	EPA Measures - 1999
Limitingpleasurecraft/vehicleuseabove100F	VOC		Offroad	SAQMD Clean Air Plan - 2003
LNGCombustionTechnologyforLocomotives23	NOx/VOC	Develop and demonstrate, via the GasRail USA program, LNG combustion technology for locomotives capable of reducing NOx emissions by 75% or more compared to conventional diesel technology. In partnership with Southwest Research Institute, the project would optimize a newly developed combustion technology in a multi-cylinder locomotive engine. This will be followed by integration of the combustion system into one or more Metrolink passenger locomotives for operation in the SCAQMD Basin.		Regulatory Impact Analysis - 1997
LongerTermEngineRetrofitorAftertreatment	NOx		Offroad	SAQMD Clean Air Plan - 2003
LoTOx(tm)Technology	NOx	Emission capture systems	Stationary	NEET Database - ongoing
LowEmission,AlternativeFuelTechnologiesforOn-RoadApplications21	NOx/VOC	Development and demonstration of low-emission, alternative fuel technologies for light-, medium-, and heavy-duty mobile sources. Alternative clean fuels that will be considered include, but are not necessarily limited to, natural gas, propane, methanol, ethanol, hydrogen, and Hythane. In addition, reformulated gasoline and diesel fuels have been developed that produce lower emissions.		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		When used in conjunction with advanced emission controls, additives, and new engine technologies, these appear to have promise to meet some CARB LEV standards.		
Low-EmissionAsphalt		Adopt SCAQMD Rules 1108: Cutback Asphalt (less than 0.5% VOC evaporating at 260F) and 1108.1: Emulsified Asphalt (less than 3% VOC evaporating at 260F)	Area	DC RACM - 2003
Lowemissiondieselforfleets				EACs - 2004
Low-EmissionFurnaces		Adopt SCAQMD Rule 1111: NOx Emissions from Natural Gas Fired, Fan-Type Central Furnaces (no more than 40 nanograms of NOx per joule of useful heat)	Area	DC RACM - 2003
Low-emissionsagriculturalequipment		Require sale of low-emissions agricultural equipment in region	Non-road	DC RACM - 2003
Low-emissionsconstructionequipment		Require sale of low-emissions construction equipment in region	Non-road	DC RACM - 2003
Low-EmissionWaterHeaters		Adopt SCAQMD Rule 1121: Control of NOx from Residential Type Natural Gas Fired Water Heaters	Area	DC RACM - 2003
Loweremissionstandardsforgasolinetrucks	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
Lowerspeedlimit-55fortrucksduring				EACs - 2004
Low-NOxDieselFuel(On-Road)		Require regional use of low-NOx fuel for on-road diesel vehicles	Mobile	DC RACM - 2003
lowNOxlimitsforboilers/heatersintheheatinputrangeof75,000to2,000,000Btu/hr	NOx		Stationary	SAQMD Clean Air Plan - 2003
LowReidVaporPressureGas				EACs - 2004
LowSfuels-asap				EACs - 2004
Low-SulfurFuelforElectricGeneratingUnits--R.C.S.A.section22a-174-19a	PM2/5		Stationary	CT Memo - 2005

Measure	Pollutant	Description	Source	Source Code
LowSulfurFuelOil(340ppm);80percentReductionin SOxEmissions	NOx		Marine (commercial)	Regulatory Impact Analysis - 1997
Low-sulfurTypeIIfuelsinallvehicles				EACs - 2004
LowVOCstripingmaterial				EACs - 2004
Magneticallycontrolleddepositionofmetalsusinggas plasma7	VOC	Methods of spraying materials on a substrate in a controlled manner are being researched in an attempt to eliminate the waste inherent in the present process. Thin layers of secondary material are plated on substrates either by plating or spraying processes. Plating operations produce large amounts of hazardous liquid waste. Spraying, while one of the less waste intensive methods, produces `over spray' which is waste that is a result of the uncontrolled nature of the spray stream. In many cases the over spray produces a hazardous waste.		Regulatory Impact Analysis - 1997
MagneticTapes(SurfaceCoating)	VOC	See Website - http://www.epa.gov/ttn/uatw/magtape/magtappg.html	Stationary	EPA Measures - 1999
MagnetWireCoatingOperations	VOC	VOC content limits for compliant coatings + Emission capture and control system for non-compliant coatings + Cleaning operations and solvent storage and disposal comply with Rule 1171	Stationary	EPA Measures - 1999
Mandatorychipreflashingforheavy-dutydieseltrucks	NOx/VOC		Mobile	CT Memo - 2005
MandatoryFacilityReductiononSpareAirDays	NOx		Stationary	SAQMD Clean Air Plan - 2003
MandatoryFacilityReductiononSpareAirDays	VOC		Stationary	SAQMD Clean Air Plan - 2003
ManufactureOfPaints,Coatings,andAdhesives	VOC	Pending	Stationary	EPA Measures - 1999
ManufactureofPolymericCellularProducts(Foam)	VOC	Discontinue use of VOC blowing agents in non-expandable molding operations + Quantity limitations on blowing agents in expandable	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
		molding operations		
ManufacturingOfNutritionalYeast	VOC	Pending	Stationary	EPA Measures - 1999
ManufacturingTechniques	NOx/VOC	The manufacture of wind tower components is to date a labor intensive process (airfoils are traditionally hand laid). Development and use of computerized mass production techniques promises to reduce lay-up times and increase orders.		Regulatory Impact Analysis - 1997
MarinaGasolineRefueling	VOC	Stage I and II vapor recovery at marinas that dispense more than 10,000 gallons per month.	Stationary	EPA Measures - 1999
MarineCoatingOperations	VOC	VOC content limits for marine coatings + Solvent cleaning and storage comply with Rule 1171 + Emission collection and control system for non-compliant coatings	Stationary	EPA Measures - 1999
MarineEngines:OperatingRestrictions	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
MarineEngines:Refueling/Fuels	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Marinesurfacecoating	VOC	Add-on control levels	Stationary	EPA Measures - 1999
Marinesurfacecoating	VOC	MACT	Stationary	EPA Measures - 1999
MarineVesselLoadingOperations	VOC	Sets standards and requires RACT for VOC and HAP emissions from new and existing marine tank vessel loading operations Sets NESHAP and requires MACT for existing and new major marine tank vessel loading operations	Stationary	EPA Measures - 1999
Mechanical,electric,railroadcoating	VOC	MACT level of control	Stationary	EPA Measures - 1999
Mechanical,electric,railroadcoating	VOC	SCAQMD Limits	Stationary	EPA Measures - 1999
Media/puiblicrelationsprogram				EACs - 2004
MedicalWasteIncinerators	NOx	250 ppmv	Stationary	EPA Measures - 1999
MedicalWasteIncinerators	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
MedicalWasteIncinerators	NOx	Controls similar to those for municipal waste combustors	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
Medium-DutyCNGEngineConversionKit18	NOx/VOC	Support for field demonstration of improved software and hardware for a medium-duty CNG engine conversion kit to support the existing medium-duty vehicle population. The SCAQMD previously supported field demonstration of the first generation kit in a contract with Thermo Power Corporation. This kit has operated well in the field. However, improvements in performance and fuel economy are needed if the kit is to be commercially viable. Hardware and software modifications to achieve improved performance and fuel economy are currently being developed. The proposed project would support field demonstration of the second generation kit.		Regulatory Impact Analysis - 1997
MetalCan(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999
Metalcoil&cancoating	VOC	Incineration	Stationary	EPA Measures - 1999
Metalcoil&cancoating	VOC	MACT	Stationary	EPA Measures - 1999
Metalcoil&cancoating	VOC	BAAQMD Rule 11 Amended	Stationary	EPA Measures - 1999
MetalCoil(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999
Metalcoilsurfacecoating	VOC	Incineration	Stationary	EPA Measures - 1999
MetalContainer,Closure,andCoilCoatingOperations	VOC	VOC content limits for compliant coatings + Emission capture and control system for non-compliant coatings + Cleaning operations and solvent storage and disposal comply with Rule 1171	Stationary	EPA Measures - 1999
Metalfurniture,appliances,parts	VOC	SCAQMD Limits	Stationary	EPA Measures - 1999
Metalfurniture,appliances,parts	VOC	MACT	Stationary	EPA Measures - 1999
Micro-emulsiontechnology15	VOC	New microemulsion technology creates an effective way to decrease VOC levels up to 50% or more and still maintain effective paint-stripping performance. This solvent technology allows water to be incorporated into hydrocarbon-based paint strippers		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		while making minimal performance sacrifices.		
MiscellaneousMetalPartsandProducts(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999
Mobilezonesprayboothventilationsystem6	VOC	New process design endeavors to reduce the volume of air to be treated from spray paint booths, thereby increasing efficiency and improving air pollution abatement (in particular, reducing VOC emissions). Most of the ventilation air is recycled through the booth to maintain laminar flow; the machinery is located on the supply side of the booth rather than on the exhaust side. 60 to 95% reduction in spray booth exhaust rate should result.		Regulatory Impact Analysis - 1997
MobotecSystem	NOx/PM	Emission capture systems	Stationary	NEET Database - ongoing
MoleculeQuantumMechanicAirPurification	NOx/VOC	Other	Stationary	NEET Database - ongoing
MoltenCarbonateFuelCell(MCFC)4	NOx/VOC	The molten carbonate fuel cell uses an electrolyte of lithium and potassium carbonates and operates at approximately 650C (1200F). Due to the high temperature involved, noble metal catalysts are not required for the cell electrochemical oxidation and reduction process.		Regulatory Impact Analysis - 1997
Moreefficienttraffickingsystems				EACs - 2004
MotorVehicleandMobileEquipmentNon-AssemblyLineCoatingOperations	VOC	VOC content limits for compliant coatings + Emission capture and control system for non-compliant coatings + Cleaning operations and solvent storage and disposal comply with Rule 1171	Stationary	EPA Measures - 1999
MotorVehicleAssemblyLineCoatingOperations	VOC	VOC content limit for compliant coatings + Solvent cleaning and storage comply with Rule 1171 + Emission capture and control system for non-compliant coatings	Stationary	EPA Measures - 1999
Motorvehiclecoating	VOC	MACT	Stationary	EPA Measures - 1999
Motorvehiclecoating	VOC	Incineration	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
Multi-junctioncells(galliumarsenideandIII-Valloys)	NOx/VOC	It is possible to increase any solar cell's efficiency by focusing a more direct source of solar energy on it. In application, cells need to withstand extreme conditions in order to see an efficiency increase. This alloy demonstrated an efficiency in excess of 30 percent under concentrated sunlight. The expectation is to exceed 32 percent efficiency.		Regulatory Impact Analysis - 1997
Municipalsolidwastelandfill	VOC	RCRA standards	Stationary	EPA Measures - 1999
MunicipalWasteCombustorControls	NOx		Stationary	CT Memo - 2005
MunicipalWasteCombustors	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
MunicipalWasteCombustors	NOx	EPA's regulation for large, existing MWCs emitting more than 250 tons/day + more stringent limits (e.g., 30-50 ppmv) or shorter averaging periods (e.g., 8-hr average).	Stationary	EPA Measures - 1999
MunicipalWasteCombustors(Beganoperationbetween12/20/89and9/20/94)	NOx	180 ppm at 7% oxygen	Stationary	EPA Measures - 1999
Natural-Gas-Fired,Fan-TypeCentralFurnaces	NOx	NOx emission limit	Stationary	EPA Measures - 1999
NaturalGasFuelSpecifications	NOx		Area	SAQMD Clean Air Plan - 2003
Naturalgasprocessingplant-reduceNoxandVOCemissionsby90%				EACs - 2004
NaturalGasProduction;Compressors	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
NaturalGasTransmissionandStorage	VOC	Pending	Stationary	EPA Measures - 1999
NeopreneProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr1/pr1pg.html	Stationary	EPA Measures - 1999
Newinfrastructure-rideshareprogram				EACs - 2004
Newlatexpolymerapplicationmethod5	VOC	New latex polymer application method eliminates the acetate rinse-out and the resultant solvent-contaminated water waste stream and distillation air emissions.		Regulatory Impact Analysis - 1997
Newphotoinitiatorsystems25	VOC	Ciba is working on advanced photoinitiator systems		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		that enable paints and coatings to dry rapidly without the need for heating or the release of solvents into the atmosphere. Key future research is targeting extending the range of photoinitiators for paints and coatings.		
NewUV-curetechnologyapplications7	VOC	New UV-cure applications are being developed for use in the automotive industry. These applications include coatings for metal and plastics, interior and exterior applications, adhesives, and gasketing.		Regulatory Impact Analysis - 1997
Newvehiclespowered	NOx		M4 On-road heavy duty diesel	Regulatory Impact Analysis - 1997
Nitric/adipicacids	NOx	Nitric acid - 2.3 lb/ton extended adsorption; Adipic acid - 7.4 lb/ton extended adsorption	Stationary	EPA Measures - 1999
NitricAcidManufacturing	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
NitricAcidManufacturing	NOx	Extended Absorption	Stationary	EPA Measures - 1999
NitricAcidManufacturing	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
NitricAcidPlants	NOx	3.0 lb/ton of acid produced	Stationary	EPA Measures - 1999
NitricandAdipicAcidPlants	NOx	Consider a standard of 2.0 lbs NOx/ton of nitric acid produced, representing approximately 95-percent control. Even lower standards are achievable using SCR. The nation's four adipic acid plants are already regulated at over 80-per-cent efficiency.	Stationary	EPA Measures - 1999
NitrileButadieneRubberProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr1/pr1pg.html	Stationary	EPA Measures - 1999
NitrogenOxides(NOx)EmissionControl	NOx	Process vent gas treatment	Stationary	NEET Database - ongoing
Non-acrylateSystems10	VOC	In the research development of UV and EB curable alternatives to acrylates, a number of "new" systems have been developed that reduce emissions, such as cationic systems, alternating free radical induced copolymerization of donor/acceptor		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		type monomers, various hybrid systems, and photoinduced addition reactions for the formation of polymeric networks.		
Non-majorVOCsourcebakeries	NOx/VOC		Stationary	CT Memo - 2005
Non-NylonPolyamidsProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr2/pr2pg.html	Stationary	EPA Measures - 1999
Non-ozonedepletingsealantsforammunitionapplications 22	VOC	Research program aimed at investigating solvent-free or solvent-safe case mouth sealants for military ammunition by evaluating state-of-the-art, commercially-available non-ozone depleting sealants. Economic benefits include reduced costs (elimination of toxic ozone-depleting chemicals environmental protection activities), increased production rates, and reduced lot rejection rate (which currently averages 6% per year).		Regulatory Impact Analysis - 1997
Non-RoadEngineStandards8	VOC		Mobile	CT Memo - 2005
NonroadGasolineEngines	NOx/VOC	Federal Reformulated Gasoline	Mobile	EPA Measures - 1999
Non-RoadVehiclesandEngines	NOx/VOC	Achieve reductions from lawn and garden equipment and recreational vessels	Mobile	EPA Measures - 1999
Non-ThermalPlasmaReactor30	NOx/VOC	"Packed-bed reactor" transforms exhaust gas pollutants into less harmful constituents. Simultaneous particulate and NOx removal in diesel engine exhaust		Regulatory Impact Analysis - 1997
NonutilityBoilers	NOx	Natural Gas and Distillate Oil- Low heat release rate - 0.10 lb/mmBtu; High heat -0.20 lb/mmBtu Residual Oil- Low heat release rate - 0.3 lb/mmBtu; High heat release rate - 0.4 lb/mmBtu Coal- Mass Feed Stoker - 0.5 lb/mmBtu; Spreader Stoker and FBC - 0.6 lb/mmBtu; Pulverized Coal - 0.7 lb/mmBtu; Lignite - 0.6 lb/mmBtu	Stationary	EPA Measures - 1999
NOxAnalyzers	NOx	Emissions Monitoring	Monitoring	NEET Database - ongoing
NOxBudgetProgram(EPANOxSIPCall)	NOx		Stationary	CT Memo - 2005

Measure	Pollutant	Description	Source	Source Code
NOxControlsonCommercialPowerGeneratingEquipment		Adopt OTC Additional NOx Controls Rule throughout nonattainment area (applies to industrial boilers, stationary combustion turbines and reciprocating engines, emergency generators, load shavers and cement kilns)	Stationary	DC RACM - 2003
NOxemissionlimitsonasphalticconcreteproductionfacilities	NOx		Stationary	SAQMD Clean Air Plan - 2003
NOxemissionlimitsonasphalticconcreteproductionfacilities	VOC		Stationary	SAQMD Clean Air Plan - 2003
NOxLimitForPowerPlants		Cap the emission rate from each utility boiler and turbine below NOx SIP Call limits	Stationary	DC RACM - 2003
NOxRACTRules	NOx	States' NOx RACT rules	Stationary	EPA Measures - 1999
off-roadvehiclereplacements				EACs - 2004
Offsetlithography	VOC	Low solvent inks and fountain solutions	Stationary	EPA Measures - 1999
Off-SiteWasteandRecoveryOperations	VOC	Pending	Stationary	EPA Measures - 1999
Oilandnaturalgasproduction	VOC	Equipment and maintenance	Stationary	EPA Measures - 1999
OilandNaturalGasProduction	VOC	For major oil and natural gas production facilities, the rule requires controls at the following emission points: (1) process vents at certain size glycol dehydration units; (2)tanks with flashing emission potential; and (3) certain fugitive emission sources at natural gas processing plants. For natural gas transmission and storage facilities that are major sources of hazardous air pollutants, the rule requires emission controls at process vents at certain size glycol dehydration units.	Stationary	EPA Measures - 1999
On-boardRefuelingVaporRecovery	VOC		Mobile	CT Memo - 2005
On-boardRefuelingVaporRecovery				CT RACM - 2001
On-roadvehiclereplacement				EACs - 2004
OpenBurning	NOx	Episodic Ban (Daily Only)	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
Openburning	VOC	Episodic ban	Stationary	EPA Measures - 1999
OpenBurning		Eliminate open burning in counties adjacent to nonattainment area	Area	DC RACM - 2003
OpenBurning				EACs - 2004
Openburningban-expanded				EACs - 2004
Opentopdegreasing	VOC	SCAQMD 1122 (VOC content limit)	Stationary	EPA Measures - 1999
Opentopdegreasing	VOC	Airtight degreasing system	Stationary	EPA Measures - 1999
Opentopdegreasing	VOC	MACT	Stationary	EPA Measures - 1999
Optimizedautomobilecatalyst35	NOx/VOC	Airflow Catalysts is attempting to reengineer the traditional automobile catalyst. The redesign is an effort to minimize costs by reducing the amounts of costly rare metals in the catalyst. The new design will seek to react all contaminants (NOx, HC, CO) in the same area of the converter, rather than in three separate areas. The company is also seeking to minimize the need for air injection for NOx control.		Regulatory Impact Analysis - 1997
OrganicAcidsManufacture	VOC	RACT Extended to Other Areas	Stationary	EPA Measures - 1999
OrganicChemicalPlants	NOx	Controls on industrial boilers and process heaters for these sources	Stationary	EPA Measures - 1999
OrganicLiquidsDistribution(Non-Gasoline)	VOC	Pending	Stationary	EPA Measures - 1999
Organicprotectivecoatingsandapplicationtechnology3	VOC	High performance, non-toxic, low VOC content coatings for Navy use are being developed, including investigation of low VOC polymer technology to produce low VOC binder systems. Reactive monomers and diluents and low molecular weight resins have been used to develop low viscosity binder systems for future near-zero VOC aircraft coatings. In addition, recent advances in water-borne resin technology has allowed for the development of a high performance water-borne		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		topcoat which goes beyond mere compliance with environmental regulations. Non-toxic inhibitor systems have been developed and formulated into non-toxic aircraft corrosion inhibiting primers. Coating corrosion resistance, physical performance properties and VOC content were evaluated in the development of the best materials. The non-toxic inhibited primers have been optimized, and service evaluation at Navy maintenance facilities is in progress.		
OTC-architecturalandindmain				EACs - 2004
OTC-consumerproducts				EACs - 2004
OTC-lowemissionspaint				EACs - 2004
OTCPhaseIINOxMOU		Require reductions in emissions from regional power plants through the OTC Phase II NOx MOU	Stationary	DC RACM - 2003
OTC-portablefuelcontainers				EACs - 2004
OxygenEnrichmentMembrane32	NOx/VOC	Membrane system uses DuPont Teflon AF fiber as the oxygen exchange mechanism for a underhood module to feed oxygen-enriched air directly to the engine chamber. The membrane separates ambient air into oxygen-rich and nitrogen-rich streams. The oxygen rich stream is directed to the manifold to improve combustion, while the nitrogen rich stream can be fed into the exhaust as a plasma to reduce NOx emissions.		Regulatory Impact Analysis - 1997
PahlmanProcess	NOx/PM	Emission capture systems	Stationary	NEET Database - ongoing
PaintStrippingOperations	VOC	Pending	Stationary	EPA Measures - 1999
Paper,Fabric,andFilmCoatingOperations	VOC	VOC content limits for compliant coatings + Coating applicator transfer efficiency + Emission capture and control system for non-compliant coatings	Stationary	EPA Measures - 1999
PaperandOtherWebs(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
Papersurfacecoating	VOC	Incineration	Stationary	EPA Measures - 1999
ParkingLotTreePlantingToReduceVehicleTemperaturesAnd,Thereby,EvaporativeEmissions	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
PartnershipforNewGenerationVehicle1	NOx/VOC	Multi-agency Federal partnership with US automakers and suppliers, and universities to develop advanced manufacturing technologies, near-term vehicle improvements, and prototypes with up to triple efficiency. The partnership is evaluating many of the individual technologies listed below such as lean NOx catalysts, CIDI engine, reformulated or alternative fuels for CIDI, CIDI fuel injection, EGR in addition to improved manufacturing processes that would allow higher temperatures or reduced weight. Other goals include reducing the vehicle weight, aerodynamics, rolling resistance, accessory energy use, and regenerative braking that increase vehicle efficiency and reduce emissions.		Regulatory Impact Analysis - 1997
PesticideActiveIngredientProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pest/pestpg.html	Stationary	EPA Measures - 1999
PesticideApplication	VOC	Reformulation - FIP rule	Stationary	EPA Measures - 1999
PesticideApplication	VOC	Ozone season limits on pesticide application and prohibition of solvent-containing fumigants + emissions regulations for fumigation chambers + lowest VOC-emitting alternative	Stationary	EPA Measures - 1999
PetroGuard	VOC	Petroleum, oils, and lubricants	Pollution Prevention	NEET Database - ongoing
Petroleumdrycleaners	VOC	Carbon adsorption	Stationary	EPA Measures - 1999
PetroleumDryCleaning				EACs - 2004
PetroleumRefineries	NOx	Regulate refinery boilers and process heaters like other industries + regulate fluid catalytic cracking units by controlling CO boilers + SNCR or low	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
		NOx burners on tail gas incinerators		
PetroleumRefineries-CatalyticCracking(FluidandOther)Units,CatalyticReformingUnits,andSulfurPlantUnits	VOC	Controls for emissions of air toxics from storage tanks,equipment leaks, process vents, and wastewater collection and treatment systems. Provides emissions averaging across operations and across refineries.	Stationary	EPA Measures - 1999
PetroleumRefineries-OtherSourcesNotDistinctlyListed	VOC	Controls for emissions of air toxics from other nonspecific refinery sources, processes, and systems. Provides emissions averaging across operations and across refineries.	Stationary	EPA Measures - 1999
Petroleumrefineryfugitives	VOC	Equipment and maintenance	Stationary	EPA Measures - 1999
Petroleumrefinerywastewatersystems	VOC	Covers, Floating roofs, Combustion devices or Carbon adsorption	Stationary	EPA Measures - 1999
PetroleumSolventDryCleaners	VOC	Operating practices + Leak controls + Tight storage containers + Waste stream filtration system + Emission control devices	Stationary	EPA Measures - 1999
PharmaceuticalsandCosmeticsManufacturingOperations	VOC	Surface condensers on equipment vents + Control devices on VOC transfer to storage operations + Control devices on drying operations	Stationary	EPA Measures - 1999
PharmaceuticalsProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pharma/pharmpg.html	Stationary	EPA Measures - 1999
PhaseIIMARAMA/NESCAUMUtilityBoiler	NOx		Stationary	EPA Measures - 1999
PhosphoricAcidFuelCell(PAFC)3	NOx/VOC	This is the most commercially developed type of fuel cell. It is already being used in such diverse applications as hospitals, nursing homes, hotels, office buildings, schools, utility power plants, and an airport terminal. Phosphoric acid fuel cells generate electricity at more than 40% efficiency, and nearly 85% if steamthat the fuel cell produces is used for cogeneration, compared to 30% for the most efficient internal combustion engine. Operating temperatures are in the range of 400		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		degrees F. These fuel cells also can be used in larger vehicles, such as buses and locomotives.		
PhotographicChemicalProduction	VOC	Pending	Stationary	EPA Measures - 1999
PhotovoltaicsforMilitaryApplications		This technology involves demonstrating the use of photovoltaic technology, reducing the amount of pollutants from fossil-fueled electrical gensets within DOD, and enhancing energy security. The focus will be to develop a modular, standardized power processing center (PPC) that will service multiple source photovoltaic/engine hybrid and demand reduction applications.		Regulatory Impact Analysis - 1997
PhthalatePlasticizersProduction	VOC	Pending	Stationary	EPA Measures - 1999
Planningforfuturegreenspaces				EACs - 2004
PlasmaEnhancedESP		Emission capture systems	Stationary	NEET Database - ongoing
PlasmaTreatmentofAutomotiveExhaust28	NOx/VOC	Plasma (ionized gas) treatment of lean-burn exhaust emissions in both gasoline and diesel lean-burn engines. Current plasma systems (gas-phase plasma discharges) appear to have low NOx conversion and/or high energy consumption. An alternative approach is being pursued to improve emission reduction and energy consumption.		Regulatory Impact Analysis - 1997
Plastic,Rubber,andGlassCoatings	VOC	VOC content limits for compliant coatings + Coating applicator transfer efficiency + Emission capture and control system for non-compliant coatings	Stationary	EPA Measures - 1999
PlasticPartsandProducts(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999
PlasticsProducts;Specific;(ABS)Resin	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
PleasureCraftCoatingOperations	VOC	VOC content limits for applicable coatings + Solvent cleaning and storage comply with Rule 1171	Stationary	EPA Measures - 1999
PlywoodandCompositeWoodProducts	VOC	Pending	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
PM10AmbientAirSampling		Ambient Monitoring	Monitoring	NEET Database - ongoing
PolyesterResinOperations	VOC	Polyester residual monomer content limit + Process requirements to limit VOC loss + Spray applicator requirements + Solvent cleaning operations comply with Rule 1171 + Emission control system for non-compliant polyester materials	Stationary	EPA Measures - 1999
PolyetherPolyolsProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/polyol/polyolpg.html	Stationary	EPA Measures - 1999
PolyethyleneTerephtalateProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr4/pr4pg.html	Stationary	EPA Measures - 1999
Polymericcoatingofsupportingsubstratesfacilities	VOC	Carbon adsorption or Incineration	Stationary	EPA Measures - 1999
Polyolresins,crosslinkersandreactivediluents14	VOC	Recent developments with polyol resins, crosslinkers and reactive diluents will enable the future formulation of higher-solids, ultralow-VOC coatings and, ultimately, of solventless liquid coatings. In spite of the increasing popularity of waterborne and powder coatings, many companies see a future for higher-solids coatings and are investing in new technology, particularly for industrial (original equipment manufacturer) and special-purpose applications.		Regulatory Impact Analysis - 1997
PolystyreneProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr4/pr4pg.html	Stationary	EPA Measures - 1999
Polyurethanereactive(PUR)technology3	VOC	New, accelerated-cure versions of hot-melt adhesives technology for recreational vehicle and building components customers has been developed. Also applicable to the profile wrapping segment of the woodworking industry, which can use the adhesives to make window and door components that withstand hot and cold temperatures, rain and snow. Users can increase process speeds, while at the same time produce		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		stronger products in a solvent-free environment.		
pooling;flexschedules;alternatefuel				EACs - 2004
Port/harborelectrification	NOx/VOC		Mobile	CT Memo - 2005
Portablefuelcontainerbuybackpromotions	NOx/VOC		Stationary	CT Memo - 2005
PortableToxicChemicalDetector		Fugitive emission controls	Stationary	NEET Database - ongoing
Powder-basedprimers20	VOC	GM is working on a prototype powder primer to try on one of its vehicle lines; such a primer would contain no VOCs. New chemistry research is being conducted on both epoxy and polyester powder primers.		Regulatory Impact Analysis - 1997
PP3-FFuelOilTreatment,		Fuels and fuel additives	Pollution Prevention	NEET Database - ongoing
PP-CCylinderoiladditive		Petroleum, oils, and lubricants	Pollution Prevention	NEET Database - ongoing
Preconditioningofdieselengines	NOx		Offroad	SAQMD Clean Air Plan - 2003
Prepolymersandultralow-viscosityreactivediluentstechnologies10	VOC	Two technologies have been developed to help solve formulation problems with decreased levels of VOCs in two-part, solventborne polyurethane coatings. One technology is a process to make narrow-molecular-weight-distribution, isocyanate-terminated polyurethane prepolymers. The other technology is the creation of ultralow-viscosity oxazolidine and aldimine/oxazolidine reactive diluents. Use of these materials achieves low-VOC formulations, controlled reactivity of low-VOC systems and enhanced coating performance, as well as formulation flexibility and ease of use.		Regulatory Impact Analysis - 1997
PrimaryCopperSmelters;ReverbSmeltingFurnace	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
Printing,Coating,andDyeingOfFabrics	VOC	Pending	Stationary	EPA Measures - 1999
Printing/Publishing(SurfaceCoating)	VOC	See Website - http://www.epa.gov/ttn/uatw/print/printpg.html	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
Printing-Letterpress	VOC	Carbon Adsorption	Stationary	EPA Measures - 1999
Printing-Lithographic	VOC	New CTG to Other Areas	Stationary	EPA Measures - 1999
ProcessHeaters	NOx	Limits of 0.036 lb/mmBtu for gas and 0.05 lb/mmBtu for other liquid fuels+ limits same as mid-sized industrial boilers for gas, distillate oil and residual oil-fired units	Stationary	EPA Measures - 1999
ProcessHeaters	VOC	Pending	Stationary	EPA Measures - 1999
Processheaters(revised)	NOx	NG - ULNB 0.05 lb/mm Btu / Oil - ULNB 0.14 lb/mm Btu	Stationary	EPA Measures - 1999
ProcessHeaters-DistillateOil	NOx	Low NOx Burners + Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-DistillateOil	NOx	Low NOx Burners + Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-DistillateOil	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-DistillateOil	NOx	Ultra Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-DistillateOil	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-DistillateOil	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-DistillateOil	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ProcessHeaters-LPG	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-LPG	NOx	Ultra Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-LPG	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-LPG	NOx	Low NOx Burners + Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-LPG	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-LPG	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ProcessHeaters-LPG	NOx	Low NOx Burners + Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-NaturalGas	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-NaturalGas	NOx	Ultra Low NOx Burners	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
ProcessHeaters-NaturalGas	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-NaturalGas	NOx	Low NOx Burners + Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-NaturalGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-NaturalGas	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ProcessHeaters-NaturalGas	NOx	Low NOx Burners + Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-OtherFuel	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ProcessHeaters-OtherFuel	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-OtherFuel	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-OtherFuel	NOx	Ultra Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-OtherFuel	NOx	Low NOx Burners + Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-OtherFuel	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-OtherFuel	NOx	Low NOx Burners + Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-ProcessGas	NOx	Low NOx Burners + Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-ProcessGas	NOx	Low NOx Burners + Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-ProcessGas	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ProcessHeaters-ProcessGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-ProcessGas	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-ProcessGas	NOx	Ultra Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-ResidualOil	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ProcessHeaters-ResidualOil	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-ResidualOil	NOx	Low NOx Burners + Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-ResidualOil	NOx	Ultra Low NOx Burners	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
ProcessHeaters-ResidualOil	NOx	Low NOx Burners + Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-ResidualOil	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-ResidualOil	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProheatGen4			Mobile	NEET Database - ongoing
Propane/ButaneFuelBlends19	NOx/VOC	Emissions testing on multiple light-duty vehicles using propane/butane blends, which may be cost-effective low-emission alternative fuels for light-, medium-, and heavy-duty vehicles. It is expected that the proposed project will result in emission benefits and help AQMD, ARB, the petroleum industry, and automobile manufacturers identify a potentially clean, cost-effective alternative fuel with capability for wide-scale application to all types of internal combustion engines. Generate data on emissions, lubricant compatibility, combustion chamber and intake valve deposits, component durability, and catalyst durability. Operate and evaluate three or more new vehicles for a minimum of 50,000 miles using selected butane/propane blends. Conduct periodic emission tests during mileage accumulation to determine the effects of operation on regulated emissions, speciated hydrocarbons, and the specific reactivity (ozone-forming potential) of exhaust emissions. At test completion dismantle engines and quantify and rate deposits.		Regulatory Impact Analysis - 1997
Protectnaturalareas;minimizeuseof				EACs - 2004
ProteinExchangeMembraneFuelCell(PEMFC)9	NOx/VOC	These cells operate at relatively low temperatures (about 200 F), have high power density, can very their output quickly to meet shifts in power demand, and are suited for applications, such as in automobiles, where quick startup is required. According to the U.S. DOE, "they are the primary candidates for light-duty vehicles, for buildings,		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		and potentially for much smaller applications such as replacements for rechargeable batteries in video cameras." Fueling stations are a large obstacle in introducing hydrogen powered vehicles to the public on a large scale. From the best calculations available, fueling stations are cost effective, and they are starting to be built across the country. A fueling station will cost $4.5 million to build, but will produce as well as dispense the fuel. Hydrogen fuel costs 3.8 cents per mile, while gas costs 4.5 cents per mile. 11 pounds of hydrogen would provide a 400 mile driving range for a mid-sized car. The tank for this fuel is 3 times the size of a gas tank, and fueling would take about ten minutes.		
ProtonExchangeMembraneFuelCells(PEMFC)5	NOx/VOC	These cells operate at relatively low temperatures (about 200 degrees F), have high power density, can vary their output quickly to meet shifts in power demand, and are suited for applications, such as automobiles, where quick startup is required. According to DOE, "they are the primary candidates for light-duty vehicles, for buildings, and potentially for much smaller applications such as replacements for rechargeable batteries in video cameras."		Regulatory Impact Analysis - 1997
Providefreepublictransit	NOx		Landuse	SAQMD Clean Air Plan - 2003
Providefreepublictransitduringepisodes	NOx		Landuse	SAQMD Clean Air Plan - 2003
Providefreereplacementgascapstolight-andmedium-dutyvehicleowners	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
Provideincentivesformicroturbineenginesinsmallpowergenerationapplications	VOC		Offroad	SAQMD Clean Air Plan - 2003
ProvideTruckstopElectrificationForIn-TruckServices	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
Publicawarenessprogram				EACs - 2004
PublicEducationonNOxandROGsourcesinSchoolsandSmallBusinesses	NOx		Landuse	SAQMD Clean Air Plan - 2003
PubliclyOwnedTreatmentWorks	VOC	Source reduction approaches requiring industrial pretreatment controlling VOCs where they are most concentrated	Stationary	EPA Measures - 1999
PubliclyOwnedTreatmentWorks(POTW)Emissions	VOC	See Website - http://www.epa.gov/ttn/uatw/potw/potwpg.html	Stationary	EPA Measures - 1999
PulpandPaper	VOC	Maximum Achievable Control Technology standards for the integrated pulp and paper industry	Stationary	EPA Measures - 1999
PulpandPaperProduction	VOC	Pending	Stationary	EPA Measures - 1999
Purchase15CNGvehicles				EACs - 2004
Purchase1hybridelectricbus				EACs - 2004
Purchase2alternativefuelvehicles				EACs - 2004
PVManufac-turing(PVMat)	NOx/VOC	One of the primary hindrances to PV market acceptance is the difficulty in taking laboratory results and replicating them under real world conditions. A public-private partnership, funded for 5 years at $118 million, sought to address this problem by improving PV manufacturing processes, module development, and balance of system (BOS) components. For example, BOS components account for 50% of the system cost but 99% of repair issues. The goal was to increase PV module supply [currently demand outstrips supply (as of May, firms are taking no further orders for 1997)] and ensure that the U.S. production remains internationally competitive.		Regulatory Impact Analysis - 1997
QC-TILDAS		Other	Stationary	NEET Database - ongoing
QuaternaryAmmoniumCompoundsProduction	VOC	Pending	Stationary	EPA Measures - 1999
RACTatmajorsources				EACs - 2004

Measure	Pollutant	Description	Source	Source Code
RayonProduction	VOC	Pending	Stationary	EPA Measures - 1999
RCL®CatalyticCombustion		Combustion	Pollution Prevention	NEET Database - ongoing
ReasonablyAvailableControlTechnology(RACT)for25tpyVOCsources	VOC			MA Strategies - 2004
ReciprocatingInternalCombustionEngines	NOx	Limits for rich-burn gas-fired engines between 0.4-0.8 g/bhp-hr, for lean-burn engines as low as 0.5-0.6 g/bhp-hr and for diesel engines at 0.5-1.1 g/bhp-hr.	Stationary	EPA Measures - 1999
ReciprocatingInternalCombustionEngines	VOC	Pending	Stationary	EPA Measures - 1999
Reducedenginetaxi,aircrafttowing,congestionreduction	NOx		M15 Airports	Regulatory Impact Analysis - 1997
Reducedidlingscenario	NOx		Airports	Regulatory Impact Analysis - 1997
Reducelocomotiveidling				EACs - 2004
ReduceParkingFeesatFacilitiesOutsidetheBeltwayAdjacenttoMetro		Reduce parking fees at Metro parking facilities or county/city managed facilities outside of the Beltway that are located near Metro stations.	Mobile	DC RACM - 2003
ReducethenumberofpublicparkingspacesintheCityofSacramentoby25%	NOx		Landuse	SAQMD Clean Air Plan - 2003
ReductionsonNOxRACTfornon-NOxBudgetunits	NOx/VOC		Stationary	CT Memo - 2005
RefineryFlares	NOx	Adoption of a Flare Monitoring and Recording Plan	Stationary	EPA Measures - 1999
ReformulatedGasoline	NOx/VOC	Opt into the federal reformulated gasoline program	Mobile	EPA Measures - 1999
ReformulatedGasoline				CT RACM - 2001
ReformulatedGasoline-PhaseI3	VOC		Mobile	CT Memo - 2005
Reformulationsofaerosolproducts(suchasspraypaint,rustproofing,andWD-40)	VOC			MA Strategies - 2004
RegenerativeThermalOxidizer		Emission capture systems	Stationary	NEET Database - ongoing
RegulatesmallICengines				EACs - 2004

Measure	Pollutant	Description	Source	Source Code
Regulationofadditionalprintingoperations	NOx/VOC		Stationary	CT Memo - 2005
Removalofexemptiononcutbackasphaltuse	NOx/VOC		Area	CT Memo - 2005
RenewablePortfolioStandards(DPUC)--C.G.S.section16-245a	NOx/VOC		Stationary	CT Memo - 2005
Replace/retrofitconstructionequip				EACs - 2004
Repowerheavy-dutydieselvehicleswithnewer,loweremittingengines	NOx		On-Road	SAQMD Clean Air Plan - 2003
Repoweroldunitswith2004standardcertifiedengines	NOx/VOC		M6 On-road heavy duty diesel	Regulatory Impact Analysis - 1997
Repowerwithnaturalgasengines	NOx		M5 On-road heavy duty diesel	Regulatory Impact Analysis - 1997
Requireasurchargetobepaidbydriversduringthesummerseasonbasedonthenumberofdrivingmiles	NOx		Landuse	SAQMD Clean Air Plan - 2003
RequirecaptureefficiencytestingatallmajorsourcesofVOC,andmorestringentreportingrequirements,includingon-lineCEMs.	VOC			MA Strategies - 2004
Requirelow-NOxfuelforagriculturalequipment		Require agricultural equipment to use low-NOx fuel during ozone season	Non-road	DC RACM - 2003
RequireOn-BoardDiagnosticsonNewDieselandGasolineTrucksandBuses	NOx		Mobile	SAQMD Clean Air Plan - 2003
Requirepassengervehiclesnotmeetingthestandardsofpassengercarstopayanannualfeeand/orafeeuponpurchase	NOx		Landuse	SAQMD Clean Air Plan - 2003
RequireSNCRatallmajorNOxsources(50tpy+)	NOx			MA Strategies - 2004
RequirethatCongestionMitigationAirQuality(CMAQ)fundsbeusedonlyforprojectsthatsignificantlyimproveairquality	NOx			SAQMD Clean Air Plan - 2003

Measure	Pollutant	Description	Source	Source Code
RescindRestrictedEmissionStatuspermitsandrequireemissionrateswithRACTorBARCT	VOC			MA Strategies - 2004
ResidentialFuelCells7	NOx/VOC	Fuel cell that is small enough to fit into a closet and capable of generating 2-10 kW of power.		Regulatory Impact Analysis - 1997
ResidentialLNBwaterheater				EACs - 2004
ResidentialSpaceandWaterHeaters	NOx	Set limit on new sources of 0.09 lbs//mmBtu of heat output + incentives to replace older space and water heaters	Stationary	EPA Measures - 1999
Restrictionsonoutdoorwoodburningfurnaces	NOx/VOC		Stationary	CT Memo - 2005
RestrictionsonwoodstovesnotsubjecttoNSPS;noburndays	NOx/VOC		Stationary	CT Memo - 2005
Restrictorbancertainoff-roadengineuse--e.g.,target2-strokeenginesunder5horsepower(limitsorbansonlawnmowers,jetskis,ORVs,chainsaws,weedwackers,andleafblowers)	VOC			MA Strategies - 2004
RetrofitenginesforNOx:	NOx		M9 Non-road diesel	Regulatory Impact Analysis - 1997
RetrofitenginesforNOx:waterinjection/emulsion	NOx		M9 Non-road diesel	Regulatory Impact Analysis - 1997
ReviseallexistingAirPermitsfor25tpyorhigherVOCsourcestorequirestrictermonitoring,recordkeepingandcontrollevels(wouldhitthelargestdozenorsoemitterse.g.,Rexam,Globe)	VOC			MA Strategies - 2004
RocketTestingFacilities	VOC	Pending	Stationary	EPA Measures - 1999
RotaryRegenerativeOxidizerwithElectricDriveandFulFlowOn-LineBake-out		Emission capture systems	Stationary	NEET Database - ongoing
RotaryValveRTO(RL)		Process vent gas treatment	Stationary	NEET Database - ongoing
RTIDryRegenerableAlkaliCarbonateProcess		Emission capture systems	Stationary	NEET Database - ongoing
Rubberandplasticsmanufacturing	VOC	SCAQMD o low VOC	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
RubberTireManufacturing	VOC	Pending	Stationary	EPA Measures - 1999
Rubbertiremanufacturingindustry	VOC	VOC capture systems + Control devices	Stationary	EPA Measures - 1999
SafeYellowIC8	VOC	A product has been developed for enhancing powder coatings by increasing the flow of the resins, eliminating orange peel and allowing the replacement of more expensive organic pigment on a one for one basis. The manufacturers of this product say it is an improved coating with lower costs.		Regulatory Impact Analysis - 1997
Sand/Gravel;Dryer	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
Schoolbusengineretrofit				EACs - 2004
Schoolbusretrofits,newlow-emissionschoolbusesanduseofultralowsulfurdieselfuel	NOx/VOC		Mobile	CT Memo - 2005
ScreenPrintingOperations	VOC	VOC content of screen printing materials + Solvent cleaning and storage and disposal of VOC-containing materials comply with Rule 1171	Stationary	EPA Measures - 1999
season-EACareas				EACs - 2004
SecondaryAluminumProduction;SmeltingFurnaces/Reverb	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
Selectivecatalyticreduction(SCR)	NOx		M11 Diesel locomotives	Regulatory Impact Analysis - 1997
SemiconductorManufacturing	VOC	Solvent cleaning station requirements + Emission control system on photoresist operations +C content limits for cleanup solvents	Stationary	EPA Measures - 1999
SemiconductorManufacturing	VOC	Pending	Stationary	EPA Measures - 1999
ServiceStations-StageI	VOC	Vapor Balance	Stationary	EPA Measures - 1999
Setloweremissionsstandardsfornewhandheldandnon-handheldlawnandgardenequipment/State/Federal	NOx		Offroad	SAQMD Clean Air Plan - 2003
Setloweremissionstandardsfornewoff-roadspark-	NOx		Offroad	SAQMD Clean Air Plan - 2003

Measure	Pollutant	Description	Source	Source Code
ignitedengines(<25hp)				
Setmorestringentemissionstandardsfornewmarinevesselsandpursueapproachestoreduceland-basedportemissions	VOC		Offroad	SAQMD Clean Air Plan - 2003
SetNewConsumerProductsLimitsfor2006	VOC		Area	SAQMD Clean Air Plan - 2003
SetNewConsumerProductsLimitsfor2008–2010	VOC		Area	SAQMD Clean Air Plan - 2003
Setuserestrictionsforeachonroadvehicletypeduringepisodes	NOx		Landuse	SAQMD Clean Air Plan - 2003
SetVOC/ROG/NOxstandardfordieselfueledrefrigerationunitsontrucks	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
ShellGlobalSolutionsThirdStageSeparator(TSS)		Emission capture systems	Stationary	NEET Database - ongoing
Shiftelectricloadprofile				EACs - 2004
ShipbuildingandShipRepair	VOC	Enhanced application techniques achieving a minimum 65-percent transfer efficiency + California's general limit of 340 grams per liter for marine coatings.	Stationary	EPA Measures - 1999
ShipbuildingandShipRepair(SurfaceCoating)	VOC	See Website - http://www.epa.gov/ttn/uatw/shipb/shipbpg.html	Stationary	EPA Measures - 1999
SidelSRUfluegascondensers		Emission capture systems	Stationary	NEET Database - ongoing
SmallCompressionIgnitionDirectInjection(CIDI)DieselEngines5	VOC	Research is being conducted into lightweight engine materials, alternative fuels, and catalytic converters in an effort to apply the advantages of CIDI engines (high thermal efficiency, operating flexibility, low start-up emissions) to passenger cars, while controlling negative characteristics (heavy engine components and production of sub-optimal levels of NOx and particulate emissions).		Regulatory Impact Analysis - 1997
SmallIndustrial,Institutional,andCommercialBoilers,SteamGenerators,andProcessHeaters	NOx	NOx emission limit, methods to meet the limit is not specified	Stationary	EPA Measures - 1999
SmallSourceBACT			Stationary	CT Memo - 2005

Measure	Pollutant	Description	Source	Source Code
Smokingvehicleban				EACs - 2004
SOCMIbatchprocesses	VOC	Vapor collection system + incineration	Stationary	EPA Measures - 1999
SOCMIbatchreactorprocesses	VOC	New CTG	Stationary	EPA Measures - 1999
SOCMI-Distillation	VOC	New CTG level control	Stationary	EPA Measures - 1999
SOCMIfugitives	VOC	Equipment and maintenance	Stationary	EPA Measures - 1999
SOCMI-ReactorProcesses	VOC	New CTG level control	Stationary	EPA Measures - 1999
sodiumbicarbonateinjection		Emission capture systems	Stationary	NEET Database - ongoing
Solae-switchtoalternativefuel				EACs - 2004
SolidOxideFuelCell(SOFC)2	NOx/VOC	The solid oxide fuel cell generates power electrochemically, avoiding the air pollutants and efficiency losses associated with combustion processes. Fuels cells operate continuosly, generating power as long as natural gas, coal-derived gas, or other hydrocarbon fuels are supplied. The solid electrolyte allows for the simplest of fuel cell plant designs, and requires no external fuel reforming. Capable of using either natural gas or cleaned coal gas, it emits no sulfur pollutants and as much as 60 to 65 percent less carbon dioxide than a conventional coal-burning plant.		Regulatory Impact Analysis - 1997
SolidWasteDisposal;Government;OtherIncinerator;Sludge	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
SolventCleaningOperations	VOC	Compliant solvent requirement by cleaning application + Cleaning devices and methods requirement + Storage and disposal requirements + Emission control system for non-compliant solvents and cleaning procedures	Stationary	EPA Measures - 1999
SolventCleaningOperations–Cleaningofcoatings/adhesivesapplicationequipment	VOC	VOC-content specifications for solvents based on vapor pressure or emission capture and control systems	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
SolventCleaningOperations–Cleaningofinkapplicationequipment	VOC	VOC-content specifications for solvents based on vapor pressure or emission capture and control systems	Stationary	EPA Measures - 1999
SolventCleaningOperations–Cleaningofpolyesterresinapplicationequipment	VOC	VOC-content specifications for solvents based on vapor pressure or emission capture and control systems	Stationary	EPA Measures - 1999
SolventCleaningOperations–Repair&maintenancecleaning	VOC	VOC-content specifications for solvents based on vapor pressure or emission capture and control systems	Stationary	EPA Measures - 1999
SolventCleaningOperations–Surfacecleaningformfg,&surfaceprepforcoating,adhesive,orinkapplication	VOC	VOC-content specifications for solvents based on vapor pressure or emission capture and control systems	Stationary	EPA Measures - 1999
SolventCleaningOperations–Ultravioletinkremovalfromgraphicarts	VOC	VOC-content specifications for solvents based on vapor pressure or emission capture and control systems	Stationary	EPA Measures - 1999
SolventDegreasers	VOC	Operating practice requirements + VOC content limits of solvents + Clean Air Solvent Certificates	Stationary	EPA Measures - 1999
SpaceHeaters-DistillateOil	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
SpaceHeaters-DistillateOil	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
SpaceHeaters-DistillateOil	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
SpaceHeaters-DistillateOil	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
SpaceHeaters-NaturalGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
SpaceHeaters-NaturalGas	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
SpaceHeaters-NaturalGas	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
SpaceHeaters-NaturalGas	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
SpaceHeaters-NaturalGas	NOx	Oxygen Trim + Water Injection	Stationary	EPA Measures - 1999
SpandexProduction	VOC	Pending	Stationary	EPA Measures - 1999
Stage1vaporrecovery				EACs - 2004
Stage1vaporrecovery				EACs - 2004

Measure	Pollutant	Description	Source	Source Code
Stage1VaporRecovery>25,000				EACs - 2004
Stage1vaporrecovery-EACareas				EACs - 2004
StageIIVaporRecovery	VOC	Rules to achieve a 95-percent level of control efficiency + require California certification of equipment + limit exemptions to facilities with throughputs below 10,000 gallons per month + semi-annual inspections.+ Stage II program in Moderate nonattainment areas	Stationary	EPA Measures - 1999
StageIIVaporRecovery				CT RACM - 2001
StageIIVaporRecovery:Pressure-VentValves	VOC		Stationary	CT Memo - 2005
StageI-truckunloading	VOC	Vapor balance	Stationary	EPA Measures - 1999
StageI-truckunloading	VOC	Vapor balance + PN valves	Stationary	EPA Measures - 1999
StageIVaporRecovery				EACs - 2004
StageIVaporRecoveryatGasolineServiceStations	VOC		Stationary	CT Memo - 2005
Stakeholderdevelopment				EACs - 2004
StarchManufacturing;CombinedOperations	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
State&LocalFleetReplacement		Replace public sector gasoline-fueled automobile fleet with hybrid vehicles (i.e. Toyota Prius)	Mobile	DC RACM - 2003
StationaryGasTurbines	NOx	Continuous in-stack NOx and oxygen monitoring system + Selective Catalytic Reduction	Stationary	EPA Measures - 1999
StationaryInternalCombustionEngines	NOx	NOx emission limit	Stationary	EPA Measures - 1999
StationCarsToPromoteUserFriendlinessOfMassTransportation	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
SteelFoundries	VOC	Pending	Stationary	EPA Measures - 1999
SteelFoundries;HeatTreatingFurnaces	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
SteelProduction;SoakingPits	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
StorageTankDegassing	VOC	Degassing procedures required + Control device to capture VOCs displaced from tanks	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
StorageVesselsforPetroleumLiquids	VOC	Floating roofs	Stationary	EPA Measures - 1999
Strictercontrolsonillegalburning				EACs - 2004
Styrene-AcrylonitrileProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr4/pr4pg.html	Stationary	EPA Measures - 1999
SubsidizePurchaseofBikeAccessories	NOx		Landuse	SAQMD Clean Air Plan - 2003
SulfatePulping-RecoveryFurnaces	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
SulfatePulping-RecoveryFurnaces	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
SulfatePulping-RecoveryFurnaces	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
SulfatePulping-RecoveryFurnaces	NOx	Oxygen Trim + Water Injection	Stationary	EPA Measures - 1999
SulfatePulping-RecoveryFurnaces	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
SupercriticalCO2asapaintsolvent30	VOC	Supercritical CO2 is being investigated as a replacement for traditional paint solvents, eliminating VOC emissions.		Regulatory Impact Analysis - 1997
SuperplasticAdvancedManifolds3	VOC	Double-wall +manifold offers the potential for substantial reductions in cold-start emissions by allowing the inner tube to heat quickly, resulting in a quicker "light-off" of the catalytic converter, thereby reducing hydrocarbon emissions.		Regulatory Impact Analysis - 1997
Supportcetanedieselfueladditive				EACs - 2004
Surfacecoatingofmetalfurniture	VOC	Low solvent coatings	Stationary	EPA Measures - 1999
SurfaceCoatingofPlasticParts	VOC	HVLP spray or other techniques achieving a minimum transfer efficiency of 65 percent + VOC-content limits	Stationary	EPA Measures - 1999
SurfaceCoatingOperation;CoatingOvenHeater;NaturalGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
Switchvehiclestobio-diesel				EACs - 2004
Syntheticfibermanufacture	VOC	Carbon Adsorber	Stationary	EPA Measures - 1999
SyntheticFiberProduction	VOC	Solvent recovery systems including carbon adsorption	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
SyntheticOrganicChemicalManufacturing	VOC	See Website - http://www.epa.gov/ttn/uatw/hon/honpg.html	Stationary	EPA Measures - 1999
SyntheticOrganicChemicalManufacturingIndustry(SOCMI)ReactorandDistillationProcesses	VOC	98-percent reduction in emissions from SOCMI sources + exemptions based on EPA's CTG with a more stringent total resource effectiveness (TRE) cutoff for exemptions	Stationary	EPA Measures - 1999
TD-4100On-LineHydrocarbonMonitor		Emissions Monitoring	Monitoring	NEET Database - ongoing
TerephthalicAcidManufacture	VOC	Incineration	Stationary	EPA Measures - 1999
Testo350		Emissions Monitoring	Monitoring	NEET Database - ongoing
TextileFinishing	VOC	Add-on controls of 95 percent or better control efficiency + capture efficiency based on best engineering practices + possible exemption of low-solvent inks	Stationary	EPA Measures - 1999
thecaptureandcontrolofVOCemissionsfromlivestockwaste	VOC		Stationary	SAQMD Clean Air Plan - 2003
TheExpertFurnaceSystemOptimizationProcess(EFSOP)forEAFs		Combustion	Pollution Prevention	NEET Database - ongoing
Thegraphicartsindustry;Publicationrotogravureprinting	VOC	Carbon adsorption	Stationary	EPA Measures - 1999
ThermalOxidizers		Emission capture systems	Stationary	NEET Database - ongoing
ThermalOxidizerwithEnergyRecovery		Process vent gas treatment	Stationary	NEET Database - ongoing
ThermoPV(TPV)	NOx/VOC	Using superconducting materials to turn solar energy into heat to creates steam to then generate electricity.		Regulatory Impact Analysis - 1997
Thin-layercrystallinesilicon	NOx/VOC	A solar film on which research effort is focused because it is likely to blend the production ease of other film technologies with the efficiency of silicon crystals.		Regulatory Impact Analysis - 1997
Tightenstandardsforbulkterminalgasolinestorageandtransferin7.24(2)--	VOC			MA Strategies - 2004

Measure	Pollutant	Description	Source	Source Code
suchthatthevaporrecoveryunitsarerequiredtooperateatloweremissionrates.				
Tighteremissionstandardsforpleasurecraft/State/Federal	VOC		Offroad	SAQMD Clean Air Plan - 2003
TORBEDTM-ProcessReactorTechnologies		Other	Stationary	NEET Database - ongoing
Trafficmarkings	VOC	South Coast Phase III	Stationary	EPA Measures - 1999
Trafficmarkings	VOC	South Coast Phase I	Stationary	EPA Measures - 1999
Trafficmarkings	VOC	South Coast Phase II	Stationary	EPA Measures - 1999
Trafficmarkings	VOC	AIM Coating Federal Rule	Stationary	EPA Measures - 1999
TransitPrioritization--QueueJumps		Provide queue jumps for buses at over-capacity signalized intersections throughout the region. Queue jumps allow buses to use a shoulder or other designated lane to bypass intersection queues and move forward towards the stop line.	Mobile	DC RACM - 2003
Transitprograms				EACs - 2004
TransportRefrigerationUnits(TRUs)	PM2.5		Mobile	CT Memo - 2005
TreatmentStorageandDisposalFacilities	VOC	Expedited process for upgrading permits + air pollution control regulations for TSDFs modeled after EPA's hazardous waste rules	Stationary	EPA Measures - 1999
Treeplantingprogram				EACs - 2004
Truckstopelectrification	PM2.5		Mobile	CT Memo - 2005
Truckstopelectrification				EACs - 2004
TSDFs	VOC	Phase I & II rules	Stationary	EPA Measures - 1999
UltraFiltration24	VOC	Decorative Coatings' technology center at Montataire, France is developing new technologies to improve waterborne paint waste reuse, thereby reducing new paint production and associated emissions. One of its initiatives is wastewater treatment by Ultra Filtration (UF). This is a major project, because up to 12 European sites may be		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		involved. UF is a nonchemical membrane separation process, which separates the effluent into two streams: permeate (the treated water) and concentrate (UF sludge). The pollution level of the permeate is equivalent to that obtained after conventional treatment, but it is completely free of paint solids, which are held in the concentrate. So far, UF has proved to be an efficient solution for treating effluent from waterborne paint production. Industrial application of UF is economical provided that the concentrate is reused in making paint.		
UndergroundStorageTankVents	VOC	Pressure-vacuum valves on open vent pipes of storage tanks equipped with Stage I vapor recovery	Stationary	EPA Measures - 1999
Updatedevelopmentregulations				EACs - 2004
UpgradeVOCRACT	NOx/VOC		Stationary	CT Memo - 2005
UreaResins-General	VOC	RACT Extended to Other Areas	Stationary	EPA Measures - 1999
usage;restrictvehicleidletimes				EACs - 2004
Uselandfillgas;supportNCGreenPower				EACs - 2004
Useremotesensorsandlicenseplatephotostoidentifysmokingvehicles	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
UtilityBoilers	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
UtilityBoilers	NOx	T-fired and wall-fired coal units emissions of 0.15 lb/mmBtu or below + oil and gas units emissions of 0.05 lb/mmBtu + emission rates based on energy output	Stationary	EPA Measures - 1999
Utilityboilers	NOx	Gas / oil - SCR 0.08 lb/mmBtu	Stationary	EPA Measures - 1999
UtilityBoilers	NOx	Natural Gas- 0.2lb/mmBtu; Liquid Fossil Fuel - 0.3 lb/mmBtu; Subituminous Coal - 0.5 lb/mmBtu; Lignite- 0.8 lb/mmBtu; Bituminous Coal- 0.6 lb/mmBtu	Stationary	EPA Measures - 1999
UV/ozoneoxidationtechnique23	VOC	Technology development and demonstration		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		activity targeted for Department of Defense painting operations to validate the recirculation/partitioning concept used with a novel UV/ozone oxidation technique to eliminate HAP and VOC discharges from paint spray booths and other booth designs. Preliminary results suggest that booth discharge flow reductions of up to 75% can be achieved.		
VacuumInsulatedCatalyticConverter29	NOx/VOC	Using a form of vacuum insulation and phase-change heat storage technology, the converter remains at operating temperatures for more than 24 hours after the engine has been turned off. Potential exists to reduce automotive emissions to ultra-low emission vehicle (ULEV) levels, or even to equivalent zero emission vehicle (EZEV) standards in some cases.		Regulatory Impact Analysis - 1997
VariousMiscellaneousPolymerChemicalsProduction	VOC	Pending	Stationary	EPA Measures - 1999
VegetableOilProduction	VOC	Pending	Stationary	EPA Measures - 1999
VehicleI/Mprogram				EACs - 2004
Vehicleinspectionincludingdiesel				EACs - 2004
VinylChlorideEmissions	VOC	Emission control system with continuous stack monitor	Stationary	EPA Measures - 1999
VOCemissionlimitsformarinecoatings	VOC		Stationary/Area	SAQMD Clean Air Plan - 2003
VOCemissionlmitsforCommercialCookingsuchascharbroilersanddeepfatfryers	VOC		Area	SAQMD Clean Air Plan - 2003
VOCemissionsformthepolymermanufacturingindustry	VOC	Incineration of emissions in boiler or flare	Stationary	EPA Measures - 1999
VOClimitsforMetalPartsandProductsinDistrictswhererulesarenotadopted	VOC		Stationary/Are	SAQMD Clean Air Plan - 2003

Measure	Pollutant	Description	Source	Source Code
			a	
VOClimitsforunregulatedcoatings	VOC		Stationary/Area	SAQMD Clean Air Plan - 2003
VOCRACTpursuanttosections182(a)(2)(A)and182(b)(2)(B)ofCleanAirAct				CT RACM - 2001
VolatileOrganicLiquidsStorage	VOC	Volatile organic liquid storage CTG + enhanced test methods, monitoring specifications and equipment specifications based on HON rule + lower vapor pressure limits for exemptions in current rules	Stationary	EPA Measures - 1999
Volatileorganicliquidstorage	VOC	Floating roof tops for tanks	Stationary	EPA Measures - 1999
Volatileorganicliquidstorage	VOC	Floating roofs	Stationary	EPA Measures - 1999
VoluntaryMobileEmissionsReductionProgram(VMEP)				TX SIP - 2000-2004
W15-590DieselFuelAdditive		Fund trial of the fuel additive W15-590 to reduce NOX emissions. The additive can be mixed with the fuel before or after delivery from the distribution center.	Mobile	DC RACM - 2003
WasteBurning--AgriculturalorOpenBurning(defined:p804ofCAFIP)	VOC	Agricultural and open burning are prohibited on a "no-burn day" which is a day declared by EPA, CARB, or local air district if an ozone exceedance (0.09 ppm) is predicted	Stationary	EPA Measures - 1999
Water-based,solvent-freeandultrahigh-solidscoatings12	VOC	Water-based, solvent free and ultrahigh-solids coatings are being considered for development for the metal office furniture industry.		Regulatory Impact Analysis - 1997
Water-basedaerosoladhesive11	VOC	Based on new technology, a water-based low VOC spray adhesive has been developed that offers bonding strength and heat resistance comparable to many typical solvent-based aerosol products. This adhesive can be used to bonds a range of substrates, including paper, fabrics, plastics, wood, and		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		aluminum.		
Water-basedcoatings13	VOC	Morton's Water-Based Polymers Technology Group is involved in developing new and improving on existing Morton waterborne products such as: a new water-based, lead-free highway paint; a zero-VOC, waterborne color dispersion paint component; and water-based automotive plastic coatings.		Regulatory Impact Analysis - 1997
Water-basedsoldermasks26	VOC	Probimer7 water-based solder masks can help cut down on the use of solvents; these water-based coatings are used on printed wiring boards in the computer industry. In addition, the division's powder coating systems are applied to buildings and cars using electrostatic charge - avoiding the need for a solvent.		Regulatory Impact Analysis - 1997
Waterborneclearcoats19	VOC	Water-based clearcoats are under investigation at Ford.		Regulatory Impact Analysis - 1997
Waterborneprimers18	VOC	Waterborne primers will be studied at three Ford truck plants and a BMW plant.		Regulatory Impact Analysis - 1997
WebOffsetLithography	VOC	New CTG	Stationary	EPA Measures - 1999
WetESP		Emission capture systems	Stationary	NEET Database - ongoing
WMATABusInformationDisplayswithMaps		Install additional information boxes with maps and schedule information. Would include schedules in languages other than English in neighborhoods where most residents speak another language	Mobile	DC RACM - 2003
WoodFlatStockCoatingOperations	VOC	VOC content limits for coatings, inks, and adhesives + Applicator requirements + Emission collection and control system for non-compliant coatings	Stationary	EPA Measures - 1999
WoodFurniture(SurfaceCoating)	VOC	See Website - http://www.epa.gov/ttn/uatw/wood/riwood.html	Stationary	EPA Measures - 1999
WoodFurnitureCoating	VOC	Incineration	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
WoodFurnitureCoating	VOC	Negotiated regulatory rules	Stationary	EPA Measures - 1999
WoodFurnitureProducts(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999
Woodfurnituresurfacecoating	VOC	New CTG	Stationary	EPA Measures - 1999
Woodfurnituresurfacecoating	VOC	MACT	Stationary	EPA Measures - 1999
Woodfurnituresurfacecoating	VOC	Add-On Controls	Stationary	EPA Measures - 1999
WoodProductsCoatings	VOC	VOC content limits of coatings and strippers + Coating applicator transfer efficiency + Approved emission control system for non-compliant coatings	Stationary	EPA Measures - 1999
Woodproductsurfacecoating	VOC	MACT	Stationary	EPA Measures - 1999
Woodproductsurfacecoating	VOC	SCAQMD Rule 1104	Stationary	EPA Measures - 1999
Woodproductsurfacecoating	VOC	Incineration	Stationary	EPA Measures - 1999
WorkwithSEQLproject				EACs - 2004
XactMulti-MetalsCEM		Emissions Monitoring	Monitoring	NEET Database - ongoing
XononCoolCombustion®		Combustion	Pollution Prevention	NEET Database - ongoing
ZeroI/Mwaiversandexemptions		Eliminate all waivers and exemptions in the I/M program	Mobile	DC RACM - 2003
Zero-VOCIndustrialMaintenanceMetalCoating31	VOC	This zero-VOC coating technology is intended for use as a topcoat on metal furniture. The resin formulation for the coating will be adjusted to provide acceptable drying times, flexibility and hardness, and ultraviolet, chemical and salt spray resistance.		Regulatory Impact Analysis - 1997
ZEVbusdemonstrationandpurchase	NOx		TCM	SAQMD Clean Air Plan - 2003
ZEVprogram		Adopt California ZEV program	Mobile	DC RACM - 2003
Zoningordinance-landscapebuffers				EACs - 2004

Appendix C – Control Measure Worksheets

This Appendix contains the Control Measure Summary Worksheets for the following source categories:

Manufacture and Use of Adhesives and Sealants
Architectural and Industrial Maintenance Coatings
Asphalt Paving (Emulsified and Cutback)
Asphalt Production Plants
Automotive Refinish Coatings
Cement Kilns
Chip Reflash (Heavy Duty Diesel Engines)
Consumer Products
Glass and Fiberglass Furnaces
Industrial, Commercial, Institutional Boilers
Industrial Surface Coatings – Fabric Printing, Coating, and Dyeing
Industrial Surface Coatings – Large Appliances
Industrial Surface Coatings – Metal Cans
Industrial Surface Coatings – Metal Coils
Industrial Surface Coatings – Metal Furniture
Industrial Surface Coatings – Miscellaneous Metal Parts
Industrial Surface Coatings – Paper and Web Coating
Industrial Surface Coatings – Plastics Parts
Industrial Surface Coatings – Wood Building Products
Industrial Surface Coatings – All Categories
Lime Kilns
Municipal Waste Combustors
Printing and Graphic Arts
Portable Fuel Containers
Reformulated Gasoline

CONTROL MEASURE SUMMARY
Manufacture and Use of Adhesives and Sealants
(SCC- 2440020000)

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Control Measure Summary

The provisions of this model rule limit emissions of volatile organic compounds (VOCs) from adhesives, sealants and primers. The model rule achieves VOC reductions through two basic components: sale and manufacture restrictions that limit the VOC content of specified adhesives, sealants and primers sold in the state; and use restrictions that apply primarily to commercial/industrial applications. By reducing the availability of higher VOC content adhesives and sealants within the state, the sales prohibition is also intended to address adhesive and sealant usage at area sources. Emissions from residential use of regulated products are addressed through the sales restrictions and simple use provisions.

A reasonably available control technology determination prepared by the California Air Resources Board (CARB) in 1998 forms the basis of this model rule. In the years 1998-2001, the provisions of the CARB determination were adopted in regulatory form in various air pollution control districts in California including the Bay Area, South Coast, Ventura County, Sacramento Metropolitan and San Joaquin Valley.

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Costs and Emissions Reductions

2002 existing measure: No existing limitations for this category

Candidate measure: Approximately 75% of VOC emissions originate from solvent-based adhesives and sealants, the remaining 25% of VOC in this category are due to water-based materials. VOC content limits have been enacted by various APCD in California from 1998 to 2001.

***Emissions reductions*:** VOC content limits for the solvent-based materials can result in 64.4% reduction in total emissions from this category. (CARB RACT/BARCT for Adhesives/ Sealants, Dec 1998)

***Control costs*:** Costs for control by reformulation are estimated by the CARB at less than $2500 / ton (1999$). Many manufacturers have either reformulated solvent-based products to reduce the VOC content or have developed low-VOC water-based latex and acrylic products, or polyurethane or silicone products in response to the adoption of similar regulations in California. Thus, the actual costs in the OTC region are anticipated to be lower.

Estimated costs for add-on controls carbon and thermal oxidizers ranged from $10,000 to $100,000 per ton.

***Timing of implementation*:** 01/01/09

***Implementation area*:** Region-wide

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Annual VOC

2002 Emissions: 35,489 tpy
2009 Emissions: 46,241 tpy
2009 Reduction: 29,438 tpy
2009 Remaining: 16,803 tpy

Summer VOC

2002 Emissions: 99.8 tpd
2009 Emissions: 129.8 tpd
2009 Reduction: 82.3 tpd
2009 Remaining: 47.5 tpd

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Interaction with other OTC Model Rules

The products regulated in this model rule do not overlap with the products regulated by either the architectural and industrial maintenance (AIM) or consumer product rules. A "coating," as contemplated in the AIM rule, is a "material applied onto or impregnated into a substrate for protective, decorative or functional purposes." Because the coating is applied only to one substrate, it is clearly distinguished from adhesives and sealants, which are defined in both the consumer product and adhesive rules by application to two surfaces; in the case of adhesives, the two surfaces are directly bonded while in the case of sealants, a gap between two surfaces is filled.

The overlap between the consumer product and adhesive rules is addressed mainly by an exemption in the adhesive rule for adhesives and sealers subject to the state's consumer products regulation.

Reference:

California Air Resources Board. *Determination of Reasonably Available Control Technology and Best Available Retrofit Technology for Adhesives and Sealants*. December 1998. Page 18 provides the emission reduction estimates for California: the ARB emission inventory estimates 45 tons per day pre-rule; reductions will range from approximately 29 to 35 tons per day. We used the low end of this range to calculate the percent reduction of 64.4% (i.e. 29 tpd/45 tpd). Page 17 provides the cost-effectiveness information: the cost of complying with the determination reflects the cost of using alternative formulations of low-VOC or water-based adhesives, sealants, and cleanup products. Ventura County APCD staff determined that the cost-effectiveness of their adhesives rule ranges from a savings of $0.53 per pound to a cost of $1.16 per pound of VOC reduced ($1,060 to 2,320). The use of add-on control equipment to comply was $4.50 to $55.00 per pound ($9,000 to $110,000).

CONTROL MEASURE SUMMARY FOR *AIM Coatings*

Control Measure Summary: VOC emission reductions can be obtained through modifying the current formulation of the coating to obtain a lower VOC content. The regulatory approach for reducing emissions is to establish VOC content limits for specific coatings that manufacturers are required to meet either through reformulating products or substituting products with compliant coatings.	**Emissions (tons/year)**
2001 existing measure: Federal AIM rules 40CFR Part 59 *Emission Reductions*: 20% reduction from uncontrolled levels *Control Cost*: $228 per ton *Timing of Implementation*: Compliance required by September 1999 *Implementation Area*: Nationwide	**VOC (with Part 59 limits)** 2002 OTR total: 124,173
2009 On-the-Way Measure: OTC Model Rule based on a model rule adopted by the California Air Resources Board (CARB) in June, 2000 for 33 air control districts. *Emission Reductions*: 31% beyond Federal AIM rule *Control Cost*: $6,400 per ton	**VOC (After OTC Model Rule)** 2009 Reduction: -25,150 2009 Remaining: 99,023
Candidate measure: Follow CARB 2007 Rulemaking. Modify rule as appropriate when complete (in time for 2009) Participate actively in CARB process. Conduct survey in 2006 for 2005 sales data. *Emission Reductions* : 6% emissions reduction For modeling purposes we split the difference between SCAQMD and OTC model rule. But we go 75% of the way toward SCAQMD on the top four sales products, and set a 250 g/l VOC limit for Industrial Maintenance coatings. The reductions are calculated using the "reg neg" spreadsheet. *Control Cost*: Cost of OTC Survey (revise with cost data from the future CARB SCM when available in 2007) SCAQMD estimated the overall cost-effectiveness for their 1999 Amendments to $13,317 per ton. For Dec. 5 2003 amendments to Rule 1113, SCAQMD estimated the cost-effectiveness to be in the range of $4,229 to $11,405 per ton *Timing of Implementation:* 01/01/09 *Implementation Area*: Throughout OTR and MRPO	**VOC (After CARB 2007 Rule)** 2009 Reduction: -5,941 2009 Remaining: 93,082

REFERENCES:

2002 Existing Measure (Federal Part 59 Rules):

E.H. Pechan & Associates, Inc., *AirControlNET Version 4.1: Documentation Report*, September 2005. Pages III-1347 and III-1348 shows the 20% reduction for the Federal Part 59 rule at a cost of $228 per ton (1990$).

2009 On-the-Books Measure (OTC Model Rule):

E.H. Pechan & Associates, Inc., *Control Measure Development Support Analysis of Ozone Transport Commission Model Rules*, March 31, 2001. Table II-6 shows 31% reduction (OTC Model Rule beyond Federal rule). Page 15 presents cost of $6,400 per ton based on CARB's 2000 Staff Report for the Suggested Control Measure for Architectural Coatings.

Candidate Measure (CARB 2007 Suggested Control Measure):

CARB is in the process of updating the 2000 Suggested Control Measure (SCM) for Architectural Coatings this year. They will be using 2004 survey data as an important resource to update the SCM, but will not begin the formal SCM update process until the survey is completed. They anticipate bringing the SCM update to our Board in mid to late 2007.

CARB is developing an analysis of costs for implementing an updated it's Suggested Control Measure. Results of the analysis will not be available until 2007.

Cost information for the South Coast Phase rules were obtained from:

South Coast Air Quality Management District. *Final Staff Report for Proposed Amended Rule 1113 – Architectural Coatings*. December 5, 2003. "estimated the cost-effectiveness to be in the range of $4,229 to $11,405 per ton of VOC reduced. The low end of the range was determined based on the retail cost of compliant coatings reported by coating manufacturers surveyed by staff. The upper end of the range was derived by estimating the increased cost at the retail level due to the increase in cost of raw materials, reformulation, testing and packaging a new product prior to commercialization." The Dec. 2003 amendments lowered the VOC limit for the following specialty coating categories: clear wood finishes including varnishes and sanding sealers, roof coatings, stains, and waterproofing sealers including concrete and masonry sealers.

South Coast Air Quality Management District. *Appendix F Addendum to Staff Report, Final Socioeconomic Impact Assessment, Proposed Amendments to Rule 1113*. May 1999. The May 1999 amendments to Rule 1113 lower VOC limits for the coating categories of industrial maintenance; non-flats; primers, sealers, and undercoaters; quick-dry enamels; quick-dry primers, sealers, and undercoaters; roof coatings; floor coatings, rust preventative coatings, stains, and waterproofing wood sealers. The overall cost-effectiveness of the proposed amendments, (total costs/total emission reductions) over the years 2002-2015, is estimated to be $13,317 per ton.

CONTROL MEASURE SUMMARY FOR EMULSIFIED AND CUTBACK ASPHALT PAVING

<table>
<tr><td>Control Measure Summary: OTC Regional Ban on Cutback Asphalt in Ozone Season, with lower VOC/Solvent Contents for Emulsified Asphalt.</td><td>VOC Emissions in Ozone Transport Region</td></tr>
<tr><td>2002 existing measures:
1. Cutback asphalt: The OTC states typically ban the use of cutback asphalt during the ozone season. States do provide various exemptions to the ban, most notably allowances may be made for cutbacks which contain less than 5% VOC.
2. Emulsified asphalt: Ten of the OTC states regulate emulsified asphalt by providing allowable VOC content limits for the various applications. Three of the states do not address emulsified asphalts in their regulation.
Control Cost: According to the 1977 CTG (EPA-450/2-77-037), which formed the basis for the existing regulations, the use of emulsified asphalts (no VOC) presented a cost savings.
Timing of Implementation: All regulations implemented in 1990s or earlier under the 1-hour ozone standard.
Implementation Area: OTC 1-hour ozone non-attainment areas.</td><td>Annual VOC
2002 cutback: 9,154 tpy
2002 emulsified: 10,379 tpy
2002 total: 19,533 tpy

Summer VOC
2002 cutback: 17.5 tpd
2002 emulsified: 38.5 tpd
2002 total: 56.0 tpd</td></tr>
<tr><td>Candidate measure: For cutback asphalt paving
Measure ID: BOTW09-AP-Cutback
Place a complete prohibition on the use of cutback asphalt during the ozone season.
Emission Reductions: to be achieved from using lower VOC content emulsified asphalt products or working outside the ozone season.
Control Cost: Negligible.
Timing of Implementation: 01/01/09
Implementation Area: All OTC 8-hour ozone non-attainment counties or individual state-wide.</td><td>Summer VOC
2009 OTB: 19.9 tpd
2009 Reduction: 19.9 tpd
2009 Remaining: 0.0 tpd</td></tr>
<tr><td>Candidate measure: For emulsified asphalt paving
Measure ID: BOTW09-AP-Emulsified
Proposes to limit ozone season use of emulsified asphalt to that which contains not more than 0.5 ml of oil distillate from the 200 mL sample using the ASTM D244 test method regardless of application (which is 0.25% VOC by volume)
Emission Reductions: to be achieved from using lower VOC content emulsified asphalt products or working outside the ozone season.
Control Cost: Negligible
Timing of Implementation: 01/01/09
Implementation Area: All OTC 8-hour ozone non-attainment counties or individual state-wide.</td><td>Summer VOC
2009 OTB: 44.2 tpd
2009 Reduction: 39.9 tpd
2009 Remaining: 4.3 tpd</td></tr>
<tr><td colspan="2">Control Measure Recommendation:
States implement most stringent measure possible to achieve VOC reductions by 2009 from OTB projections in OTC states, with out disrupting state and county paving operations.</td></tr>
<tr><td colspan="2">Brief Rationale for Recommended Strategy:
(1) Delaware already implements and complies with the most stringent proposed control strategy.
(2) The control strategy is supported by the 1977 Control Techniques Document EPA-450/2-77-037.</td></tr>
</table>

CONTROL MEASURE SUMMARY FOR
Asphalt Production Plants

Control Measure Summary: NOx emission reductions can be obtained through installation of low NOx burners and flue gas recirculation. SO2 can be reduced by reducing the sulfur in fuel limits for distillate oil to 500 ppm.	**Emissions (tons/year) in Ozone Transport Region**	
2002 existing measure: No existing limitations for this specific category have been identified.	2002 NOx Base: 2002 SO2 Base:	827 847
Candidate Measure: ***Emission Reductions*****:** NOx can be reduced between 35% to 50% with low NOx burners and flue gas recirculation (FGR). SO2 can be reduced 25% to 75% by reducing the sulfur in fuel limits for distillate oil to 500 ppm. The MANEVU data for this category is incomplete. Only major point sources are typically included in the point source database. Non-major source emissions are likely lumped into the area source inventory with other industrial/commercial boilers/heaters. The point source data projects only 800+ tons per year (TPY) of both NOx and SO2 actual emissions in 2002 for the entire region. New York actual emissions are over 600 TPY of NOx and 400 TPY of SO2. Therefore, it is unknown what the actual reductions will produce as no accurate baseline exists for both major and minor facilities. ***Control Cost*****:** Costs for control are similar to those of small to midsize boilers or process heaters. Low NOx burners range from \$500 to \$1250 per ton. While Low NOx burners in combination with FGR range from \$1000 to \$2000 per ton. Projected cost increase from lowing sulfur in distillate oil is approximately 2 to 3 cents per gallon. ***Timing of Implementation*****:** Similar to the NOx RACT procedures of 1994. Require a NOx compliance plan by the spring of 2008 with full implementation and compliance within one year (01/01/09). Unknown for sulfur-in-fuel reductions. ***Implementation Area*****:** Region-wide	**NOx** 2009 Base: 2009 Reduction: 2009 Remaining: **SO2** 2009 Base: 2009 Reduction: 2009 Remaining:	 1,276 -549 727 1,266 -950 316
Recommended Strategy: States should support rules that encourage a combination of Best Management Practices, Low NOx Burners and FGR in asphalt production plants to achieve a 20-35% reduction in NOx emissions form a 2002 base, and encourage the use of low-sulfur oil. Area source emissions from asphalt plants are not included in this summary.		

REFERENCES:

Note: The reductions estimated for this category only include emissions from point sources. Area source emissions from fuel combustion at asphalt production plants are not explicitly contained in the area source emissions. These emissions are likely lumped together in the general area source industrial and commercial fuel use category. Reductions from area source emissions at asphalt production plants are included in the ICI boiler source category.

Candidate Measure (Low NOx Burners plus FGR; low sulfur fuel oil):

The emission reduction estimates and cost-effectiveness data were provided by NYSDEC. These control efficiencies and cost-effectiveness estimates for Low NOx Burners plus FGR are generally consisten with the data presented in E.H. Pechan & Associates, Inc., *AirControlNET Version 4.1: Documentation Report*, September 2005. Information in this report for small oil-fired process heaters and ICI boilers provide similar levels of control and cost-effectiveness.

Candidate Measure (Best Management Practices)

Best Practices to Reduce Fuel Consumption and/or Lower Air Emissions: HMA industry leaders have identified a number of Best Practices that, if implemented, allow for substantial reduction in plant fuel consumption and the corresponding products of combustion including NOx. In today's business environment, there is significant incentive to reduce fuel usage. For this reason, implementing best practices to reduce fuel consumption and NOx emissions, forms the basis of a sustainable strategy.

Effective stockpile management to reduce aggregate moisture content: Current information indicates that effective stockpile management can reduce aggregate moisture content by about 25 percent, corresponding to a reduction in fuel consumption by approximately 10 - 15 percent. There are a number of ways to reduce aggregate moisture: covering stockpiles, paving under stockpiles, and sloping stockpiles are all ways that prevent aggregate from retaining moisture. Best Practices are plant- and geographic locale-specific.

Burner tune-ups: As identified in OTC Resolution 06-02 and companion control measures summaries, a burner tune-up may reduce NOx emissions by up to 10 percent. From a contractor's perspective, this also is helpful in reducing fuel consumption. In other words, there can be a direct pay-back to the business from regular burner tune-ups.

Lowering mix temperature: A Technical Working Group of FHWA is currently investigating a number of newer formulation technologies, to understand the practicality and performance of lowering mix temperatures. Substantial reductions in mix temperatures, on the order of 20 percent or more, appear to be plausible. Lowering mix temperatures, by this amount, may reduce fuel consumption, as less heat is needed to produce the mix.

Other maintenance and operational best practices: Additional practices can be employed throughout the plant to help optimize production and operations. For example, regular inspection of drum mixing flites and other measures can be taken – all in the effort to make a plant operate more efficiently, thereby using less fuel.

Plant Type	**Emission Rate (lbs NOx/ton asphalt produced)**	**% Reduction**
Area/Point Sources (State emissions option)		
Batch Mix Plant – Natural Gas	0.02	35
Batch Mix Plant – Distillate/Waste Oil	0.09	35
Drum Mix Plant – Natural Gas	0.02	35
Drum Mix Plant – Distillate/Waste Oil	0.04	35
Area/Point Sources (State technology option)		
Batch/Drum Mix Plant – Natural Gas	Low-NOx Burner Technology and/or Best Management Practices	
Batch/Drum Mix Plant – Distillate/Waste Oil	Low-NOx Burner Technology and/or Best Management Practices	

CONTROL MEASURE SUMMARY FOR
Auto Refinish Coatings – Area Source

Control Measure Summary: Limiting the concentration of solvents in Auto Refinishing Coatings in order to reduce VOC emissions. Encourage the use of high transfer-efficiency painting methods (e.g., high volume low pressure spray guns), and controls on emissions from equipment (e.g., spray gun) cleaning, housekeeping activities (e.g., use of sealed containers for clean-up rags), and operator training.	**Emissions (tons/year) in Ozone Transport Region**	
2002 existing measure: Federal Auto Body Refinishing rules 40CFR Part 59 Subpart B *Emission Reductions*: 37% reduction from Part 59 (from Pechan OTC Model Rule Report) due to Part 59 VOC content limits *Control Cost*: $118 per ton for Part 59 rules *Timing of Implementation*: Part 59 compliance required by January 1999 *Implementation Area*: Part 59 – Nationwide;	**VOC** Uncontrolled: 2002 Reduction: 2002 Base:	 50,759 -18,781 31,978
OTB Control Measure: OTC Model Rule for Mobile Equipment Repair and Refinishing *Emission Reductions*: 38% reduction from 2002 Levels in those States that adopted OTC model Rule (per Pechan March 31, 2001 OTC Model Rule Report) *Control Cost*: $1,534 per ton of VOC *Timing of Implementation*: Assuming 2007 effective date of rule, emission reductions are achieved 01/01/09. *Implementation Area*: All counties in the OTR.	**VOC:** 2009 Reduction: 2009 Remaining:	 -10,468 21,510
Candidate measure: CARB October 20, 2005 SCM Staff Report – Lowers VOC limits, combines coatings categories, simplifies recording. *Emission Reductions*: CARB estimates a 65% reduction in VOC emissions from a 2002 baseline; the OTC model rule is very similar to the CARB 2002 baseline, so a similar reduction would be expected in the OTR. *Control Cost*: $2,860 per ton *Timing of Implementation*: Assuming 2007 effective date of rule, emission reductions are achieved in beginning 01/01/09. *Implementation Area*: All counties in the OTR.	**VOC:** 2009 Reduction: 2009 Remaining:	 -13,981 7,529

REFERENCES:

2002 Existing Measure (Federal Part 59 Rules):

E.H. Pechan & Associates, Inc., *AirControlNET Version 4.1: Documentation Report*, September 2005. Pages III-1364 shows the Federal Part 59 rule at a cost of $118 per ton (1990$) and a reduction of 37 percent from uncontrolled levels.

2009 On-the-Books Measure (OTC Model Rule):

E.H. Pechan & Associates, Inc., *Control Measure Development Support Analysis of Ozone Transport Commission Model Rules*, March 31, 2001. Table II-6 shows 37% reduction for Federal Part 59 rule and 38% (OTC Model Rule beyond Federal rule). Page 17 presents cost of $1,534 per ton based on estimates used for PA Rule 129.75.

Candidate Measure (CARB 2005 Suggested Control Measure):

California Air Resources Board. *Staff Report for the Proposed Suggested Control Measure for Automotive Coatings.* October 2005. Table V-3 shows the estimated 65% reduction from 2002 baseline emissions for new automotive coatings limits. A similar reduction is expected for the OTR. Page VII-6 indicates that the cost-effectiveness of the SCM is estimated to be $1.43 per pound of VOC reduced ($2,860 per ton). The CARB SCM coating categories and VOC limits are:

Table ES-1 - Proposed Coating Categories and VOC Limits

Coating Category	VOC regulatory limit as applied Effective January 1, 2009	
	grams/liter	(pounds per gallon*)
Adhesion Promoter	540	4.5
Clear Coating	250	2.1
Color Coating	420	3.5
Multi-Color Coating	680	5.7
Pretreatment Coating	660	5.5
Primer	250	2.1
Single-Stage Coating	340	2.8
Temporary Protective Coating	60	0.5
Truck Bed Liner Coating	310	2.6
Underbody Coating	430	(3.6
Uniform Finish Coating	540	4.5
Any other coating type	250	2.1

The OTC Model Rule coating categories and VOC limits are:

OTC Model Rule		*Limit*
Coating Type	*Grams per Liter*	*Pounds per gallon*
Automotive pretreatment primer	780	6.5
Automotive primer-surfacer	575	4.8
Automotive primer-sealer	550	4.6
Automotive topcoat:		
single stage-topcoat	600	5.0
2 stage basecoat/clearcoat	600	5.0
3 or 4-stage basecoat/clearcoat	625	5.2
Automotive Multi-colored Topcoat	680	5.7
Automotive specialty	840	7.0

CONTROL MEASURE SUMMARY FOR
Cement Kilns

Control Measure Summary:	Emissions (tons/year) in Ozone Transport Region	
2002 existing measure: NSR; PSD; State RACT.	**NOx** 2002 Base:	 31,960
On the Books: NOx SIP Call *Measure ID:* NOx SIP Call *Emission Reductions*: The SIP Call requirements were estimated by EPA to result in NOx reductions of approximately 25 percent from the cement industry. *Control Cost*: $2,000 per ton *Timing of Implementation*: 2004 *Implementation Area*: OTR	**NOx** 2009 Base: 2009 Reduction: 2009 Remaining:	 31,960 -7,990 23,970
Candidate measure: Use of proven control technologies (such as SNCR) or other methods to meet recommended emission limits. *Emission Reductions*: source specific, varies from 0-63% based upon 2002 base rates. *Control Cost*: less than 2,500 per ton *Timing of Implementation*: 01/01/09 *Implementation Area:* OTR	**NOx** 2009 Base: Candidate Reduction: 2009 Remaining:	 31,960 -13,231 18,279

Policy Recommendation: It is recommended that a program be developed reduces NOx emissions from existing cement kilns by requiring existing kilns to meet a NOx emission rate of

3.88 lbs/ton clinker for wet kiln

3.44 lbs/ton clinker for long dry kiln

2.36 lbs/ton clinker for pre-heater kiln

1.52 lbs/ton clinker for pre-calciner kiln.

Trading between facilities would not be permitted, but averaging at a facility would be permissible.

Brief Rationale for Recommended Strategy: This limit is consistent with the emission reduction capabilities of SNCR. There are 18 full-scale SNCR installations in Europe.

REFERENCES

EC/R Incorporated. *NOx Control Technologies for the Cement Industry* – Final Report. September 19, 2000. This report for EPA shows data for two SNCR technologies, biosolids injection and NOXOUT®. These technologies showed average emission reductions of 50 and 40 percent, respectively. For biosolids injection, "Cost effectiveness for this kiln is based on the annualized costs of ($320,000/year), the emission reduction achieved at that facility (emissions decreased from 2.4 lb/ton of clinker to 1.2 lb/ton of clinker), a kiln capacity of 215 tons/hr, and an annual operation of 8,000 hr/yr. Cost effectiveness is a credit of ($310/ton) for installing biosolids injection on this kiln" due to tipping fee for using biosolids (dewatered sewage sludge) For NOXOUT®, "40 percent NOX reduction based on the available test data. Cost effectiveness for the two kilns, using urea as the reagent, is based on an uncontrolled emission rate of 3.8 lb NOX/ton of clinker, kiln capacities of 92 and 130 tons/hr respectively, annual operation of 8,000 hr/yr, and a NOX control efficiency of 40%. Cost effectiveness is $1,000/ton for the smaller kiln and $2,500/ton for the larger kiln."

European Commission. *Integrated Pollution Prevention and Control (IPPC) Reference Document on Best Available Techniques in the Cement and Lime Manufacturing Industries*. December 2001. These report indicates that there are 18 full-scale SNCR installation in Europe. Most SNCR installations are designed and/or operated for NOx reduction rates of 10-50% which is sufficient to comply with current legislation in some countries. Two Swedish plants installed SNCR in 1996/97 and have achieved a reduction of 80-85% at both kilns.

Emission Rates:

Table 4-5 of the EPA's *NOx Control Technologies for the Cement Industry, September 19, 2000* provides the following uncontrolled emission rates for the four types of cement kilns:

Kiln Type	Heat Input Requirement (mmBtu/ton of clinker)	Average NOx Uncontrolled Emission Rate (lb/ton of clinker)	Range of NOx Uncontrolled Emission Rate (lb/ton of clinker)
Wet	6.0	9.7	3.6 to 19.5
Long Dry	4.5	8.6	6.1 to 10.5
Preheater	3.8	5.9	2.5 to 11.7
Precalciner	3.8	3.8	0.9 to 7.0

The OTC Control Measure Summary Sheet calls for a 60% reduction from uncontrolled emissions. Using this percent reduction figure and the uncontrolled emission rates above, the following controlled emission rates were calculated:

Kiln Type	Percent Reduction from Uncontrolled	Low-End NOx Controlled Emission Rate (lb/ton of clinker)	Average NOx Controlled Emission Rate (lb/ton of clinker)	High-End NOx Controlled Emission Rate (lb/ton of clinker)
Wet	60	1.44	3.88	7.80
Long Dry	60	2.44	3.44	4.20
Preheater	60	1.00	2.36	4.68
Precalciner	60	0.36	1.52	2.80

The State/workgroup lead recommended the use of the the average NOx Controlled emission rates in the above table (expressed as lb/ton of clinker).

CONTROL MEASURE SUMMARY FOR
Chip Reflash

Control Measure Summary: Upgrade the version of software in engine electronic control module (ECM) aka "Chip Reflash". Software reprograms the vehicle's computer and reduces off-cycle NOx emissions. The installation process typically takes between one-half to one hour.	**Emissions Reductions (tons/day)**	
2002 existing measure: No existing measure in the OTR other than the EPA program resulting from the consent decrees on 7 heavy duty engine manufacturers. The results of the EPA program thus far are significantly lower than the level originally projected by the Agency (less than 10% implementation). CARB implemented a voluntary program that did not achieve its expected results, so the Board's backstop mandatory program was triggered. The CARB mandatory program is facing two separate legal challenges, alleging that CARB has breached its settlement agreement and alleging that CARB is illegally establishing different emissions standards on "new engines".		
Candidate measure: *Measure ID:* Model rule for Mandatory Chip Reflash Program in the OTR *Emission Reductions*: NOx reduction (TPD) from in-state registered vehicles *Control Cost*: Moderate – manufacturers must provide the rebuild kits free to any truck operator who requests it. The cost associated with the reflash has been estimated at $20-$30 per vehicle, which is borne by the engine manufacturer. There may be costs associated with potential downtime to the trucking firms, and record-keeping requirements on the dealer performing the reflash and the vehicle owner. For the MRPO, ENVIRON estimated cost effectiveness to be "$1,800 to $2,500 (depending on vehicle size) due to incremental "fuel penalty" of 2% increase in fuel consumption). However, in reality, no fuel penalty has been documented on vehicles that have already been reflashed. *Timing of Implementation*: The kits are currently available, so once the states adopt the rule, retrofits can begin according to the schedule. *Implementation Area*: All OTR and MRPO states (NOx reductions 109 TPD)	LADCO Northeast states Mid-Atlantic States Total OTR	46 TPD 41 TPD 22 TPD 63 TPD
Policy Recommendation of State/Workgroup Lead: Expand scope of the model rule for the Northeast states to the entire OTR and MWRPO		
Brief Rationale for Recommended Strategy: While the EPA program provides a good platform for chip reflash retrofits, the federal program is not even achieving 10% of its estimated emission reductions. The kits are available and must be given to the truckers for free; yet without additional motivation, it is unlikely that the implementation rate will improve due to fuel consumption and/or performance perceptions and the ability to extend the time to next major rebuild/overhaul. The states in the OTR do not face the prospect of breach-of-settlement allegations that CARB did in adopting a mandatory program, since they did not participate in the negotiation of the CD settlements. And there are significant emission reductions that can be achieved through a mandatory program, even though installing the kits will not result in the engines operating at the same emission levels required for the EPA engine certification test. Nevertheless, this is a relatively simple fix for a problem that our states will face if they rely on the federal program alone to produce emission reductions from these sources.		

CONTROL MEASURE SUMMARY FOR
Consumer Products

Control Measure Summary: Consumer Products This control measure establishes limits on the VOC content of consumer products. It is based on the California Air Resources Board (CARB) consumer products rules, with some region specific modifications. It regulates categories such as hairspray, air fresheners, glass and general purpose cleaners, adhesives, anti-perspirants and deodorants, insecticides and automotive aftermarket products.	**VOC Emissions in Ozone Transport Region**	
2002 Existing Measure: The Federal Consumer Products Rule Part 59 *Emission Reductions*: 20 % reduction of the categories being regulated or 9.95 % reduction of the entire consumer products inventory (about 40 % of products were included in rule). *Control Cost*: $237 per ton of VOC reduced *Timing of Implementation*: 12/98 *Implementation Area*: Nationwide	**2002 Annual** Uncontrolled: Reduction: Remaining: **2002 Summer** Uncontrolled: Reduction: Remaining:	 258,537 tpy 25,724 tpy 232,813 tpy 713.9 tpd 71.0 tpd 642.9 tpd
2009 On-the-Books Measure: Adopt the 2001 OTC Model Rule for Consumer Products in all OTC states (this model rule was based on a series of five CARB consumer products rules). *Emission Reductions*: 14.2 % beyond federal rule or a total of 21 % from the uncontrolled state. *Control Cost*: $800 per ton VOC reduced *Timing of Implementation*: 1/1/05 effective date of VOC limits (though some states were later and some have yet to adopt) *Implementation Area*: OTR	**2009 Annual** Reduction: Remaining: **2009 Summer** Reduction: Remaining:	 22,916 tpy 209,897 tpy 63.4 tpd 579.5 tpd
Candidate Measure #1: Adopt the CARB amendments to their consumer products rule, adopted 7/20/05, with the exception of the 12/31/09 shaving gel, and 12/31/08 anti-static aerosol VOC limits. This rule sets new VOC limits for 11 categories, revises the existing VOC limit for 1 category and includes some additional requirements. See more detailed limits below. *Emission Reductions*: CARB estimates their rule will achieve a 6.3 ton/day reduction of VOC in California, which is equivalent to about 11.3 tons per day in the OTR or a 2% reduction beyond the on-the-books measure. *Control Cost*: $4,800 per ton of VOC reduced *Timing of Implementation*: 01/01/09 *Implementation Area* OTR	**2009 Annual** Reduction: Remaining: **2009 Summer** Reduction: Remaining:	 7,453 tpy 202,444 tpy 20.6 tpd 558.9 tpd
Candidate Measure #2: Follow and adopt as appropriate CARB 's next round of amendments to their consumer products rule, to be developed and proposed by approximately late 2006/early 2007 with limits effective in 2010. *Emission Reductions*: The CONS-2 amendments are estimated by CARB to achieve VOC reductions of about 20-35 tpd in California by 2010 which is equivalent to about 36-63 tpd in the OTR (The mid-point of this range was used in the calculations, 49.5 tpd). *Control Cost*: Unknown at present; *Timing of Implementation*: 01/01/10 *Implementation Area OTR*	***VOC not modeled:*** **2009 Annual** Reduction: Remaining: **2009 Summer** Reduction: Remaining:	Not Available

Summary of Candidate Measure #1: The proposed VOC limits based on CARB's 7/20/05 amendments are as follows:

Summary of Candidate Measure #1: The proposed VOC limits based on CARB's 7/20/05 amendments are as follows:

PRODUCT CATEGORY	CARB VOC CONTENT LIMIT %	OTC PROPOSED CONTENT LIMIT%	CARB EFFECTIVE DATE	OTC PROPOSED EFFECTIVE DATE
Adhesive, Contact – General purpose *	55	55	12/31/2006	1/1/2009
Special Purpose*	80	80	12/31/2006	1/1/2009
Adhesive Remover - Floor or Wall covering	5	5	12/31/2006	1/1/2009
Gasket or Thread Locking	50	50	12/31/2006	1/1/2009
General Purpose	20	20	12/31/2006	1/1/2009
Specialty	70	70	12/31/2006	1/1/2009
Anti-static - non-aerosol	11	11	12/31/2006	1/1/2009
Electrical Cleaner	45	45	12/31/2006	1/1/2009
Electronic Cleaner	75	75	12/31/2006	1/1/2009
Fabric refresher – aerosol	15	15	12/31/2006	1/1/2009
non-aerosol	6	6	12/31/2006	1/1/2009
Footware or Leather Care - aerosol	75	75	12/31/2006	1/1/2009
Solid	55	55	12/31/2006	1/1/2009
all other forms	15	15	12/31/2006	1/1/2009
Graffiti Remover –aerosol	50	50	12/31/2006	1/1/2009
non-aerosol	30	30	12/31/2006	1/1/2009
Hair Styling Products – aerosol & pump sprays	6	6	12/31/2006	1/1/2009
all other forms	2	2	12/31/2006	1/1/2009
Shaving Gel	7	7	12/31/2006	1/1/2009
Toilet/Urinal Care – aerosol	10	10	12/31/2006	1/1/2009
non-aerosol	3	3	12/31/2006	1/1/2009
Wood Cleaner – aerosol	17	17	12/31/2006	1/1/2009
non-aerosol	4	4	12/31/2006	1/1/2009
* Change to an existing category				

References:

2002 Existing Measure (Federal Part 59 Rules):

E.H. Pechan & Associates, Inc., *Control Measure Development Support Analysis of Ozone Transport Commission Model Rules*, March 31, 2001.

E.H. Pechan & Associates, Inc., *AirControlNET Version 4.1: Documentation Report*, September 2005. Pages III-1377 shows the Federal Part 59 rule at a cost of $237 per ton (1990$).

2009 On-the-Books Measure (OTC Model Rule):

E.H. Pechan & Associates, Inc., *Control Measure Development Support Analysis of Ozone Transport Commission Model Rules*, March 31, 2001. Table II-6 shows 14.2% reduction (OTC Model Rule beyond Federal rule). Page 8 presents cost of $800 per ton based on CARB's Sept. 1999 Initial Statement of Reasons for Proposed Amendments to the California Consumer Products Regulation.

Candidate Measure #1 (CARB 2005 and 2006/2007 Amendments):

California Air Resources Board. *Initial Statement of Reasons for Proposed Amendments, Volume 1: Executive Summary*. June 24, 2004. Table 2 of the Executive Summary shows that the CONS-1 amendments will achieve reductions of about 6.8 tons per day state wide (6.3 tons per day without the 12/31/09 Shaving gel, and 12/31/08 anti-static aerosol regs.. Page 21 states the cost of CONS-1 will be $2.40 per pound ($4,800 per ton). Since OTC's model rule is very similar to the CARB's rule, and emissions are proportional to population, CARB's 6.3 ton per day reduction was prorated to the OTC region based on the ratio of OTR 2002 population (63 million) to CA 2002 population (35 million) yielding approximately 11.3 tons per day in the OTR (4,139 tons per year).

Page 4 states that the estimated reductions from CONS-2 (not yet proposed) will achieve 20-35 tons per day statewide by 2010. Since OTC's model rule is very similar to the CARB's rule, and emissions are proportional to population, the mid-point of CARB's 20-35 ton per day reduction (i.e., 27.5 tons per day) was prorated to the OTC region based on the ratio of OTR 2002 population (63 million) to CA 2002 population (35 million) yielding approximately 49.5 tons per day in the OTR (18,068 tons per year).

CONTROL MEASURE SUMMARY FOR
Glass/Fiberglass Furnaces

Control Measure Summary:	**Emissions (tons/year) in Ozone Transport Region**	
2002 existing measure: NSR; PSD; State RACT.	**NOx** 2002 Base:	18,840
Candidate measure: Use of oxyfiring or other methods to meet recommended emission limits. *Emission Reductions*: source specific, varies from 0-85% depending upon 2002 base rates. *Control Cost*: $ 924 to 2,232 per ton *Timing of Implementation*: 01/01/09 *Implementation Area*: OTR	**NOx** 2009 projected: Reduction at full implementation: Remaining after full implementation:	21,893 -13,474 8,419

Control Measure Recommendation: Develop a control strategy that requires implementation of an "oxyfiring" program for each furnace at the next furnace rebuild. Alternatively, states may allow manufacturers to propose compliance methods based on California's San Joaquin Valley Rule 4354 which allows a mix of control options to meet specified emission limits. Prior to furnace rebuild, owners/operators may be allowed, by the state, to meet emissions limits by purchasing a state specified number of NOx allowances. Continuous emission monitoring systems would be used to determine emissions. This Measure should be modeled at 85% reduction.

Brief Rationale for Recommended Strategy: Oxyfiring is best implemented, and provides the most effective NOx emission reductions, with a complete furnace rebuild. This strategy not only reduces NOx emissions by as much as 85 percent, but reduces energy consumption, increases production rates by 10-15%, and improves glass quality by reducing defects. Oxyfiring is demonstrated technology and has penetrated into all segments of the glass industry.

REFERENCES

European Commission, Integrated Pollution Prevention and Control (IPPC) Bureau. *Reference Document on Best Available Techniques in the Glass Manufacturing Industry*. December 2001. This document reports 75 to 85% reduction in NOx and emission rates of 1.25 to 4.1 lbs NOx/ton. The cost effectiveness was determined to be $1,254 to $2,542 depending on the size of the furnace.

U.S. EPA *Alternative Control Techniques Document – NOx Emissions from Glass Manufacturing*, EPA-453/R-94-037, June 1994. Oxyfiring reduction of 85%, cost-effectiveness of $2,150 to $5,300.

Emission rates based on San Joaquin Valley Rule 4354

Type of Furnace	Block 24-hour Average	Rolling 30-day average
Container Glass	4.0 pounds of NOx per ton of glass pulled	4.0 pounds of NOx per ton of glass pulled
Fiberglass	4.0 pounds of NOx per ton of glass pulled	4.0 pounds of NOx per ton of glass pulled
Flat Glass	9.2 pounds of NOx per ton of glass pulled	7.0 pounds of NOx per ton of glass pulled

CONTROL MEASURE SUMMARY FOR

Industrial, Commercial, Institutional (ICI) Boilers – Jointly processed with MANE-VU

Addendum to OTC Resolution 06-02 Guidelines for ICI Boilers

ICI Boiler Size (mmBtu/hr)	Control Strategy/ Compliance Option	NOx Control Measure
5-25		Annual Boiler Tune-Up
25-100	Option #1	Natural Gas: 0.05 lb NOx/mmBtu #2 Fuel Oil: 0.08 lb NOx/mmBtu #4 or #6 Fuel Oil: 0.20 lb NOx/mmBtu Coal: 0.30 lb NOx/mmBtu**
	Option #2	50% reduction in NOx emissions from uncontrolled baseline
	Option #3	Purchase current year CAIR NOx allowances equal to reducted needed to acheiv the required emission rates
100-250	Option #1	Natural Gas: 0.10 lb NOx/mmBtu #2 Fuel Oil: 0.20 lb NOx/mmBtu #4 or #6 Fuel Oil: 0.20 lb NOx/mmBtu Coal: Wall-fired 0.14 lb NOx/mm Btu Tangential 0.12 lb NOx/mm Btu Stoker 0.22 lb NOx/mm Btu Fluidized Bed 0.08 lb NOx/mm Btu
	Option #2	LNB/SNCR, LNB/FGR, SCR, or some combination of these controls in conjunction with Low NOx Burner technology
	Option #3	60% reduction in NOx emissions from uncontrolled baseline
	Option #4	Purchase current year CAIR NOx allowances equal to reducted needed to acheiv the required emission rates
>250	Option #1	Purchase current year CAIR NOx allowances equal to reducted needed to acheiv the required emission rates
	Option #2	Phase I – 2009 Emission rate equal to EGUs of similar size Phase II – 2012 Emission rate equal to EGUs of similar size

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Fabric Printing

Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating	**Emissions (tons/year) in Ozone Transport Region**	
Fabric Printing, Coating and Dyeing - 2002 existing measures: NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties EPA CTG RACT limit: 2.9 lbs VOC/gal coating [0.35 kg/liter] (minus H_2O & exempt solvents) Applicability: Sources 3 lbs/hour, 15 lb/day or 10 tons/year uncontrolled emissions OTC state RACT limits: MD, NJ, NH = 2.9 lbs/gal coating MA = 4.8 lbs VOC/gal of solids applied (equivalent to 2.9 lbs/gal coating)	**VOC** Actual 2002:	(not available)
Fabric Printing, Coating and Dyeing - 2009 On-the-Books measures: MACT Std. - Subpart OOOO (68 FR 32172, 5/29/03) EPA MACT limits <u>existing sources</u>: Coating and printing operations - 0.12 kg HAP/liter solids Dyeing and finishing operations - 0.016 kg HAP/liter solids Dyeing operations only - 0.016 kg HAP/liter solids Finishing operations only - 0.0003 kg HAP/liter solids *Emission Reductions*: *Nationwide – 60% HAP reduction from 1997 baseline* *MACT Organic HAP control efficiency option: 97% for existing sources* *MACT Estimated VOC reduction 60% (Pechan Table)* *Control Cost*: *Nationwide –$14.5 million/yr for 4,100 tons/yr = $3,537/ton* *Timing of Implementation*: Compliance Date (existing) May 29, 2006 *Implementation Area*: Nationwide	**VOC** Actual 2002: OTB 2009: Reduction from OTB:	(not available)
Fabric Printing, Coating and Dyeing Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage *Measure ID: Permanent Total Enclosure* *Emission Reductions*: *Estimated VOC reduction 95-97% (Air Control Net 3.0 Table)* *Control Cost*: *$1,459-$1,565/ton* *Timing of Implementation*: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010 *Implementation Area*: (1) 8-hr ozone nonattainment areas, (2) 8-hr ozone nonattainment areas plus adjacent counties, or (3) all counties	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	(not available)
Policy Recommendation: Final recommendation not made as of June, 2006.		
Brief Rationale for Recommended Strategy: See additional discussion in briefing paper		

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Large Appliances

Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating	**Emissions (tons/year) in Ozone Transport Region**	
Large Appliances - 2002 existing measures: NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties; EPA CTG RACT limit: 2.8 lbs VOC/gal coating [0.34 kg/liter] (minus H_2O & exempt solvents)	**VOC** Actual 2002:	(not available)
Large Appliances - 2009 On-the-Books measures: MACT Std. – Subpart NNNN (67 FR 48254, 7/23/02) EPA MACT limits <u>existing sources</u>: 0.13 kg HAP/liter solids *Emission Reductions*: *Nationwide – 45% HAP reduction from 1995 baseline* *MACT Organic HAP control efficiency option: xx% for existing sources* *Estimated VOC reduction: 0% (Pechan Table) - 60%??* *Control Cost*: *Nationwide – $1.63 million/yr for 1,190 tons/yr = $1,370/ton* *Timing of Implementation*: Compliance Date (existing) July 23, 2005 *Implementation Area*: Nationwide	**VOC** Actual 2002: OTB 2009: Reduction from OTB:	(not available)
Large Appliances Candidate measure 1: Adopt More Stringent RACT regulations (e.g., ICAC letter 2/16/2001); lower applicability thresholds, extend geographic coverage *Measure ID:* *ICAC Option 1 - Nationwide – 80% HAP reduction from 1995 baseline (Additional 250 tons/per HAP)* *ICAC Option 2 - Nationwide – 98% HAP reduction from 1995 baseline (Additional 1,190 tons/per HAP)* *Emission Reductions*: *Control Cost*: *Timing of Implementation*: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010 *Implementation Area*: (1) 8-hr ozone nonattainment areas, (2) 8-hr ozone nonattainment areas plus adjacent counties, or (3) all counties	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	(not available)
Policy Recommendation of: Final recommendation not made as of June, 2006.		
Brief Rationale for Recommended Strategy: See additional discussion in briefing paper		

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Metal Cans

<table>
<tr><th>Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating</th><th colspan="2">Emissions (tons/year) in Ozone Transport Region</th></tr>
<tr><td>Metal Can - 2002 existing measures:
NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties;
EPA CTG RACT limit: lbs VOC/gal coating (minus H_2O&exempt solvents)
Sheet basecoat & over varnish 2.8 [0.34 kg/l]
2 and 3-piece can interior & 2-piece can 4.2 [0.50 kg/l]
3-piece can side-seam spray 5.5 [0.66 kg/l]
End sealing compound 3.7 [0.44 kg/l]
Applicability: 10 tons/year uncontrolled emissions
OTC state RACT limits: MD, NJ, NH same limits as CTG;
MA (4.5, 9.8, 21.8, 7.7 lbs/gallon of solids applied)</td><td>**VOC**
Actual 2002:</td><td>(not available)</td></tr>
<tr><td>Metal Can - 2009 On-the-Books measures:
MACT Std. – Subpart KKKK (68 FR 64432 , 11/13/03)
EPA MACT limits existing sources:
Sheet coating 0.03 kg HAP/l solids
Body Coating
2-piece beverage cans 0.07 kg HAP/l solids
2-piece food cans 0.06 kg HAP/l solids
1-piece aerosol cans 0.12 kg HAP/l solids
3-piece can assembly
Inside Spray 0.29 kg HAP/l solids
Aseptic side seam strips on food cans 1.94 kg HAP/l solids
Nonaseptic side seam strips on food cans 0.79 kg HAP/l solids
Side seam strips on non-food cans 1.18 kg HAP/l solids
Side seam strips on aerosol cans 1.46 kg HAP/l solids
End sealing compound
Aseptic end seal compounds 1.94 kg HAP/l solids
Nonaseptic end seal compounds 0.00 kg HAP/l solids
Repair spray coatings 2.06 kg HAP/l solids
Emission Reductions:
Nationwide – 70% HAP reduction from 1997 baseline
MACT Organic HAP control efficiency option: xx% for existing sources
Estimated VOC reduction 70% (Pechan Table)
Control Cost:
Nationwide – $58.7 million/yr for 6,800 tons/yr = $8,632/ton
Timing of Implementation: Compliance Date (existing) Nov. 13, 2006

Implementation Area: Nationwide</td><td>**VOC**
Actual 2002:
OTB 2009:
Reduction from OTB:</td><td>(not available)</td></tr>
</table>

Metal Can (Continued) Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage *Measure ID: Permanent Total Enclosure* *Emission Reductions*: *Estimated VOC reduction 95% (Air Control Net 3.0 Table)* *Control Cost*: *$7,947/ton* *Timing of Implementation*: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010 *Implementation Area*: (1) 8-hr ozone nonattainment areas, (2) 8-hr ozone nonattainment areas plus adjacent counties, or (3) all counties.	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	(not available)
Policy Recommendation: Final recommendation not made as of June, 2006.		
Brief Rationale for Recommended Strategy: See additional discussion in briefing paper		

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Metal Coils

<table>
<tr><td>Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating</td><td colspan="2">Emissions (tons/year) in Ozone Transport Region</td></tr>
<tr><td>Metal Coil - 2002 existing measures:
NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties;
EPA CTG RACT limit: 2.6 lbs VOC/gal coating [0.31 kg/liter] (minus H_2O & exempt solvents)
Applicability: Sources 10 tons/year uncontrolled emissions
OTC state RACT limits: NH - same limits as CTG</td><td>VOC
Actual 2002:</td><td>(not available)</td></tr>
<tr><td>Metal Coil – 2009 On-the-Books measures:
MACT Std. – Subpart SSSS (67 FR 39794 , 6/10/02)
EPA MACT limits <u>existing sources</u>: 0.046 kg HAP/liter solids
Emission Reductions:
Nationwide – 53% HAP reduction from current levels?
MACT Organic HAP control efficiency option: xx% for existing sources
Estimated VOC reduction 53% (Pechan Table)
Control Cost:
Nationwide – $7.6 million/yr for 1,316 tons/yr = $5,775/ton
Timing of Implementation: Compliance Date (existing) June 10, 2005

Implementation Area: Nationwide</td><td>VOC
Actual 2002:
OTB 2009:
Reduction from OTB:</td><td>(not available)</td></tr>
<tr><td>Metal Coil
Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage
Measure ID:

Emission Reductions:

Control Cost:

Timing of Implementation: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010

Implementation Area: (1) 8-hr ozone nonattainment areas, (2) 8-hr ozone nonattainment areas plus adjacent counties, or (3) all counties.</td><td>VOC
OTB 2009:
BOTW 2009:
Reduction from BOTW:</td><td>(not available)</td></tr>
<tr><td colspan="3">Policy Recommendation: Final recommendation not made as of June, 2006.</td></tr>
<tr><td colspan="3">Brief Rationale for Recommended Strategy: See additional discussion in briefing paper</td></tr>
</table>

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Metal Furniture

<table>
<tr><td>Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating</td><td colspan="2">Emissions (tons/year) in Ozone Transport Region</td></tr>
<tr><td>Metal Furniture - 2002 existing measures:
NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties
EPA CTG RACT limit: 3.0 lbs VOC/gal coating [0.36 kg/liter] (minus H_2O & exempt solvents)
Applicability: Sources 10 tons/year uncontrolled emissions
OTC state RACT limits: NH - same limits as CTG</td><td>VOC
Actual 2002:</td><td>(not available)</td></tr>
<tr><td>Metal Furniture – 2009 On-the-Books measures:
MACT Std. – Subpart RRRR (67 FR 28606 , 5/23/03)
EPA MACT limits <u>existing sources</u>: 0.10 kg HAP/liter solids
Emission Reductions:
Nationwide – 73% HAP reduction from 1997/1998 baseline
MACT Organic HAP control efficiency option: xx% for existing sources
Estimated VOC reduction 0% (Pechan Table)
Control Cost:
Nationwide – $14.8 million/yr for 16,300 tons/yr = $908/ton
Timing of Implementation: Compliance Date (existing) May 23, 2006

Implementation Area: Nationwide</td><td>VOC
Actual 2002:
OTB 2009:
Reduction from OTB:</td><td>(not available)</td></tr>
<tr><td>Metal Furniture
Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage
Measure ID: Permanent Total Enclosure

Emission Reductions: Estimated VOC reduction 95% (Air Control Net 3.0 Table)
Control Cost: $20,115/ton

Timing of Implementation: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010

Implementation Area: (1) 8-hr ozone nonattainment areas, (2) 8-hr ozone nonattainment areas plus adjacent counties, or (3) all counties.</td><td>VOC
OTB 2009:
BOTW 2009:
Reduction from BOTW:</td><td>(not available)</td></tr>
<tr><td colspan="3">Policy Recommendation: Final recommendation not made as of June, 2006.</td></tr>
<tr><td colspan="3">Brief Rationale for Recommended Strategy: See additional discussion in briefing paper</td></tr>
</table>

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Miscellaneous Metal Parts

<table>
<tr><th>Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating</th><th colspan="2">Emissions (tons/year) in Ozone Transport Region</th></tr>
<tr><td>Miscellaneous Metal Parts - 2002 existing measures:
NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties
EPA CTG RACT limit: <u>lbs VOC/gal coating (minus H_2O&exempt solvents)</u>
Clear or transparent top coat 4.3 [0.52 kg/l]
Air dries Coatings 3.5 [0.42 kg/l]
Coating used in extreme environmental conditions 3.5 [0.42 kg/l]
All other coatings 3.0 [0.35 kg/l]
Applicability: 10 tons/year uncontrolled emissions
OTC state RACT limits: NH same limits as CTG</td><td>VOC
Actual 2002:</td><td>(not available)</td></tr>
<tr><td>Miscellaneous Metal Parts – 2009 On-the Books measures:
MACT Std. – Subpart MMMM (69 FR 130 , 1/2/04)
EPA MACT limits <u>existing sources:</u>
General use Coating 0.31 kg HAP/l solids
High Performance Coating 3.30 kg HAP/l solids
Rubber-to-Metal Coating 4.50 kg HAP/l solids
Extreme Performance Fluoropolymer 1.5 kg HAP/l solids
Emission Reductions:
Nationwide – 48% HAP reduction from 1997 baseline
MACT Organic HAP control efficiency option: xx% for existing sources
Estimated VOC reduction 0% (Pechan Table)
Control Cost:
Nationwide – $57.3 million/yr for 26,000 tons/yr = $2204/ton
Timing of Implementation: Compliance Date (existing) Jan. 2, 2007

Implementation Area: Nationwide</td><td>VOC
Actual 2002:
OTB 2009:
Reduction from OTB:</td><td>(not available)</td></tr>
<tr><td>Miscellaneous Metal Parts
Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage
Measure ID:
Emission Reductions:
Control Cost:
Timing of Implementation: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010
Implementation Area:</td><td>VOC
OTB 2009:
BOTW 2009:
Reduction from BOTW:</td><td>(not available)</td></tr>
<tr><td colspan="3">Policy Recommendation: Final recommendation not made as of June, 2006.</td></tr>
<tr><td colspan="3">Brief Rationale for Recommended Strategy: See additional discussion in briefing paper</td></tr>
</table>

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Paper and Other Web

Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating	**Emissions (tons/year) in Ozone Transport Region**	
Paper & Other Web - 2002 existing measures: NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties EPA CTG RACT limit: 2.9 lbs VOC/gal coating [0.35 kg/liter] (minus H_2O & exempt solvents) Applicability: Sources 3 lbs/hour, 15 lb/day or 10 tons/year uncontrolled emissions OTC state RACT limits: MD, NJ, NH = 2.9 lbs/gal coating MA = 4.8 lbs VOC/gal of solids (equivalent to 2.9 lbs/gal coating)	**VOC** Actual 2002:	
Paper & Other Web – 2009 On-the-Books measures: MACT Std. – Subpart JJJJ (67 FR 72330 , 12/4/02) EPA MACT limits existing sources: 0.2 kg organic HAP/kg coating solids *Emission Reductions*: *Nationwide – 80% HAP reduction from current levels??* *MACT Organic HAP control efficiency option: 95% for existing sources* *Estimated VOC reduction 80% (Pechan Table)* *Control Cost*: *Nationwide – $64 million/yr for 34,500 tons/yr = $1,855/ton* *Timing of Implementation*: Compliance Date (existing) Dec. 5, 2005 *Implementation Area*: Nationwide	**VOC** Actual 2002: OTB 2009: Reduction from OTB:	(not available)
Paper & Other Web Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage *Measure ID:* *Emission Reductions*: *Control Cost*: *Timing of Implementation*: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010 *Implementation Area*:	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	(not available)
Policy Recommendation: Final recommendation not made as of June, 2006.		
Brief Rationale for Recommended Strategy: See additional discussion in briefing paper		

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Plastic Parts

<table>
<tr><th>Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating</th><th colspan="2">Emissions (tons/year) in Ozone Transport Region</th></tr>
<tr><td>Plastic Parts - 2002 existing measures:
NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties
EPA CTG RACT limit: lbs VOC/gal coating (minus H_2O&exempt solvents)
| | Auto Interior | Auto Exterior |
High Bake Prime: 3.8 [0.46 kg/l] | --
High Bake Prime - Flexible: -- | 5.0 [0.60 kg/l]
High Bake Prime – Nonflexible: -- | 4.5 [0.54 kg/l]
High Bake Color: 4.1 [0.49 kg/l] | 4.6 [0.55 kg/l]
Low Bake Prime: 3.5 [0.42 kg/l] | 5.5 [0.66 kg/l]
Low Bake Color: 3.5 [0.42 kg/l] | 5.6 red or black
Low Bake Color: -- | 4.5 all others
Applicability: NH - 50 tons/year uncontrolled emissions
OTC state RACT limits: NH - same limits as CTG</td><td>VOC
Actual 2002:</td><td>(not available)</td></tr>
<tr><td>Plastic Parts - 2009 On-the Books measures:
MACT Std. – Subpart PPPP (69 FR 20968 , 4/19/04)
EPA MACT limits existing sources:
General Use Coating - 0.16 kg HAP/kg coating solids
Automotive Lamp Coating - 0.45 kg HAP/kg coating solids
Thermoplastic Olefins - 0.26 kg HAP/kg coating solids
New Assembled On-Road Vehicles - 1.34 kg HAP/kg coating solids
Emission Reductions:
Nationwide – 80% HAP reduction from 1997 baseline
Estimated VOC reduction 0% (Pechan Table)
Control Cost:
Nationwide – $10.9 million/yr for 7,560 tons/yr = $1,442/ton
Timing of Implementation: Compliance Date (existing) April 19, 2007
Implementation Area: Nationwide</td><td>VOC
Actual 2002:
OTB 2009:
Reduction from OTB:</td><td>(not available)</td></tr>
<tr><td>Plastic Parts
Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage
Measure ID:
Emission Reductions:
Control Cost:
Timing of Implementation: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010
Implementation Area:</td><td>VOC
OTB 2009:
BOTW 2009:
Reduction from BOTW:</td><td>(not available)</td></tr>
<tr><td colspan="3">Policy Recommendation: Final recommendation not made as of June, 2006.</td></tr>
<tr><td colspan="3">Brief Rationale for Recommended Strategy: See additional discussion in briefing paper</td></tr>
</table>

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Wood Building Products

Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating	**Emissions (tons/year) in Ozone Transport Region**	
Wood Building Products - 2002 existing measures: NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties EPA CTG RACT limit: lbs VOC/gal coating (minus H_2O&exempt solvents)	**VOC** Actual 2002:	(not available)
Wood Building Products - 2009 On-the-Books measures: MACT Std. – Subpart QQQQ (68 FR 31746 , 5/28/03) EPA MACT limits existing sources: - kg HAP/liter of solids (lb HAP/gal solids) Doors, Windows & Misc. 0.231 (1.93) Flooring 0.093 (0.78) Interior Wall Paneling & Tileboard 0.183 (1.53) Other Interior Panels 0.020 (0.17) Exterior Siding & Primed Door Skins 0.007 (0.06) *Emission Reductions*: *Nationwide – 63% HAP reduction from 1997 baseline* *MACT Organic HAP control efficiency option: xx% for existing sources* *Estimated VOC reduction 63% (Pechan Table)* *Control Cost*: *Nationwide –$22.5 million/yr for 4,900 tons/yr = $4,592/ton* *Timing of Implementation*: Compliance Date (existing) May 28, 2006 *Implementation Area*: Nationwide	**VOC** Actual 2002: OTB 2009: Reduction from OTB:	(not available)
Wood Building Products Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage *Measure ID:* *Emission Reductions*: *Control Cost*: *Timing of Implementation*: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010 *Implementation Area*:	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	(not available)
Policy Recommendation of State/Workgroup Lead: Final recommendation not made as of June, 2006.		
Brief Rationale for Recommended Strategy: See additional discussion in briefing paper		

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings All Categories

<table>
<tr><td>Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating</td><td colspan="2">Emissions (tons/year) in Ozone Transport Region</td></tr>
<tr><td>Industrial Surface Coatings Category Total - 2002 existing measures:
NSPS: PSD/NSR; State RACT rules in 1-hour non-attainment counties</td><td>Total VOC
Point &Area
Actual 2002:</td><td>164,445</td></tr>
<tr><td>Industrial Surface Coatings Category Total - 2009 On-the-Books measures:
MACT Stds. – Subpart OOOO (68 FR 32172, 5/29/03)
Subpart NNNN (67 FR 48254, 7/23/02)
Subpart KKKK (68 FR 64432 , 11/13/03)
Subpart SSSS (67 FR 39794 , 6/10/02)
Subpart RRRR (67 FR 28606 , 5/23/03)
Subpart MMMM (69 FR 130 , 1/2/04)
Subpart JJJJ (67 FR 72330 , 12/4/02)
Subpart PPPP (69 FR 20968 , 4/19/04)
Subpart QQQQ (68 FR 31746 , 5/28/03)
Emission Reductions:
OTC Regional – x,xxx from 2002 baseline
Control Cost:
OTC Regional –$ xx.x million/yr for x,xxx tons/yr = $4,592/ton
Timing of Implementation: Compliance Dates (existing) 5/29/06;
(existing) 7/23/05;
(existing) 11/13/06;
(existing) 6/10/05;
(existing) 5/23/06;
(existing) 1/2/07;
(existing) 12/5/05;
(existing) 4/19/07;
(existing) 5/28/06
Implementation Area: Ozone Transport Region</td><td>Total VOC

Point & Area
Actual 2002:
OTB 2009:
Reduction from OTB:

MANE-VU 2002 Point*

MANE-VU 2002 Area* (Ed Sabo’s e-mail 01/06/06)</td><td>164,445
<u>-175,983</u>

-11,448

24,931

139,512

From 10/04/05 draft emission inventory</td></tr>
<tr><td>Industrial Surface Coatings Category Total
Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage
Measure ID:
Emission Reductions:
Control Cost:
Timing of Implementation: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010
Implementation Area:</td><td>VOC
OTB 2009:
BOTW 2009:
Reduction from BOTW:</td><td>(not available)</td></tr>
<tr><td colspan="3">Policy Recommendation: Final recommendation not made as of June, 2006.</td></tr>
<tr><td colspan="3">Brief Rationale for Recommended Strategy: See additional discussion in briefing paper</td></tr>
</table>

Background Information

Industrial surface coatings are used during the manufacture of a wide variety of products including: fabrics, paper, large appliances, metal cans, metal coils, metal furniture, metal parts, plastic parts, and wood building materials. Surface coating is the process by which paints, inks, varnishes, adhesives or other decorative or functional coatings are applied to a substrate (e.g., fabric, metal, wood, or plastic) to protect or decorate the substrate. Industrial surface coatings can be applied by brushing, rolling, spraying, dipping, flow coating, electro-coating, or combinations and variations of these methods. The process used to coat a particular product is dependent on the composition of the coating, the substrate to which the coating is applied and the intended end use of the final product. After a coating is applied, it is dried or cured either by conventional curing through the use of thermal drying ovens, or through the use of radiation. During conventional curing, heat from thermal ovens is used to evaporate the solvents and/or water trapped in the coating and release them into the atmosphere. Two types of radiation curing processes currently in use are ultraviolet (UV) curing and electron beam (EB) curing.

Emissions are released by the evaporation of the solvents used in the coatings and the evaporation of any additional solvents used to dilute (thin) the coating prior to application and for cleaning the coating equipment after use. Emissions from surface preparation and coating applications are a function of the VOC content of product used. Emissions are also a function of the type of coating process used (rolling, dipping, spraying, etc.) and the transfer efficiency of the process. Transfer efficiency is the percentage of the coating solids that are applied (e.g., sprayed) which actually adhere to the surface being coated. Emissions from cleaning vary with the type of cleanup and the housekeeping practices used.

Industrial surface coating is estimated to account for approximately 164,000 tons per year of VOC emissions in the Mid-Atlantic/Northeast Visibility Union (MANE-VU) region in 2002 from both point and area sources. It is important to consider two aspects regarding the accuracy of this emissions estimate when assessing this category for additional controls:

1) The MANE-VU VOC emissions inventory for the industrial surface coating category includes emissions from both point and area sources. While the 2002 VOC emissions inventory for the MANE-VU region indicates that VOC emission from area sources in this category are substantial, the area source part of the emissions inventory is highly uncertain and may be substantially overestimated. The method used to estimate area source VOC emissions relies heavily on employee emission factors and employment data. These emission factors are based on data collected by EPA in the 1980s and may not accurately portray the types of coatings, the type of coating equipment, or the type of control technology currently in use.

2) At least nine types of industrial surface coating point sources are already controlled due to state specific VOC RACT regulations or will soon be controlled prior to 2009 as a result of the recently promulgated Maximum Achievable Control Technology (MACT) standards. Since the MACT standards were designed to control air toxic emissions and not necessarily VOC emissions the effectiveness of the MACT standards for controlling VOC emissions will vary with the industrial surface coating subcategory (e.g., metal cans, wood building products, etc.) and the type of coating equipment and the type of solvents used in that subcategory.

Regulatory History

Industrial surface coating processes are currently subject to multiple state and federal regulations pursuant to Titles I and III of the Clean Air Act. Title I imposes Standards of Performance for New Stationary Sources (NSPS) on new and modified large stationary sources. In the early 1990s, EPA promulgated NSPSs for various types of industrial surface coating operations. These regulations applied to surface coating operations that were constructed or modified after effective dates specified in each NSPS. In general, surface coating operations constructed or modified after 1980 are subject to NSPS requirements. The NSPS generally established VOC emission rate limits that could be complied with using either compliant coatings or add-on capture and control equipment. For certain source categories the NSPS also set transfer efficiency requirements.

New and modified large stationary sources that increase their emissions can also be subject to the New Source Review (NSR) requirements of Title I. NSR requires a control technology review for large new plants and for modifications at existing plants that result in a significant increase in emissions, subjecting these sources to Best Available Control Technology (BACT) in attainment areas and Lowest Achievable Emission Rate (LAER) in nonattainment areas. BACT and LAER control requirements are updated over time to reflect improvements in control equipment and are reviewed on a case-by-case basis during state permitting process.

Criteria pollutants, which include VOCs, nitrogen oxides (NOx), sulfur dioxide (SO_2), fine particulate matter (PM_{fine}), carbon monoxide (CO) and lead (Pb), are also regulated by the State Implementation Plans (SIPs) required by Title I. SIPs set forth the states' strategies for achieving reductions of criteria pollutants for which the state is currently out of attainment. SIPs must include requirements that all major stationary sources located in nonattainment areas must install reasonably available control technology (RACT). RACT levels must be basedon the level of emissions reduction that can be reasonably achieved at a reasonable cost. The U.S. EPA has issued a series of Control Technology Guidelines (CTGs) and Alternative Control Technologies (ACT) documents to assist states in defining RACT for a number of industrial surface coating categories. For categories not covered by a CTG or ACT document, state regulations require that a case-by-case RACT determination be made. Most of the EPA's CTGs and ACT documents for the industrial surface coating category were developed prior to 1990. While specific RACT requirements will vary from state to state, some OTC states have already adopted RACT regulations that are more stringent than the CTG/ACT requirements.

Policy Recommendation

As can be noted from the background information, the regulatory history, and the information contained in summary tables, the industrial surface coatings category includes at least nine different major source types and multiple processes for each source type with regulations and emissions limits that vary not only by major source type, but also by individual process and individual product. In addition, the industrial surface coatings category is already subject to a variety of regulations (NSPS; PSD/NSR, state RACT, MACT, state specific rules on hazardous air pollutants) that were adopted to achieve different goals. Some regulations (e.g., RACT) were designed to reduce VOC emissions. Other regulations (e.g., MACT) were designed to reduce emissions of hazardous air pollutants but have the side benefit of reducing VOC emissions as well.

Analysis of the potential benefits and costs of adopting additional VOC control measures, Beyond On-The-Way (BOTW) measures) is further complicated by the following:

1) Uncertainty as to the accuracy of the current (2002) MANE-VU VOC emissions inventory for the industrial surface coatings category;
2) Difference in current VOC RACT limits among the OTC states;
3) Difference in the estimates of the potential VOC reductions from MACT standards; and
4) Difference in the source size and geographic area covered by a specific regulation.

The most recent version of the (2002) MANE-VU VOC emissions inventory for the MANE-VU region estimates total VOC emissions from the industrial surface coatings category to be 164, 445 tons (24,931 tons of VOC from point sources and 139,512 tons from area sources). Further investigation into the amount of VOC emissions from area sources will most likely reveal that these VOC emissions are substantially overestimated due in part to the emission factors and employment data used and in part to the cutpoints used by various states for distinguishing a point source from an area source.

A quick sampling of the current VOC RACT limits in the OTC states reveals differences not only in the limits for existing sources (lbs. VOC per gallon of coating minus water and exempt solvents), but also in the size of source to which these limits apply.

Several complications arise when trying to calculate the potential VOC reductions from a particular MACT standard including the following:

1) Not all toxics regulated under the MACT are VOCs;
2) MACT standards are expressed as kg HAP/liter of solids or lbs. HAP/gallon of solids not lbs. VOC/gallon of coating minus water and exempt solvent so the MACT limit applies to all HAPs not just VOCs; and
3) The specific types of processes and coatings regulated under the MACT standards are different than the types of processes and coatings regulated under the RACT standards.

These complications have lead to widely varying estimates of the potential additional VOC reductions from the application of a particular MACT requirement (from 0% to as much as 80% VOC reduction nationwide).

RACT standards and MACT standards apply to sources located in different geographic areas throughout the Ozone Transport Region. For some OTC states RACT standards apply only to sources located in 1-hour ozone nonattainment counties while in other OTC states RACT standards apply statewide. MACT standards are applicable nationwide and only to major HAP sources (10 tons/year of individual HAP or 25 tons/year of combined HAPs).

Given all of these uncertainties the following options are available:

1) OTC states that currently have higher VOC RACT limits than the EPA CTG/ACT VOC RACT limits can adopt more stringent RACT regulations;
2) OTC states can extend the geographic coverage for RACT limits to statewide;
3) OTC states can lower the RACT applicability thresholds
4) OTC states can adopt more stringent control requirements for specific industrial surface coating categories (e.g., permanent total enclosures for metal can coating processes).

Policy recommendations:

1) Due to uncertainty in current MANE-VU VOC emissions inventory for this category, develop an improved, state specific VOC emissions inventory for point and area sources for each subcategory of industrial surface coatings before requiring additional controls beyond MACT.

CONTROL MEASURE SUMMARY FOR *Lime Kilns*

<table>
<tr><td>Control Measure Summary: Good combustion practices and kiln operation for Lime Kilns. These kilns are used for the calcination of limestone. Lime kilns are also often associated with paper mills.</td><td colspan="2">Emissions (tons/year) in Ozone Transport Region</td></tr>
<tr><td>2002 existing measure: NSR; PSD; State RACT.
Emission Reductions:
Control Cost:
Timing of Implementation:
Implementation Area: OTR</td><td>NOx

Uncontrolled:
2002 Reduction:
2002 Base:</td><td>

4,649
0
4,649</td></tr>
<tr><td>Candidate measure: Good combustion practices and kiln operation
Emission Reductions: Under Evaluation
Control Cost: less than $2,000 per ton
Timing of Implementation: 01/01/09
Implementation Area: OTR</td><td>NOx

2009 Base including growth:
2009 Reduction:
2009 Remaining:</td><td>

5,228
TBD</td></tr>
<tr><td colspan="3">Policy Recommendation: Final recommendation not made as of June, 2006.</td></tr>
<tr><td colspan="3">Recommended Strategy: See additional discussion in briefing paper</td></tr>
<tr><td colspan="3">REFERENCES:
European Commission, Integrated Pollution Prevention and Control (IPPC) Bureau. Reference Document on Best Available Techniques in the Cement and Lime Manufacturing Industries. December 2001. “The direct transfer of low-NOx burner technology from cement kilns to lime kilns is not straightforward. In cement kilns, flame temperatures are higher and low-NOx burners have been developed for reducing high initial levels of ‘thermal NOx’. In most lime kilns the levels of NOx are lower and the ‘thermal NOx’ is probably less important.”

Northeast States for Coordinated Air Use Management. Assessment of Control Technology Options for BART-Eligible Sources: Steam Electric Boilers, Industrial Boilers, Cement Plants, and Paper and Pulp Facilities. March 2005. “Due to the design of the lime kiln, SNCRs and SCRs are not viable NOx reduction techniques. Installing low-NOx burners is also not a practical NOx reduction technique according to a BACT analysis conducted on a new lime kiln in 1997…combustion modification such as decreasing excess air is the best way to reduce NOx emissions”.</td></tr>
</table>

CONTROL MEASURE SUMMARY FOR
Municipal Waste Combustiors
(Only NOx reductions are evaluated under this strategy)

Control Measure Summary	**Emissions (tons/year) in Ozone Transport Region**	
2002 existing measure: Federal performance standards and emissions guidelines for large MWCs (40 CFR 60 Subparts Cb and Eb). No control technology is mandated to meet the emissions limitations. EPA approved state trading programs for NOx compliance are allowed as is facility-wide averaging for NOx compliance. *Emission Reductions*: 19,000 Mg NOx/yr nationally (increment over 1991 40 CFR 60 Subpart Ca standards). *Control Cost*: $7.2 per Mg municipal solid waste combusted. *Timing of Implementation*: Compliance required December 19, 2000. *Implementation Area*: Nationwide.	**NOx** 2002 Base:	26,139
	SO2: **2002 Base**	3,865
	VOC: **2002 Base**	473
Implement Federal Rules: *Measure ID:* *Emission Reductions*: Varies per state depending on the number of MWC units, incinerator technology and chosen emissions limitations. In Connecticut, this measure resulted in NOx emissions reductions of 1.6 tons/summer day and 592 tons/year. *Control Cost*: $0 to approximately $1,500/MMBtu/hr depending on whether SNCR was installed in response to the federal emissions guidelines and whether SNCR is feasible. *Timing of Implementation*: Assuming timely adoption of state rule amendments, compliance with emissions limitations could be required by May 1, 2009. *Implementation Area*: Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York and Pennsylvania report operating MWC units (assuming state NOx emissions limitations are at the level of the federal emissions guidelines).	**NOx** 2009 Reduction: 2009 Remaining:	 -3,610 22,529
	SO2	***
	VOC	***

Policy Recommendation of State/Workgroup Lead:
Individual states with operating MWCs should evaluate the possible reduction of state NOx emissions limitations to produce creditable emissions reductions. At the regional level, this strategy should not be emphasized as it is state-specific in nature (depending on the MWC population, current control level and current state standards); does not require regional implementation to maximize its effectiveness; emissions from MWCs are a minor portion of the regional inventory given MACT-based standards required under Section 129 of the Clean Air Act; and EPA has proposed more stringent NOx emission limits for MWCs that states will be required to adopt and implement as of April 2009.

Recommended Strategy:
MWCs are subject to stringent MACT emissions standards, including standards for NOx, under Section 129 of the Clean Air Act. To comply with these MACT standards, many MWC owners and operators installed control technologies, including SNCR, to comply with the federal deadline of December 19, 2000. Many MWCs may be operated to reduce emissions to a level below the current federal standards. For example, Connecticut includes a state NOx emission reduction credit (ERC) trading program in its MWC rule. Recognizing that the "excess emissions" produced in Connecticut's MWC NOx ERC trading program could yield creditable emissions reductions if the required NOx emissions limits were reduced, in October 2000, the Department amended the state MWC rule to require the MWC owners and operators to meet more stringent NOx emissions limits as of May 1, 2003. The resulting emissions reductions of 1.62 tons of NOx per summer day (248 tons per ozone season) were used for compliance with the "shortfall" emission reduction obligation

needed for EPA approval of the attainment demonstration for the 1-hour ozone national ambient air quality standard.

Other states in the OTC region have operating MWC units that now comply with MACT-based state emissions limitations. Many MWC units now operate with SNCR to control NOx emissions. For MWC units that do not now have SNCR, SNCR is likely a feasible RACT measure capable of reducing NOx emissions below the state limits. Thus, the reduction of the state MWC NOx limits may produce creditable NOx emissions reductions. Furthermore, since MWCs are not subject to the Clean Air Interstate Rule (CAIR) and may not participate in a CAIR NOx trading program, reduction of state MWC NOx emissions limitations could be considered an equity measure that places MWC owners in a position similar to the owners of large electric generating units subject to CAIR. However, the amount of creditable emissions reductions a state may obtain from this strategy is limited given EPA's December 19, 2005 proposal of reduced emissions limitations for MWCs.

BACKGROUND INFORMATION

In December 1995, EPA adopted new source performance standards (NSPS) (40 CFR 60 subpart Eb) and emission guidelines (subpart Cb) for MWC units with a combustion capacity greater than 250 tons per day. Both the NSPS and emission guidelines require compliance with emission limitations for nine pollutants including NOx that reflect the performance of maximum achievable control technology (MACT). The emission guidelines required compliance by December 2000 for all existing MWCs, while the NSPS apply to new MWCs. On December 19, 2005, EPA proposed revisions to the emissions guidelines to reflect the levels of performance achieved due to the installation of control equipment (70 FR 75348). This proposal includes reduced NOx emissions limitations that states will be required to adopt and implement by April 2009, if the proposal is finalized. Selective non-catalytic reduction (SNCR) is considered MACT for NOx under both the 1995 guidelines and the 2005 proposal.

Connecticut's MWC regulation, section 22a-174-38 of the Regulations of Connecticut State Agencies (R.C.S.A.) (Attachment A), was adopted in June 1999 with NOx emissions limits equivalent to the federal emissions guidelines (Phase I NOx limits). Owners and operators of the state's 15 MWC units were required to comply with the emissions limits no later than December 19, 2000. R.C.S.A. section 22a-174-38 was amended in October 2000 to include more stringent NOx emissions limits (Phase II NOx limits), for which compliance was required no later than May 1, 2003. The following NOx emissions reductions, relative to emissions levels under the Phase I NOx limits, are attributed to the Phase II NOx limits in Connecticut:

- 592 tons per year;
- 248 tons per ozone season; and
- 1.62 tons per day during the ozone season.[1]

EPA's December 19, 2005 proposal to update the 1995 emissions standards will substantially reduce the ability of other states to achieve the same level of emissions reductions that Connecticut achieved by implementing this measure in 2003.

Add-on NOx Control

The number of NOx-reduction technologies for MWCs are limited as these units use a heterogeneous, wet fuel; are less thermally efficient than fossil fuel-fired boilers of comparable heat input; and require larger amounts of excess air and less densely-packed heat recovery systems. Low-NOx burners, fuel switching and load curtailment are not possible control options.

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[1] Assumes 100% rule effectiveness, which is reasonable given that the MWCs are operated with continuous emissions monitoring.

The only generally applicable and feasible add-on control technology for reducing NOx emissions from MWCs is SNCR.[2] SNCR is a chemical process for removing NOx from flue gas. In the SNCR process, a reagent, typically liquid urea or anhydrous gaseous ammonia is injected within a boiler or in ducts in a region where the temperature is between 900 and 1100 degrees Celsius. The reaction converts NOx to nitrogen gas and water vapor. SNCR performance depends on factors specific to each type of combustion equipment, including flue gas temperature, residence time for the reagent and flue gas, amount of reagent injected, reagent distribution, uncontrolled NOx level and carbon monoxide and oxygen concentrations.

Some disadvantages arise from the use of SNCR including: the high operating temperatures required; ineffectiveness at high temperatures with low concentrations of NOx; the need to accommodate enough residence time to complete the chemical reaction at high temperatures; and undesirable excess ammonia and urea emissions ("ammonia slip") that arise from an incomplete chemical reaction (Thermal Energy International, 2000).

All of Connecticut's large MWC units are equipped with SNCR, including nine mass burn/waterwall units and three refuse-derived fuel units. Two tire-fired units subject to the state MWC rule also operate with SNCR.[3] Similarly, all of New Jersey's large MWC units are equipped with SCR to meet NOx emissions limitations based on the federal emissions guidelines.

<u>Cost</u>

The capital cost of installing SNCR on a MWC unit is approximately $1,500 MMBtu/hr (see, e.g., Institute of Clean Air Companies, 2000).[4] Most of the cost of using SNCR is in operating expenses (Institute of Clean Air Companies, 2000), which EPA estimates as falling between 680 and 1,200 $/MMBtu (1993 dollars). Thus, SNCR is well suited for seasonal control in that it may provide significant reductions in NOx emissions but incurs little cost when the system is not in use. EPA has assigned an ozone season cost effectiveness to SNCR operated on MWC units of $2,140 per ton of NOx reduced (1990 dollars)(EPA, 1999, Table 16).

<u>Emissions reductions</u>

In Connecticut, MWC facility owners report emissions reductions of 25 to 50% from the operation of SNCR; a typical reduction of 35-40% could be assumed from the installation and operation of SNCR/ammonia injection to MWC units of similar size and type. Other combustors of varying technologies and capacities but with similar baseline NOx emissions have reported reductions ranging from 35 - 75% from the operation of urea-based SNCR (Appendix 1, Institute of Clean Air Companies, 2000). EPA assigns a typical 45% emission reduction to the effectiveness of SNCR at MWCs (EPA, 1999, Table 16).

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2 The use of SCR to control NOx emissions from MWCs in North American is limited to very few units (see, e.g., http://www.region.peel.on.ca/pw/waste/facilities/algonquin-power.htm) because the nature of municipal solid waste requires huge SCR reactor sizes and significant actions to prevent catalyst poisoning. These factors, combined with the relatively small size of most MWCs, makes the use of SCR prohibitively expensive (EPA 2005, comment by IWSA).

3 Connecticut also has three mass burn refractory units that are classified as small MWCs and do not use SNCR.

4 For comparison, EPA places the capital cost of SNCR between 1,600 and 3,300 $/MMBtu (1993 dollars). In 2002, the 3-unit facility (140 MMBTU/hr per unit) owned by the Connecticut Resources Recovery Authority in Bridgeport, Connecticut installed SNCR on all three units at a capital cost of $2.1 million.

<u>REFERENCES</u>

Institute of Clean Air Companies. May 2000. *Selective Non-Catalytic Reduction (SNCR) for Controlling NOx Emissions*. http://www.fueltechnv.com/pdf/TPP-534.pdf

Thermal Energy International Inc. 2000. *Thermal THERMALONOx Competitive Advantages.* http://www.thermalenergy.com/solutions/solutions.html

U.S. Environmental Protection Agency. November 1999. Nitrogen Oxides (NOx), *Why and How They are Controlled*. Clean Air Technology Center: EPA 456/F-99-006R.

U.S. Environmental Protection Agency. April 2005. *Corrected Response to Significant Public Comments on the Proposed Clean Air Interstate Rule*. Comment of IWSA.

U.S. Environmental Protection Agency. December 19, 2005. *Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Large Municipal Waste Combustors; Proposed Rule*. 70 FR 75348.

CONTROL MEASURE SUMMARY FOR
Printing and Graphic Arts

Control Measure Summary: This category includes categories of both heat set and non-heat set operations. It includes lithographic, gravure, flexographic and screen printing. It includes both point sources and area sources.	**Emissions (tons/year) in Ozone Transport Region**	
2002 existing measures: RACT, BACT, NSPS	**VOC Point** Actual 2002 **VOC Area** Actual 2002:	 5,501 31,738
2009 On-the-Books measures: MACT Std. - Subpart KK Publication rotogravure – limit organic HAP emissions to no more than 8% of volatile matter used each month. Either reformulation or 92% capture and control efficiency. Product and packaging rotogravure and wide-web flexo – limit organic HAP emissions to no more than 5% of volatile matter used each month. Either reformulation or 95% capture and control efficiency. *Emission Reductions*: *Control Cost*: *Timing of Implementation*: Compliance Date (existing) December 5, 2005 *Implementation Area*: Nationwide	**VOC Point** Actual 2002: 2009 Reduction: 2009 Remaining: **VOC Point** Actual 2002: 2009 Reduction: 2009 Remaining:	 5,501 -121 5,380 31,738 -0 31,738
Candidate measure: Adopt the requirements of SCAQMD rule 1130 and 1130.1 *Emission Reductions*: Under evaluation *Control Cost*: Under evaluation *Timing of Implementation*: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010 *Implementation Area*: OTR	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	Under review
Candidate measure: Same option as CM1, except potentially require that publication, packaging and product rotogravure and wide web flexo printers that are equipped with capture and control equipment, meet the capture and control efficiency requirement in the MACT standard for VOC reductions (this would apply to facilities not major for HAPs). *Implementation Area:* OTR	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	Under review
Candidate measure: Adopt September 2006 CTGs. In September 2006, EPA determined that control technique guideline (CTG) documents will be substantially as effective as national regulations in reducing VOC emissions in ozone nonattainment areas from the following Group II product categories: lithographic printing materials, letterpress printing materials, and flexible packaging printing materials *Implementation Area:* OTR		Under Review
Policy Recommendation: Final recommendation not made as of June, 2006.		
Brief Rationale for Recommended Strategy:		

CONTROL MEASURE SUMMARY FOR *Portable Fuel Containers*

Control Measure Summary: Portable Fuel Containers This control measure establishes design and manufacturing specifications for portable fuel containers (PFCs) based on the California Air Resources Board (CARB) rules. PFCs are used to refuel residential and commercial equipment and vehicles. PFCs are used to refuel a broad range of small off-road engines and other equipment (e.g., lawnmowers, chainsaws, personal watercraft, motorcycles, etc.).	**VOC Emissions in Ozone Transport Region**	
2002 Existing Measure: None	2002 Annual: 2002 Summer:	99,919 tpy 315.3 tpd
2009 On-the-Books Measure: Adopt the OTC Model Rule for PFCs, which is based on the 2000 CARB rule for PFCs. *Emission Reductions*: Based on a CE=65%, RE=100%, RP=based on the number of years the rule has been in place based on the assumed 10-yr turnover of the sale of the cans, and Total control = 65% when fully implemented after 10 years. *Control Cost*: $581 per ton *Timing of Implementation*: State specific with a 10% per year turnover, full reductions are achieved after 10 years. CARB, and the EPA, have estimated a 5 year turnover for the cans, but the OTC used a more conservative 10 year turnover in calculating emission reductions. *Implementation Area*: OTR	**Annual:** 2009 Reduction: 2009 Remaining: **Summer:** 2009 Reduction: 2009 Remaining:	 33,055 tpy 66,864 tpy 107.1 tpd 208.2 tpd
2009 On-the-Way Measure: Proposed Federal HAP Mobile Source Reg (Feb 28, 2006) Rule – This rule proposes to regulate PFCs similar to CARBs 2006 rule amendments and will regulate permeability to 0.3 grams of HC per gallon per day (2001 OTC Model Rule has 0.4 grams per gallon per day). It does not contain CARBs amendments regarding kerosene containers and utility jugs. *Emission Reductions*: EPA estimates about a 9% reduction nationwide in 2009 and a 61% reduction when fully implemented after 5 years. *Control Cost*: $180 per ton without fuel savings; over the long term, fuel savings outweigh costs. *Timing of Implementation*: Jan.1, 2009 effective date of rule and 20% per year turnover, full reductions are achieved after 5 years, in 2014. *Implementation Area*: Nationwide	**Annual:** 2009 Reduction: 2009 Remaining: **Summer:** 2009 Reduction: 2009 Remaining:	 negligible 66,864 tpy negligible 208.2 tpd
Candidate measure: Adopt the CARB 2006 amendments broadening PFC definition to include kerosene containers and utility jugs, increasing the permeability requirement from 0.3 grams of hydrocarbons per gallon per day to 0.4 grams of hydrocarbons per gallon per day, and other changes needed to make the OTC Model Rule consistent with CARB *Emission Reductions*: CARB estimates their amendments are expected to reduce ROG emissions by 58% after full penetration into the marketplace, assumed to be 5 years. *Control Cost*: CARB estimate is $800 to $1,400 per ton reduced *Timing of Implementation*: State specific with a 10% per year turnover, full reductions are achieved after 10 years *Implementation Area:* OTR	**Annual:** 2009 Base: 2009 Reduction: 2009 Remaining: **Summer:** 2009 Base: 2009 Reduction: 2009 Remaining:	 66,864 tpy 4,152 tpy 62,712 tpy 208.2 tpd 12.8 tpd 195.4 tpd

Summary of Candidate Measure:
The California Air Resources Board (CARB) 2000 PFC regulation establishes design and manufacturing specifications for PFCs. PFC emissions are calculated by accounting for emissions from five different components related to gas container use: permeation, diurnal, transport-spillage, refueling spillage and refueling vapor displacement emissions. The permeation, diurnal emissions (associated with storage) and transport-spillage emissions are included in the area source inventory. The equipment refueling spillage and refueling vapor displacement emissions are calculated from the non-road model and are included in the non-road inventory. After four years of implementation and a comprehensive assessment of the program, CARB staff identified some problems with the rule related to consumer acceptance and reducing anticipated emission reductions. Their 2006 amendments address these issues, as well as expanding on the regulation to increase emission reductions. The amendments include the following:

1. Eliminate the requirement for an auto shutoff.
2. Eliminate fuel flow rate and fill level standards.
3. Eliminate one opening standard.
4. Reduce pressure standard from 10 psig to 5 psig.
5. Establish a certification program for PFCs.
6. Expand the definition of a PFC to include utility jugs and kerosene containers. CARB staff determined that consumers were using these containers for gasoline.
7. Change permeability standard from 0.4 grams ROG /gallon-day to 0.3 grams/gallon-day.
8. Combine the evaporation and permeation standards into a new diurnal standard to simplify certification and compliance testing.
9. Adopt new PFC test procedures.
10. Include a voluntary Consumer Acceptance Program to support and encourage user-friendly PFC designs (i.e., allowing the use of the ARB Star Rating system to clearly identify superior designs as determined by users).

While ARB staff does not expect these changes to affect the cost of gasoline cans, the price of kerosene cans could rise to as much as $8.50 per container once the regulations are implemented. CARB also estimates the cost-effectiveness to be between $0.40 to $0.70 per pound.

Recommended Strategy: CARB, through their comprehensive history of research and multiple product surveys, have the best technical data available to create rules to regulate portable fuel containers. Most portable fuel container manufacturers market their products nationally, therefore many will be selling the new products nationally after they have produced cans than conform with the CARB rules. The CARB rule contains some revisions to their original rule to ease consumer acceptance of the cans, for states that have adopted the original OTC model rule. In addition the CARB rule amendments regulate kerosene cans and utility jugs, which the Federal rule proposal does not.

References:

2009 On-the-Books Measure (OTC Model Rule):

E.H. Pechan & Associates, Inc., *Control Measure Development Support Analysis of Ozone Transport Commission Model Rules*, March 31, 2001. Much of the analysis in this report was based on CARB's analysis for CARB's original 1999 PFC rule , which estimated a 75% reduction that would be fully achieved after 5 years (CARB's assumed life cycle for PFCs). The OTC used a more conservative 10-year turnover rate in its analysis. Table II-5 of the Pechan report shows the cost of compliance to be $581/ton.

2009 On-the-Way Measure (Proposed 2/28/06 Federal Rule):

U.S. EPA Office of Transportation and Air Quality. *Estimating Emissions Associated with Portable Fuel Containers (PFCs), Draft Report*, EPA420-D-06-003, February 2006.

U.S. EPA Office of Transportation and Air Quality. *Draft Regulatory Impact Analysis: Control of Hazardous Air Pollutants from Mobile Sources*, EPA420-D-06-004, February 2006.

Candidate Measure (CARB 2006 Amendments):

California Air Resources Board. *Final Statement of Reasons for Rulemaking, Including Summary of Comments and Agency Response: PUBLIC HEARING TO CONSIDER AMENDMENTS TO THE PORTABLE FUEL CONTAINER REGULATIONS.* September 15, 2005.

California Air Resources Board. *Initial Statement of Reasons for Proposed Amendments to the Portable Fuel Container Regulations.* July 29, 2005. Table 5.1 shows the cost-effectiveness of the proposed amendments to be $0.40 to $0.70 per pound ($800 to $1,400 per ton)

CONTROL MEASURE SUMMARY FOR
Regional Fuel

Control Measure Summary: The OTR proposes a common fuel standard for the OTR states that does not require MTBE or Ethanol, but exhibits Environmentally Beneficial Combustion Properties.	**NOx Emissions (tons/summer day) in OTR**	
2002 existing measure: Federal program in the CAA requiring RFG in certain non-attainment areas and allowing other states with non-attainment areas to opt-in. All but two states in the OTR are participating, in whole or in part, with the federal program, however nearly 1/3 of the gasoline sold in the OTR is not RFG.		
Candidate measure: *Measure ID:* OTR-wide Regional Fuel *Emission Reductions*: *Control Cost*: unknown at this time *Timing of Implementation*: *Implementation Area*: All states in the OTR	 NOx VOC	 ~ 4.8 tpsd ~ 139.4 tpsd
Policy Recommendation: Continue to examine the potential for a regional fuel, keeping in mind that some states like PA may have statutory/legislative constraints.		
Brief Rationale for Recommended Strategy: The Energy Policy Act of 2005 provides the opportunity for the OTR to achieve a single clean-burning gasoline without MTBE, as it also eliminates the oxygen content requirement for RFG. The authority provided in Energy Act is consistent with what states promoted through the long debate over MTBE/ethanol/RFG. Approximately one-third of the gasoline currently sold in the OTR is not RFG; most is conventional gasoline. The new authority plus the potential for emission reductions from the amount of non-RFG sold in the OTR provides an opportunity for additional emission reductions in the region as well as for a reduced number of fuels, and possibly a single fuel, to be utilized throughout the region.		

Appendix D – VOC Emissions by County for 2002 and 2009

Table D-1 Adhesives and Sealants VOC Area Source Emission Summary for 2002 and 2009 by County

Table D-2 Adhesives and Sealants VOC Point Source Emission Summary for 2002 and 2009 by County

Table D-3 Cutback and Emulsified Asphalt Paving VOC Area Source Emission Summary for 2002 and 2009 by County

Table D-4 Consumer Products VOC Area Source Emission Summary for 2002 and 2009 by County

Table D-5 Portable Fuel Containers VOC Area Source Emission Summary for 2002 and 2009 by County

Table D-6 Portable Fuel Containers VOC Nonroad Source Emission Summary for 2002 and 2009 by State

Table D-7 Reformulated Gasoline Emission Summary by State

Due to their large size, these tables are being transmitted electronically in the spreadsheet named Appendix_D_VOC_2009.xls. There are separate tabs for each of the tables listed above.

State	Adhesives/Sealants VOC Emissions (tpd)				Asphalt Paving VOC Emissions (tpd)				Consumer Products VOC Emissions (tpd)				PFCs (Area Source) VOC Emissions (tpd)				PFCs (Nonroad Source) VOC Emissions (tpd)				RFG* VOC Emissions (tpd)				Total for Five Categories VOC Emissions (tpd)			
	2002	2009 OTB/W	2009 BOTW	2009 Benefit	2002	2009 OTB/W	2009 BOTW	2009 Benefit	2002	2009 OTB/W	2009 BOTW	2009 Benefit	2002	2009 OTB/W	2009 BOTW	2009 Benefit	2002	2009 OTB/W	2009 BOTW	2009 Benefit	2006	2006 OTB/W	2006 BOTW	2006 Benefit	2002	2009 OTB/W	2009 BOTW	2009 Benefit
CT	4.8	6.6	2.4	4.2	4.5	4.5	0.3	4.3	40.1	35.4	34.7	0.7	9.7	6.5	6.1	0.4	2.9	1.9	1.8	0.1	87.9	87.9	87.9	0.0	149.9	142.9	133.2	9.7
DE	1.4	1.6	0.6	1.0	0.1	0.1	0.1	0.0	7.3	6.7	6.5	0.1	3.0	2.1	1.9	0.1	0.9	0.6	0.6	0.0	26.6	26.6	26.6	0.0	39.3	37.7	36.3	1.4
DC	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	5.7	5.1	5.0	0.1	3.6	2.5	2.4	0.1	1.1	0.8	0.7	0.0	9.1	9.1	9.1	0.0	19.6	17.6	17.2	0.4
ME	3.1	3.9	1.4	2.5	8.6	10.6	0.0	10.6	10.9	9.7	9.5	0.2	3.6	2.4	2.3	0.1	1.1	0.7	0.7	0.0	56.2	56.2	47.1	9.1	83.5	83.6	60.9	22.6
MD	6.9	9.1	3.3	5.8	0.0	0.0	0.0	0.0	52.8	48.4	47.4	1.0	39.6	24.5	23.1	1.4	11.9	7.4	6.9	0.4	158.7	158.7	155.6	3.2	270.0	248.1	236.3	11.8
MA	10.6	14.7	5.8	8.9	8.4	8.6	0.5	8.1	62.2	64.1	53.9	10.2	18.1	18.6	16.9	1.7	5.4	5.6	5.1	0.5	148.6	148.6	148.6	0.0	253.3	260.1	230.8	29.3
NH	2.5	3.6	1.3	2.3	3.8	4.8	0.5	4.4	13.7	12.6	12.4	0.3	3.6	3.0	2.8	0.2	1.1	0.9	0.8	0.1	45.3	45.3	41.0	4.3	70.0	70.3	58.8	11.5
NJ	14.9	15.2	6.0	9.2	4.9	4.8	0.1	4.7	82.9	71.9	70.5	1.4	24.4	17.7	16.7	1.0	7.3	5.3	5.0	0.3	219.6	219.6	219.6	0.0	354.1	334.6	317.9	16.7
NY	24.7	33.4	11.9	21.5	15.4	18.3	1.8	16.4	209.6	183.3	179.6	3.7	76.6	45.0	42.4	2.6	23.0	13.5	12.7	0.8	465.0	465.0	408.1	56.9	814.2	758.4	656.5	101.9
PA	25.5	34.0	12.2	21.8	7.7	9.3	0.9	8.4	119.6	104.4	102.4	2.1	47.0	27.6	26.0	1.6	14.1	8.3	7.8	0.5	363.0	363.0	305.0	58.0	576.8	546.7	454.3	92.3
RI	1.8	2.4	0.9	1.5	1.0	1.2	0.1	1.1	10.6	9.3	9.1	0.2	3.0	2.7	2.5	0.2	0.9	0.8	0.8	0.0	22.2	22.2	22.2	0.0	39.5	38.6	35.6	3.0
VT	2.4	3.4	1.2	2.2	1.4	1.8	0.0	1.8	6.1	5.6	5.5	0.1	1.7	1.5	1.5	0.1	0.5	0.5	0.4	0.0	35.9	35.9	27.9	7.9	48.0	48.7	36.5	12.1
No. VA	1.2	1.6	0.6	1.0	<0.1	<0.1	<0.1	<0.1	21.5	23.0	22.5	0.5	8.6	6.1	5.7	0.4	2.6	1.8	1.7	0.1	54.9	54.9	54.9	0.0	88.8	87.4	85.4	1.9
OTR	**99.8**	**129.8**	**47.5**	**82.3**	**55.9**	**64.0**	**4.3**	**59.8**	**642.9**	**579.5**	**559.0**	**20.5**	**242.5**	**160.1**	**150.3**	**9.9**	**72.8**	**48.0**	**45.1**	**3.0**	**1693.1**	**1693.1**	**1553.7**	**139.4**	**2,807.0**	**2,674.6**	**2,359.8**	**314.8**

* 2006 Emission Estimates from NESCAUM

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
F	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
G	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

SCC: 24-61-021-xxx. 24-61-022-xxx

COLUMN	COLUMN DESCRIPTIONS
K	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
L	VOC 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
M	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
N	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
O	Incremental Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Annual Control Factor
Q	Summer Control Factor (100% for cutback; 90% for emulsified, except 0 in DE and 96.9% in NJ))
R, S	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW control factor/100)
T, U	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

ASPHALT PAVING

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions								2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Annual Control Factor	2009 BOTW Summer Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
CT	Fairfield	09001	2461021000	20.18	0.2302	0.230	74.1	25.1	20.18	0.2302	0.230	1.00	0.00	0.00	100.00	20.18	0.000	0.00	0.230	Cutback Asphalt
CT	Hartford	09003	2461021000	4.80	0.0548	0.055	74.3	25.1	4.80	0.0548	0.055	1.00	0.00	0.00	100.00	4.80	0.000	0.00	0.055	Cutback Asphalt
CT	Litchfield	09005	2461021000	97.67	1.1047	1.105	73.5	25.1	97.67	1.1047	1.105	1.00	0.00	0.00	100.00	97.67	0.000	0.00	1.105	Cutback Asphalt
CT	Middlesex	09007	2461021000	0.00	0.0000	0.000	0.0	25.1	0.00	0.0000	0.000	1.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
CT	New Haven	09009	2461021000	15.93	0.1765	0.176	72.0	25.1	15.93	0.1765	0.176	1.00	0.00	0.00	100.00	15.93	0.000	0.00	0.176	Cutback Asphalt
CT	New London	09011	2461021000	0.00	0.0000	0.000	0.0	25.1	0.00	0.0000	0.000	1.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
CT	Tolland	09013	2461021000	5.17	0.0597	0.060	75.2	25.1	5.17	0.0597	0.060	1.00	0.00	0.00	100.00	5.17	0.000	0.00	0.060	Cutback Asphalt
CT	Windham	09015	2461021000	33.08	0.3324	0.332	65.3	25.1	33.08	0.3324	0.332	1.00	0.00	0.00	100.00	33.08	0.000	0.00	0.332	Cutback Asphalt
DE	Kent	10001	2461021000	9.54	0.0000	0.000	0.0	25.1	11.62	0.0000	0.000	1.22	0.00	0.00	100.00	11.62	0.000	0.00	0.000	Cutback Asphalt
DE	New Castle	10003	2461021000	15.64	0.0000	0.000	0.0	25.1	19.05	0.0000	0.000	1.22	0.00	0.00	100.00	19.05	0.000	0.00	0.000	Cutback Asphalt
DE	Sussex	10005	2461021000	23.19	0.0622	0.062	24.0	25.1	28.24	0.0758	0.076	1.22	0.00	0.00	100.00	28.24	0.000	0.00	0.076	Cutback Asphalt
ME	Androscoggin	23001	2461021000	190.79	Missing	0.526	Missing	25.1	235.74	Missing	0.650	1.24	0.00	0.00	100.00	235.74	0.000	0.00	0.650	Cutback Asphalt
ME	Aroostook	23003	2461021000	164.34	Missing	0.453	Missing	25.1	203.05	Missing	0.560	1.24	0.00	0.00	100.00	203.05	0.000	0.00	0.560	Cutback Asphalt
ME	Cumberland	23005	2461021000	650.02	Missing	1.793	Missing	25.1	803.14	Missing	2.215	1.24	0.00	0.00	100.00	803.14	0.000	0.00	2.215	Cutback Asphalt
ME	Franklin	23007	2461021000	73.27	Missing	0.202	Missing	25.1	90.52	Missing	0.250	1.24	0.00	0.00	100.00	90.52	0.000	0.00	0.250	Cutback Asphalt
ME	Hancock	23009	2461021000	155.75	Missing	0.430	Missing	25.1	192.44	Missing	0.531	1.24	0.00	0.00	100.00	192.44	0.000	0.00	0.531	Cutback Asphalt
ME	Kennebec	23011	2461021000	309.81	Missing	0.855	Missing	25.1	382.79	Missing	1.056	1.24	0.00	0.00	100.00	382.79	0.000	0.00	1.056	Cutback Asphalt
ME	Knox	23013	2461021000	81.58	Missing	0.225	Missing	25.1	100.80	Missing	0.278	1.24	0.00	0.00	100.00	100.80	0.000	0.00	0.278	Cutback Asphalt
ME	Lincoln	23015	2461021000	83.49	Missing	0.230	Missing	25.1	103.16	Missing	0.285	1.24	0.00	0.00	100.00	103.16	0.000	0.00	0.285	Cutback Asphalt
ME	Oxford	23017	2461021000	120.60	Missing	0.333	Missing	25.1	149.01	Missing	0.411	1.24	0.00	0.00	100.00	149.01	0.000	0.00	0.411	Cutback Asphalt
ME	Penobscot	23019	2461021000	359.97	Missing	0.993	Missing	25.1	444.76	Missing	1.227	1.24	0.00	0.00	100.00	444.76	0.000	0.00	1.227	Cutback Asphalt
ME	Piscataquis	23021	2461021000	39.10	Missing	0.108	Missing	25.1	48.31	Missing	0.133	1.24	0.00	0.00	100.00	48.31	0.000	0.00	0.133	Cutback Asphalt
ME	Sagadahoc	23023	2461021000	100.29	Missing	0.277	Missing	25.1	123.92	Missing	0.342	1.24	0.00	0.00	100.00	123.92	0.000	0.00	0.342	Cutback Asphalt
ME	Somerset	23025	2461021000	143.54	Missing	0.396	Missing	25.1	177.35	Missing	0.489	1.24	0.00	0.00	100.00	177.35	0.000	0.00	0.489	Cutback Asphalt
ME	Waldo	23027	2461021000	91.91	Missing	0.254	Missing	25.1	113.57	Missing	0.313	1.24	0.00	0.00	100.00	113.57	0.000	0.00	0.313	Cutback Asphalt
ME	Washington	23029	2461021000	90.59	Missing	0.250	Missing	25.1	111.93	Missing	0.309	1.24	0.00	0.00	100.00	111.93	0.000	0.00	0.309	Cutback Asphalt
ME	York	23031	2461021000	458.46	Missing	1.265	Missing	25.1	566.46	Missing	1.562	1.24	0.00	0.00	100.00	566.46	0.000	0.00	1.562	Cutback Asphalt
MA	Barnstable	25001	2461021000	11.63	Missing	0.13	Missing	25.1	11.84	Missing	0.130	1.02	0.00	0.00	100.00	11.84	0.000	0.00	0.130	Cutback Asphalt
MA	Berkshire	25003	2461021000	6.77	Missing	0.07	Missing	25.1	6.89	Missing	0.076	1.02	0.00	0.00	100.00	6.89	0.000	0.00	0.076	Cutback Asphalt
MA	Bristol	25005	2461021000	28.05	Missing	0.31	Missing	25.1	28.55	Missing	0.313	1.02	0.00	0.00	100.00	28.55	0.000	0.00	0.313	Cutback Asphalt
MA	Dukes	25007	2461021000	0.80	Missing	0.01	Missing	25.1	0.81	Missing	0.009	1.02	0.00	0.00	100.00	0.81	0.000	0.00	0.009	Cutback Asphalt
MA	Essex	25009	2461021000	37.90	Missing	0.42	Missing	25.1	38.59	Missing	0.423	1.02	0.00	0.00	100.00	38.59	0.000	0.00	0.423	Cutback Asphalt
MA	Franklin	25011	2461021000	3.71	Missing	0.04	Missing	25.1	3.78	Missing	0.041	1.02	0.00	0.00	100.00	3.78	0.000	0.00	0.041	Cutback Asphalt
MA	Hampden	25013	2461021000	23.70	Missing	0.26	Missing	25.1	24.12	Missing	0.264	1.02	0.00	0.00	100.00	24.12	0.000	0.00	0.264	Cutback Asphalt
MA	Hampshire	25015	2461021000	7.87	Missing	0.09	Missing	25.1	8.01	Missing	0.088	1.02	0.00	0.00	100.00	8.01	0.000	0.00	0.088	Cutback Asphalt
MA	Middlesex	25017	2461021000	74.90	Missing	0.82	Missing	25.1	76.25	Missing	0.836	1.02	0.00	0.00	100.00	76.25	0.000	0.00	0.836	Cutback Asphalt
MA	Nantucket	25019	2461021000	0.52	Missing	0.01	Missing	25.1	0.53	Missing	0.006	1.02	0.00	0.00	100.00	0.53	0.000	0.00	0.006	Cutback Asphalt
MA	Norfolk	25021	2461021000	33.55	Missing	0.37	Missing	25.1	34.16	Missing	0.374	1.02	0.00	0.00	100.00	34.16	0.000	0.00	0.374	Cutback Asphalt

ASPHALT PAVING				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Annual Control Factor	2009 BOTW Summer Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
MA	Plymouth	25023	2461021000	25.28	Missing	0.28	Missing	25.1	25.73	Missing	0.282	1.02	0.00	0.00	100.00	25.73	0.000	0.00	0.282	Cutback Asphalt
MA	Suffolk	25025	2461021000	33.60	Missing	0.37	Missing	25.1	34.20	Missing	0.375	1.02	0.00	0.00	100.00	34.20	0.000	0.00	0.375	Cutback Asphalt
MA	Worcester	25027	2461021000	40.21	Missing	0.44	Missing	25.1	40.94	Missing	0.449	1.02	0.00	0.00	100.00	40.94	0.000	0.00	0.449	Cutback Asphalt
NJ	Atlantic	34001	2461021000	24.65	0.0948	0.095	25.0	25.1	24.16	0.0929	0.093	0.98	0.00	0.00	100.00	24.16	0.000	0.00	0.093	Cutback Asphalt
NJ	Bergen	34003	2461021000	36.69	0.1411	0.141	25.0	25.1	35.96	0.1383	0.138	0.98	0.00	0.00	100.00	35.96	0.000	0.00	0.138	Cutback Asphalt
NJ	Burlington	34005	2461021000	32.60	0.1254	0.125	25.0	25.1	31.95	0.1229	0.123	0.98	0.00	0.00	100.00	31.95	0.000	0.00	0.123	Cutback Asphalt
NJ	Camden	34007	2461021000	25.33	0.0974	0.097	25.0	25.1	24.82	0.0955	0.096	0.98	0.00	0.00	100.00	24.82	0.000	0.00	0.096	Cutback Asphalt
NJ	Cape May	34009	2461021000	12.97	0.0499	0.050	25.0	25.1	12.71	0.0489	0.049	0.98	0.00	0.00	100.00	12.71	0.000	0.00	0.049	Cutback Asphalt
NJ	Cumberland	34011	2461021000	15.85	0.0610	0.061	25.0	25.1	15.53	0.0597	0.060	0.98	0.00	0.00	100.00	15.53	0.000	0.00	0.060	Cutback Asphalt
NJ	Essex	34013	2461021000	22.25	0.0856	0.086	25.0	25.1	21.81	0.0839	0.084	0.98	0.00	0.00	100.00	21.81	0.000	0.00	0.084	Cutback Asphalt
NJ	Gloucester	34015	2461021000	17.94	0.0690	0.069	25.0	25.1	17.59	0.0676	0.068	0.98	0.00	0.00	100.00	17.59	0.000	0.00	0.068	Cutback Asphalt
NJ	Hudson	34017	2461021000	8.49	0.0327	0.033	25.0	25.1	8.32	0.0320	0.032	0.98	0.00	0.00	100.00	8.32	0.000	0.00	0.032	Cutback Asphalt
NJ	Hunterdon	34019	2461021000	17.84	0.0686	0.069	25.0	25.1	17.49	0.0673	0.067	0.98	0.00	0.00	100.00	17.49	0.000	0.00	0.067	Cutback Asphalt
NJ	Mercer	34021	2461021000	21.47	0.0826	0.083	25.0	25.1	21.04	0.0809	0.081	0.98	0.00	0.00	100.00	21.04	0.000	0.00	0.081	Cutback Asphalt
NJ	Middlesex	34023	2461021000	30.82	0.1185	0.119	25.0	25.1	30.21	0.1162	0.116	0.98	0.00	0.00	100.00	30.21	0.000	0.00	0.116	Cutback Asphalt
NJ	Monmouth	34025	2461021000	39.12	0.1505	0.151	25.0	25.1	38.34	0.1475	0.148	0.98	0.00	0.00	100.00	38.34	0.000	0.00	0.148	Cutback Asphalt
NJ	Morris	34027	2461021000	29.95	0.1152	0.115	25.0	25.1	29.35	0.1129	0.113	0.98	0.00	0.00	100.00	29.35	0.000	0.00	0.113	Cutback Asphalt
NJ	Ocean	34029	2461021000	35.65	0.1371	0.137	25.0	25.1	34.94	0.1344	0.134	0.98	0.00	0.00	100.00	34.94	0.000	0.00	0.134	Cutback Asphalt
NJ	Passaic	34031	2461021000	16.91	0.0650	0.065	25.0	25.1	16.57	0.0637	0.064	0.98	0.00	0.00	100.00	16.57	0.000	0.00	0.064	Cutback Asphalt
NJ	Salem	34033	2461021000	11.07	0.0426	0.043	25.0	25.1	10.85	0.0417	0.042	0.98	0.00	0.00	100.00	10.85	0.000	0.00	0.042	Cutback Asphalt
NJ	Somerset	34035	2461021000	20.07	0.0772	0.077	25.0	25.1	19.67	0.0757	0.076	0.98	0.00	0.00	100.00	19.67	0.000	0.00	0.076	Cutback Asphalt
NJ	Sussex	34037	2461021000	17.41	0.0669	0.067	25.0	25.1	17.06	0.0656	0.066	0.98	0.00	0.00	100.00	17.06	0.000	0.00	0.066	Cutback Asphalt
NJ	Union	34039	2461021000	18.30	0.0704	0.070	25.0	25.1	17.94	0.0690	0.069	0.98	0.00	0.00	100.00	17.94	0.000	0.00	0.069	Cutback Asphalt
NJ	Warren	34041	2461021000	15.03	0.0578	0.058	25.0	25.1	14.73	0.0567	0.057	0.98	0.00	0.00	100.00	14.73	0.000	0.00	0.057	Cutback Asphalt
PA	Adams	42001	2461021000	56.75	0.0000	0.000	0.0	25.1	68.27	0.0000	0.000	1.20	0.00	0.00	100.00	68.27	0.000	0.00	0.000	Cutback Asphalt
PA	Allegheny	42003	2461021000	132.61	0.0000	0.000	0.0	25.1	159.55	0.0000	0.000	1.20	0.00	0.00	100.00	159.55	0.000	0.00	0.000	Cutback Asphalt
PA	Armstrong	42005	2461021000	67.09	0.0000	0.000	0.0	25.1	80.72	0.0000	0.000	1.20	0.00	0.00	100.00	80.72	0.000	0.00	0.000	Cutback Asphalt
PA	Beaver	42007	2461021000	66.05	0.0000	0.000	0.0	25.1	79.46	0.0000	0.000	1.20	0.00	0.00	100.00	79.46	0.000	0.00	0.000	Cutback Asphalt
PA	Bedford	42009	2461021000	87.42	0.0000	0.000	0.0	25.1	105.17	0.0000	0.000	1.20	0.00	0.00	100.00	105.17	0.000	0.00	0.000	Cutback Asphalt
PA	Berks	42011	2461021000	98.60	0.0000	0.000	0.0	25.1	118.62	0.0000	0.000	1.20	0.00	0.00	100.00	118.62	0.000	0.00	0.000	Cutback Asphalt
PA	Blair	42013	2461021000	43.11	0.0000	0.000	0.0	25.1	51.86	0.0000	0.000	1.20	0.00	0.00	100.00	51.86	0.000	0.00	0.000	Cutback Asphalt
PA	Bradford	42015	2461021000	91.23	0.0000	0.000	0.0	25.1	109.76	0.0000	0.000	1.20	0.00	0.00	100.00	109.76	0.000	0.00	0.000	Cutback Asphalt
PA	Bucks	42017	2461021000	116.52	0.0000	0.000	0.0	25.1	140.19	0.0000	0.000	1.20	0.00	0.00	100.00	140.19	0.000	0.00	0.000	Cutback Asphalt
PA	Butler	42019	2461021000	75.76	0.0000	0.000	0.0	25.1	91.15	0.0000	0.000	1.20	0.00	0.00	100.00	91.15	0.000	0.00	0.000	Cutback Asphalt
PA	Cambria	42021	2461021000	71.38	0.0000	0.000	0.0	25.1	85.87	0.0000	0.000	1.20	0.00	0.00	100.00	85.87	0.000	0.00	0.000	Cutback Asphalt
PA	Cameron	42023	2461021000	11.50	0.0000	0.000	0.0	25.1	13.83	0.0000	0.000	1.20	0.00	0.00	100.00	13.83	0.000	0.00	0.000	Cutback Asphalt
PA	Carbon	42025	2461021000	35.01	0.0000	0.000	0.0	25.1	42.12	0.0000	0.000	1.20	0.00	0.00	100.00	42.12	0.000	0.00	0.000	Cutback Asphalt
PA	Centre	42027	2461021000	59.67	0.0000	0.000	0.0	25.1	71.79	0.0000	0.000	1.20	0.00	0.00	100.00	71.79	0.000	0.00	0.000	Cutback Asphalt
PA	Chester	42029	2461021000	113.86	0.0000	0.000	0.0	25.1	136.98	0.0000	0.000	1.20	0.00	0.00	100.00	136.98	0.000	0.00	0.000	Cutback Asphalt
PA	Clarion	42031	2461021000	47.44	0.0000	0.000	0.0	25.1	57.08	0.0000	0.000	1.20	0.00	0.00	100.00	57.08	0.000	0.00	0.000	Cutback Asphalt
PA	Clearfield	42033	2461021000	84.18	0.0000	0.000	0.0	25.1	101.27	0.0000	0.000	1.20	0.00	0.00	100.00	101.27	0.000	0.00	0.000	Cutback Asphalt
PA	Clinton	42035	2461021000	29.84	0.0000	0.000	0.0	25.1	35.90	0.0000	0.000	1.20	0.00	0.00	100.00	35.90	0.000	0.00	0.000	Cutback Asphalt
PA	Columbia	42037	2461021000	51.31	0.0000	0.000	0.0	25.1	61.73	0.0000	0.000	1.20	0.00	0.00	100.00	61.73	0.000	0.00	0.000	Cutback Asphalt
PA	Crawford	42039	2461021000	92.64	0.0000	0.000	0.0	25.1	111.46	0.0000	0.000	1.20	0.00	0.00	100.00	111.46	0.000	0.00	0.000	Cutback Asphalt
PA	Cumberland	42041	2461021000	71.43	0.0000	0.000	0.0	25.1	85.93	0.0000	0.000	1.20	0.00	0.00	100.00	85.93	0.000	0.00	0.000	Cutback Asphalt
PA	Dauphin	42043	2461021000	60.93	0.0000	0.000	0.0	25.1	73.30	0.0000	0.000	1.20	0.00	0.00	100.00	73.30	0.000	0.00	0.000	Cutback Asphalt
PA	Delaware	42045	2461021000	62.28	0.0000	0.000	0.0	25.1	74.93	0.0000	0.000	1.20	0.00	0.00	100.00	74.93	0.000	0.00	0.000	Cutback Asphalt
PA	Elk	42047	2461021000	29.47	0.0000	0.000	0.0	25.1	35.46	0.0000	0.000	1.20	0.00	0.00	100.00	35.46	0.000	0.00	0.000	Cutback Asphalt
PA	Erie	42049	2461021000	79.37	0.0000	0.000	0.0	25.1	95.49	0.0000	0.000	1.20	0.00	0.00	100.00	95.49	0.000	0.00	0.000	Cutback Asphalt
PA	Fayette	42051	2461021000	78.80	0.0000	0.000	0.0	25.1	94.80	0.0000	0.000	1.20	0.00	0.00	100.00	94.80	0.000	0.00	0.000	Cutback Asphalt
PA	Forest	42053	2461021000	19.65	0.0000	0.000	0.0	25.1	23.64	0.0000	0.000	1.20	0.00	0.00	100.00	23.64	0.000	0.00	0.000	Cutback Asphalt
PA	Franklin	42055	2461021000	63.80	0.0000	0.000	0.0	25.1	76.76	0.0000	0.000	1.20	0.00	0.00	100.00	76.76	0.000	0.00	0.000	Cutback Asphalt
PA	Fulton	42057	2461021000	42.79	0.0000	0.000	0.0	25.1	51.49	0.0000	0.000	1.20	0.00	0.00	100.00	51.49	0.000	0.00	0.000	Cutback Asphalt
PA	Greene	42059	2461021000	59.10	0.0000	0.000	0.0	25.1	71.10	0.0000	0.000	1.20	0.00	0.00	100.00	71.10	0.000	0.00	0.000	Cutback Asphalt
PA	Huntingdon	42061	2461021000	61.76	0.0000	0.000	0.0	25.1	74.31	0.0000	0.000	1.20	0.00	0.00	100.00	74.31	0.000	0.00	0.000	Cutback Asphalt
PA	Indiana	42063	2461021000	84.39	0.0000	0.000	0.0	25.1	101.53	0.0000	0.000	1.20	0.00	0.00	100.00	101.53	0.000	0.00	0.000	Cutback Asphalt
PA	Jefferson	42065	2461021000	58.47	0.0000	0.000	0.0	25.1	70.34	0.0000	0.000	1.20	0.00	0.00	100.00	70.34	0.000	0.00	0.000	Cutback Asphalt
PA	Juniata	42067	2461021000	35.32	0.0000	0.000	0.0	25.1	42.50	0.0000	0.000	1.20	0.00	0.00	100.00	42.50	0.000	0.00	0.000	Cutback Asphalt
PA	Lackawanna	42069	2461021000	66.46	0.0000	0.000	0.0	25.1	79.96	0.0000	0.000	1.20	0.00	0.00	100.00	79.96	0.000	0.00	0.000	Cutback Asphalt

ASPHALT PAVING

State	County	FIPS	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Annual Control Factor	2009 BOTW Summer Control Factor	2009 BOTW Emissions Annual (tpy)	2009 BOTW Emissions Summer Day Calculated (tpd)	2009 BOTW Reductions Annual (tpy)	2009 BOTW Reductions Summer Day (tpd)	SCC Description
PA	Lancaster	42071	2461021000	111.19	0.0000	0.000	0.0	25.1	133.77	0.0000	0.000	1.20	0.00	0.00	100.00	133.77	0.000	0.00	0.000	Cutback Asphalt
PA	Lawrence	42073	2461021000	38.46	0.0000	0.000	0.0	25.1	46.27	0.0000	0.000	1.20	0.00	0.00	100.00	46.27	0.000	0.00	0.000	Cutback Asphalt
PA	Lebanon	42075	2461021000	40.08	0.0000	0.000	0.0	25.1	48.22	0.0000	0.000	1.20	0.00	0.00	100.00	48.22	0.000	0.00	0.000	Cutback Asphalt
PA	Lehigh	42077	2461021000	63.96	0.0000	0.000	0.0	25.1	76.95	0.0000	0.000	1.20	0.00	0.00	100.00	76.95	0.000	0.00	0.000	Cutback Asphalt
PA	Luzerne	42079	2461021000	96.51	0.0000	0.000	0.0	25.1	116.11	0.0000	0.000	1.20	0.00	0.00	100.00	116.11	0.000	0.00	0.000	Cutback Asphalt
PA	Lycoming	42081	2461021000	76.91	0.0000	0.000	0.0	25.1	92.54	0.0000	0.000	1.20	0.00	0.00	100.00	92.54	0.000	0.00	0.000	Cutback Asphalt
PA	McKean	42083	2461021000	38.04	0.0000	0.000	0.0	25.1	45.76	0.0000	0.000	1.20	0.00	0.00	100.00	45.76	0.000	0.00	0.000	Cutback Asphalt
PA	Mercer	42085	2461021000	80.15	0.0000	0.000	0.0	25.1	96.43	0.0000	0.000	1.20	0.00	0.00	100.00	96.43	0.000	0.00	0.000	Cutback Asphalt
PA	Mifflin	42087	2461021000	24.19	0.0000	0.000	0.0	25.1	29.11	0.0000	0.000	1.20	0.00	0.00	100.00	29.11	0.000	0.00	0.000	Cutback Asphalt
PA	Monroe	42089	2461021000	57.79	0.0000	0.000	0.0	25.1	69.53	0.0000	0.000	1.20	0.00	0.00	100.00	69.53	0.000	0.00	0.000	Cutback Asphalt
PA	Montgomery	42091	2461021000	98.91	0.0000	0.000	0.0	25.1	119.00	0.0000	0.000	1.20	0.00	0.00	100.00	119.00	0.000	0.00	0.000	Cutback Asphalt
PA	Montour	42093	2461021000	18.13	0.0000	0.000	0.0	25.1	21.81	0.0000	0.000	1.20	0.00	0.00	100.00	21.81	0.000	0.00	0.000	Cutback Asphalt
PA	Northampton	42095	2461021000	53.04	0.0000	0.000	0.0	25.1	63.81	0.0000	0.000	1.20	0.00	0.00	100.00	63.81	0.000	0.00	0.000	Cutback Asphalt
PA	Northumberland	42097	2461021000	57.37	0.0000	0.000	0.0	25.1	69.02	0.0000	0.000	1.20	0.00	0.00	100.00	69.02	0.000	0.00	0.000	Cutback Asphalt
PA	Perry	42099	2461021000	43.47	0.0000	0.000	0.0	25.1	52.30	0.0000	0.000	1.20	0.00	0.00	100.00	52.30	0.000	0.00	0.000	Cutback Asphalt
PA	Philadelphia	42101	2461021000	59.72	0.0000	0.000	0.0	25.1	71.85	0.0000	0.000	1.20	0.00	0.00	100.00	71.85	0.000	0.00	0.000	Cutback Asphalt
PA	Pike	42103	2461021000	39.35	0.0000	0.000	0.0	25.1	47.34	0.0000	0.000	1.20	0.00	0.00	100.00	47.34	0.000	0.00	0.000	Cutback Asphalt
PA	Potter	42105	2461021000	41.59	0.0000	0.000	0.0	25.1	50.04	0.0000	0.000	1.20	0.00	0.00	100.00	50.04	0.000	0.00	0.000	Cutback Asphalt
PA	Schuylkill	42107	2461021000	70.80	0.0000	0.000	0.0	25.1	85.18	0.0000	0.000	1.20	0.00	0.00	100.00	85.18	0.000	0.00	0.000	Cutback Asphalt
PA	Snyder	42109	2461021000	33.08	0.0000	0.000	0.0	25.1	39.79	0.0000	0.000	1.20	0.00	0.00	100.00	39.79	0.000	0.00	0.000	Cutback Asphalt
PA	Somerset	42111	2461021000	100.48	0.0000	0.000	0.0	25.1	120.89	0.0000	0.000	1.20	0.00	0.00	100.00	120.89	0.000	0.00	0.000	Cutback Asphalt
PA	Sullivan	42113	2461021000	23.98	0.0000	0.000	0.0	25.1	28.85	0.0000	0.000	1.20	0.00	0.00	100.00	28.85	0.000	0.00	0.000	Cutback Asphalt
PA	Susquehanna	42115	2461021000	78.59	0.0000	0.000	0.0	25.1	94.55	0.0000	0.000	1.20	0.00	0.00	100.00	94.55	0.000	0.00	0.000	Cutback Asphalt
PA	Tioga	42117	2461021000	63.43	0.0000	0.000	0.0	25.1	76.32	0.0000	0.000	1.20	0.00	0.00	100.00	76.32	0.000	0.00	0.000	Cutback Asphalt
PA	Union	42119	2461021000	30.46	0.0000	0.000	0.0	25.1	36.65	0.0000	0.000	1.20	0.00	0.00	100.00	36.65	0.000	0.00	0.000	Cutback Asphalt
PA	Venango	42121	2461021000	55.39	0.0000	0.000	0.0	25.1	66.64	0.0000	0.000	1.20	0.00	0.00	100.00	66.64	0.000	0.00	0.000	Cutback Asphalt
PA	Warren	42123	2461021000	54.34	0.0000	0.000	0.0	25.1	65.38	0.0000	0.000	1.20	0.00	0.00	100.00	65.38	0.000	0.00	0.000	Cutback Asphalt
PA	Washington	42125	2461021000	119.45	0.0000	0.000	0.0	25.1	143.71	0.0000	0.000	1.20	0.00	0.00	100.00	143.71	0.000	0.00	0.000	Cutback Asphalt
PA	Wayne	42127	2461021000	72.16	0.0000	0.000	0.0	25.1	86.82	0.0000	0.000	1.20	0.00	0.00	100.00	86.82	0.000	0.00	0.000	Cutback Asphalt
PA	Westmoreland	42129	2461021000	137.84	0.0000	0.000	0.0	25.1	165.83	0.0000	0.000	1.20	0.00	0.00	100.00	165.83	0.000	0.00	0.000	Cutback Asphalt
PA	Wyoming	42131	2461021000	37.36	0.0000	0.000	0.0	25.1	44.95	0.0000	0.000	1.20	0.00	0.00	100.00	44.95	0.000	0.00	0.000	Cutback Asphalt
PA	York	42133	2461021000	126.55	0.0000	0.000	0.0	25.1	152.26	0.0000	0.000	1.20	0.00	0.00	100.00	152.26	0.000	0.00	0.000	Cutback Asphalt
RI	Bristol	44001	2461021000	7.14	0.0000	0.000	25.0	25.1	8.75	0.0000	0.000	1.23	0.00	0.00	100.00	8.75	0.000	0.00	0.000	Cutback Asphalt
RI	Kent	44003	2461021000	22.85	0.0000	0.000	25.0	25.1	28.00	0.0000	0.000	1.23	0.00	0.00	100.00	28.00	0.000	0.00	0.000	Cutback Asphalt
RI	Newport	44005	2461021000	11.42	0.0000	0.000	0.0	25.1	13.99	0.0000	0.000	1.23	0.00	0.00	100.00	13.99	0.000	0.00	0.000	Cutback Asphalt
RI	Providence	44007	2461021000	84.25	0.0000	0.000	25.0	25.1	103.22	0.0000	0.000	1.23	0.00	0.00	100.00	103.22	0.000	0.00	0.000	Cutback Asphalt
RI	Washington	44009	2461021000	17.14	0.0000	0.000	25.0	25.1	21.00	0.0000	0.000	1.23	0.00	0.00	100.00	21.00	0.000	0.00	0.000	Cutback Asphalt
VT	Addison	50001	2461021000	30.31	Missing	0.083	25.0	25.1	37.99	Missing	0.104	1.25	0.00	0.00	100.00	37.99	0.000	0.00	0.104	Cutback Asphalt
VT	Bennington	50003	2461021000	34.07	Missing	0.094	25.0	25.1	42.71	Missing	0.117	1.25	0.00	0.00	100.00	42.71	0.000	0.00	0.117	Cutback Asphalt
VT	Caledonia	50005	2461021000	25.81	Missing	0.071	25.0	25.1	32.35	Missing	0.089	1.25	0.00	0.00	100.00	32.35	0.000	0.00	0.089	Cutback Asphalt
VT	Chittenden	50007	2461021000	120.85	Missing	0.332	25.0	25.1	151.49	Missing	0.416	1.25	0.00	0.00	100.00	151.49	0.000	0.00	0.416	Cutback Asphalt
VT	Essex	50009	2461021000	6.43	Missing	0.018	25.0	25.1	8.06	Missing	0.022	1.25	0.00	0.00	100.00	8.06	0.000	0.00	0.022	Cutback Asphalt
VT	Franklin	50011	2461021000	35.99	Missing	0.099	25.0	25.1	45.11	Missing	0.124	1.25	0.00	0.00	100.00	45.11	0.000	0.00	0.124	Cutback Asphalt
VT	Grand Isle	50013	2461021000	5.14	Missing	0.014	25.0	25.1	6.44	Missing	0.018	1.25	0.00	0.00	100.00	6.44	0.000	0.00	0.018	Cutback Asphalt
VT	Lamoille	50015	2461021000	17.46	Missing	0.048	25.0	25.1	21.89	Missing	0.060	1.25	0.00	0.00	100.00	21.89	0.000	0.00	0.060	Cutback Asphalt
VT	Orange	50017	2461021000	23.36	Missing	0.064	25.0	25.1	29.28	Missing	0.080	1.25	0.00	0.00	100.00	29.28	0.000	0.00	0.080	Cutback Asphalt
VT	Orleans	50019	2461021000	23.36	Missing	0.064	25.0	25.1	29.28	Missing	0.080	1.25	0.00	0.00	100.00	29.28	0.000	0.00	0.080	Cutback Asphalt
VT	Rutland	50021	2461021000	58.06	Missing	0.160	25.0	25.1	72.78	Missing	0.200	1.25	0.00	0.00	100.00	72.78	0.000	0.00	0.200	Cutback Asphalt
VT	Washington	50023	2461021000	52.18	Missing	0.143	25.0	25.1	65.41	Missing	0.180	1.25	0.00	0.00	100.00	65.41	0.000	0.00	0.180	Cutback Asphalt
VT	Windham	50025	2461021000	38.68	Missing	0.106	25.0	25.1	48.49	Missing	0.133	1.25	0.00	0.00	100.00	48.49	0.000	0.00	0.133	Cutback Asphalt
VT	Windsor	50027	2461021000	51.96	Missing	0.143	25.0	25.1	65.13	Missing	0.179	1.25	0.00	0.00	100.00	65.13	0.000	0.00	0.179	Cutback Asphalt
VA	Arlington	51013	2461021000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
VA	Fairfax	51059	2461021000	0.11	Missing	0.000	25.0	25.1	0.13	Missing	0.000	0.00	0.00	0.00	100.00	0.13	0.000	0.00	0.000	Cutback Asphalt
VA	Loudoun	51107	2461021000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
VA	Prince William	51153	2461021000	0.01	Missing	0.000	25.0	25.1	0.01	Missing	0.000	0.00	0.00	0.00	100.00	0.01	0.000	0.00	0.000	Cutback Asphalt
VA	Stafford	51179	2461021000	0.67	Missing	0.002	25.0	25.1	0.80	Missing	0.002	0.00	0.00	0.00	100.00	0.80	0.000	0.00	0.002	Cutback Asphalt
VA	Alexandria	51510	2461021000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
VA	Fairfax City	51600	2461021000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
VA	Falls Chruch	51610	2461021000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt

ASPHALT PAVING				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Annual Control Factor	2009 BOTW Summer Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
VA	Manassas City	51683	2461021000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
VA	Manassas Park City	51685	2461021000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
CT	Fairfield	09001	2461022000	25.99	0.2861	0.286	71.5	25.1	25.99	0.2861	0.286	1.00	0.00	90.00	90.00	2.60	0.029	23.39	0.257	Emulsified Asphalt
CT	Hartford	09003	2461022000	25.58	0.2874	0.287	73.0	25.1	25.58	0.2874	0.287	1.00	0.00	90.00	90.00	2.56	0.029	23.02	0.259	Emulsified Asphalt
CT	Litchfield	09005	2461022000	57.98	0.6266	0.627	70.2	25.1	57.98	0.6266	0.627	1.00	0.00	90.00	90.00	5.80	0.063	52.18	0.564	Emulsified Asphalt
CT	Middlesex	09007	2461022000	26.60	0.2854	0.285	69.8	25.1	26.60	0.2854	0.285	1.00	0.00	90.00	90.00	2.66	0.029	23.94	0.257	Emulsified Asphalt
CT	New Haven	09009	2461022000	16.00	0.1824	0.182	74.1	25.1	16.00	0.1824	0.182	1.00	0.00	90.00	90.00	1.60	0.018	14.40	0.164	Emulsified Asphalt
CT	New London	09011	2461022000	24.06	0.2584	0.258	69.8	25.1	24.06	0.2584	0.258	1.00	0.00	90.00	90.00	2.41	0.026	21.65	0.233	Emulsified Asphalt
CT	Tolland	09013	2461022000	20.29	0.2341	0.234	75.0	25.1	20.29	0.2341	0.234	1.00	0.00	90.00	90.00	2.03	0.023	18.26	0.211	Emulsified Asphalt
CT	Windham	09015	2461022000	37.35	0.4176	0.418	72.7	25.1	37.35	0.4176	0.418	1.00	0.00	90.00	90.00	3.74	0.042	33.62	0.376	Emulsified Asphalt
DE	Kent	10001	2461022000	1.77	0.0195	0.020	100.0	25.1	2.16	0.0238	0.024	1.22	0.00	0.00	0.00	2.16	0.024	0.00	0.000	Emulsified Asphalt
DE	New Castle	10003	2461022000	0.02	0.0000	0.000	8.0	25.1	0.03	0.0000	0.000	1.22	0.00	0.00	0.00	0.03	0.000	0.00	0.000	Emulsified Asphalt
DE	Sussex	10005	2461022000	5.85	0.0462	0.046	72.0	25.1	7.13	0.0562	0.056	1.22	0.00	0.00	0.00	7.13	0.056	0.00	0.000	Emulsified Asphalt
MD	Allegany	24001	2461022000	0.15	0.0006	0.001	Missing	25.1	0.15	0.0006	0.001	0.98	0.00	90.00	90.00	0.01	0.000	0.13	0.001	Emulsified Asphalt
MD	Anne Arundel	24003	2461022000	1.01	0.0039	0.004	Missing	25.1	1.05	0.0040	0.004	1.04	0.00	90.00	90.00	0.11	0.000	0.95	0.004	Emulsified Asphalt
MD	Baltimore	24005	2461022000	1.54	0.0059	0.006	Missing	25.1	1.60	0.0062	0.006	1.04	0.00	90.00	90.00	0.16	0.001	1.44	0.006	Emulsified Asphalt
MD	Calvert	24009	2461022000	0.16	0.0006	0.001	Missing	25.1	0.19	0.0007	0.001	1.15	0.00	90.00	90.00	0.02	0.000	0.17	0.001	Emulsified Asphalt
MD	Caroline	24011	2461022000	0.06	0.0002	0.000	Missing	25.1	0.06	0.0002	0.000	1.06	0.00	90.00	90.00	0.01	0.000	0.06	0.000	Emulsified Asphalt
MD	Carroll	24013	2461022000	0.32	0.0012	0.001	Missing	25.1	0.36	0.0014	0.001	1.12	0.00	90.00	90.00	0.04	0.000	0.32	0.001	Emulsified Asphalt
MD	Cecil	24015	2461022000	0.18	0.0007	0.001	Missing	25.1	0.20	0.0008	0.001	1.11	0.00	90.00	90.00	0.02	0.000	0.18	0.001	Emulsified Asphalt
MD	Charles	24017	2461022000	0.26	0.0010	0.001	Missing	25.1	0.30	0.0012	0.001	1.17	0.00	90.00	90.00	0.03	0.000	0.27	0.001	Emulsified Asphalt
MD	Dorchester	24019	2461022000	0.06	0.0002	0.000	Missing	25.1	0.06	0.0002	0.000	1.03	0.00	90.00	90.00	0.01	0.000	0.06	0.000	Emulsified Asphalt
MD	Frederick	24021	2461022000	0.42	0.0016	0.002	Missing	25.1	0.49	0.0019	0.002	1.16	0.00	90.00	90.00	0.05	0.000	0.44	0.002	Emulsified Asphalt
MD	Garrett	24023	2461022000	0.06	0.0002	0.000	Missing	25.1	0.06	0.0002	0.000	1.03	0.00	90.00	90.00	0.01	0.000	0.06	0.000	Emulsified Asphalt
MD	Harford	24025	2461022000	0.46	0.0018	0.002	Missing	25.1	0.51	0.0020	0.002	1.11	0.00	90.00	90.00	0.05	0.000	0.46	0.002	Emulsified Asphalt
MD	Howard	24027	2461022000	0.52	0.0020	0.002	Missing	25.1	0.58	0.0022	0.002	1.11	0.00	90.00	90.00	0.06	0.000	0.52	0.002	Emulsified Asphalt
MD	Kent	24029	2461022000	0.04	0.0002	0.000	Missing	25.1	0.04	0.0002	0.000	1.08	0.00	90.00	90.00	0.00	0.000	0.04	0.000	Emulsified Asphalt
MD	Montgomery	24031	2461022000	1.82	0.0070	0.007	Missing	25.1	2.00	0.0077	0.008	1.10	0.00	90.00	90.00	0.20	0.001	1.80	0.007	Emulsified Asphalt
MD	Prince Georges	24033	2461022000	1.67	0.0064	0.006	Missing	25.1	1.75	0.0067	0.007	1.05	0.00	90.00	90.00	0.18	0.001	1.58	0.006	Emulsified Asphalt
MD	Queen Annes	24035	2461022000	0.09	0.0003	0.000	Missing	25.1	0.10	0.0004	0.000	1.14	0.00	90.00	90.00	0.01	0.000	0.09	0.000	Emulsified Asphalt
MD	St. Marys	24037	2461022000	0.18	0.0007	0.001	Missing	25.1	0.20	0.0008	0.001	1.12	0.00	90.00	90.00	0.02	0.000	0.18	0.001	Emulsified Asphalt
MD	Somerset	24039	2461022000	0.05	0.0002	0.000	Missing	25.1	0.05	0.0002	0.000	1.02	0.00	90.00	90.00	0.01	0.000	0.05	0.000	Emulsified Asphalt
MD	Talbot	24041	2461022000	0.07	0.0003	0.000	Missing	25.1	0.07	0.0003	0.000	1.07	0.00	90.00	90.00	0.01	0.000	0.07	0.000	Emulsified Asphalt
MD	Washington	24043	2461022000	0.27	0.0010	0.001	Missing	25.1	0.29	0.0011	0.001	1.07	0.00	90.00	90.00	0.03	0.000	0.26	0.001	Emulsified Asphalt
MD	Wicomico	24045	2461022000	0.17	0.0007	0.001	Missing	25.1	0.19	0.0007	0.001	1.08	0.00	90.00	90.00	0.02	0.000	0.17	0.001	Emulsified Asphalt
MD	Worcester	24047	2461022000	0.10	0.0004	0.000	Missing	25.1	0.11	0.0004	0.000	1.10	0.00	90.00	90.00	0.01	0.000	0.10	0.000	Emulsified Asphalt
MD	Baltimore City	24510	2461022000	1.28	0.0049	0.005	Missing	25.1	1.26	0.0049	0.005	0.99	0.00	90.00	90.00	0.13	0.000	1.14	0.004	Emulsified Asphalt
MA	Barnstable	25001	2461022000	15.38	0.17	0.170	Missing	25.1	15.65	Missing	0.173	1.02	0.00	90.00	90.00	1.57	0.017	14.09	0.156	Emulsified Asphalt
MA	Berkshire	25003	2461022000	8.95	0.10	0.099	Missing	25.1	9.11	Missing	0.101	1.02	0.00	90.00	90.00	0.91	0.010	8.20	0.091	Emulsified Asphalt
MA	Bristol	25005	2461022000	37.09	0.41	0.410	Missing	25.1	37.76	Missing	0.417	1.02	0.00	90.00	90.00	3.78	0.042	33.98	0.375	Emulsified Asphalt
MA	Dukes	25007	2461022000	1.06	0.01	0.012	Missing	25.1	1.08	Missing	0.012	1.02	0.00	90.00	90.00	0.11	0.001	0.97	0.011	Emulsified Asphalt
MA	Essex	25009	2461022000	50.12	0.55	0.554	Missing	25.1	51.02	Missing	0.564	1.02	0.00	90.00	90.00	5.10	0.056	45.92	0.507	Emulsified Asphalt
MA	Franklin	25011	2461022000	4.91	0.05	0.054	Missing	25.1	5.00	Missing	0.055	1.02	0.00	90.00	90.00	0.50	0.006	4.50	0.050	Emulsified Asphalt
MA	Hampden	25013	2461022000	31.34	0.35	0.346	Missing	25.1	31.90	Missing	0.352	1.02	0.00	90.00	90.00	3.19	0.035	28.71	0.317	Emulsified Asphalt
MA	Hampshire	25015	2461022000	10.41	0.12	0.115	Missing	25.1	10.60	Missing	0.117	1.02	0.00	90.00	90.00	1.06	0.012	9.54	0.105	Emulsified Asphalt
MA	Middlesex	25017	2461022000	99.05	1.09	1.094	Missing	25.1	100.83	Missing	1.114	1.02	0.00	90.00	90.00	10.08	0.111	90.75	1.003	Emulsified Asphalt
MA	Nantucket	25019	2461022000	0.69	0.01	0.008	Missing	25.1	0.70	Missing	0.008	1.02	0.00	90.00	90.00	0.07	0.001	0.63	0.007	Emulsified Asphalt
MA	Norfolk	25021	2461022000	44.37	0.49	0.490	Missing	25.1	45.17	Missing	0.499	1.02	0.00	90.00	90.00	4.52	0.050	40.65	0.449	Emulsified Asphalt
MA	Plymouth	25023	2461022000	33.43	0.37	0.369	Missing	25.1	34.03	Missing	0.376	1.02	0.00	90.00	90.00	3.40	0.038	30.63	0.338	Emulsified Asphalt
MA	Suffolk	25025	2461022000	44.43	0.49	0.491	Missing	25.1	45.23	Missing	0.500	1.02	0.00	90.00	90.00	4.52	0.050	40.70	0.450	Emulsified Asphalt
MA	Worcester	25027	2461022000	53.17	0.59	0.588	Missing	25.1	54.13	Missing	0.598	1.02	0.00	90.00	90.00	5.41	0.060	48.72	0.538	Emulsified Asphalt
NH	Belknap	33001	2461022000	85.09	0.2331	0.233	Missing	25.1	107.20	0.2937	0.294	1.26	0.00	90.00	90.00	10.72	0.029	96.48	0.264	Emulsified Asphalt
NH	Carroll	33003	2461022000	103.48	0.2835	0.284	Missing	25.1	130.37	0.3572	0.357	1.26	0.00	90.00	90.00	13.04	0.036	117.33	0.321	Emulsified Asphalt
NH	Cheshire	33005	2461022000	114.50	0.3137	0.314	Missing	25.1	144.26	0.3952	0.395	1.26	0.00	90.00	90.00	14.43	0.040	129.83	0.356	Emulsified Asphalt
NH	Coos	33007	2461022000	82.06	0.2248	0.225	Missing	25.1	103.39	0.2832	0.283	1.26	0.00	90.00	90.00	10.34	0.028	93.05	0.255	Emulsified Asphalt
NH	Grafton	33009	2461022000	186.29	0.5104	0.510	Missing	25.1	234.70	0.6430	0.643	1.26	0.00	90.00	90.00	23.47	0.064	211.23	0.579	Emulsified Asphalt
NH	Hillsborough	33011	2461022000	272.74	0.7472	0.747	Missing	25.1	343.62	0.9414	0.941	1.26	0.00	90.00	90.00	34.36	0.094	309.26	0.847	Emulsified Asphalt
NH	Merrimack	33013	2461022000	183.04	0.5015	0.502	Missing	25.1	230.61	0.6318	0.632	1.26	0.00	90.00	90.00	23.06	0.063	207.55	0.569	Emulsified Asphalt
NH	Rockingham	33015	2461022000	211.53	0.5795	0.580	Missing	25.1	266.50	0.7301	0.730	1.26	0.00	90.00	90.00	26.65	0.073	239.85	0.657	Emulsified Asphalt

State	County	FIPS	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Annual Control Factor	2009 BOTW Summer Control Factor	2009 BOTW Emissions Annual (tpy)	2009 BOTW Emissions Summer Day Calculated (tpd)	2009 BOTW Reductions Annual (tpy)	2009 BOTW Reductions Summer Day (tpd)	SCC Description
ASPHALT PAVING																				
NH	Strafford	33017	2461022000	84.74	0.2322	0.232	Missing	25.1	106.76	0.2925	0.293	1.26	0.00	90.00	90.00	10.68	0.029	96.09	0.263	Emulsified Asphalt
NH	Sullivan	33019	2461022000	79.86	0.2188	0.219	Missing	25.1	100.61	0.2757	0.276	1.26	0.00	90.00	90.00	10.06	0.028	90.55	0.248	Emulsified Asphalt
NJ	Atlantic	34001	2461022000	42.28	0.1626	0.163	25.0	25.1	41.43	0.1594	0.159	0.98	0.00	96.90	96.90	1.28	0.005	40.15	0.154	Emulsified Asphalt
NJ	Bergen	34003	2461022000	62.94	0.2421	0.242	25.0	25.1	61.68	0.2372	0.237	0.98	0.00	96.90	96.90	1.91	0.007	59.77	0.230	Emulsified Asphalt
NJ	Burlington	34005	2461022000	55.92	0.2151	0.215	25.0	25.1	54.80	0.2108	0.211	0.98	0.00	96.90	96.90	1.70	0.007	53.11	0.204	Emulsified Asphalt
NJ	Camden	34007	2461022000	43.45	0.1671	0.167	25.0	25.1	42.58	0.1638	0.164	0.98	0.00	96.90	96.90	1.32	0.005	41.26	0.159	Emulsified Asphalt
NJ	Cape May	34009	2461022000	22.24	0.0855	0.086	25.0	25.1	21.80	0.0838	0.084	0.98	0.00	96.90	96.90	0.68	0.003	21.12	0.081	Emulsified Asphalt
NJ	Cumberland	34011	2461022000	27.19	0.1046	0.105	25.0	25.1	26.65	0.1025	0.103	0.98	0.00	96.90	96.90	0.83	0.003	25.82	0.099	Emulsified Asphalt
NJ	Essex	34013	2461022000	38.16	0.1468	0.147	25.0	25.1	37.40	0.1439	0.144	0.98	0.00	96.90	96.90	1.16	0.004	36.24	0.139	Emulsified Asphalt
NJ	Gloucester	34015	2461022000	30.78	0.1184	0.118	25.0	25.1	30.16	0.1160	0.116	0.98	0.00	96.90	96.90	0.94	0.004	29.23	0.112	Emulsified Asphalt
NJ	Hudson	34017	2461022000	14.57	0.0560	0.056	25.0	25.1	14.28	0.0549	0.055	0.98	0.00	96.90	96.90	0.44	0.002	13.83	0.053	Emulsified Asphalt
NJ	Hunterdon	34019	2461022000	30.61	0.1177	0.118	25.0	25.1	30.00	0.1154	0.115	0.98	0.00	96.90	96.90	0.93	0.004	29.07	0.112	Emulsified Asphalt
NJ	Mercer	34021	2461022000	36.83	0.1417	0.142	25.0	25.1	36.10	0.1388	0.139	0.98	0.00	96.90	96.90	1.12	0.004	34.98	0.134	Emulsified Asphalt
NJ	Middlesex	34023	2461022000	52.86	0.2033	0.203	25.0	25.1	51.81	0.1993	0.199	0.98	0.00	96.90	96.90	1.61	0.006	50.21	0.193	Emulsified Asphalt
NJ	Monmouth	34025	2461022000	67.11	0.2581	0.258	25.0	25.1	65.77	0.2530	0.253	0.98	0.00	96.90	96.90	2.04	0.008	63.73	0.245	Emulsified Asphalt
NJ	Morris	34027	2461022000	51.37	0.1976	0.198	25.0	25.1	50.35	0.1936	0.194	0.98	0.00	96.90	96.90	1.56	0.006	48.79	0.188	Emulsified Asphalt
NJ	Ocean	34029	2461022000	61.15	0.2352	0.235	25.0	25.1	59.94	0.2305	0.231	0.98	0.00	96.90	96.90	1.86	0.007	58.08	0.223	Emulsified Asphalt
NJ	Passaic	34031	2461022000	29.00	0.1116	0.112	25.0	25.1	28.43	0.1093	0.109	0.98	0.00	96.90	96.90	0.88	0.003	27.55	0.106	Emulsified Asphalt
NJ	Salem	34033	2461022000	18.98	0.0730	0.073	25.0	25.1	18.60	0.0716	0.072	0.98	0.00	96.90	96.90	0.58	0.002	18.03	0.069	Emulsified Asphalt
NJ	Somerset	34035	2461022000	34.43	0.1324	0.132	25.0	25.1	33.75	0.1298	0.130	0.98	0.00	96.90	96.90	1.05	0.004	32.70	0.126	Emulsified Asphalt
NJ	Sussex	34037	2461022000	29.85	0.1148	0.115	25.0	25.1	29.26	0.1125	0.113	0.98	0.00	96.90	96.90	0.91	0.003	28.35	0.109	Emulsified Asphalt
NJ	Union	34039	2461022000	31.39	0.1207	0.121	25.0	25.1	30.76	0.1183	0.118	0.98	0.00	96.90	96.90	0.95	0.004	29.81	0.115	Emulsified Asphalt
NJ	Warren	34041	2461022000	25.78	0.0992	0.099	25.0	25.1	25.27	0.0972	0.097	0.98	0.00	96.90	96.90	0.78	0.003	24.48	0.094	Emulsified Asphalt
NY	Albany	36001	2461022000	333.24	Missing	0.919	Missing	25.1	396.09	Missing	1.093	1.19	0.00	90.00	90.00	39.61	0.109	356.48	0.983	Emulsified Asphalt
NY	Allegany	36003	2461022000	23.85	Missing	0.066	Missing	25.1	28.35	Missing	0.078	1.19	0.00	90.00	90.00	2.84	0.008	25.52	0.070	Emulsified Asphalt
NY	Bronx	36005	2461022000	16.81	Missing	0.046	Missing	25.1	19.98	Missing	0.055	1.19	0.00	90.00	90.00	2.00	0.006	17.98	0.050	Emulsified Asphalt
NY	Broome	36007	2461022000	433.02	Missing	1.194	Missing	25.1	514.69	Missing	1.420	1.19	0.00	90.00	90.00	51.47	0.142	463.22	1.278	Emulsified Asphalt
NY	Cattaraugus	36009	2461022000	33.26	Missing	0.092	Missing	25.1	39.53	Missing	0.109	1.19	0.00	90.00	90.00	3.95	0.011	35.58	0.098	Emulsified Asphalt
NY	Cayuga	36011	2461022000	31.76	Missing	0.088	Missing	25.1	37.75	Missing	0.104	1.19	0.00	90.00	90.00	3.78	0.010	33.98	0.094	Emulsified Asphalt
NY	Chautauqua	36013	2461022000	157.89	Missing	0.435	Missing	25.1	187.66	Missing	0.518	1.19	0.00	90.00	90.00	18.77	0.052	168.90	0.466	Emulsified Asphalt
NY	Chemung	36015	2461022000	170.37	Missing	0.470	Missing	25.1	202.50	Missing	0.559	1.19	0.00	90.00	90.00	20.25	0.056	182.25	0.503	Emulsified Asphalt
NY	Chenango	36017	2461022000	46.13	Missing	0.127	Missing	25.1	54.83	Missing	0.151	1.19	0.00	90.00	90.00	5.48	0.015	49.34	0.136	Emulsified Asphalt
NY	Clinton	36019	2461022000	164.57	Missing	0.454	Missing	25.1	195.61	Missing	0.540	1.19	0.00	90.00	90.00	19.56	0.054	176.05	0.486	Emulsified Asphalt
NY	Columbia	36021	2461022000	11.42	Missing	0.032	Missing	25.1	13.58	Missing	0.037	1.19	0.00	90.00	90.00	1.36	0.004	12.22	0.034	Emulsified Asphalt
NY	Cortland	36023	2461022000	7.96	Missing	0.022	Missing	25.1	9.46	Missing	0.026	1.19	0.00	90.00	90.00	0.95	0.003	8.51	0.023	Emulsified Asphalt
NY	Delaware	36025	2461022000	37.86	Missing	0.104	Missing	25.1	45.00	Missing	0.124	1.19	0.00	90.00	90.00	4.50	0.012	40.50	0.112	Emulsified Asphalt
NY	Dutchess	36027	2461022000	38.61	Missing	0.106	Missing	25.1	45.89	Missing	0.127	1.19	0.00	90.00	90.00	4.59	0.013	41.30	0.114	Emulsified Asphalt
NY	Erie	36029	2461022000	208.84	Missing	0.576	Missing	25.1	248.22	Missing	0.685	1.19	0.00	90.00	90.00	24.82	0.068	223.40	0.616	Emulsified Asphalt
NY	Essex	36031	2461022000	15.32	Missing	0.042	Missing	25.1	18.21	Missing	0.050	1.19	0.00	90.00	90.00	1.82	0.005	16.39	0.045	Emulsified Asphalt
NY	Franklin	36033	2461022000	8.23	Missing	0.023	Missing	25.1	9.78	Missing	0.027	1.19	0.00	90.00	90.00	0.98	0.003	8.80	0.024	Emulsified Asphalt
NY	Fulton	36035	2461022000	26.34	Missing	0.073	Missing	25.1	31.31	Missing	0.086	1.19	0.00	90.00	90.00	3.13	0.009	28.17	0.078	Emulsified Asphalt
NY	Genesee	36037	2461022000	83.98	Missing	0.232	Missing	25.1	99.82	Missing	0.275	1.19	0.00	90.00	90.00	9.98	0.028	89.84	0.248	Emulsified Asphalt
NY	Greene	36039	2461022000	11.62	Missing	0.032	Missing	25.1	13.81	Missing	0.038	1.19	0.00	90.00	90.00	1.38	0.004	12.43	0.034	Emulsified Asphalt
NY	Herkimer	36043	2461022000	7.06	Missing	0.019	Missing	25.1	8.39	Missing	0.023	1.19	0.00	90.00	90.00	0.84	0.002	7.55	0.021	Emulsified Asphalt
NY	Jefferson	36045	2461022000	14.66	Missing	0.040	Missing	25.1	17.43	Missing	0.048	1.19	0.00	90.00	90.00	1.74	0.005	15.69	0.043	Emulsified Asphalt
NY	Kings	36047	2461022000	0.27	Missing	0.001	Missing	25.1	0.33	Missing	0.001	1.19	0.00	90.00	90.00	0.03	0.000	0.29	0.001	Emulsified Asphalt
NY	Lewis	36049	2461022000	49.44	Missing	0.136	Missing	25.1	58.76	Missing	0.162	1.19	0.00	90.00	90.00	5.88	0.016	52.88	0.146	Emulsified Asphalt
NY	Livingston	36051	2461022000	16.50	Missing	0.046	Missing	25.1	19.61	Missing	0.054	1.19	0.00	90.00	90.00	1.96	0.005	17.65	0.049	Emulsified Asphalt
NY	Madison	36053	2461022000	20.10	Missing	0.055	Missing	25.1	23.89	Missing	0.066	1.19	0.00	90.00	90.00	2.39	0.007	21.50	0.059	Emulsified Asphalt
NY	Monroe	36055	2461022000	150.39	Missing	0.415	Missing	25.1	178.75	Missing	0.493	1.19	0.00	90.00	90.00	17.88	0.049	160.88	0.444	Emulsified Asphalt
NY	Montgomery	36057	2461022000	27.05	Missing	0.075	Missing	25.1	32.15	Missing	0.089	1.19	0.00	90.00	90.00	3.22	0.009	28.94	0.080	Emulsified Asphalt
NY	Nassau	36059	2461022000	876.27	Missing	2.417	Missing	25.1	1,041.54	Missing	2.873	1.19	0.00	90.00	90.00	104.15	0.287	937.39	2.586	Emulsified Asphalt
NY	New York	36061	2461022000	27.33	Missing	0.075	Missing	25.1	32.48	Missing	0.090	1.19	0.00	90.00	90.00	3.25	0.009	29.23	0.081	Emulsified Asphalt
NY	Niagara	36063	2461022000	12.41	Missing	0.034	Missing	25.1	14.75	Missing	0.041	1.19	0.00	90.00	90.00	1.48	0.004	13.28	0.037	Emulsified Asphalt
NY	Oneida	36065	2461022000	324.89	Missing	0.896	Missing	25.1	386.17	Missing	1.065	1.19	0.00	90.00	90.00	38.62	0.107	347.55	0.959	Emulsified Asphalt
NY	Onondaga	36067	2461022000	177.16	Missing	0.489	Missing	25.1	210.57	Missing	0.581	1.19	0.00	90.00	90.00	21.06	0.058	189.51	0.523	Emulsified Asphalt
NY	Ontario	36069	2461022000	50.76	Missing	0.140	Missing	25.1	60.34	Missing	0.166	1.19	0.00	90.00	90.00	6.03	0.017	54.30	0.150	Emulsified Asphalt
NY	Orange	36071	2461022000	456.14	Missing	1.258	Missing	25.1	542.17	Missing	1.495	1.19	0.00	90.00	90.00	54.22	0.150	487.95	1.346	Emulsified Asphalt
NY	Orleans	36073	2461022000	30.27	Missing	0.084	Missing	25.1	35.98	Missing	0.099	1.19	0.00	90.00	90.00	3.60	0.010	32.39	0.089	Emulsified Asphalt

State	County	FIPS	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Annual Control Factor	2009 BOTW Summer Control Factor	2009 BOTW Emissions Annual (tpy)	2009 BOTW Emissions Summer Day Calculated (tpd)	2009 BOTW Reductions Annual (tpy)	2009 BOTW Reductions Summer Day (tpd)	SCC Description
NY	Oswego	36075	2461022000	347.15	Missing	0.958	Missing	25.1	412.63	Missing	1.138	1.19	0.00	90.00	90.00	41.26	0.114	371.36	1.024	Emulsified Asphalt
NY	Otsego	36077	2461022000	37.54	Missing	0.104	Missing	25.1	44.62	Missing	0.123	1.19	0.00	90.00	90.00	4.46	0.012	40.16	0.111	Emulsified Asphalt
NY	Putnam	36079	2461022000	10.26	Missing	0.028	Missing	25.1	12.19	Missing	0.034	1.19	0.00	90.00	90.00	1.22	0.003	10.97	0.030	Emulsified Asphalt
NY	Queens	36081	2461022000	89.92	Missing	0.248	Missing	25.1	106.88	Missing	0.295	1.19	0.00	90.00	90.00	10.69	0.029	96.20	0.265	Emulsified Asphalt
NY	Rensselaer	36083	2461022000	39.50	Missing	0.109	Missing	25.1	46.95	Missing	0.129	1.19	0.00	90.00	90.00	4.69	0.013	42.25	0.117	Emulsified Asphalt
NY	Richmond	36085	2461022000	41.32	Missing	0.114	Missing	25.1	49.11	Missing	0.135	1.19	0.00	90.00	90.00	4.91	0.014	44.20	0.122	Emulsified Asphalt
NY	St. Lawrence	36089	2461022000	40.71	Missing	0.112	Missing	25.1	48.39	Missing	0.133	1.19	0.00	90.00	90.00	4.84	0.013	43.55	0.120	Emulsified Asphalt
NY	Saratoga	36091	2461022000	51.79	Missing	0.143	Missing	25.1	61.56	Missing	0.170	1.19	0.00	90.00	90.00	6.16	0.017	55.41	0.153	Emulsified Asphalt
NY	Schenectady	36093	2461022000	85.67	Missing	0.236	Missing	25.1	101.83	Missing	0.281	1.19	0.00	90.00	90.00	10.18	0.028	91.65	0.253	Emulsified Asphalt
NY	Schoharie	36095	2461022000	35.05	Missing	0.097	Missing	25.1	41.66	Missing	0.115	1.19	0.00	90.00	90.00	4.17	0.011	37.50	0.103	Emulsified Asphalt
NY	Steuben	36101	2461022000	15.59	Missing	0.043	Missing	25.1	18.53	Missing	0.051	1.19	0.00	90.00	90.00	1.85	0.005	16.68	0.046	Emulsified Asphalt
NY	Suffolk	36103	2461022000	170.18	Missing	0.469	Missing	25.1	202.28	Missing	0.558	1.19	0.00	90.00	90.00	20.23	0.056	182.05	0.502	Emulsified Asphalt
NY	Sullivan	36105	2461022000	80.97	Missing	0.223	Missing	25.1	96.24	Missing	0.265	1.19	0.00	90.00	90.00	9.62	0.027	86.62	0.239	Emulsified Asphalt
NY	Tioga	36107	2461022000	4.93	Missing	0.014	Missing	25.1	5.86	Missing	0.016	1.19	0.00	90.00	90.00	0.59	0.002	5.27	0.015	Emulsified Asphalt
NY	Tompkins	36109	2461022000	33.79	Missing	0.093	Missing	25.1	40.17	Missing	0.111	1.19	0.00	90.00	90.00	4.02	0.011	36.15	0.100	Emulsified Asphalt
NY	Ulster	36111	2461022000	36.53	Missing	0.101	Missing	25.1	43.42	Missing	0.120	1.19	0.00	90.00	90.00	4.34	0.012	39.08	0.108	Emulsified Asphalt
NY	Warren	36113	2461022000	2.24	Missing	0.006	Missing	25.1	2.66	Missing	0.007	1.19	0.00	90.00	90.00	0.27	0.001	2.40	0.007	Emulsified Asphalt
NY	Washington	36115	2461022000	11.83	Missing	0.033	Missing	25.1	14.06	Missing	0.039	1.19	0.00	90.00	90.00	1.41	0.004	12.66	0.035	Emulsified Asphalt
NY	Wayne	36117	2461022000	20.39	Missing	0.056	Missing	25.1	24.23	Missing	0.067	1.19	0.00	90.00	90.00	2.42	0.007	21.81	0.060	Emulsified Asphalt
NY	Westchester	36119	2461022000	298.67	Missing	0.824	Missing	25.1	355.00	Missing	0.979	1.19	0.00	90.00	90.00	35.50	0.098	319.50	0.881	Emulsified Asphalt
NY	Yates	36123	2461022000	11.30	Missing	0.031	Missing	25.1	13.43	Missing	0.037	1.19	0.00	90.00	90.00	1.34	0.004	12.09	0.033	Emulsified Asphalt
PA	Adams	42001	2461022000	24.47	0.1009	0.101	38.0	25.1	29.44	0.1214	0.121	1.20	0.00	90.00	90.00	2.94	0.012	26.49	0.109	Emulsified Asphalt
PA	Allegheny	42003	2461022000	57.18	0.2359	0.236	38.0	25.1	68.79	0.2838	0.284	1.20	0.00	90.00	90.00	6.88	0.028	61.91	0.255	Emulsified Asphalt
PA	Armstrong	42005	2461022000	28.93	0.1193	0.119	38.0	25.1	34.80	0.1436	0.144	1.20	0.00	90.00	90.00	3.48	0.014	31.32	0.129	Emulsified Asphalt
PA	Beaver	42007	2461022000	28.48	0.1175	0.118	38.0	25.1	34.26	0.1413	0.141	1.20	0.00	90.00	90.00	3.43	0.014	30.83	0.127	Emulsified Asphalt
PA	Bedford	42009	2461022000	37.69	0.1555	0.156	38.0	25.1	45.35	0.1871	0.187	1.20	0.00	90.00	90.00	4.53	0.019	40.81	0.168	Emulsified Asphalt
PA	Berks	42011	2461022000	42.51	0.1754	0.175	38.0	25.1	51.15	0.2110	0.211	1.20	0.00	90.00	90.00	5.11	0.021	46.03	0.190	Emulsified Asphalt
PA	Blair	42013	2461022000	18.59	0.0767	0.077	38.0	25.1	22.36	0.0922	0.092	1.20	0.00	90.00	90.00	2.24	0.009	20.12	0.083	Emulsified Asphalt
PA	Bradford	42015	2461022000	39.34	0.1623	0.162	38.0	25.1	47.32	0.1952	0.195	1.20	0.00	90.00	90.00	4.73	0.020	42.59	0.176	Emulsified Asphalt
PA	Bucks	42017	2461022000	50.24	0.2072	0.207	38.0	25.1	60.44	0.2493	0.249	1.20	0.00	90.00	90.00	6.04	0.025	54.40	0.224	Emulsified Asphalt
PA	Butler	42019	2461022000	32.67	0.1348	0.135	38.0	25.1	39.30	0.1621	0.162	1.20	0.00	90.00	90.00	3.93	0.016	35.37	0.146	Emulsified Asphalt
PA	Cambria	42021	2461022000	30.77	0.1269	0.127	38.0	25.1	37.02	0.1527	0.153	1.20	0.00	90.00	90.00	3.70	0.015	33.32	0.137	Emulsified Asphalt
PA	Cameron	42023	2461022000	4.96	0.0204	0.020	38.0	25.1	5.96	0.0246	0.025	1.20	0.00	90.00	90.00	0.60	0.002	5.37	0.022	Emulsified Asphalt
PA	Carbon	42025	2461022000	15.09	0.0623	0.062	38.0	25.1	18.16	0.0749	0.075	1.20	0.00	90.00	90.00	1.82	0.007	16.34	0.067	Emulsified Asphalt
PA	Centre	42027	2461022000	25.73	0.1061	0.106	38.0	25.1	30.95	0.1277	0.128	1.20	0.00	90.00	90.00	3.10	0.013	27.86	0.115	Emulsified Asphalt
PA	Chester	42029	2461022000	49.09	0.2025	0.203	38.0	25.1	59.06	0.2436	0.244	1.20	0.00	90.00	90.00	5.91	0.024	53.15	0.219	Emulsified Asphalt
PA	Clarion	42031	2461022000	20.46	0.0844	0.084	38.0	25.1	24.61	0.1015	0.102	1.20	0.00	90.00	90.00	2.46	0.010	22.15	0.091	Emulsified Asphalt
PA	Clearfield	42033	2461022000	36.29	0.1497	0.150	38.0	25.1	43.67	0.1801	0.180	1.20	0.00	90.00	90.00	4.37	0.018	39.30	0.162	Emulsified Asphalt
PA	Clinton	42035	2461022000	12.86	0.0531	0.053	38.0	25.1	15.48	0.0638	0.064	1.20	0.00	90.00	90.00	1.55	0.006	13.93	0.057	Emulsified Asphalt
PA	Columbia	42037	2461022000	22.12	0.0913	0.091	38.0	25.1	26.62	0.1098	0.110	1.20	0.00	90.00	90.00	2.66	0.011	23.95	0.099	Emulsified Asphalt
PA	Crawford	42039	2461022000	39.94	0.1648	0.165	38.0	25.1	48.06	0.1982	0.198	1.20	0.00	90.00	90.00	4.81	0.020	43.25	0.178	Emulsified Asphalt
PA	Cumberland	42041	2461022000	30.80	0.1270	0.127	38.0	25.1	37.05	0.1528	0.153	1.20	0.00	90.00	90.00	3.71	0.015	33.35	0.138	Emulsified Asphalt
PA	Dauphin	42043	2461022000	26.27	0.1084	0.108	38.0	25.1	31.60	0.1304	0.130	1.20	0.00	90.00	90.00	3.16	0.013	28.44	0.117	Emulsified Asphalt
PA	Delaware	42045	2461022000	26.85	0.1108	0.111	38.0	25.1	32.31	0.1333	0.133	1.20	0.00	90.00	90.00	3.23	0.013	29.08	0.120	Emulsified Asphalt
PA	Elk	42047	2461022000	12.71	0.0524	0.052	38.0	25.1	15.29	0.0631	0.063	1.20	0.00	90.00	90.00	1.53	0.006	13.76	0.057	Emulsified Asphalt
PA	Erie	42049	2461022000	34.22	0.1412	0.141	38.0	25.1	41.17	0.1698	0.170	1.20	0.00	90.00	90.00	4.12	0.017	37.05	0.153	Emulsified Asphalt
PA	Fayette	42051	2461022000	33.97	0.1401	0.140	38.0	25.1	40.87	0.1686	0.169	1.20	0.00	90.00	90.00	4.09	0.017	36.79	0.152	Emulsified Asphalt
PA	Forest	42053	2461022000	8.47	0.0349	0.035	38.0	25.1	10.19	0.0420	0.042	1.20	0.00	90.00	90.00	1.02	0.004	9.17	0.038	Emulsified Asphalt
PA	Franklin	42055	2461022000	27.51	0.1135	0.114	38.0	25.1	33.09	0.1365	0.137	1.20	0.00	90.00	90.00	3.31	0.014	29.78	0.123	Emulsified Asphalt
PA	Fulton	42057	2461022000	18.45	0.0761	0.076	38.0	25.1	22.20	0.0916	0.092	1.20	0.00	90.00	90.00	2.22	0.009	19.98	0.082	Emulsified Asphalt
PA	Greene	42059	2461022000	25.48	0.1051	0.105	38.0	25.1	30.65	0.1265	0.127	1.20	0.00	90.00	90.00	3.07	0.013	27.59	0.114	Emulsified Asphalt
PA	Huntingdon	42061	2461022000	26.63	0.1098	0.110	38.0	25.1	32.04	0.1322	0.132	1.20	0.00	90.00	90.00	3.20	0.013	28.83	0.119	Emulsified Asphalt
PA	Indiana	42063	2461022000	36.38	0.1501	0.150	38.0	25.1	43.77	0.1806	0.181	1.20	0.00	90.00	90.00	4.38	0.018	39.40	0.163	Emulsified Asphalt
PA	Jefferson	42065	2461022000	25.21	0.1040	0.104	38.0	25.1	30.33	0.1251	0.125	1.20	0.00	90.00	90.00	3.03	0.013	27.30	0.113	Emulsified Asphalt
PA	Juniata	42067	2461022000	15.23	0.0628	0.063	38.0	25.1	18.32	0.0756	0.076	1.20	0.00	90.00	90.00	1.83	0.008	16.49	0.068	Emulsified Asphalt
PA	Lackawanna	42069	2461022000	28.66	0.1182	0.118	38.0	25.1	34.48	0.1422	0.142	1.20	0.00	90.00	90.00	3.45	0.014	31.03	0.128	Emulsified Asphalt
PA	Lancaster	42071	2461022000	47.94	0.1978	0.198	38.0	25.1	57.68	0.2379	0.238	1.20	0.00	90.00	90.00	5.77	0.024	51.91	0.214	Emulsified Asphalt
PA	Lawrence	42073	2461022000	16.58	0.0684	0.068	38.0	25.1	19.95	0.0823	0.082	1.20	0.00	90.00	90.00	1.99	0.008	17.95	0.074	Emulsified Asphalt
PA	Lebanon	42075	2461022000	17.28	0.0713	0.071	38.0	25.1	20.79	0.0858	0.086	1.20	0.00	90.00	90.00	2.08	0.009	18.71	0.077	Emulsified Asphalt

ASPHALT PAVING				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Annual Control Factor	2009 BOTW Summer Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
PA	Lehigh	42077	2461022000	27.58	0.1137	0.114	38.0	25.1	33.18	0.1369	0.137	1.20	0.00	90.00	90.00	3.32	0.014	29.86	0.123	Emulsified Asphalt
PA	Luzerne	42079	2461022000	41.61	0.1716	0.172	38.0	25.1	50.06	0.2065	0.207	1.20	0.00	90.00	90.00	5.01	0.021	45.06	0.186	Emulsified Asphalt
PA	Lycoming	42081	2461022000	33.16	0.1368	0.137	38.0	25.1	39.90	0.1646	0.165	1.20	0.00	90.00	90.00	3.99	0.016	35.91	0.148	Emulsified Asphalt
PA	McKean	42083	2461022000	16.40	0.0677	0.068	38.0	25.1	19.73	0.0814	0.081	1.20	0.00	90.00	90.00	1.97	0.008	17.76	0.073	Emulsified Asphalt
PA	Mercer	42085	2461022000	34.56	0.1426	0.143	38.0	25.1	41.58	0.1715	0.172	1.20	0.00	90.00	90.00	4.16	0.017	37.42	0.154	Emulsified Asphalt
PA	Mifflin	42087	2461022000	10.43	0.0430	0.043	38.0	25.1	12.55	0.0518	0.052	1.20	0.00	90.00	90.00	1.25	0.005	11.29	0.047	Emulsified Asphalt
PA	Monroe	42089	2461022000	24.92	0.1028	0.103	38.0	25.1	29.98	0.1237	0.124	1.20	0.00	90.00	90.00	3.00	0.012	26.98	0.111	Emulsified Asphalt
PA	Montgomery	42091	2461022000	42.65	0.1759	0.176	38.0	25.1	51.31	0.2116	0.212	1.20	0.00	90.00	90.00	5.13	0.021	46.18	0.190	Emulsified Asphalt
PA	Montour	42093	2461022000	7.82	0.0322	0.032	38.0	25.1	9.41	0.0388	0.039	1.20	0.00	90.00	90.00	0.94	0.004	8.46	0.035	Emulsified Asphalt
PA	Northampton	42095	2461022000	22.87	0.0943	0.094	38.0	25.1	27.51	0.1135	0.114	1.20	0.00	90.00	90.00	2.75	0.011	24.76	0.102	Emulsified Asphalt
PA	Northumberland	42097	2461022000	24.74	0.1020	0.102	38.0	25.1	29.76	0.1228	0.123	1.20	0.00	90.00	90.00	2.98	0.012	26.78	0.111	Emulsified Asphalt
PA	Perry	42099	2461022000	18.74	0.0773	0.077	38.0	25.1	22.55	0.0930	0.093	1.20	0.00	90.00	90.00	2.26	0.009	20.30	0.084	Emulsified Asphalt
PA	Philadelphia	42101	2461022000	25.75	0.1062	0.106	38.0	25.1	30.98	0.1278	0.128	1.20	0.00	90.00	90.00	3.10	0.013	27.88	0.115	Emulsified Asphalt
PA	Pike	42103	2461022000	16.96	0.0700	0.070	38.0	25.1	20.41	0.0842	0.084	1.20	0.00	90.00	90.00	2.04	0.008	18.37	0.076	Emulsified Asphalt
PA	Potter	42105	2461022000	17.93	0.0740	0.074	38.0	25.1	21.58	0.0890	0.089	1.20	0.00	90.00	90.00	2.16	0.009	19.42	0.080	Emulsified Asphalt
PA	Schuylkill	42107	2461022000	30.53	0.1259	0.126	38.0	25.1	36.73	0.1515	0.152	1.20	0.00	90.00	90.00	3.67	0.015	33.05	0.136	Emulsified Asphalt
PA	Snyder	42109	2461022000	14.26	0.0588	0.059	38.0	25.1	17.16	0.0708	0.071	1.20	0.00	90.00	90.00	1.72	0.007	15.44	0.064	Emulsified Asphalt
PA	Somerset	42111	2461022000	43.32	0.1787	0.179	38.0	25.1	52.12	0.2150	0.215	1.20	0.00	90.00	90.00	5.21	0.022	46.91	0.194	Emulsified Asphalt
PA	Sullivan	42113	2461022000	10.34	0.0427	0.043	38.0	25.1	12.44	0.0513	0.051	1.20	0.00	90.00	90.00	1.24	0.005	11.20	0.046	Emulsified Asphalt
PA	Susquehanna	42115	2461022000	33.88	0.1398	0.140	38.0	25.1	40.76	0.1682	0.168	1.20	0.00	90.00	90.00	4.08	0.017	36.69	0.151	Emulsified Asphalt
PA	Tioga	42117	2461022000	27.35	0.1128	0.113	38.0	25.1	32.90	0.1357	0.136	1.20	0.00	90.00	90.00	3.29	0.014	29.61	0.122	Emulsified Asphalt
PA	Union	42119	2461022000	13.13	0.0542	0.054	38.0	25.1	15.80	0.0652	0.065	1.20	0.00	90.00	90.00	1.58	0.007	14.22	0.059	Emulsified Asphalt
PA	Venango	42121	2461022000	23.88	0.0985	0.099	38.0	25.1	28.73	0.1185	0.119	1.20	0.00	90.00	90.00	2.87	0.012	25.86	0.107	Emulsified Asphalt
PA	Warren	42123	2461022000	23.43	0.0966	0.097	38.0	25.1	28.19	0.1163	0.116	1.20	0.00	90.00	90.00	2.82	0.012	25.37	0.105	Emulsified Asphalt
PA	Washington	42125	2461022000	51.50	0.2124	0.212	38.0	25.1	61.96	0.2556	0.256	1.20	0.00	90.00	90.00	6.20	0.026	55.76	0.230	Emulsified Asphalt
PA	Wayne	42127	2461022000	31.11	0.1283	0.128	38.0	25.1	37.43	0.1544	0.154	1.20	0.00	90.00	90.00	3.74	0.015	33.69	0.139	Emulsified Asphalt
PA	Westmoreland	42129	2461022000	59.43	0.2452	0.245	38.0	25.1	71.50	0.2949	0.295	1.20	0.00	90.00	90.00	7.15	0.029	64.35	0.265	Emulsified Asphalt
PA	Wyoming	42131	2461022000	16.11	0.0664	0.066	38.0	25.1	19.38	0.0799	0.080	1.20	0.00	90.00	90.00	1.94	0.008	17.44	0.072	Emulsified Asphalt
PA	York	42133	2461022000	54.56	0.2251	0.225	38.0	25.1	65.65	0.2708	0.271	1.20	0.00	90.00	90.00	6.56	0.027	59.08	0.244	Emulsified Asphalt
RI	Bristol	44001	2461022000	1.97	0.0485	0.049	25.0	25.1	2.41	0.0594	0.059	1.23	0.00	90.00	90.00	0.24	0.006	2.17	0.053	Emulsified Asphalt
RI	Kent	44003	2461022000	6.31	0.1550	0.155	25.0	25.1	7.73	0.1899	0.190	1.23	0.00	90.00	90.00	0.77	0.019	6.96	0.171	Emulsified Asphalt
RI	Newport	44005	2461022000	3.15	0.0775	0.078	0.0	25.1	3.86	0.0950	0.095	1.23	0.00	90.00	90.00	0.39	0.009	3.47	0.085	Emulsified Asphalt
RI	Providence	44007	2461022000	23.26	0.5718	0.572	25.0	25.1	28.50	0.7006	0.701	1.23	0.00	90.00	90.00	2.85	0.070	25.65	0.631	Emulsified Asphalt
RI	Washington	44009	2461022000	4.73	0.1163	0.116	25.0	25.1	5.80	0.1425	0.142	1.23	0.00	90.00	90.00	0.58	0.014	5.22	0.128	Emulsified Asphalt
VA	Arlington	51013	2461022000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	90.00	90.00	0.00	0.000	0.00	0.000	Emulsified Asphalt
VA	Fairfax	51059	2461022000	0.24	Missing	0.001	25.0	25.1	0.30	Missing	0.001	0.00	0.00	90.00	90.00	0.03	0.000	0.27	0.001	Emulsified Asphalt
VA	Loudoun	51107	2461022000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	90.00	90.00	0.00	0.000	0.00	0.000	Emulsified Asphalt
VA	Prince William	51153	2461022000	0.02	Missing	0.000	25.0	25.1	0.02	Missing	0.000	0.00	0.00	90.00	90.00	0.00	0.000	0.02	0.000	Emulsified Asphalt
VA	Stafford	51179	2461022000	0.16	Missing	0.000	25.0	25.1	0.19	Missing	0.001	0.00	0.00	90.00	90.00	0.02	0.000	0.17	0.000	Emulsified Asphalt
VA	Alexandria	51510	2461022000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	90.00	90.00	0.00	0.000	0.00	0.000	Emulsified Asphalt
VA	Fairfax City	51600	2461022000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	90.00	90.00	0.00	0.000	0.00	0.000	Emulsified Asphalt
VA	Falls Chruch	51610	2461022000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	90.00	90.00	0.00	0.000	0.00	0.000	Emulsified Asphalt
VA	Manassas City	51683	2461022000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	90.00	90.00	0.00	0.000	0.00	0.000	Emulsified Asphalt
VA	Manassas Park City	51685	2461022000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	90.00	90.00	0.00	0.000	0.00	0.000	Emulsified Asphalt
			MANEVU	19,280.02		54.10			22,815.27		61.86					12,083.52	4.06	10,731.75	57.81	

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
F	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
G	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

SCC: 24-40-020-xxx

COLUMN	COLUMN DESCRIPTIONS
K	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
L	VOC 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
M	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
N	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
O	Incremental Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Incremental Control Factor (percent reduction due to OTC 2006 Control Measure)
Q, R	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW control factor/100)
S, T	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

Adhesives and Sealants

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
CT	Fairfield	09001	2440020000	441.56	Missing	1.232	Missing	25.4	606.23	Missing	1.692	1.37	0.00	64.40	215.82	0.602	390.41	1.090	Adhesive (Industrial) Application
CT	Hartford	09003	2440020000	423.67	Missing	1.183	Missing	25.4	581.66	Missing	1.624	1.37	0.00	64.40	207.07	0.578	374.59	1.046	Adhesive (Industrial) Application
CT	Litchfield	09005	2440020000	146.19	Missing	0.408	Missing	25.4	200.71	Missing	0.560	1.37	0.00	64.40	71.45	0.199	129.26	0.361	Adhesive (Industrial) Application
CT	Middlesex	09007	2440020000	117.52	Missing	0.328	Missing	25.4	161.34	Missing	0.450	1.37	0.00	64.40	57.44	0.160	103.90	0.290	Adhesive (Industrial) Application
CT	New Haven	09009	2440020000	287.40	Missing	0.802	Missing	25.4	394.58	Missing	1.101	1.37	0.00	64.40	140.47	0.392	254.11	0.709	Adhesive (Industrial) Application
CT	New London	09011	2440020000	122.62	Missing	0.342	Missing	25.4	168.35	Missing	0.470	1.37	0.00	64.40	59.93	0.167	108.42	0.303	Adhesive (Industrial) Application
CT	Tolland	09013	2440020000	41.49	Missing	0.116	Missing	25.4	56.97	Missing	0.159	1.37	0.00	64.40	20.28	0.057	36.69	0.102	Adhesive (Industrial) Application
CT	Windham	09015	2440020000	133.65	Missing	0.373	Missing	25.4	183.49	Missing	0.512	1.37	0.00	64.40	65.32	0.182	118.17	0.330	Adhesive (Industrial) Application
DE	Kent	10001	2440020000	101.78	Missing	0.284	Missing	25.4	123.09	Missing	0.344	1.21	0.00	64.40	43.82	0.122	79.27	0.221	Adhesive (Industrial) Application
DE	New Castle	10003	2440020000	316.69	Missing	0.884	Missing	25.4	382.99	Missing	1.069	1.21	0.00	64.40	136.35	0.381	246.65	0.688	Adhesive (Industrial) Application
DE	Sussex	10005	2440020000	54.36	Missing	0.152	Missing	25.4	65.75	Missing	0.184	1.21	0.00	64.40	23.41	0.065	42.34	0.118	Adhesive (Industrial) Application
DC	Washington	11001	2440020000	62.88	Missing	0.176	Missing	25.4	70.55	Missing	0.197	1.12	0.00	64.40	25.12	0.070	45.43	0.127	Adhesive (Industrial) Application
ME	Androscoggin	23001	2440020000	129.97	Missing	0.357	25.0	25.4	166.63	Missing	0.458	1.28	0.00	64.40	59.32	0.163	107.31	0.295	Adhesive (Industrial) Application
ME	Aroostook	23003	2440020000	67.05	Missing	0.184	25.0	25.4	85.96	Missing	0.236	1.28	0.00	64.40	30.60	0.084	55.36	0.152	Adhesive (Industrial) Application
ME	Cumberland	23005	2440020000	191.92	Missing	0.527	25.0	25.4	246.05	Missing	0.676	1.28	0.00	64.40	87.59	0.241	158.45	0.435	Adhesive (Industrial) Application
ME	Franklin	23007	2440020000	55.94	Missing	0.154	25.0	25.4	71.72	Missing	0.197	1.28	0.00	64.40	25.53	0.070	46.19	0.127	Adhesive (Industrial) Application
ME	Hancock	23009	2440020000	31.30	Missing	0.086	25.0	25.4	40.13	Missing	0.110	1.28	0.00	64.40	14.29	0.039	25.84	0.071	Adhesive (Industrial) Application
ME	Kennebec	23011	2440020000	83.37	Missing	0.229	25.0	25.4	106.88	Missing	0.294	1.28	0.00	64.40	38.05	0.105	68.83	0.189	Adhesive (Industrial) Application
ME	Knox	23013	2440020000	31.03	Missing	0.085	25.0	25.4	39.78	Missing	0.109	1.28	0.00	64.40	14.16	0.039	25.62	0.070	Adhesive (Industrial) Application
ME	Lincoln	23015	2440020000	9.66	Missing	0.027	25.0	25.4	12.38	Missing	0.034	1.28	0.00	64.40	4.41	0.012	7.98	0.022	Adhesive (Industrial) Application
ME	Oxford	23017	2440020000	53.79	Missing	0.148	25.0	25.4	68.96	Missing	0.189	1.28	0.00	64.40	24.55	0.067	44.41	0.122	Adhesive (Industrial) Application
ME	Penobscot	23019	2440020000	150.42	Missing	0.413	25.0	25.4	192.84	Missing	0.530	1.28	0.00	64.40	68.65	0.189	124.19	0.341	Adhesive (Industrial) Application
ME	Piscataquis	23021	2440020000	29.21	Missing	0.080	25.0	25.4	37.45	Missing	0.103	1.28	0.00	64.40	13.33	0.037	24.12	0.066	Adhesive (Industrial) Application
ME	Sagadahoc	23023	2440020000	55.03	Missing	0.151	25.0	25.4	70.55	Missing	0.194	1.28	0.00	64.40	25.12	0.069	45.43	0.125	Adhesive (Industrial) Application
ME	Somerset	23025	2440020000	59.00	Missing	0.162	25.0	25.4	75.64	Missing	0.208	1.28	0.00	64.40	26.93	0.074	48.71	0.134	Adhesive (Industrial) Application
ME	Waldo	23027	2440020000	13.53	Missing	0.037	25.0	25.4	17.35	Missing	0.048	1.28	0.00	64.40	6.18	0.017	11.17	0.031	Adhesive (Industrial) Application
ME	Washington	23029	2440020000	21.53	Missing	0.059	25.0	25.4	27.60	Missing	0.076	1.28	0.00	64.40	9.83	0.027	17.78	0.049	Adhesive (Industrial) Application
ME	York	23031	2440020000	135.77	Missing	0.373	25.0	25.4	174.06	Missing	0.478	1.28	0.00	64.40	61.97	0.170	112.10	0.308	Adhesive (Industrial) Application
MD	Allegany	24001	2440020000	39.33	Missing	0.110	Missing	25.4	51.32	Missing	0.143	1.30	0.00	64.40	18.27	0.051	33.05	0.092	Adhesive (Industrial) Application
MD	Anne Arundel	24003	2440020000	201.72	Missing	0.563	Missing	25.4	263.25	Missing	0.735	1.30	0.00	64.40	93.72	0.262	169.53	0.473	Adhesive (Industrial) Application
MD	Baltimore	24005	2440020000	559.49	Missing	1.562	Missing	25.4	730.12	Missing	2.038	1.30	0.00	64.40	259.92	0.726	470.20	1.312	Adhesive (Industrial) Application
MD	Calvert	24009	2440020000	13.12	Missing	0.037	Missing	25.4	17.13	Missing	0.048	1.30	0.00	64.40	6.10	0.017	11.03	0.031	Adhesive (Industrial) Application
MD	Caroline	24011	2440020000	122.81	Missing	0.343	Missing	25.4	160.26	Missing	0.447	1.30	0.00	64.40	57.05	0.159	103.21	0.288	Adhesive (Industrial) Application
MD	Carroll	24013	2440020000	69.55	Missing	0.194	Missing	25.4	90.76	Missing	0.253	1.30	0.00	64.40	32.31	0.090	58.45	0.163	Adhesive (Industrial) Application
MD	Cecil	24015	2440020000	45.36	Missing	0.127	Missing	25.4	59.19	Missing	0.165	1.30	0.00	64.40	21.07	0.059	38.12	0.106	Adhesive (Industrial) Application
MD	Charles	24017	2440020000	56.88	Missing	0.159	Missing	25.4	74.22	Missing	0.207	1.30	0.00	64.40	26.42	0.074	47.80	0.133	Adhesive (Industrial) Application
MD	Dorchester	24019	2440020000	19.16	Missing	0.053	Missing	25.4	25.00	Missing	0.070	1.30	0.00	64.40	8.90	0.025	16.10	0.045	Adhesive (Industrial) Application
MD	Frederick	24021	2440020000	86.05	Missing	0.240	Missing	25.4	112.29	Missing	0.313	1.30	0.00	64.40	39.98	0.112	72.32	0.202	Adhesive (Industrial) Application
MD	Garrett	24023	2440020000	17.81	Missing	0.050	Missing	25.4	23.24	Missing	0.065	1.30	0.00	64.40	8.27	0.023	14.96	0.042	Adhesive (Industrial) Application

Adhesives and Sealants				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
MD	Harford	24025	2440020000	80.41	Missing	0.224	Missing	25.4	104.93	Missing	0.293	1.30	0.00	64.40	37.36	0.104	67.58	0.189	Adhesive (Industrial) Application
MD	Howard	24027	2440020000	75.82	Missing	0.212	Missing	25.4	98.94	Missing	0.276	1.30	0.00	64.40	35.22	0.098	63.72	0.178	Adhesive (Industrial) Application
MD	Kent	24029	2440020000	5.29	Missing	0.015	Missing	25.4	6.91	Missing	0.019	1.30	0.00	64.40	2.46	0.007	4.45	0.012	Adhesive (Industrial) Application
MD	Montgomery	24031	2440020000	187.47	Missing	0.523	Missing	25.4	244.64	Missing	0.683	1.30	0.00	64.40	87.09	0.243	157.55	0.440	Adhesive (Industrial) Application
MD	Prince Georges	24033	2440020000	242.06	Missing	0.676	Missing	25.4	315.89	Missing	0.882	1.30	0.00	64.40	112.46	0.314	203.43	0.568	Adhesive (Industrial) Application
MD	Queen Annes	24035	2440020000	8.99	Missing	0.025	Missing	25.4	11.73	Missing	0.033	1.30	0.00	64.40	4.18	0.012	7.55	0.021	Adhesive (Industrial) Application
MD	St. Marys	24037	2440020000	21.71	Missing	0.061	Missing	25.4	28.33	Missing	0.079	1.30	0.00	64.40	10.09	0.028	18.25	0.051	Adhesive (Industrial) Application
MD	Somerset	24039	2440020000	1.48	Missing	0.004	Missing	25.4	1.93	Missing	0.005	1.30	0.00	64.40	0.69	0.002	1.24	0.003	Adhesive (Industrial) Application
MD	Talbot	24041	2440020000	31.19	Missing	0.087	Missing	25.4	40.71	Missing	0.114	1.30	0.00	64.40	14.49	0.040	26.22	0.073	Adhesive (Industrial) Application
MD	Washington	24043	2440020000	111.08	Missing	0.310	Missing	25.4	144.96	Missing	0.405	1.30	0.00	64.40	51.61	0.144	93.35	0.261	Adhesive (Industrial) Application
MD	Wicomico	24045	2440020000	84.70	Missing	0.236	Missing	25.4	110.53	Missing	0.309	1.30	0.00	64.40	39.35	0.110	71.18	0.199	Adhesive (Industrial) Application
MD	Worcester	24047	2440020000	17.48	Missing	0.049	Missing	25.4	22.81	Missing	0.064	1.30	0.00	64.40	8.12	0.023	14.69	0.041	Adhesive (Industrial) Application
MD	Baltimore City	24510	2440020000	330.13	Missing	0.921	Missing	25.4	430.81	Missing	1.202	1.30	0.00	64.40	153.37	0.428	277.44	0.774	Adhesive (Industrial) Application
MA	Barnstable	25001	2440020000	125.19	0.3430	0.343	Missing	25.4	172.67	0.4731	0.473	1.38	0.00	64.40	61.47	0.168	111.20	0.305	Adhesive (Industrial) Application
MA	Berkshire	25003	2440020000	73.32	0.2009	0.201	Missing	25.4	101.13	0.2771	0.277	1.38	0.00	64.40	36.00	0.099	65.13	0.178	Adhesive (Industrial) Application
MA	Bristol	25005	2440020000	299.12	0.8195	0.820	Missing	25.4	412.58	1.1304	1.130	1.38	0.00	64.40	146.88	0.402	265.70	0.728	Adhesive (Industrial) Application
MA	Dukes	25007	2440020000	8.48	0.0232	0.023	Missing	25.4	11.70	0.0320	0.032	1.38	0.00	64.40	4.16	0.011	7.53	0.021	Adhesive (Industrial) Application
MA	Essex	25009	2440020000	405.09	1.1098	1.110	Missing	25.4	558.75	1.5308	1.531	1.38	0.00	64.40	198.91	0.545	359.83	0.986	Adhesive (Industrial) Application
MA	Franklin	25011	2440020000	39.57	0.1084	0.108	Missing	25.4	54.58	0.1495	0.150	1.38	0.00	64.40	19.43	0.053	35.15	0.096	Adhesive (Industrial) Application
MA	Hampden	25013	2440020000	252.79	0.6926	0.693	Missing	25.4	348.68	0.9553	0.955	1.38	0.00	64.40	124.13	0.340	224.55	0.615	Adhesive (Industrial) Application
MA	Hampshire	25015	2440020000	83.94	0.2300	0.230	Missing	25.4	115.78	0.3172	0.317	1.38	0.00	64.40	41.22	0.113	74.56	0.204	Adhesive (Industrial) Application
MA	Middlesex	25017	2440020000	807.78	2.2131	2.213	Missing	25.4	1,114.17	3.0525	3.053	1.38	0.00	64.40	396.64	1.087	717.52	1.966	Adhesive (Industrial) Application
MA	Nantucket	25019	2440020000	5.43	0.0149	0.015	Missing	25.4	7.49	0.0205	0.021	1.38	0.00	64.40	2.67	0.007	4.83	0.013	Adhesive (Industrial) Application
MA	Norfolk	25021	2440020000	359.54	0.9850	0.985	Missing	25.4	495.91	1.3587	1.359	1.38	0.00	64.40	176.55	0.484	319.37	0.875	Adhesive (Industrial) Application
MA	Plymouth	25023	2440020000	266.54	0.7302	0.730	Missing	25.4	367.64	1.0072	1.007	1.38	0.00	64.40	130.88	0.359	236.76	0.649	Adhesive (Industrial) Application
MA	Suffolk	25025	2440020000	376.85	1.0325	1.033	Missing	25.4	519.79	1.4241	1.424	1.38	0.00	64.40	185.05	0.507	334.75	0.917	Adhesive (Industrial) Application
MA	Worcester	25027	2440020000	423.25	1.1596	1.160	Missing	25.4	583.79	1.5994	1.599	1.38	0.00	64.40	207.83	0.569	375.96	1.030	Adhesive (Industrial) Application
NH	Belknap	33001	2440020000	35.01	Missing	0.096	25.0	25.4	51.67	Missing	0.142	1.48	0.00	64.40	18.39	0.051	33.28	0.091	Adhesive (Industrial) Application
NH	Carroll	33003	2440020000	9.32	Missing	0.026	25.0	25.4	13.76	Missing	0.038	1.48	0.00	64.40	4.90	0.013	8.86	0.024	Adhesive (Industrial) Application
NH	Cheshire	33005	2440020000	58.91	Missing	0.162	25.0	25.4	86.94	Missing	0.239	1.48	0.00	64.40	30.95	0.085	55.99	0.154	Adhesive (Industrial) Application
NH	Coos	33007	2440020000	36.45	Missing	0.100	25.0	25.4	53.80	Missing	0.148	1.48	0.00	64.40	19.15	0.053	34.64	0.095	Adhesive (Industrial) Application
NH	Grafton	33009	2440020000	51.26	Missing	0.141	25.0	25.4	75.65	Missing	0.208	1.48	0.00	64.40	26.93	0.074	48.72	0.134	Adhesive (Industrial) Application
NH	Hillsborough	33011	2440020000	303.75	Missing	0.834	25.0	25.4	448.30	Missing	1.232	1.48	0.00	64.40	159.59	0.438	288.70	0.793	Adhesive (Industrial) Application
NH	Merrimack	33013	2440020000	83.67	Missing	0.230	25.0	25.4	123.49	Missing	0.339	1.48	0.00	64.40	43.96	0.121	79.53	0.218	Adhesive (Industrial) Application
NH	Rockingham	33015	2440020000	115.32	Missing	0.317	25.0	25.4	170.20	Missing	0.468	1.48	0.00	64.40	60.59	0.166	109.61	0.301	Adhesive (Industrial) Application
NH	Strafford	33017	2440020000	11.41	Missing	0.031	25.0	25.4	16.84	Missing	0.046	1.48	0.00	64.40	5.99	0.016	10.84	0.030	Adhesive (Industrial) Application
NH	Sullivan	33019	2440020000	35.22	Missing	0.097	25.0	25.4	51.98	Missing	0.143	1.48	0.00	64.40	18.50	0.051	33.48	0.092	Adhesive (Industrial) Application
NJ	Atlantic	34001	2440020000	138.73	0.4186	0.419	27.0	25.4	140.26	0.4232	0.423	1.01	0.00	64.40	49.93	0.151	90.33	0.273	Adhesive (Industrial) Application
NJ	Bergen	34003	2440020000	488.92	1.4751	1.475	27.0	25.4	494.31	1.4913	1.491	1.01	0.00	64.40	175.97	0.531	318.33	0.960	Adhesive (Industrial) Application
NJ	Burlington	34005	2440020000	236.25	0.7128	0.713	27.0	25.4	238.86	0.7206	0.721	1.01	0.00	64.40	85.03	0.257	153.82	0.464	Adhesive (Industrial) Application
NJ	Camden	34007	2440020000	280.54	0.8464	0.846	27.0	25.4	283.63	0.8557	0.856	1.01	0.00	64.40	100.97	0.305	182.66	0.551	Adhesive (Industrial) Application
NJ	Cape May	34009	2440020000	58.49	0.1765	0.177	27.0	25.4	59.13	0.1784	0.178	1.01	0.00	64.40	21.05	0.064	38.08	0.115	Adhesive (Industrial) Application
NJ	Cumberland	34011	2440020000	80.65	0.2433	0.243	27.0	25.4	81.54	0.2460	0.246	1.01	0.00	64.40	29.03	0.088	52.51	0.158	Adhesive (Industrial) Application
NJ	Essex	34013	2440020000	439.06	1.3247	1.325	27.0	25.4	443.90	1.3393	1.339	1.01	0.00	64.40	158.03	0.477	285.87	0.863	Adhesive (Industrial) Application
NJ	Gloucester	34015	2440020000	142.45	0.4298	0.430	27.0	25.4	144.02	0.4345	0.435	1.01	0.00	64.40	51.27	0.155	92.75	0.280	Adhesive (Industrial) Application
NJ	Hudson	34017	2440020000	339.55	1.0244	1.024	27.0	25.4	343.29	1.0357	1.036	1.01	0.00	64.40	122.21	0.369	221.08	0.667	Adhesive (Industrial) Application
NJ	Hunterdon	34019	2440020000	68.67	0.2072	0.207	27.0	25.4	69.43	0.2095	0.210	1.01	0.00	64.40	24.72	0.075	44.71	0.135	Adhesive (Industrial) Application
NJ	Mercer	34021	2440020000	195.41	0.5896	0.590	27.0	25.4	197.57	0.5961	0.596	1.01	0.00	64.40	70.33	0.212	127.23	0.384	Adhesive (Industrial) Application
NJ	Middlesex	34023	2440020000	418.98	1.2641	1.264	27.0	25.4	423.59	1.2780	1.278	1.01	0.00	64.40	150.80	0.455	272.79	0.823	Adhesive (Industrial) Application
NJ	Monmouth	34025	2440020000	347.60	1.0487	1.049	27.0	25.4	351.44	1.0603	1.060	1.01	0.00	64.40	125.11	0.377	226.33	0.683	Adhesive (Industrial) Application
NJ	Morris	34027	2440020000	271.72	0.8198	0.820	27.0	25.4	274.72	0.8288	0.829	1.01	0.00	64.40	97.80	0.295	176.92	0.534	Adhesive (Industrial) Application
NJ	Ocean	34029	2440020000	294.94	0.8899	0.890	27.0	25.4	298.20	0.8997	0.900	1.01	0.00	64.40	106.16	0.320	192.04	0.579	Adhesive (Industrial) Application
NJ	Passaic	34031	2440020000	271.67	0.8196	0.820	27.0	25.4	274.67	0.8287	0.829	1.01	0.00	64.40	97.78	0.295	176.89	0.534	Adhesive (Industrial) Application
NJ	Salem	34033	2440020000	36.10	0.1089	0.109	27.0	25.4	36.50	0.1101	0.110	1.01	0.00	64.40	12.99	0.039	23.51	0.071	Adhesive (Industrial) Application
NJ	Somerset	34035	2440020000	165.99	0.5008	0.501	27.0	25.4	167.82	0.5063	0.506	1.01	0.00	64.40	59.75	0.180	108.08	0.326	Adhesive (Industrial) Application
NJ	Sussex	34037	2440020000	80.25	0.2421	0.242	27.0	25.4	81.14	0.2448	0.245	1.01	0.00	64.40	28.89	0.087	52.25	0.158	Adhesive (Industrial) Application
NJ	Union	34039	2440020000	288.40	0.8701	0.870	27.0	25.4	291.58	0.8797	0.880	1.01	0.00	64.40	103.80	0.313	187.78	0.567	Adhesive (Industrial) Application
NJ	Warren	34041	2440020000	57.30	0.1729	0.173	27.0	25.4	57.94	0.1748	0.175	1.01	0.00	64.40	20.63	0.062	37.31	0.113	Adhesive (Industrial) Application
NY	Albany	36001	2440020000	109.78	Missing	0.302	25.0	25.4	148.89	Missing	0.409	1.36	0.00	64.40	53.00	0.146	95.88	0.263	Adhesive (Industrial) Application

Adhesives and Sealants

State	County	FIPS	SCC	2002 VOC Emissions: Annual (tpy)	2002 VOC Emissions: Summer Day from Inventory (tpd)	2002 VOC Emissions: Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions: Annual (tpy)	2009 VOC OTB/OTW Emissions: Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions: Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Emissions: Annual (tpy)	2009 BOTW Emissions: Summer Day Calculated (tpd)	2009 BOTW Reductions: Annual (tpy)	2009 BOTW Reductions: Summer Day (tpd)	SCC Description
NY	Allegany	36003	2440020000	25.12	Missing	0.069	25.0	25.4	34.07	Missing	0.094	1.36	0.00	64.40	12.13	0.033	21.94	0.060	Adhesive (Industrial) Application
NY	Bronx	36005	2440020000	154.90	Missing	0.426	25.0	25.4	210.08	Missing	0.577	1.36	0.00	64.40	74.79	0.205	135.29	0.372	Adhesive (Industrial) Application
NY	Broome	36007	2440020000	222.89	Missing	0.612	25.0	25.4	302.29	Missing	0.830	1.36	0.00	64.40	107.61	0.296	194.67	0.535	Adhesive (Industrial) Application
NY	Cattaraugus	36009	2440020000	59.64	Missing	0.164	25.0	25.4	80.88	Missing	0.222	1.36	0.00	64.40	28.79	0.079	52.09	0.143	Adhesive (Industrial) Application
NY	Cayuga	36011	2440020000	39.97	Missing	0.110	25.0	25.4	54.21	Missing	0.149	1.36	0.00	64.40	19.30	0.053	34.91	0.096	Adhesive (Industrial) Application
NY	Chautauqua	36013	2440020000	114.07	Missing	0.313	25.0	25.4	154.70	Missing	0.425	1.36	0.00	64.40	55.07	0.151	99.63	0.274	Adhesive (Industrial) Application
NY	Chemung	36015	2440020000	59.20	Missing	0.163	25.0	25.4	80.29	Missing	0.221	1.36	0.00	64.40	28.58	0.079	51.71	0.142	Adhesive (Industrial) Application
NY	Chenango	36017	2440020000	46.58	Missing	0.128	25.0	25.4	63.17	Missing	0.174	1.36	0.00	64.40	22.49	0.062	40.68	0.112	Adhesive (Industrial) Application
NY	Clinton	36019	2440020000	29.48	Missing	0.081	25.0	25.4	39.98	Missing	0.110	1.36	0.00	64.40	14.23	0.039	25.75	0.071	Adhesive (Industrial) Application
NY	Columbia	36021	2440020000	21.03	Missing	0.058	25.0	25.4	28.52	Missing	0.078	1.36	0.00	64.40	10.15	0.028	18.37	0.050	Adhesive (Industrial) Application
NY	Cortland	36023	2440020000	42.42	Missing	0.117	25.0	25.4	57.53	Missing	0.158	1.36	0.00	64.40	20.48	0.056	37.05	0.102	Adhesive (Industrial) Application
NY	Delaware	36025	2440020000	40.17	Missing	0.110	25.0	25.4	54.48	Missing	0.150	1.36	0.00	64.40	19.39	0.053	35.08	0.096	Adhesive (Industrial) Application
NY	Dutchess	36027	2440020000	221.05	Missing	0.607	25.0	25.4	299.79	Missing	0.824	1.36	0.00	64.40	106.73	0.293	193.07	0.530	Adhesive (Industrial) Application
NY	Erie	36029	2440020000	607.52	Missing	1.669	25.0	25.4	823.93	Missing	2.264	1.36	0.00	64.40	293.32	0.806	530.61	1.458	Adhesive (Industrial) Application
NY	Essex	36031	2440020000	11.54	Missing	0.032	25.0	25.4	15.65	Missing	0.043	1.36	0.00	64.40	5.57	0.015	10.08	0.028	Adhesive (Industrial) Application
NY	Franklin	36033	2440020000	9.97	Missing	0.027	25.0	25.4	13.52	Missing	0.037	1.36	0.00	64.40	4.81	0.013	8.71	0.024	Adhesive (Industrial) Application
NY	Fulton	36035	2440020000	44.50	Missing	0.122	25.0	25.4	60.35	Missing	0.166	1.36	0.00	64.40	21.49	0.059	38.87	0.107	Adhesive (Industrial) Application
NY	Genesee	36037	2440020000	36.57	Missing	0.100	25.0	25.4	49.60	Missing	0.136	1.36	0.00	64.40	17.66	0.049	31.94	0.088	Adhesive (Industrial) Application
NY	Greene	36039	2440020000	8.53	Missing	0.023	25.0	25.4	11.57	Missing	0.032	1.36	0.00	64.40	4.12	0.011	7.45	0.020	Adhesive (Industrial) Application
NY	Hamilton	36041	2440020000	0.88	Missing	0.002	25.0	25.4	1.19	Missing	0.003	1.36	0.00	64.40	0.42	0.001	0.77	0.002	Adhesive (Industrial) Application
NY	Herkimer	36043	2440020000	38.29	Missing	0.105	25.0	25.4	51.93	Missing	0.143	1.36	0.00	64.40	18.49	0.051	33.44	0.092	Adhesive (Industrial) Application
NY	Jefferson	36045	2440020000	38.41	Missing	0.106	25.0	25.4	52.09	Missing	0.143	1.36	0.00	64.40	18.54	0.051	33.55	0.092	Adhesive (Industrial) Application
NY	Kings	36047	2440020000	503.38	Missing	1.383	25.0	25.4	682.69	Missing	1.876	1.36	0.00	64.40	243.04	0.668	439.65	1.208	Adhesive (Industrial) Application
NY	Lewis	36049	2440020000	14.14	Missing	0.039	25.0	25.4	19.18	Missing	0.053	1.36	0.00	64.40	6.83	0.019	12.35	0.034	Adhesive (Industrial) Application
NY	Livingston	36051	2440020000	24.71	Missing	0.068	25.0	25.4	33.51	Missing	0.092	1.36	0.00	64.40	11.93	0.033	21.58	0.059	Adhesive (Industrial) Application
NY	Madison	36053	2440020000	19.74	Missing	0.054	25.0	25.4	26.77	Missing	0.074	1.36	0.00	64.40	9.53	0.026	17.24	0.047	Adhesive (Industrial) Application
NY	Monroe	36055	2440020000	854.33	Missing	2.347	25.0	25.4	1,158.66	Missing	3.183	1.36	0.00	64.40	412.48	1.133	746.17	2.050	Adhesive (Industrial) Application
NY	Montgomery	36057	2440020000	48.83	Missing	0.134	25.0	25.4	66.22	Missing	0.182	1.36	0.00	64.40	23.58	0.065	42.65	0.117	Adhesive (Industrial) Application
NY	Nassau	36059	2440020000	594.06	Missing	1.632	25.0	25.4	805.67	Missing	2.213	1.36	0.00	64.40	286.82	0.788	518.85	1.425	Adhesive (Industrial) Application
NY	New York	36061	2440020000	1,548.38	Missing	4.254	25.0	25.4	2,099.94	Missing	5.769	1.36	0.00	64.40	747.58	2.054	1352.36	3.715	Adhesive (Industrial) Application
NY	Niagara	36063	2440020000	170.91	Missing	0.470	25.0	25.4	231.79	Missing	0.637	1.36	0.00	64.40	82.52	0.227	149.27	0.410	Adhesive (Industrial) Application
NY	Oneida	36065	2440020000	144.35	Missing	0.397	25.0	25.4	195.77	Missing	0.538	1.36	0.00	64.40	69.69	0.191	126.08	0.346	Adhesive (Industrial) Application
NY	Onondaga	36067	2440020000	331.16	Missing	0.910	25.0	25.4	449.12	Missing	1.234	1.36	0.00	64.40	159.89	0.439	289.24	0.795	Adhesive (Industrial) Application
NY	Ontario	36069	2440020000	53.67	Missing	0.147	25.0	25.4	72.79	Missing	0.200	1.36	0.00	64.40	25.91	0.071	46.88	0.129	Adhesive (Industrial) Application
NY	Orange	36071	2440020000	97.78	Missing	0.269	25.0	25.4	132.61	Missing	0.364	1.36	0.00	64.40	47.21	0.130	85.40	0.235	Adhesive (Industrial) Application
NY	Orleans	36073	2440020000	21.03	Missing	0.058	25.0	25.4	28.52	Missing	0.078	1.36	0.00	64.40	10.15	0.028	18.37	0.050	Adhesive (Industrial) Application
NY	Oswego	36075	2440020000	61.52	Missing	0.169	25.0	25.4	83.43	Missing	0.229	1.36	0.00	64.40	29.70	0.082	53.73	0.148	Adhesive (Industrial) Application
NY	Otsego	36077	2440020000	16.18	Missing	0.044	25.0	25.4	21.94	Missing	0.060	1.36	0.00	64.40	7.81	0.021	14.13	0.039	Adhesive (Industrial) Application
NY	Putnam	36079	2440020000	13.77	Missing	0.038	25.0	25.4	18.68	Missing	0.051	1.36	0.00	64.40	6.65	0.018	12.03	0.033	Adhesive (Industrial) Application
NY	Queens	36081	2440020000	490.29	Missing	1.347	25.0	25.4	664.94	Missing	1.827	1.36	0.00	64.40	236.72	0.650	428.22	1.176	Adhesive (Industrial) Application
NY	Rensselaer	36083	2440020000	47.66	Missing	0.131	25.0	25.4	64.64	Missing	0.178	1.36	0.00	64.40	23.01	0.063	41.63	0.114	Adhesive (Industrial) Application
NY	Richmond	36085	2440020000	26.03	Missing	0.072	25.0	25.4	35.30	Missing	0.097	1.36	0.00	64.40	12.57	0.035	22.73	0.062	Adhesive (Industrial) Application
NY	Rockland	36087	2440020000	118.66	Missing	0.326	25.0	25.4	160.93	Missing	0.442	1.36	0.00	64.40	57.29	0.157	103.64	0.285	Adhesive (Industrial) Application
NY	St. Lawrence	36089	2440020000	39.97	Missing	0.110	25.0	25.4	54.21	Missing	0.149	1.36	0.00	64.40	19.30	0.053	34.91	0.096	Adhesive (Industrial) Application
NY	Saratoga	36091	2440020000	49.11	Missing	0.135	25.0	25.4	66.60	Missing	0.183	1.36	0.00	64.40	23.71	0.065	42.89	0.118	Adhesive (Industrial) Application
NY	Schenectady	36093	2440020000	57.40	Missing	0.158	25.0	25.4	77.85	Missing	0.214	1.36	0.00	64.40	27.71	0.076	50.13	0.138	Adhesive (Industrial) Application
NY	Schoharie	36095	2440020000	5.61	Missing	0.015	25.0	25.4	7.61	Missing	0.021	1.36	0.00	64.40	2.71	0.007	4.90	0.013	Adhesive (Industrial) Application
NY	Schuyler	36097	2440020000	8.05	Missing	0.022	25.0	25.4	10.92	Missing	0.030	1.36	0.00	64.40	3.89	0.011	7.03	0.019	Adhesive (Industrial) Application
NY	Seneca	36099	2440020000	27.83	Missing	0.076	25.0	25.4	37.74	Missing	0.104	1.36	0.00	64.40	13.44	0.037	24.31	0.067	Adhesive (Industrial) Application
NY	Steuben	36101	2440020000	101.05	Missing	0.278	25.0	25.4	137.05	Missing	0.376	1.36	0.00	64.40	48.79	0.134	88.26	0.242	Adhesive (Industrial) Application
NY	Suffolk	36103	2440020000	690.36	Missing	1.897	25.0	25.4	936.28	Missing	2.572	1.36	0.00	64.40	333.31	0.916	602.96	1.656	Adhesive (Industrial) Application
NY	Sullivan	36105	2440020000	7.09	Missing	0.019	25.0	25.4	9.62	Missing	0.026	1.36	0.00	64.40	3.42	0.009	6.19	0.017	Adhesive (Industrial) Application
NY	Tioga	36107	2440020000	58.64	Missing	0.161	25.0	25.4	79.53	Missing	0.218	1.36	0.00	64.40	28.31	0.078	51.22	0.141	Adhesive (Industrial) Application
NY	Tompkins	36109	2440020000	27.55	Missing	0.076	25.0	25.4	37.36	Missing	0.103	1.36	0.00	64.40	13.30	0.037	24.06	0.066	Adhesive (Industrial) Application
NY	Ulster	36111	2440020000	59.44	Missing	0.163	25.0	25.4	80.61	Missing	0.221	1.36	0.00	64.40	28.70	0.079	51.92	0.143	Adhesive (Industrial) Application
NY	Warren	36113	2440020000	40.85	Missing	0.112	25.0	25.4	55.40	Missing	0.152	1.36	0.00	64.40	19.72	0.054	35.68	0.098	Adhesive (Industrial) Application
NY	Washington	36115	2440020000	39.29	Missing	0.108	25.0	25.4	53.29	Missing	0.146	1.36	0.00	64.40	18.97	0.052	34.32	0.094	Adhesive (Industrial) Application
NY	Wayne	36117	2440020000	56.51	Missing	0.155	25.0	25.4	76.64	Missing	0.211	1.36	0.00	64.40	27.28	0.075	49.36	0.136	Adhesive (Industrial) Application
NY	Westchester	36119	2440020000	475.14	Missing	1.305	25.0	25.4	644.39	Missing	1.770	1.36	0.00	64.40	229.40	0.630	414.99	1.140	Adhesive (Industrial) Application

Adhesives and Sealants

State	County	FIPS	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Emissions Annual (tpy)	2009 BOTW Emissions Summer Day Calculated (tpd)	2009 BOTW Reductions Annual (tpy)	2009 BOTW Reductions Summer Day (tpd)	SCC Description
NY	Wyoming	36121	2440020000	23.43	Missing	0.064	25.0	25.4	31.78	Missing	0.087	1.36	0.00	64.40	11.31	0.031	20.46	0.056	Adhesive (Industrial) Application
NY	Yates	36123	2440020000	7.09	Missing	0.019	25.0	25.4	9.62	Missing	0.026	1.36	0.00	64.40	3.42	0.009	6.19	0.017	Adhesive (Industrial) Application
PA	Adams	42001	2440020000	67.14	Missing	0.184	25.0	25.4	89.51	Missing	0.246	1.33	0.00	64.40	31.86	0.088	57.64	0.158	Adhesive (Industrial) Application
PA	Allegheny	42003	2440020000	756.21	Missing	2.078	25.0	25.4	1,008.14	Missing	2.770	1.33	0.00	64.40	358.90	0.986	649.24	1.784	Adhesive (Industrial) Application
PA	Armstrong	42005	2440020000	26.48	Missing	0.073	25.0	25.4	35.30	Missing	0.097	1.33	0.00	64.40	12.57	0.035	22.73	0.062	Adhesive (Industrial) Application
PA	Beaver	42007	2440020000	88.06	Missing	0.242	25.0	25.4	117.40	Missing	0.323	1.33	0.00	64.40	41.79	0.115	75.60	0.208	Adhesive (Industrial) Application
PA	Bedford	42009	2440020000	21.78	Missing	0.060	25.0	25.4	29.04	Missing	0.080	1.33	0.00	64.40	10.34	0.028	18.70	0.051	Adhesive (Industrial) Application
PA	Berks	42011	2440020000	424.94	Missing	1.167	25.0	25.4	566.51	Missing	1.556	1.33	0.00	64.40	201.68	0.554	364.83	1.002	Adhesive (Industrial) Application
PA	Blair	42013	2440020000	96.62	Missing	0.265	25.0	25.4	128.81	Missing	0.354	1.33	0.00	64.40	45.86	0.126	82.95	0.228	Adhesive (Industrial) Application
PA	Bradford	42015	2440020000	62.72	Missing	0.172	25.0	25.4	83.62	Missing	0.230	1.33	0.00	64.40	29.77	0.082	53.85	0.148	Adhesive (Industrial) Application
PA	Butler	42019	2440020000	106.94	Missing	0.294	25.0	25.4	142.57	Missing	0.392	1.33	0.00	64.40	50.75	0.139	91.81	0.252	Adhesive (Industrial) Application
PA	Cambria	42021	2440020000	75.51	Missing	0.207	25.0	25.4	100.67	Missing	0.277	1.33	0.00	64.40	35.84	0.098	64.83	0.178	Adhesive (Industrial) Application
PA	Cameron	42023	2440020000	9.22	Missing	0.025	25.0	25.4	12.29	Missing	0.034	1.33	0.00	64.40	4.38	0.012	7.92	0.022	Adhesive (Industrial) Application
PA	Carbon	42025	2440020000	39.75	Missing	0.109	25.0	25.4	52.99	Missing	0.146	1.33	0.00	64.40	18.87	0.052	34.13	0.094	Adhesive (Industrial) Application
PA	Centre	42027	2440020000	73.98	Missing	0.203	25.0	25.4	98.63	Missing	0.271	1.33	0.00	64.40	35.11	0.096	63.52	0.174	Adhesive (Industrial) Application
PA	Chester	42029	2440020000	262.07	Missing	0.720	25.0	25.4	349.38	Missing	0.960	1.33	0.00	64.40	124.38	0.342	225.00	0.618	Adhesive (Industrial) Application
PA	Clarion	42031	2440020000	22.44	Missing	0.062	25.0	25.4	29.92	Missing	0.082	1.33	0.00	64.40	10.65	0.029	19.27	0.053	Adhesive (Industrial) Application
PA	Clearfield	42033	2440020000	46.60	Missing	0.128	25.0	25.4	62.12	Missing	0.171	1.33	0.00	64.40	22.12	0.061	40.01	0.110	Adhesive (Industrial) Application
PA	Clinton	42035	2440020000	34.19	Missing	0.094	25.0	25.4	45.58	Missing	0.125	1.33	0.00	64.40	16.23	0.045	29.35	0.081	Adhesive (Industrial) Application
PA	Columbia	42037	2440020000	86.96	Missing	0.239	25.0	25.4	115.93	Missing	0.318	1.33	0.00	64.40	41.27	0.113	74.66	0.205	Adhesive (Industrial) Application
PA	Crawford	42039	2440020000	74.27	Missing	0.204	25.0	25.4	99.01	Missing	0.272	1.33	0.00	64.40	35.25	0.097	63.76	0.175	Adhesive (Industrial) Application
PA	Cumberland	42041	2440020000	156.62	Missing	0.430	25.0	25.4	208.80	Missing	0.574	1.33	0.00	64.40	74.33	0.204	134.47	0.369	Adhesive (Industrial) Application
PA	Dauphin	42043	2440020000	208.02	Missing	0.571	25.0	25.4	277.32	Missing	0.762	1.33	0.00	64.40	98.73	0.271	178.60	0.491	Adhesive (Industrial) Application
PA	Delaware	42045	2440020000	302.60	Missing	0.831	25.0	25.4	403.41	Missing	1.108	1.33	0.00	64.40	143.61	0.395	259.80	0.714	Adhesive (Industrial) Application
PA	Elk	42047	2440020000	63.57	Missing	0.175	25.0	25.4	84.75	Missing	0.233	1.33	0.00	64.40	30.17	0.083	54.58	0.150	Adhesive (Industrial) Application
PA	Erie	42049	2440020000	310.92	Missing	0.854	25.0	25.4	414.50	Missing	1.139	1.33	0.00	64.40	147.56	0.405	266.94	0.733	Adhesive (Industrial) Application
PA	Fayette	42051	2440020000	50.35	Missing	0.138	25.0	25.4	67.12	Missing	0.184	1.33	0.00	64.40	23.90	0.066	43.23	0.119	Adhesive (Industrial) Application
PA	Forest	42053	2440020000	2.23	Missing	0.006	25.0	25.4	2.97	Missing	0.008	1.33	0.00	64.40	1.06	0.003	1.91	0.005	Adhesive (Industrial) Application
PA	Franklin	42055	2440020000	116.63	Missing	0.320	25.0	25.4	155.49	Missing	0.427	1.33	0.00	64.40	55.35	0.152	100.13	0.275	Adhesive (Industrial) Application
PA	Fulton	42057	2440020000	8.08	Missing	0.022	25.0	25.4	10.77	Missing	0.030	1.33	0.00	64.40	3.83	0.011	6.94	0.019	Adhesive (Industrial) Application
PA	Greene	42059	2440020000	3.61	Missing	0.010	25.0	25.4	4.81	Missing	0.013	1.33	0.00	64.40	1.71	0.005	3.10	0.009	Adhesive (Industrial) Application
PA	Huntingdon	42061	2440020000	28.15	Missing	0.077	25.0	25.4	37.53	Missing	0.103	1.33	0.00	64.40	13.36	0.037	24.17	0.066	Adhesive (Industrial) Application
PA	Indiana	42063	2440020000	37.47	Missing	0.103	25.0	25.4	49.95	Missing	0.137	1.33	0.00	64.40	17.78	0.049	32.17	0.088	Adhesive (Industrial) Application
PA	Jefferson	42065	2440020000	42.56	Missing	0.117	25.0	25.4	56.74	Missing	0.156	1.33	0.00	64.40	20.20	0.055	36.54	0.100	Adhesive (Industrial) Application
PA	Juniata	42067	2440020000	23.25	Missing	0.064	25.0	25.4	31.00	Missing	0.085	1.33	0.00	64.40	11.03	0.030	19.96	0.055	Adhesive (Industrial) Application
PA	Lackawanna	42069	2440020000	224.62	Missing	0.617	25.0	25.4	299.45	Missing	0.823	1.33	0.00	64.40	106.61	0.293	192.85	0.530	Adhesive (Industrial) Application
PA	Lancaster	42071	2440020000	556.79	Missing	1.530	25.0	25.4	742.29	Missing	2.039	1.33	0.00	64.40	264.25	0.726	478.03	1.313	Adhesive (Industrial) Application
PA	Lawrence	42073	2440020000	63.71	Missing	0.175	25.0	25.4	84.94	Missing	0.233	1.33	0.00	64.40	30.24	0.083	54.70	0.150	Adhesive (Industrial) Application
PA	Lebanon	42075	2440020000	104.37	Missing	0.287	25.0	25.4	139.14	Missing	0.382	1.33	0.00	64.40	49.53	0.136	89.61	0.246	Adhesive (Industrial) Application
PA	Lehigh	42077	2440020000	351.67	Missing	0.966	25.0	25.4	468.83	Missing	1.288	1.33	0.00	64.40	166.90	0.459	301.93	0.829	Adhesive (Industrial) Application
PA	Luzerne	42079	2440020000	267.60	Missing	0.735	25.0	25.4	356.75	Missing	0.980	1.33	0.00	64.40	127.00	0.349	229.75	0.631	Adhesive (Industrial) Application
PA	Lycoming	42081	2440020000	152.63	Missing	0.419	25.0	25.4	203.48	Missing	0.559	1.33	0.00	64.40	72.44	0.199	131.04	0.360	Adhesive (Industrial) Application
PA	McKean	42083	2440020000	44.36	Missing	0.122	25.0	25.4	59.14	Missing	0.162	1.33	0.00	64.40	21.05	0.058	38.09	0.105	Adhesive (Industrial) Application
PA	Mercer	42085	2440020000	104.42	Missing	0.287	25.0	25.4	139.21	Missing	0.382	1.33	0.00	64.40	49.56	0.136	89.65	0.246	Adhesive (Industrial) Application
PA	Mifflin	42087	2440020000	51.31	Missing	0.141	25.0	25.4	68.40	Missing	0.188	1.33	0.00	64.40	24.35	0.067	44.05	0.121	Adhesive (Industrial) Application
PA	Monroe	42089	2440020000	45.70	Missing	0.126	25.0	25.4	60.93	Missing	0.167	1.33	0.00	64.40	21.69	0.060	39.24	0.108	Adhesive (Industrial) Application
PA	Montgomery	42091	2440020000	756.94	Missing	2.080	25.0	25.4	1,009.12	Missing	2.772	1.33	0.00	64.40	359.25	0.987	649.87	1.785	Adhesive (Industrial) Application
PA	Montour	42093	2440020000	19.92	Missing	0.055	25.0	25.4	26.56	Missing	0.073	1.33	0.00	64.40	9.45	0.026	17.10	0.047	Adhesive (Industrial) Application
PA	Northampton	42095	2440020000	227.80	Missing	0.626	25.0	25.4	303.69	Missing	0.834	1.33	0.00	64.40	108.11	0.297	195.58	0.537	Adhesive (Industrial) Application
PA	Northumberland	42097	2440020000	99.52	Missing	0.273	25.0	25.4	132.68	Missing	0.364	1.33	0.00	64.40	47.23	0.130	85.44	0.235	Adhesive (Industrial) Application
PA	Perry	42099	2440020000	6.61	Missing	0.018	25.0	25.4	8.81	Missing	0.024	1.33	0.00	64.40	3.14	0.009	5.67	0.016	Adhesive (Industrial) Application
PA	Philadelphia	42101	2440020000	773.19	Missing	2.124	25.0	25.4	1,030.78	Missing	2.832	1.33	0.00	64.40	366.96	1.008	663.82	1.824	Adhesive (Industrial) Application
PA	Pike	42103	2440020000	4.42	Missing	0.012	25.0	25.4	5.89	Missing	0.016	1.33	0.00	64.40	2.10	0.006	3.79	0.010	Adhesive (Industrial) Application
PA	Potter	42105	2440020000	10.94	Missing	0.030	25.0	25.4	14.58	Missing	0.040	1.33	0.00	64.40	5.19	0.014	9.39	0.026	Adhesive (Industrial) Application
PA	Schuylkill	42107	2440020000	159.29	Missing	0.438	25.0	25.4	212.36	Missing	0.583	1.33	0.00	64.40	75.60	0.208	136.76	0.376	Adhesive (Industrial) Application
PA	Snyder	42109	2440020000	22.25	Missing	0.061	25.0	25.4	29.66	Missing	0.081	1.33	0.00	64.40	10.56	0.029	19.10	0.052	Adhesive (Industrial) Application
PA	Somerset	42111	2440020000	44.17	Missing	0.121	25.0	25.4	58.89	Missing	0.162	1.33	0.00	64.40	20.96	0.058	37.92	0.104	Adhesive (Industrial) Application
PA	Sullivan	42113	2440020000	4.99	Missing	0.014	25.0	25.4	6.65	Missing	0.018	1.33	0.00	64.40	2.37	0.007	4.28	0.012	Adhesive (Industrial) Application
PA	Susquehanna	42115	2440020000	27.06	Missing	0.074	25.0	25.4	36.08	Missing	0.099	1.33	0.00	64.40	12.84	0.035	23.23	0.064	Adhesive (Industrial) Application

Adhesives and Sealants

State	County	FIPS	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Emissions Annual (tpy)	2009 BOTW Emissions Summer Day Calculated (tpd)	2009 BOTW Reductions Annual (tpy)	2009 BOTW Reductions Summer Day (tpd)	SCC Description
PA	Tioga	42117	2440020000	26.20	Missing	0.072	25.0	25.4	34.93	Missing	0.096	1.33	0.00	64.40	12.43	0.034	22.49	0.062	Adhesive (Industrial) Application
PA	Union	42119	2440020000	38.94	Missing	0.107	25.0	25.4	51.91	Missing	0.143	1.33	0.00	64.40	18.48	0.051	33.43	0.092	Adhesive (Industrial) Application
PA	Venango	42121	2440020000	39.04	Missing	0.107	25.0	25.4	52.05	Missing	0.143	1.33	0.00	64.40	18.53	0.051	33.52	0.092	Adhesive (Industrial) Application
PA	Warren	42123	2440020000	37.85	Missing	0.104	25.0	25.4	50.46	Missing	0.139	1.33	0.00	64.40	17.96	0.049	32.50	0.089	Adhesive (Industrial) Application
PA	Washington	42125	2440020000	108.27	Missing	0.297	25.0	25.4	144.34	Missing	0.397	1.33	0.00	64.40	51.39	0.141	92.96	0.255	Adhesive (Industrial) Application
PA	Wayne	42127	2440020000	19.35	Missing	0.053	25.0	25.4	25.80	Missing	0.071	1.33	0.00	64.40	9.18	0.025	16.61	0.046	Adhesive (Industrial) Application
PA	Westmoreland	42129	2440020000	232.56	Missing	0.639	25.0	25.4	310.04	Missing	0.852	1.33	0.00	64.40	110.37	0.303	199.66	0.549	Adhesive (Industrial) Application
PA	Wyoming	42131	2440020000	26.34	Missing	0.072	25.0	25.4	35.12	Missing	0.096	1.33	0.00	64.40	12.50	0.034	22.61	0.062	Adhesive (Industrial) Application
PA	York	42133	2440020000	442.63	Missing	1.216	25.0	25.4	590.09	Missing	1.621	1.33	0.00	64.40	210.07	0.577	380.02	1.044	Adhesive (Industrial) Application
RI	Bristol	44001	2440020000	23.90	Missing	0.067	Missing	25.4	32.27	Missing	0.090	1.35	0.00	64.40	11.49	0.032	20.78	0.058	Adhesive (Industrial) Application
RI	Kent	44003	2440020000	58.29	Missing	0.163	Missing	25.4	78.70	Missing	0.220	1.35	0.00	64.40	28.02	0.078	50.68	0.141	Adhesive (Industrial) Application
RI	Newport	44005	2440020000	10.64	Missing	0.030	Missing	25.4	14.36	Missing	0.040	1.35	0.00	64.40	5.11	0.014	9.25	0.026	Adhesive (Industrial) Application
RI	Providence	44007	2440020000	454.95	Missing	1.270	Missing	25.4	614.25	Missing	1.715	1.35	0.00	64.40	218.67	0.610	395.58	1.104	Adhesive (Industrial) Application
RI	Washington	44009	2440020000	75.33	Missing	0.210	Missing	25.4	101.70	Missing	0.284	1.35	0.00	64.40	36.21	0.101	65.50	0.183	Adhesive (Industrial) Application
VT	Addison	50001	2440020000	50.71	Missing	0.139	25.0	25.4	72.43	Missing	0.199	1.43	0.00	64.40	25.78	0.071	46.64	0.128	Adhesive (Industrial) Application
VT	Bennington	50003	2440020000	70.94	Missing	0.195	25.0	25.4	101.32	Missing	0.278	1.43	0.00	64.40	36.07	0.099	65.25	0.179	Adhesive (Industrial) Application
VT	Caledonia	50005	2440020000	20.75	Missing	0.057	25.0	25.4	29.64	Missing	0.081	1.43	0.00	64.40	10.55	0.029	19.09	0.052	Adhesive (Industrial) Application
VT	Chittenden	50007	2440020000	289.23	Missing	0.795	25.0	25.4	413.11	Missing	1.135	1.43	0.00	64.40	147.07	0.404	266.04	0.731	Adhesive (Industrial) Application
VT	Essex	50009	2440020000	17.50	Missing	0.048	25.0	25.4	25.00	Missing	0.069	1.43	0.00	64.40	8.90	0.024	16.10	0.044	Adhesive (Industrial) Application
VT	Franklin	50011	2440020000	43.20	Missing	0.119	25.0	25.4	61.70	Missing	0.170	1.43	0.00	64.40	21.97	0.060	39.74	0.109	Adhesive (Industrial) Application
VT	Grand Isle	50013	2440020000	0.43	Missing	0.001	25.0	25.4	0.61	Missing	0.002	1.43	0.00	64.40	0.22	0.001	0.40	0.001	Adhesive (Industrial) Application
VT	Lamoille	50015	2440020000	11.01	Missing	0.030	25.0	25.4	15.73	Missing	0.043	1.43	0.00	64.40	5.60	0.015	10.13	0.028	Adhesive (Industrial) Application
VT	Orange	50017	2440020000	34.49	Missing	0.095	25.0	25.4	49.26	Missing	0.135	1.43	0.00	64.40	17.54	0.048	31.72	0.087	Adhesive (Industrial) Application
VT	Orleans	50019	2440020000	37.65	Missing	0.103	25.0	25.4	53.78	Missing	0.148	1.43	0.00	64.40	19.14	0.053	34.63	0.095	Adhesive (Industrial) Application
VT	Rutland	50021	2440020000	95.10	Missing	0.261	25.0	25.4	135.83	Missing	0.373	1.43	0.00	64.40	48.36	0.133	87.48	0.240	Adhesive (Industrial) Application
VT	Washington	50023	2440020000	54.04	Missing	0.148	25.0	25.4	77.19	Missing	0.212	1.43	0.00	64.40	27.48	0.075	49.71	0.137	Adhesive (Industrial) Application
VT	Windham	50025	2440020000	68.21	Missing	0.187	25.0	25.4	97.42	Missing	0.268	1.43	0.00	64.40	34.68	0.095	62.74	0.172	Adhesive (Industrial) Application
VT	Windsor	50027	2440020000	53.78	Missing	0.148	25.0	25.4	76.81	Missing	0.211	1.43	0.00	64.40	27.35	0.075	49.47	0.136	Adhesive (Industrial) Application
VA	Arlington	51013	2440020000	22.98	Missing	0.064	Missing	25.4	29.54	Missing	0.082	0.00	0.00	64.40	10.52	0.029	19.02	0.053	Adhesive (Industrial) Application
VA	Fairfax	51059	2440020000	204.09	Missing	0.570	Missing	25.4	262.31	Missing	0.732	0.00	0.00	64.40	93.38	0.261	168.93	0.472	Adhesive (Industrial) Application
VA	Loudoun	51107	2440020000	43.50	Missing	0.121	Missing	25.4	55.92	Missing	0.156	0.00	0.00	64.40	19.91	0.056	36.01	0.101	Adhesive (Industrial) Application
VA	Prince William	51153	2440020000	70.63	Missing	0.197	Missing	25.4	90.78	Missing	0.253	0.00	0.00	64.40	32.32	0.090	58.46	0.163	Adhesive (Industrial) Application
VA	Stafford	51179	2440020000	14.35	Missing	0.040	Missing	25.4	18.45	Missing	0.051	0.00	0.00	64.40	6.57	0.018	11.88	0.033	Adhesive (Industrial) Application
VA	Alexandria	51510	2440020000	33.28	Missing	0.093	Missing	25.4	42.78	Missing	0.119	0.00	0.00	64.40	15.23	0.043	27.55	0.077	Adhesive (Industrial) Application
VA	Fairfax City	51600	2440020000	26.89	Missing	0.075	Missing	25.4	34.56	Missing	0.096	0.00	0.00	64.40	12.30	0.034	22.26	0.062	Adhesive (Industrial) Application
VA	Falls Chruch	51610	2440020000	6.80	Missing	0.019	Missing	25.4	8.74	Missing	0.024	0.00	0.00	64.40	3.11	0.009	5.63	0.016	Adhesive (Industrial) Application
VA	Manassas City	51683	2440020000	11.60	Missing	0.032	Missing	25.4	14.92	Missing	0.042	0.00	0.00	64.40	5.31	0.015	9.61	0.027	Adhesive (Industrial) Application
VA	Manassas Park City	51685	2440020000	3.52	Missing	0.010	Missing	25.4	4.53	Missing	0.013	0.00	0.00	64.40	1.61	0.005	2.92	0.008	Adhesive (Industrial) Application
			MANEVU	34,019.38		94.93			44,275.42		123.19				15,762.05	43.86	28,513.37	79.33	

COLUMN	COLUMN DESCRIPTIONS
A-F	State abbreviation, County Name, FIPS state/county code, Site ID, Emission Unit ID, Process ID
G	SCC-Source Classification Code
H	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
I	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
J	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
K	Summer season percentage from NIF Emission Process (EP) file
L	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
M	Total capture/control efficiency from NIF 2002 CE file
N	Blank

COLUMN	COLUMN DESCRIPTIONS
O	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS B
P	VOC 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS
Q	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in invento 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 day b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
R	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
S	Total capture/control efficiency from NIF 2009 CE file
O	Incremental Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Incremental Control Factor (64.4% if uncontrolled, 0% if greater than 85% control system r
Q, R	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW incremental control fact
S, T	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

							2002 VOC Emissions						2009 VOC OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
CT	Hartford	09003	6484	R0131	01	40200701	2.3630	0.0099	0.010	25.0	25.5	0.00	2.2660	0.0090	0.009	0.984	0.00	64.40	0.81
CT	Hartford	09003	6484	R0132	01	40200701	2.3630	0.0099	0.010	25.0	25.5	0.00	2.2660	0.0090	0.009	0.984	0.00	64.40	0.81
CT	New Haven	09009	3371	R0263	01	40200701	3.1100	0.0130	0.013	29.0	25.5	98.00	2.7080	0.0110	0.011	0.984	98.00	0.00	2.71
CT	Windham	09015	0647	P0085	01	40200701	0.1900	0.0010	0.001	25.0	25.5	0.00	0.1820	0.0010	0.001	0.984	0.00	64.40	0.06
DE	Kent	10001	1000100004	003	2	40200701	2.7100	0.0104	0.010	25.0	25.5	0.00	2.7100	0.0100	0.010	1.000	0.00	64.40	0.96
DE	Kent	10001	1000100004	005	2	40200701	5.4200	0.0147	0.015	25.0	25.5	0.00	5.4200	0.0150	0.015	1.000	0.00	64.40	1.93
DE	Kent	10001	1000100004	005	3	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.000	0.00	64.40	0.00
DE	Kent	10001	1000100004	005	4	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.000	0.00	64.40	0.00
DE	Kent	10001	1000100004	005	5	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.000	0.00	64.40	0.00
DE	New Castle	10003	1000300365	002	1	40200710	1.8500	0.0072	0.007	25.0	24.9	0.00	1.8500	0.0070	0.007	1.000	0.00	64.40	0.66
DE	New Castle	10003	1000300365	002	2	40200706	0.0000	0.0000	0.000	25.0	29.9	0.00	0.0000	0.0000	0.000	1.000	0.00	64.40	0.00
ME	Androscoggin	23001	2300100076	003	2	40200701	0.2400	0.0006	0.001	24.0	25.5	0.00	0.3130	0.0010	0.001	1.305	0.00	64.40	0.11
MD	Anne Arundel	24003	003-0250	232	01F232	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.159	0.00	64.40	0.00
MD	Anne Arundel	24003	003-0250	232	01S232	40200701	0.2310	0.0006	0.001	25.0	25.5	0.00	0.2680	0.0010	0.001	1.159	0.00	64.40	0.10
MD	Baltimore	24005	005-2407	17	01F17	40200701	13.5290	0.0368	0.037	25.0	25.5	0.00	15.6800	0.0520	0.052	1.159	0.00	64.40	5.58
MD	Baltimore	24005	005-2407	17	01S17	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.159	0.00	64.40	0.00
MD	Baltimore	24005	005-2407	27	01F27	40200701	0.0000	0.0000	0.000	25.0	25.5	95.00	0.0000	0.0000	0.000	1.159	95.00	0.00	0.00
MD	Baltimore	24005	005-2407	27	01S27	40200701	2.0200	0.0055	0.006	25.0	25.5	95.00	2.3410	0.0080	0.008	1.159	95.00	0.00	2.34
MD	Baltimore	24005	005-2407	35	01F35	40200701	0.0000	0.0000	0.000	25.0	25.5	95.00	0.0000	0.0000	0.000	1.159	95.00	0.00	0.00
MD	Baltimore	24005	005-2407	35	01S35	40200701	0.4640	0.0013	0.001	25.0	25.5	95.00	0.5380	0.0020	0.002	1.159	95.00	0.00	0.54
MD	Harford	24025	025-0006	45	01F45	40200710	0.0000	0.0000	0.000	25.0	24.9	0.00	0.0000	0.0000	0.000	1.159	0.00	64.40	0.00
MD	Harford	24025	025-0006	45	01S45	40200710	0.0000	0.0000	0.000	25.0	24.9	0.00	0.0000	0.0000	0.000	1.159	0.00	64.40	0.00
MD	Harford	24025	025-0006	54	01F54	40200706	5.1800	0.0141	0.014	25.0	29.9	95.00	6.0040	0.0210	0.021	1.159	95.00	0.00	6.00
MD	Harford	24025	025-0006	54	01S54	40200706	2.6600	0.0072	0.007	25.0	29.9	95.00	3.0830	0.0110	0.011	1.159	95.00	0.00	3.08
MD	Harford	24025	025-0423	5	01F5	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.159	0.00	64.40	0.00
MD	Harford	24025	025-0423	5	01S5	40200701	4.0900	0.0111	0.011	25.0	25.5	0.00	4.7400	0.0210	0.021	1.159	0.00	64.40	1.69
MD	Harford	24025	025-0423	6	01F6	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.159	0.00	64.40	0.00
MD	Harford	24025	025-0423	6	01S6	40200701	3.5000	0.0095	0.010	25.0	25.5	0.00	4.0570	0.0250	0.025	1.159	0.00	64.40	1.44
MD	Harford	24025	025-0423	7	01F7	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.159	0.00	64.40	0.00
MD	Harford	24025	025-0423	7	01S7	40200701	2.5700	0.0070	0.007	25.0	25.5	0.00	2.9790	0.0730	0.073	1.159	0.00	64.40	1.06
MD	Wicomico	24045	045-0082	12	01F12	40200710	0.5000	0.0014	0.001	25.0	24.9	0.00	0.5800	0.0030	0.003	1.159	0.00	64.40	0.21

							2002 VOC Emissions						2009 VOC OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
MD	Wicomico	24045	045-0082	12	01S12	40200710	0.0000	0.0000	0.000	25.0	24.9	0.00	0.0000	0.0000	0.000	1.159	0.00	64.40	0.00
MA	Bristol	25005	1200077	12	0108	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Bristol	25005	1200100	23	0111	40200701	0.0020	Missing	0.000	25.0	25.5	0.00	0.0030	Missing	0.000	1.425	0.00	64.40	0.00
MA	Bristol	25005	1200100	26	0114	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Bristol	25005	1200100	28	0116	40200701	0.0360	Missing	0.000	25.0	25.5	0.00	0.0510	Missing	0.000	1.425	0.00	64.40	0.02
MA	Bristol	25005	1200101	08	0107	40200701	0.4620	Missing	0.001	25.0	25.5	0.00	0.6580	Missing	0.002	1.425	0.00	64.40	0.23
MA	Bristol	25005	1200101	09	0108	40200706	0.4620	Missing	0.001	25.0	29.9	0.00	0.6580	Missing	0.002	1.425	0.00	64.40	0.23
MA	Bristol	25005	1200101	10	0109	40200701	0.4620	Missing	0.001	25.0	25.5	0.00	0.6580	Missing	0.002	1.425	0.00	64.40	0.23
MA	Bristol	25005	1200101	11	0110	40200701	0.4620	Missing	0.001	25.0	25.5	0.00	0.6580	Missing	0.002	1.425	0.00	64.40	0.23
MA	Bristol	25005	1200101	12	0111	40200701	0.4620	Missing	0.001	25.0	25.5	0.00	0.6580	Missing	0.002	1.425	0.00	64.40	0.23
MA	Bristol	25005	1200183	07	0203	40200701	4.0260	Missing	0.011	25.0	25.5	0.00	5.7380	Missing	0.016	1.425	0.00	64.40	2.04
MA	Bristol	25005	1200388	04	0104	40200701	0.0010	Missing	0.000	25.0	25.5	0.00	0.0010	Missing	0.000	1.425	0.00	64.40	0.00
MA	Bristol	25005	1200388	05	0105	40200701	0.1465	Missing	0.000	25.0	25.5	0.00	0.2090	Missing	0.001	1.425	0.00	64.40	0.07
MA	Bristol	25005	1200388	05	0205	40200701	0.0505	Missing	0.000	25.0	25.5	0.00	0.0720	Missing	0.000	1.425	0.00	64.40	0.03
MA	Bristol	25005	1200509	04	0104	40200701	0.5500	Missing	0.002	25.0	25.5	0.00	0.7840	Missing	0.002	1.425	0.00	64.40	0.28
MA	Bristol	25005	1200585	02	0102	40200710	0.4000	Missing	0.001	25.0	24.9	0.00	0.5700	Missing	0.002	1.425	0.00	64.40	0.20
MA	Bristol	25005	1200673	07	0107	40200710	0.0010	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Bristol	25005	1200707	08	0106	40200710	0.1625	Missing	0.000	25.0	24.9	0.00	0.2320	Missing	0.001	1.425	0.00	64.40	0.08
MA	Bristol	25005	1200851	11	0110	40200710	0.5900	Missing	0.002	25.0	24.9	0.00	0.8410	Missing	0.002	1.425	0.00	64.40	0.30
MA	Essex	25009	1190683	03	0103	40200706	0.1000	Missing	0.000	25.0	29.9	0.00	0.1420	Missing	0.000	1.425	0.00	64.40	0.05
MA	Essex	25009	1190690	09	0108	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210001	08	0105	40200701	2.0000	Missing	0.005	25.0	25.5	97.00	2.8500	Missing	0.008	1.425	97.00	0.00	2.85
MA	Essex	25009	1210001	08	0205	40200701	2.0000	Missing	0.005	25.0	25.5	97.00	2.8500	Missing	0.008	1.425	97.00	0.00	2.85
MA	Essex	25009	1210026	15	0115	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210046	01	0101	40200706	1.0000	Missing	0.003	25.0	29.9	0.00	1.4250	Missing	0.004	1.425	0.00	64.40	0.51
MA	Essex	25009	1210083	05	0104	40200710	0.4745	Missing	0.001	25.0	24.9	0.00	0.6760	Missing	0.002	1.425	0.00	64.40	0.24
MA	Essex	25009	1210093	09	0209	40200701	0.0005	Missing	0.000	22.0	25.5	0.00	0.0010	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210110	01	0101	40200701	1.0000	Missing	0.003	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210212	30	0321	40200706	0.0000	Missing	0.000	25.0	29.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210212	30	0721	40200706	0.0000	Missing	0.000	25.0	29.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210212	32	0322	40200706	0.0200	Missing	0.000	25.0	29.9	0.00	0.0290	Missing	0.000	1.425	0.00	64.40	0.01
MA	Essex	25009	1210212	32	0622	40200706	0.0115	Missing	0.000	25.0	29.9	0.00	0.0160	Missing	0.000	1.425	0.00	64.40	0.01
MA	Essex	25009	1210212	32	0922	40200706	0.0000	Missing	0.000	25.0	29.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210219	03	0102	40200710	3.0000	Missing	0.008	25.0	24.9	99.00	4.2760	Missing	0.012	1.425	99.00	0.00	4.28
MA	Essex	25009	1210276	03	0102	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210332	01	0101	40200701	0.5850	Missing	0.002	25.0	25.5	0.00	0.8340	Missing	0.002	1.425	0.00	64.40	0.30
MA	Essex	25009	1210332	02	0102	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210332	03	0103	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210341	10	0110	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1211013	07	0105	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1211013	08	0306	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1211013	33	0331	40200701	0.0645	Missing	0.000	25.0	25.5	0.00	0.0920	Missing	0.000	1.425	0.00	64.40	0.03
MA	Essex	25009	1211013	72	0259	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1211013	89	0253	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Hampden	25013	0420145	16	0112	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Hampden	25013	0420213	01	0201	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Hampden	25013	0420260	02	0102	40200710	0.0010	Missing	0.000	25.0	24.9	0.00	0.0010	Missing	0.000	1.425	0.00	64.40	0.00
MA	Hampden	25013	0420265	06	0105	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Hampden	25013	0420561	01	0101	40200701	21.0000	Missing	0.058	25.0	25.5	0.00	29.9300	Missing	0.082	1.425	0.00	64.40	10.66
MA	Hampden	25013	0420798	05	0105	40200710	4.0000	Missing	0.011	25.0	24.9	0.00	5.7010	Missing	0.016	1.425	0.00	64.40	2.03
MA	Hampden	25013	0420821	10	0106	40200701	0.1600	Missing	0.000	26.0	25.5	0.00	0.2280	Missing	0.001	1.425	0.00	64.40	0.08
MA	Hampshire	25015	0420558	01	0101	40200710	0.0400	Missing	0.000	25.0	24.9	0.00	0.0570	Missing	0.000	1.425	0.00	64.40	0.02

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
MA	Hampshire	25015	0420558	02	0102	40200701	5.0000	Missing	0.014	25.0	25.5	99.00	7.1260	Missing	0.020	1.425	99.00	0.00	7.13
MA	Middlesex	25017	1180795	02	0102	40200706	0.0000	Missing	0.000	25.0	29.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1180795	03	0103	40200706	0.0000	Missing	0.000	25.0	29.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1180795	04	0104	40200706	0.0000	Missing	0.000	25.0	29.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1180795	05	0105	40200706	0.0000	Missing	0.000	25.0	29.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1180795	06	0106	40200706	0.0000	Missing	0.000	25.0	29.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1180795	07	0107	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1180795	08	0108	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1180795	09	0109	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190355	05	0101	40200706	2.0000	Missing	0.005	25.0	29.9	0.00	2.8500	Missing	0.008	1.425	0.00	64.40	1.01
MA	Middlesex	25017	1190424	04	0104	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190424	08	0106	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190424	11	0107	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190424	20	0110	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190424	24	0111	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190424	28	0112	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190424	32	0213	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190424	37	0117	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190429	06	0106	40200710	0.1305	Missing	0.000	25.0	24.9	0.00	0.1860	Missing	0.001	1.425	0.00	64.40	0.07
MA	Middlesex	25017	1190560	02	0101	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190560	23	0106	40200710	0.3200	Missing	0.001	25.0	24.9	0.00	0.4560	Missing	0.001	1.425	0.00	64.40	0.16
MA	Middlesex	25017	1190585	08	0104	40200706	0.1400	Missing	0.000	25.0	29.9	0.00	0.2000	Missing	0.001	1.425	0.00	64.40	0.07
MA	Middlesex	25017	1190585	17	0106	40200710	0.2300	Missing	0.001	25.0	24.9	0.00	0.3280	Missing	0.001	1.425	0.00	64.40	0.12
MA	Middlesex	25017	1190692	09	0107	40200701	0.0805	Missing	0.000	25.0	25.5	0.00	0.1150	Missing	0.000	1.425	0.00	64.40	0.04
MA	Middlesex	25017	1190692	10	0108	40200701	3.0000	Missing	0.008	25.0	25.5	0.00	4.2760	Missing	0.012	1.425	0.00	64.40	1.52
MA	Middlesex	25017	1190692	11	0108	40200701	0.1070	Missing	0.000	25.0	25.5	0.00	0.1530	Missing	0.000	1.425	0.00	64.40	0.05
MA	Middlesex	25017	1190953	04	0104	40200710	0.1300	Missing	0.000	25.0	24.9	0.00	0.1850	Missing	0.001	1.425	0.00	64.40	0.07
MA	Middlesex	25017	1190999	11	0111	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190999	11	0211	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190999	13	0313	40200710	0.0005	Missing	0.000	25.0	24.9	0.00	0.0010	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1191104	03	0103	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1191192	05	0104	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1191296	26	0116	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1191296	27	0117	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1191471	03	0102	40200710	1.0000	Missing	0.003	25.0	24.9	97.00	1.4250	Missing	0.004	1.425	97.00	0.00	1.43
MA	Middlesex	25017	1191471	04	0103	40200710	0.0005	Missing	0.000	25.0	24.9	0.00	0.0010	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1191471	07	0105	40200710	5.0000	Missing	0.014	25.0	24.9	97.00	7.1260	Missing	0.020	1.425	97.00	0.00	7.13
MA	Middlesex	25017	1191564	08	0108	40200710	0.0105	Missing	0.000	25.0	24.9	0.00	0.0150	Missing	0.000	1.425	0.00	64.40	0.01
MA	Middlesex	25017	1191844	53	0135	40200710	0.5000	Missing	0.001	25.0	24.9	0.00	0.7130	Missing	0.002	1.425	0.00	64.40	0.25
MA	Middlesex	25017	1191844	53	0335	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1192051	12	0107	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1192051	26	0115	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1210036	03	0103	40200701	0.0475	Missing	0.000	25.0	25.5	0.00	0.0680	Missing	0.000	1.425	0.00	64.40	0.02
MA	Middlesex	25017	1210036	05	0104	40200710	11.0000	Missing	0.030	25.0	24.9	0.00	15.6780	Missing	0.043	1.425	0.00	64.40	5.58
MA	Middlesex	25017	1210036	07	0105	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1210036	08	0106	40200710	54.0000	Missing	0.148	25.0	24.9	90.00	76.9630	Missing	0.211	1.425	90.00	0.00	76.96
MA	Middlesex	25017	1210036	09	0106	40200701	0.0000	Missing	0.000	25.0	25.5	90.00	0.0000	Missing	0.000	1.425	90.00	0.00	0.00
MA	Middlesex	25017	1210036	10	0106	40200701	0.0000	Missing	0.000	25.0	25.5	90.00	0.0000	Missing	0.000	1.425	90.00	0.00	0.00
MA	Middlesex	25017	1210036	11	0107	40200710	20.0000	Missing	0.055	25.0	24.9	96.00	28.5050	Missing	0.078	1.425	96.00	0.00	28.51
MA	Middlesex	25017	1210036	12	0108	40200710	0.0000	Missing	0.000	25.0	24.9	96.00	0.0000	Missing	0.000	1.425	96.00	0.00	0.00
MA	Middlesex	25017	1210036	13	0109	40200710	0.0000	Missing	0.000	25.0	24.9	96.00	0.0000	Missing	0.000	1.425	96.00	0.00	0.00
MA	Middlesex	25017	1210373	01	0101	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 VOC Emissions: Annual (tpy)	2002 VOC Emissions: Summer Day from Inventory (tpd)	2002 VOC Emissions: Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 VOC OTB/OTW Emissions: Annual (tpy)	2009 VOC OTB/OTW Emissions: Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions: Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW: Annual (tpy)
MA	Middlesex	25017	1210373	02	0102	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210373	03	0103	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210373	04	0104	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210373	04	0204	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210373	05	0105	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210373	05	0205	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210373	06	0106	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210373	06	0206	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210373	09	0109	40200701	0.1520	Missing	0.000	25.0	25.5	0.00	0.2170	Missing	0.001	1.425	0.00	64.40	0.08
MA	Middlesex	25017	1210373	10	0110	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210912	02	0202	40200710	8.0000	Missing	0.022	25.0	24.9	0.00	11.4020	Missing	0.031	1.425	0.00	64.40	4.06
MA	Norfolk	25021	1190114	15	0112	40200701	48.0000	Missing	0.132	25.0	25.5	97.40	68.4110	Missing	0.188	1.425	97.40	0.00	68.41
MA	Norfolk	25021	1190114	17	0114	40200701	7.0000	Missing	0.019	25.0	25.5	99.00	9.9770	Missing	0.027	1.425	99.00	0.00	9.98
MA	Norfolk	25021	1190319	04	0103	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Norfolk	25021	1190319	11	0111	40200710	0.0715	Missing	0.000	25.0	24.9	0.00	0.1020	Missing	0.000	1.425	0.00	64.40	0.04
MA	Norfolk	25021	1190569	23	0215	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Norfolk	25021	1191170	29	0110	40200701	0.0090	Missing	0.000	25.0	25.5	99.00	0.0130	Missing	0.000	1.425	99.00	0.00	0.01
MA	Norfolk	25021	1192106	03	0103	40200710	5.0000	Missing	0.014	25.0	24.9	0.00	7.1260	Missing	0.020	1.425	0.00	64.40	2.54
MA	Norfolk	25021	1192121	07	0107	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Norfolk	25021	1192131	03	0103	40200710	0.3500	Missing	0.001	25.0	24.9	0.00	0.4990	Missing	0.001	1.425	0.00	64.40	0.18
MA	Norfolk	25021	1192491	07	0107	40200701	0.0130	Missing	0.000	25.0	25.5	0.00	0.0180	Missing	0.000	1.425	0.00	64.40	0.01
MA	Norfolk	25021	1192491	08	0108	40200701	0.2970	Missing	0.001	25.0	25.5	0.00	0.4230	Missing	0.001	1.425	0.00	64.40	0.15
MA	Norfolk	25021	1200125	55	0146	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Norfolk	25021	1200125	56	0147	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Norfolk	25021	1200127	10	0209	40200710	0.1455	Missing	0.000	25.0	24.9	0.00	0.2070	Missing	0.001	1.425	0.00	64.40	0.07
MA	Norfolk	25021	1200228	04	0203	40200710	0.5600	Missing	0.002	25.0	24.9	0.00	0.7980	Missing	0.002	1.425	0.00	64.40	0.28
MA	Norfolk	25021	1200452	04	0102	40200701	0.0910	Missing	0.000	25.0	25.5	0.00	0.1300	Missing	0.000	1.425	0.00	64.40	0.05
MA	Plymouth	25023	1192198	11	0107	40200710	0.0660	Missing	0.000	23.0	24.9	0.00	0.0940	Missing	0.000	1.425	0.00	64.40	0.03
MA	Plymouth	25023	1192198	12	0108	40200710	1.0000	Missing	0.003	25.0	24.9	0.00	1.4250	Missing	0.004	1.425	0.00	64.40	0.51
MA	Plymouth	25023	1192198	19	0109	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Plymouth	25023	1192198	23	0109	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Plymouth	25023	1192198	25	0109	40200710	0.3310	Missing	0.001	25.0	24.9	0.00	0.4720	Missing	0.001	1.425	0.00	64.40	0.17
MA	Plymouth	25023	1192198	26	0109	40200710	0.0555	Missing	0.000	25.0	24.9	0.00	0.0790	Missing	0.000	1.425	0.00	64.40	0.03
MA	Plymouth	25023	1192203	01	0101	40200710	5.8700	Missing	0.016	25.0	24.9	0.00	8.3660	Missing	0.023	1.425	0.00	64.40	2.98
MA	Plymouth	25023	1192237	08	0102	40200710	0.2400	Missing	0.001	25.0	24.9	0.00	0.3420	Missing	0.001	1.425	0.00	64.40	0.12
MA	Plymouth	25023	1192436	04	0103	40200701	1.0000	Missing	0.003	25.0	25.5	98.10	1.4250	Missing	0.004	1.425	98.10	0.00	1.43
MA	Plymouth	25023	1192436	05	0103	40200701	1.0000	Missing	0.003	25.0	25.5	98.10	1.4250	Missing	0.004	1.425	98.10	0.00	1.43
MA	Plymouth	25023	1192436	07	0104	40200701	8.0000	Missing	0.022	25.0	25.5	98.00	11.4020	Missing	0.031	1.425	98.00	0.00	11.40
MA	Plymouth	25023	1192436	09	0105	40200701	2.0000	Missing	0.005	25.0	25.5	0.00	2.8500	Missing	0.008	1.425	0.00	64.40	1.01
MA	Plymouth	25023	1200177	05	0105	40200701	1.0000	Missing	0.003	25.0	25.5	0.00	1.4250	Missing	0.004	1.425	0.00	64.40	0.51
MA	Plymouth	25023	1200637	04	0104	40200710	0.1170	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Plymouth	25023	1200637	07	0105	40200707	0.0075	Missing	0.000	25.0	29.3	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Suffolk	25025	1191397	05	0106	40200701	10.5850	Missing	0.029	25.0	25.5	0.00	15.0860	Missing	0.041	1.425	0.00	64.40	5.37
MA	Suffolk	25025	1191397	06	0107	40200701	14.6260	Missing	0.040	25.0	25.5	0.00	20.8460	Missing	0.057	1.425	0.00	64.40	7.42
MA	Worcester	25027	1180025	01	0301	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Worcester	25027	1180069	05	0102	40200701	1.0000	Missing	0.003	25.0	25.5	98.50	1.4250	Missing	0.004	1.425	98.50	0.00	1.43
MA	Worcester	25027	1180069	06	0102	40200701	0.2095	Missing	0.001	25.0	25.5	98.50	0.2990	Missing	0.001	1.425	98.50	0.00	0.30
MA	Worcester	25027	1180078	03	0102	40200710	3.0000	Missing	0.008	25.0	24.9	97.50	4.2760	Missing	0.012	1.425	97.50	0.00	4.28
MA	Worcester	25027	1180078	05	0102	40200710	3.0000	Missing	0.008	25.0	24.9	97.50	4.2760	Missing	0.012	1.425	97.50	0.00	4.28
MA	Worcester	25027	1180115	17	0209	40200701	2.5000	Missing	0.007	25.0	25.5	0.00	3.5630	Missing	0.010	1.425	0.00	64.40	1.27
MA	Worcester	25027	1180115	25	0311	40200710	0.0275	Missing	0.000	25.0	24.9	0.00	0.0390	Missing	0.000	1.425	0.00	64.40	0.01
MA	Worcester	25027	1180115	36	0117	40200710	1.2500	Missing	0.003	25.0	24.9	0.00	1.7820	Missing	0.005	1.425	0.00	64.40	0.63

							2002 VOC Emissions						2009 VOC OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
MA	Worcester	25027	1180115	39	0118	40200701	0.0650	Missing	0.000	25.0	25.5	0.00	0.0930	Missing	0.000	1.425	0.00	64.40	0.03
MA	Worcester	25027	1180115	77	0251	40200710	0.0350	Missing	0.000	25.0	24.9	0.00	0.0500	Missing	0.000	1.425	0.00	64.40	0.02
MA	Worcester	25027	1180225	04	0104	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Worcester	25027	1180265	02	0202	40200701	6.1000	Missing	0.017	25.0	25.5	95.50	8.6940	Missing	0.024	1.425	95.50	0.00	8.69
MA	Worcester	25027	1180265	03	0303	40200701	0.6940	Missing	0.002	25.0	25.5	95.00	0.9890	Missing	0.003	1.425	95.00	0.00	0.99
MA	Worcester	25027	1180265	05	0205	40200701	2.0420	Missing	0.006	25.0	25.5	0.00	2.9100	Missing	0.008	1.425	0.00	64.40	1.04
MA	Worcester	25027	1180265	06	0206	40200701	1.0715	Missing	0.003	25.0	25.5	95.00	1.5270	Missing	0.004	1.425	95.00	0.00	1.53
MA	Worcester	25027	1180265	07	0202	40200701	0.2870	Missing	0.001	25.0	25.5	95.00	0.4090	Missing	0.001	1.425	95.00	0.00	0.41
MA	Worcester	25027	1180310	03	0203	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Worcester	25027	1180310	03	0303	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Worcester	25027	1180470	03	0202	40200701	2.0000	Missing	0.005	25.0	25.5	98.00	2.8500	Missing	0.008	1.425	98.00	0.00	2.85
MA	Worcester	25027	1180505	07	0107	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Worcester	25027	1180505	23	0123	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Worcester	25027	1180998	12	0106	40200710	5.0000	Missing	0.014	25.0	24.9	98.50	7.1260	Missing	0.020	1.425	98.50	0.00	7.13
MA	Worcester	25027	1180998	14	0106	40200710	9.0000	Missing	0.025	25.0	24.9	98.50	12.8270	Missing	0.035	1.425	98.50	0.00	12.83
MA	Worcester	25027	1180998	16	0106	40200710	0.0000	Missing	0.000	25.0	24.9	98.50	0.0000	Missing	0.000	1.425	98.50	0.00	0.00
MA	Worcester	25027	1180998	17	0106	40200710	1.0000	Missing	0.003	25.0	24.9	98.50	1.4250	Missing	0.004	1.425	98.50	0.00	1.43
MA	Worcester	25027	1180998	19	0107	40200710	7.0000	Missing	0.019	25.0	24.9	97.00	9.9770	Missing	0.027	1.425	97.00	0.00	9.98
MA	Worcester	25027	1180998	21	0106	40200710	0.0200	Missing	0.000	25.0	24.9	98.50	0.0290	Missing	0.000	1.425	98.50	0.00	0.03
MA	Worcester	25027	1180998	23	0109	40200710	1.0000	Missing	0.003	25.0	24.9	97.00	1.4250	Missing	0.004	1.425	97.00	0.00	1.43
MA	Worcester	25027	1180998	25	0110	40200710	0.8200	Missing	0.002	25.0	24.9	97.60	1.1690	Missing	0.003	1.425	97.60	0.00	1.17
MA	Worcester	25027	1180998	27	0111	40200710	6.0000	Missing	0.016	25.0	24.9	0.00	8.5510	Missing	0.023	1.425	0.00	64.40	3.04
MA	Worcester	25027	1180998	29	0112	40200710	5.0000	Missing	0.014	25.0	24.9	99.30	7.1260	Missing	0.020	1.425	99.30	0.00	7.13
MA	Worcester	25027	1180998	30	0113	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Worcester	25027	1180998	33	0114	40200710	3.0000	Missing	0.008	25.0	24.9	99.10	4.2760	Missing	0.012	1.425	99.10	0.00	4.28
MA	Worcester	25027	1180998	34	0114	40200710	4.0000	Missing	0.011	25.0	24.9	99.10	5.7010	Missing	0.016	1.425	99.10	0.00	5.70
MA	Worcester	25027	1180998	36	0115	40200710	3.0000	Missing	0.008	25.0	24.9	99.10	4.2760	Missing	0.012	1.425	99.10	0.00	4.28
MA	Worcester	25027	1180998	37	0115	40200710	2.0000	Missing	0.005	25.0	24.9	99.10	2.8500	Missing	0.008	1.425	99.10	0.00	2.85
MA	Worcester	25027	1180998	40	0116	40200710	13.0000	Missing	0.036	25.0	24.9	99.00	18.5280	Missing	0.051	1.425	99.00	0.00	18.53
MA	Worcester	25027	1200856	12	0110	40200701	0.2100	Missing	0.001	25.0	25.5	0.00	0.2990	Missing	0.001	1.425	0.00	64.40	0.11
MA	Worcester	25027	1200856	13	0111	40200701	0.2100	Missing	0.001	25.0	25.5	0.00	0.2990	Missing	0.001	1.425	0.00	64.40	0.11
NH	Hillsborough	33011	3301100076	004	1	40200701	8.4128	0.0339	0.034	25.0	25.5	0.00	6.6140	0.0270	0.027	1.510	0.00	64.40	2.35
NH	Hillsborough	33011	3301100076	005	1	40200701	8.4128	0.0339	0.034	25.0	25.5	0.00	6.6140	0.0270	0.027	1.510	0.00	64.40	2.35
NH	Hillsborough	33011	3301100076	009	1	40200701	4.9517	0.0193	0.019	25.0	25.5	0.00	3.8930	0.0150	0.015	1.510	0.00	64.40	1.39
NH	Strafford	33017	3301700010	001	1	40200701	19.8072	0.1639	0.164	24.0	25.5	0.00	29.9040	0.2470	0.247	1.510	0.00	64.40	10.65
NH	Strafford	33017	3301700010	002	1	40200701	25.6358	0.2051	0.205	24.0	25.5	0.00	38.7030	0.3100	0.310	1.510	0.00	64.40	13.78
NJ	Bergen	34003	00917	U9	OS1	40200701	0.6400	0.0022	0.002	25.0	25.5	0.00	0.8360	0.0029	0.003	1.305	0.00	0.00	0.84
NJ	Bergen	34003	00917	U9	OS2	40200701	0.0400	0.0001	0.000	25.0	25.5	0.00	0.0520	0.0001	0.000	1.305	0.00	0.00	0.05
NJ	Bergen	34003	00917	U9	OS3	40200701	4.3000	0.0145	0.015	25.0	25.5	0.00	5.6140	0.0189	0.019	1.305	0.00	0.00	5.61
NJ	Bergen	34003	00917	U9	OS6	40200701	0.1700	0.0082	0.008	26.0	25.5	0.00	0.2220	0.0107	0.011	1.305	0.00	0.00	0.22
NJ	Bergen	34003	00917	U9	OS8	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.305	0.00	0.00	0.00
NJ	Hunterdon	34019	80047	U44	OS1	40200701	25.4300	0.0822	0.082	25.0	25.5	0.00	33.1980	0.1073	0.107	1.305	0.00	0.00	33.20
NJ	Middlesex	34023	15538	U16	OS1	40200701	2.7500	0.0110	0.011	25.0	25.5	0.00	3.5900	0.0144	0.014	1.305	0.00	0.00	3.59
NJ	Middlesex	34023	15538	U16	OS2	40200701	0.0200	0.0001	0.000	25.0	25.5	0.00	0.0260	0.0001	0.000	1.305	0.00	0.00	0.03
NJ	Middlesex	34023	15538	U2	OS1	40200701	2.0800	0.0083	0.008	25.0	25.5	0.00	2.7150	0.0108	0.011	1.305	0.00	0.00	2.72
NJ	Middlesex	34023	15538	U2	OS2	40200701	0.0900	0.0004	0.000	25.0	25.5	0.00	0.1170	0.0005	0.001	1.305	0.00	0.00	0.12
NJ	Middlesex	34023	15538	U3	OS1	40200701	2.0800	0.0083	0.008	25.0	25.5	0.00	2.7150	0.0108	0.011	1.305	0.00	0.00	2.72
NJ	Middlesex	34023	15538	U3	OS2	40200701	0.0900	0.0004	0.000	25.0	25.5	0.00	0.1170	0.0005	0.001	1.305	0.00	0.00	0.12
NJ	Middlesex	34023	15538	U4	OS1	40200701	2.0800	0.0083	0.008	25.0	25.5	0.00	2.7150	0.0108	0.011	1.305	0.00	0.00	2.72
NJ	Middlesex	34023	15538	U4	OS2	40200701	0.0900	0.0004	0.000	25.0	25.5	0.00	0.1170	0.0005	0.001	1.305	0.00	0.00	0.12
NJ	Middlesex	34023	15741	U4	OS1	40200701	0.5200	0.0020	0.002	25.0	25.5	0.00	0.6790	0.0026	0.003	1.305	0.00	0.00	0.68
NJ	Middlesex	34023	17719	U1	OS1	40200701	0.2300	0.0010	0.001	27.0	25.5	99.30	0.3000	0.0013	0.001	1.305	99.30	0.00	0.30

							2002 VOC Emissions						2009 VOC OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
NJ	Middlesex	34023	17719	U1	OS2	40200701	1.9400	0.0083	0.008	27.0	25.5	99.70	2.5330	0.0108	0.011	1.305	99.70	0.00	2.53
NJ	Middlesex	34023	17719	U1	OS3	40200701	3.0100	0.0208	0.021	26.0	25.5	98.85	3.9290	0.0272	0.027	1.305	98.85	0.00	3.93
NJ	Middlesex	34023	17719	U1	OS4	40200701	6.0000	0.0228	0.023	24.0	25.5	98.50	7.8330	0.0298	0.030	1.305	98.50	0.00	7.83
NJ	Middlesex	34023	17719	U1	OS47	40200701	1.2100	0.0051	0.005	25.0	25.5	0.00	1.5800	0.0067	0.007	1.305	0.00	0.00	1.58
NJ	Middlesex	34023	17719	U1	OS48	40200701	1.2100	0.0051	0.005	25.0	25.5	0.00	1.5800	0.0067	0.007	1.305	0.00	0.00	1.58
NJ	Middlesex	34023	17719	U1	OS49	40200701	3.5600	0.0147	0.015	25.0	25.5	0.00	4.6470	0.0192	0.019	1.305	0.00	0.00	4.65
NJ	Middlesex	34023	17719	U1	OS5	40200701	13.6700	0.2395	0.240	24.0	25.5	100.00	17.8460	0.3127	0.313	1.305	100.00	0.00	17.85
NJ	Middlesex	34023	17719	U1	OS50	40200701	0.4000	0.0017	0.002	25.0	25.5	0.00	0.5220	0.0022	0.002	1.305	0.00	0.00	0.52
NJ	Middlesex	34023	17719	U1	OS6	40200701	4.9700	0.1235	0.124	27.0	25.5	0.00	6.4880	0.1612	0.161	1.305	0.00	0.00	6.49
NJ	Middlesex	34023	17719	U1	OS7	40200701	23.5200	0.0896	0.090	25.0	25.5	0.00	30.7040	0.1170	0.117	1.305	0.00	0.00	30.70
NJ	Middlesex	34023	17719	U1	OS8	40200701	0.1700	0.0007	0.001	26.0	25.5	99.90	0.2220	0.0009	0.001	1.305	99.90	0.00	0.22
NJ	Middlesex	34023	17719	U41	OS0	40200701	0.0000	0.0000	0.000	Missing	25.5	0.00	0.0000	0.0000	0.000	1.305	0.00	0.00	0.00
NY	Niagara	36063	9290900018	ADHES1	HM1FP	40200701	0.5415	Missing	0.002	Missing	25.5	0.00	0.7570	Missing	0.002	1.398	0.00	64.40	0.27
NY	Ontario	36069	8329900028	000005	WABFP	40200701	3.2250	Missing	0.009	Missing	25.5	0.00	4.5090	Missing	0.013	1.398	0.00	64.40	1.61
NY	Suffolk	36103	1473000001	EI0001	E10EI	40200701	0.7770	Missing	0.002	Missing	25.5	0.00	1.0860	Missing	0.003	1.398	0.00	64.40	0.39
NY	Suffolk	36103	1473000001	U00002	103FP	40200706	2.1297	Missing	0.007	Missing	29.9	0.00	2.9780	Missing	0.010	1.398	0.00	64.40	1.06
NY	Washington	36115	5533000016	U00011	SL2FP	40200710	0.5150	Missing	0.001	Missing	24.9	0.00	0.7200	Missing	0.002	1.398	0.00	64.40	0.26
NY	Wayne	36117	8543600007	1MLDRB	SC3FP	40200701	9.5030	Missing	0.027	Missing	25.5	0.00	13.2870	Missing	0.037	1.398	0.00	64.40	4.73
NY	Wayne	36117	8543600007	2KLZRS	SC2FP	40200701	1.0437	Missing	0.003	Missing	25.5	0.00	1.4590	Missing	0.004	1.398	0.00	64.40	0.52
PA	Adams	42001	420010009	103	1	40200706	13.3000	Missing	0.039	27.0	29.9	0.00	18.2840	Missing	0.054	1.375	0.00	64.40	6.51
PA	Berks	42011	420110084	109	2	40200706	15.3082	Missing	0.064	38.0	29.9	73.00	21.0440	Missing	0.088	1.375	73.00	0.00	21.04
PA	Berks	42011	420110084	115	2	40200706	0.0698	Missing	0.000	41.0	29.9	73.00	0.0960	Missing	0.000	1.375	73.00	0.00	0.10
PA	Blair	42013	420130480	101	2	40200701	38.3800	Missing	0.101	24.0	25.5	0.00	52.7620	Missing	0.139	1.375	0.00	64.40	18.78
PA	Bucks	42017	420171041	101	1	40200701	0.1600	Missing	0.000	28.0	25.5	0.00	0.2200	Missing	0.001	1.375	0.00	64.40	0.08
PA	Butler	42019	420190029	104	1	40200701	0.4800	Missing	0.001	25.0	25.5	0.00	0.6600	Missing	0.002	1.375	0.00	64.40	0.23
PA	Butler	42019	420190029	105	1	40200701	0.1900	Missing	0.001	25.0	25.5	0.00	0.2610	Missing	0.001	1.375	0.00	64.40	0.09
PA	Butler	42019	420190090	102	1	40200701	0.9920	Missing	0.003	25.0	25.5	0.00	1.3640	Missing	0.004	1.375	0.00	64.40	0.49
PA	Butler	42019	420190090	102	2	40200701	0.9920	Missing	0.003	25.0	25.5	0.00	1.3640	Missing	0.004	1.375	0.00	64.40	0.49
PA	Butler	42019	420190090	102	3	40200701	0.9920	Missing	0.003	25.0	25.5	0.00	1.3640	Missing	0.004	1.375	0.00	64.40	0.49
PA	Butler	42019	420190090	102	4	40200701	0.9920	Missing	0.003	25.0	25.5	0.00	1.3640	Missing	0.004	1.375	0.00	64.40	0.49
PA	Butler	42019	420190090	102	5	40200701	0.9920	Missing	0.003	25.0	25.5	0.00	1.3640	Missing	0.004	1.375	0.00	64.40	0.49
PA	Butler	42019	420190090	102	6	40200701	1.2400	Missing	0.003	25.0	25.5	0.00	1.7050	Missing	0.005	1.375	0.00	64.40	0.61
PA	Clinton	42035	420350429	P105	1	40200710	9.1800	Missing	0.027	27.0	24.9	0.00	12.6200	Missing	0.037	1.375	0.00	64.40	4.49
PA	Clinton	42035	420350429	P106	1	40200710	0.7200	Missing	0.002	27.0	24.9	0.00	0.9900	Missing	0.003	1.375	0.00	64.40	0.35
PA	Crawford	42039	420390013	106	1	40200707	68.6000	Missing	0.188	25.0	29.3	0.00	94.3050	Missing	0.259	1.375	0.00	64.40	33.57
PA	Crawford	42039	420390014	102	1	40200701	9.7047	Missing	0.027	25.0	25.5	0.00	13.3410	Missing	0.037	1.375	0.00	64.40	4.75
PA	Crawford	42039	420390014	103	1	40200701	7.3471	Missing	0.020	25.0	25.5	0.00	10.1000	Missing	0.028	1.375	0.00	64.40	3.60
PA	Crawford	42039	420390014	104	1	40200701	20.9820	Missing	0.058	25.0	25.5	0.00	28.8440	Missing	0.079	1.375	0.00	64.40	10.27
PA	Crawford	42039	420390014	105	1	40200701	20.9820	Missing	0.058	25.0	25.5	0.00	28.8440	Missing	0.079	1.375	0.00	64.40	10.27
PA	Delaware	42045	420450954	121	1	40200701	0.7009	Missing	0.002	26.0	25.5	0.00	0.9640	Missing	0.003	1.375	0.00	64.40	0.34
PA	Franklin	42055	420550022	100	1	40200706	5.0230	Missing	0.019	35.0	29.9	0.00	6.9050	Missing	0.027	1.375	0.00	64.40	2.46
PA	Franklin	42055	420550022	101	1	40200706	1.4670	Missing	0.005	28.0	29.9	0.00	2.0170	Missing	0.006	1.375	0.00	64.40	0.72
PA	Huntingdon	42061	420610016	104	1	40200701	5.4000	Missing	0.015	Missing	25.5	0.00	7.4230	Missing	0.021	1.375	0.00	64.40	2.64
PA	Huntingdon	42061	420610016	105	1	40200701	0.5000	Missing	0.001	Missing	25.5	0.00	0.6870	Missing	0.002	1.375	0.00	64.40	0.24
PA	Huntingdon	42061	420610032	101	2	40200701	2.9668	Missing	0.008	Missing	25.5	0.00	4.0790	Missing	0.011	1.375	0.00	64.40	1.45
PA	Huntingdon	42061	420610032	101	4	40200701	0.9659	Missing	0.003	Missing	25.5	0.00	1.3280	Missing	0.004	1.375	0.00	64.40	0.47
PA	Huntingdon	42061	420610032	101	6	40200701	2.9668	Missing	0.008	Missing	25.5	0.00	4.0790	Missing	0.011	1.375	0.00	64.40	1.45
PA	Huntingdon	42061	420610032	102	2	40200701	2.4509	Missing	0.007	Missing	25.5	0.00	3.3690	Missing	0.009	1.375	0.00	64.40	1.20
PA	Huntingdon	42061	420610032	102	4	40200701	0.7980	Missing	0.002	Missing	25.5	0.00	1.0970	Missing	0.003	1.375	0.00	64.40	0.39
PA	Huntingdon	42061	420610032	102	6	40200701	2.4509	Missing	0.007	Missing	25.5	0.00	3.3690	Missing	0.009	1.375	0.00	64.40	1.20
PA	Huntingdon	42061	420610032	103	2	40200701	7.0994	Missing	0.020	Missing	25.5	0.00	9.7600	Missing	0.027	1.375	0.00	64.40	3.47
PA	Huntingdon	42061	420610032	103	4	40200701	2.8997	Missing	0.008	Missing	25.5	0.00	3.9860	Missing	0.011	1.375	0.00	64.40	1.42

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
PA	Lackawanna	42069	420690023	107	1	40200701	0.5630	Missing	0.002	Missing	25.5	0.00	0.7740	Missing	0.002	1.375	0.00	64.40	0.28
PA	Lackawanna	42069	420690023	108	1	40200701	25.2100	Missing	0.133	48.0	25.5	0.00	34.6570	Missing	0.183	1.375	0.00	64.40	12.34
PA	Lancaster	42071	420710802	102	1	40200710	0.9300	Missing	0.003	26.0	24.9	0.00	1.2790	Missing	0.004	1.375	0.00	64.40	0.46
PA	Lancaster	42071	420710804	102	1	40200710	0.5500	Missing	0.002	28.0	24.9	0.00	0.7560	Missing	0.002	1.375	0.00	64.40	0.27
PA	Lehigh	42077	420770071	101	1	40200710	0.7000	Missing	0.002	25.0	24.9	0.00	0.9620	Missing	0.003	1.375	0.00	64.40	0.34
PA	Lehigh	42077	420770071	101	2	40200710	0.2640	Missing	0.001	25.0	24.9	0.00	0.3630	Missing	0.001	1.375	0.00	64.40	0.13
PA	Lehigh	42077	420770071	102	1	40200710	2.0000	Missing	0.005	25.0	24.9	0.00	2.7490	Missing	0.008	1.375	0.00	64.40	0.98
PA	Lehigh	42077	420770071	102	2	40200710	1.5114	Missing	0.004	25.0	24.9	0.00	2.0780	Missing	0.006	1.375	0.00	64.40	0.74
PA	Lehigh	42077	420770071	103	1	40200710	0.1000	Missing	0.000	25.0	24.9	0.00	0.1380	Missing	0.000	1.375	0.00	64.40	0.05
PA	Lehigh	42077	420770071	104	1	40200710	13.1000	Missing	0.036	25.0	24.9	0.00	18.0090	Missing	0.049	1.375	0.00	64.40	6.41
PA	Lehigh	42077	420770071	105	1	40200710	0.7000	Missing	0.002	25.0	24.9	0.00	0.9620	Missing	0.003	1.375	0.00	64.40	0.34
PA	Lycoming	42081	420810039	113	1	40200710	0.2000	Missing	0.001	24.0	24.9	0.00	0.2750	Missing	0.001	1.375	0.00	64.40	0.10
PA	Lycoming	42081	420810559	P104	1	40200710	0.1400	Missing	0.000	27.0	24.9	0.00	0.1930	Missing	0.001	1.375	0.00	64.40	0.07
PA	Montgomery	42091	420910826	002	1	40200701	0.3000	Missing	0.000	0.0	25.5	0.00	0.4120	Missing	0.000	1.375	0.00	64.40	0.15
PA	Montgomery	42091	420910874	101	1	40200707	0.5000	Missing	0.001	25.0	29.3	80.00	0.6870	Missing	0.002	1.375	80.00	0.00	0.69
PA	Montgomery	42091	420910874	102	1	40200707	1.9700	Missing	0.005	25.0	29.3	80.00	2.7080	Missing	0.007	1.375	80.00	0.00	2.71
PA	Northumberland	42097	420970001	105	1	40200710	9.1600	Missing	0.025	25.0	24.9	0.00	12.5920	Missing	0.035	1.375	0.00	64.40	4.48
PA	Northumberland	42097	420970001	201	1	40200710	2.3300	Missing	0.006	25.0	24.9	0.00	3.2030	Missing	0.009	1.375	0.00	64.40	1.14
PA	Northumberland	42097	420970001	202	1	40200710	23.8800	Missing	0.066	25.0	24.9	0.00	32.8280	Missing	0.090	1.375	0.00	64.40	11.69
PA	Northumberland	42097	420970034	104	1	40200710	1.3200	Missing	0.004	25.0	24.9	0.00	1.8150	Missing	0.005	1.375	0.00	64.40	0.65
PA	Northumberland	42097	420970034	105A	1	40200710	7.4200	Missing	0.019	23.0	24.9	0.00	10.2000	Missing	0.026	1.375	0.00	64.40	3.63
PA	Philadelphia	42101	4210101591	004	1	40200701	0.0000	0.0000	0.000	Missing	25.5	0.00	0.0000	0.0000	0.000	1.375	0.00	64.40	0.00
PA	Philadelphia	42101	4210102051	005	10	40200712	0.1155	0.0003	0.000	Missing	25.0	0.00	0.1590	0.0003	0.000	1.375	0.00	64.40	0.06
PA	Philadelphia	42101	4210102051	005	11	40200712	0.0866	0.0002	0.000	Missing	25.0	0.00	0.1190	0.0002	0.000	1.375	0.00	64.40	0.04
PA	Philadelphia	42101	4210102051	005	12	40200712	0.0000	0.0000	0.000	Missing	25.0	0.00	0.0000	0.0000	0.000	1.375	0.00	64.40	0.00
PA	Philadelphia	42101	4210102051	006	5	40200712	0.0938	0.0003	0.000	Missing	25.0	0.00	0.1290	0.0003	0.000	1.375	0.00	64.40	0.05
PA	Philadelphia	42101	4210102051	007	6	40200712	0.0938	0.0003	0.000	Missing	25.0	0.00	0.1290	0.0003	0.000	1.375	0.00	64.40	0.05
PA	Philadelphia	42101	4210102051	008	14	40200712	0.0938	0.0003	0.000	Missing	25.0	0.00	0.1290	0.0003	0.000	1.375	0.00	64.40	0.05
PA	Philadelphia	42101	4210102051	009	7	40200712	0.0938	0.0003	0.000	Missing	25.0	0.00	0.1290	0.0003	0.000	1.375	0.00	64.40	0.05
PA	Philadelphia	42101	4210103217	010	2	40200710	0.0000	0.0000	0.000	Missing	24.9	0.00	0.0000	0.0000	0.000	1.375	0.00	64.40	0.00
PA	Snyder	42109	421090001	113	1	40200710	6.6000	Missing	0.019	26.0	24.9	0.00	9.0730	Missing	0.026	1.375	0.00	64.40	3.23
PA	Snyder	42109	421090001	140	1	40200710	29.7000	Missing	0.091	28.0	24.9	0.00	40.8290	Missing	0.126	1.375	0.00	64.40	14.54
PA	Union	42119	421190477	P101	1	40200710	6.7900	Missing	0.019	26.0	24.9	0.00	9.3340	Missing	0.027	1.375	0.00	64.40	3.32
PA	Westmoreland	42129	421290071	105	1	40200701	1.4100	Missing	0.002	14.0	25.5	0.00	1.9380	Missing	0.003	1.375	0.00	64.40	0.69
PA	Westmoreland	42129	421290311	101	1	40200701	0.3240	Missing	0.001	29.0	25.5	0.00	0.4450	Missing	0.001	1.375	0.00	64.40	0.16
PA	York	42133	421330027	101	1	40200706	1.7250	Missing	0.005	26.0	29.9	98.00	2.3710	Missing	0.007	1.375	98.00	0.00	2.37
PA	York	42133	421330027	101	2	40200706	1.7250	Missing	0.005	26.0	29.9	98.00	2.3710	Missing	0.007	1.375	98.00	0.00	2.37
PA	York	42133	421330027	102	1	40200706	0.3600	Missing	0.001	16.0	29.9	98.00	0.4950	Missing	0.001	1.375	98.00	0.00	0.50
PA	York	42133	421330027	102	2	40200706	0.3600	Missing	0.001	16.0	29.9	98.00	0.4950	Missing	0.001	1.375	98.00	0.00	0.50
PA	York	42133	421330027	104	1	40200706	0.7650	Missing	0.002	26.0	29.9	98.00	1.0520	Missing	0.003	1.375	98.00	0.00	1.05
PA	York	42133	421330027	104	2	40200706	0.7650	Missing	0.002	26.0	29.9	98.00	1.0520	Missing	0.003	1.375	98.00	0.00	1.05
PA	York	42133	421330027	105	1	40200706	2.2200	Missing	0.006	26.0	29.9	98.00	3.0520	Missing	0.009	1.375	98.00	0.00	3.05
PA	York	42133	421330027	105	2	40200706	2.2200	Missing	0.006	26.0	29.9	98.00	3.0520	Missing	0.009	1.375	98.00	0.00	3.05
PA	York	42133	421330027	106	1	40200706	1.4650	Missing	0.003	21.0	29.9	98.00	2.0140	Missing	0.005	1.375	98.00	0.00	2.01
PA	York	42133	421330027	106	2	40200706	1.4650	Missing	0.003	21.0	29.9	98.00	2.0140	Missing	0.005	1.375	98.00	0.00	2.01
PA	York	42133	421330027	108	1	40200706	2.1350	Missing	0.006	25.0	29.9	98.00	2.9350	Missing	0.008	1.375	98.00	0.00	2.94
PA	York	42133	421330027	108	2	40200706	2.1350	Missing	0.006	25.0	29.9	98.00	2.9350	Missing	0.008	1.375	98.00	0.00	2.94
PA	York	42133	421330027	109	1	40200706	1.9700	Missing	0.006	27.0	29.9	98.00	2.7080	Missing	0.008	1.375	98.00	0.00	2.71
PA	York	42133	421330027	109	2	40200706	1.9700	Missing	0.006	27.0	29.9	98.00	2.7080	Missing	0.008	1.375	98.00	0.00	2.71
PA	York	42133	421330027	110	1	40200706	1.1850	Missing	0.004	28.0	29.9	98.00	1.6290	Missing	0.005	1.375	98.00	0.00	1.63
PA	York	42133	421330027	110	2	40200706	1.1850	Missing	0.004	28.0	29.9	98.00	1.6290	Missing	0.005	1.375	98.00	0.00	1.63
PA	York	42133	421330027	111	1	40200706	0.5500	Missing	0.001	20.0	29.9	98.00	0.7560	Missing	0.002	1.375	98.00	0.00	0.76

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
PA	York	42133	421330027	111	2	40200706	0.5500	Missing	0.001	20.0	29.9	98.00	0.7560	Missing	0.002	1.375	98.00	0.00	0.76
PA	York	42133	421330034	103	1	40200701	0.4710	Missing	0.001	27.0	25.5	0.00	0.6470	Missing	0.002	1.375	0.00	64.40	0.23
PA	York	42133	421330055	101	1	40200706	1.0000	Missing	0.003	27.0	29.9	0.00	1.3750	Missing	0.004	1.375	0.00	64.40	0.49
PA	York	42133	421330055	101	2	40200706	1.0000	Missing	0.003	27.0	29.9	0.00	1.3750	Missing	0.004	1.375	0.00	64.40	0.49
RI	Kent	44003	AIR1438	8	8	40200710	8.7646	Missing	0.024	Missing	24.9	0.00	9.4730	Missing	0.026	1.081	0.00	64.40	3.37
RI	Providence	44007	AIR1859	2	2	40200701	3.3140	Missing	0.009	Missing	25.5	0.00	3.5820	Missing	0.010	1.081	0.00	64.40	1.28
RI	Providence	44007	AIR3850	1	1	40200701	0.5255	Missing	0.001	Missing	25.5	0.00	0.5680	Missing	0.002	1.081	0.00	64.40	0.20
RI	Providence	44007	AIR537	2	2	40200710	0.5445	Missing	0.001	Missing	24.9	0.00	0.5890	Missing	0.002	1.081	0.00	64.40	0.21
RI	Washington	44009	AIR594	7	7	40200710	3.9755	Missing	0.011	Missing	24.9	0.00	4.2970	Missing	0.012	1.081	0.00	64.40	1.53
VT	Caledonia	50005	9	4	1	40200701	16.0500	0.0436	0.044	25.0	25.5	0.00	23.8570	0.0739	0.074	1.486	0.00	64.40	8.49
						MANEVU	1,031.58		3.63				1,402.77		5.04				840.31
						NOVA	0.00		0.00				0.00		0.00				0.00
						OTR	1,031.58		3.63				1,402.77		5.04				840.31
													493.57						

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/ Emissions **2009 BOTW Reductions**

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.003	1.46	0.006	WASLEY PRODUCTS INC
0.003	1.46	0.006	WASLEY PRODUCTS INC
0.011	0.00	0.000	SAINT-GOBAIN PPL CORP
0.000	0.12	0.001	DELTA RUBBER CO SUB OF NN, INC
0.004	1.75	0.006	PROCTOR AND GAMBLE DOVER WIPES COMPANY
0.005	3.49	0.010	PROCTOR AND GAMBLE DOVER WIPES COMPANY
0.000	0.00	0.000	PROCTOR AND GAMBLE DOVER WIPES COMPANY
0.000	0.00	0.000	PROCTOR AND GAMBLE DOVER WIPES COMPANY
0.000	0.00	0.000	PROCTOR AND GAMBLE DOVER WIPES COMPANY
0.002	1.19	0.005	DASSAULT FALCON JET-WILMINGTON CORP
0.000	0.00	0.000	DASSAULT FALCON JET-WILMINGTON CORP
0.000	0.20	0.001	INTERNATIONAL PAPER - AUBURN
0.000	0.00	0.000	NORTHROP-GRUMMAN - BWI
0.000	0.17	0.001	NORTHROP-GRUMMAN - BWI
0.019	10.10	0.033	MIDDLE RIVER AIRCRAFT SYSTEMS
0.000	0.00	0.000	MIDDLE RIVER AIRCRAFT SYSTEMS
0.000	0.00	0.000	MIDDLE RIVER AIRCRAFT SYSTEMS
0.008	0.00	0.000	MIDDLE RIVER AIRCRAFT SYSTEMS
0.000	0.00	0.000	MIDDLE RIVER AIRCRAFT SYSTEMS
0.002	0.00	0.000	MIDDLE RIVER AIRCRAFT SYSTEMS
0.000	0.00	0.000	CYTEC ENGINEERED MATERIALS
0.000	0.00	0.000	CYTEC ENGINEERED MATERIALS
0.021	0.00	0.000	CYTEC ENGINEERED MATERIALS
0.011	0.00	0.000	CYTEC ENGINEERED MATERIALS
0.000	0.00	0.000	ALCORE - QUARRY DRIVE
0.007	3.05	0.014	ALCORE - QUARRY DRIVE
0.000	0.00	0.000	ALCORE - QUARRY DRIVE
0.009	2.61	0.016	ALCORE - QUARRY DRIVE
0.000	0.00	0.000	ALCORE - QUARRY DRIVE
0.026	1.92	0.047	ALCORE - QUARRY DRIVE
0.001	0.37	0.002	VPI MIRREX

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.000	0.00	0.000	VPI MIRREX
0.000	0.00	0.000	ACS AUXILIARIES GROUP
0.000	0.00	0.000	PRECIX
0.000	0.00	0.000	PRECIX
0.000	0.03	0.000	PRECIX
0.001	0.42	0.001	PRECIX
0.001	0.42	0.001	PRECIX
0.001	0.42	0.001	PRECIX
0.001	0.42	0.001	PRECIX
0.001	0.42	0.001	PRECIX
0.006	3.70	0.010	AMERICAN INSULATED WIRE
0.000	0.00	0.000	KIRKHILL-TA CO HASKON DIV
0.000	0.13	0.000	KIRKHILL-TA CO HASKON DIV
0.000	0.05	0.000	KIRKHILL-TA CO HASKON DIV
0.001	0.50	0.001	METFAB ENGINEERING
0.001	0.37	0.001	HUB FOLDING BOX COMPANY
0.000	0.00	0.000	HOMELAND BUILDERS
0.000	0.15	0.000	AD A DAY COMPANY INCORPORATED
0.001	0.54	0.001	WALTER A FURMAN CO
0.000	0.09	0.000	ITW DEVCON
0.000	0.00	0.000	SALEM SUEDE INCORPORATED
0.008	0.00	0.000	SHAWSHEEN RUBBER COMPANY
0.008	0.00	0.000	SHAWSHEEN RUBBER COMPANY
0.000	0.00	0.000	AW CHESTERTON CO
0.001	0.92	0.003	HERO COATINGS INC
0.001	0.44	0.001	GI PLASTEK LTD
0.000	0.00	0.000	VERNON PLASTICS INC
0.000	0.00	0.000	CUSTOM INDUSTRIES INC
0.000	0.00	0.000	MALDEN MILLS INDUSTRIES
0.000	0.00	0.000	MALDEN MILLS INDUSTRIES
0.000	0.02	0.000	MALDEN MILLS INDUSTRIES
0.000	0.01	0.000	MALDEN MILLS INDUSTRIES
0.000	0.00	0.000	MALDEN MILLS INDUSTRIES
0.012	0.00	0.000	ANDOVER COATED PRODUCTS INC
0.000	0.00	0.000	NEW BALANCE ATHLETIC SHOE
0.001	0.54	0.001	ARC TECHNOLOGIES INCORPORATED
0.000	0.00	0.000	ARC TECHNOLOGIES INCORPORATED
0.000	0.00	0.000	ARC TECHNOLOGIES INCORPORATED
0.000	0.00	0.000	VICOR CORPORATION
0.000	0.00	0.000	RAYTHEON SYSTEMS COMPANY - IDS
0.000	0.00	0.000	RAYTHEON SYSTEMS COMPANY - IDS
0.000	0.06	0.000	RAYTHEON SYSTEMS COMPANY - IDS
0.000	0.00	0.000	RAYTHEON SYSTEMS COMPANY - IDS
0.000	0.00	0.000	RAYTHEON SYSTEMS COMPANY - IDS
0.000	0.00	0.000	HOLYOKE CARD COMPANY
0.000	0.00	0.000	GENERAL DYNAMICS AVIATION SERVICES
0.000	0.00	0.000	POLYMER INJECTION MOLDING
0.000	0.00	0.000	AVERY DENNISON CORPORATION
0.029	19.27	0.053	OLD COLONY ENVELOPE
0.006	3.67	0.010	ROCK TENN COMPANY
0.000	0.15	0.000	TYCO HEALTHCARE LUDLOW
0.000	0.04	0.000	OCTOBER COMPANY-STIK II DIV

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.020	0.00	0.000	OCTOBER COMPANY-STIK II DIV
0.000	0.00	0.000	BEMIS ASSOCIATES INC
0.000	0.00	0.000	BEMIS ASSOCIATES INC
0.000	0.00	0.000	BEMIS ASSOCIATES INC
0.000	0.00	0.000	BEMIS ASSOCIATES INC
0.000	0.00	0.000	BEMIS ASSOCIATES INC
0.000	0.00	0.000	BEMIS ASSOCIATES INC
0.000	0.00	0.000	BEMIS ASSOCIATES INC
0.000	0.00	0.000	BEMIS ASSOCIATES INC
0.003	1.84	0.005	AMES SAFETY ENVELOPE
0.000	0.00	0.000	IVEX NOVACEL INC
0.000	0.00	0.000	IVEX NOVACEL INC
0.000	0.00	0.000	IVEX NOVACEL INC
0.000	0.00	0.000	IVEX NOVACEL INC
0.000	0.00	0.000	IVEX NOVACEL INC
0.000	0.00	0.000	IVEX NOVACEL INC
0.000	0.00	0.000	IVEX NOVACEL INC
0.000	0.00	0.000	IVEX NOVACEL INC
0.000	0.12	0.000	EVERGREEN SOLAR, INC.
0.000	0.00	0.000	CHOMERICS DIVISION
0.000	0.29	0.001	CHOMERICS DIVISION
0.000	0.13	0.000	CHOMERICS INCORPORATED
0.000	0.21	0.001	CHOMERICS INCORPORATED
0.000	0.07	0.000	IONICS INCORPORATED
0.004	2.75	0.008	IONICS INCORPORATED
0.000	0.10	0.000	IONICS INCORPORATED
0.000	0.12	0.000	CHASE WALTON ELASTOMERS
0.000	0.00	0.000	RAYTHEON SYSTEMS
0.000	0.00	0.000	RAYTHEON SYSTEMS
0.000	0.00	0.000	RAYTHEON SYSTEMS
0.000	0.00	0.000	TYCO ADHESIVES
0.000	0.00	0.000	JEFFERSON SMURFIT CO
0.000	0.00	0.000	KIDDE FENWAL INCORPORATED
0.000	0.00	0.000	KIDDE FENWAL INCORPORATED
0.004	0.00	0.000	ROGERS FOAM COMPANY
0.000	0.00	0.000	ROGERS FOAM COMPANY
0.020	0.00	0.000	ROGERS FOAM COMPANY
0.000	0.01	0.000	BOSE CORPORATION
0.001	0.46	0.001	MIT
0.000	0.00	0.000	MIT
0.000	0.00	0.000	DATA INSTRUMENTS
0.000	0.00	0.000	DATA INSTRUMENTS
0.000	0.04	0.000	IDEAL TAPE COMPANY
0.015	10.10	0.028	IDEAL TAPE COMPANY
0.000	0.00	0.000	IDEAL TAPE COMPANY
0.211	0.00	0.000	IDEAL TAPE COMPANY
0.000	0.00	0.000	IDEAL TAPE COMPANY
0.000	0.00	0.000	IDEAL TAPE COMPANY
0.078	0.00	0.000	IDEAL TAPE COMPANY
0.000	0.00	0.000	IDEAL TAPE COMPANY
0.000	0.00	0.000	IDEAL TAPE COMPANY
0.000	0.17	0.000	M/A COM INCORPORATED

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.000	0.17	0.000	M/A COM INCORPORATED
0.000	0.17	0.000	M/A COM INCORPORATED
0.000	0.17	0.000	M/A COM INCORPORATED
0.000	0.17	0.000	M/A COM INCORPORATED
0.000	0.17	0.000	M/A COM INCORPORATED
0.000	0.17	0.000	M/A COM INCORPORATED
0.000	0.17	0.000	M/A COM INCORPORATED
0.000	0.17	0.000	M/A COM INCORPORATED
0.000	0.14	0.000	M/A COM INCORPORATED
0.000	0.17	0.000	M/A COM INCORPORATED
0.011	7.34	0.020	RUBBAIR DOOR INCORPORATED
0.188	0.00	0.000	PLYMOUTH RUBBER COMPANY
0.027	0.00	0.000	PLYMOUTH RUBBER COMPANY
0.000	0.00	0.000	CHASE & SONS INC
0.000	0.07	0.000	CHASE & SONS INC
0.000	0.00	0.000	WOLLASTON ALLOYS INC
0.000	0.00	0.000	BIRD INCORPORATED ROOFING
0.007	4.59	0.013	CUMING CORPORATION
0.000	0.00	0.000	AVON TAPE INC
0.000	0.32	0.001	EXHIBIT GROUP GILTSP
0.000	0.01	0.000	COURIER STOUGHTON
0.000	0.27	0.001	COURIER STOUGHTON
0.000	0.00	0.000	INVENSYS SYSTEMS
0.000	0.00	0.000	INVENSYS SYSTEMS
0.000	0.13	0.000	CLARK CUTLER MCDERMO
0.001	0.51	0.001	J&J CORRUGATED BOX CO
0.000	0.08	0.000	FABREEKA INTERNATIONAL INC
0.000	0.06	0.000	TITLEIST & FOOT JOY
0.001	0.92	0.003	TITLEIST & FOOT JOY
0.000	0.00	0.000	TITLEIST & FOOT JOY
0.000	0.00	0.000	TITLEIST & FOOT JOY
0.000	0.30	0.001	TITLEIST & FOOT JOY
0.000	0.05	0.000	TITLEIST & FOOT JOY
0.008	5.39	0.015	WARE RITE DISTRIBUTORS INC
0.000	0.22	0.001	GRAPHIC SERVICES
0.004	0.00	0.000	VENTURE TAPE
0.004	0.00	0.000	VENTURE TAPE
0.031	0.00	0.000	VENTURE TAPE
0.003	1.84	0.005	VENTURE TAPE
0.001	0.92	0.003	WINTHROP ATKINS COMPANY INC
0.000	0.00	0.000	FRANKLIN FIXTURES INC
0.000	0.00	0.000	FRANKLIN FIXTURES INC
0.015	9.72	0.027	BARRY CONTROLS
0.020	13.42	0.037	BARRY CONTROLS
0.000	0.00	0.000	NENSCO
0.004	0.00	0.000	JEN MANUFACTURING INCORPORATED
0.001	0.00	0.000	JEN MANUFACTURING INCORPORATED
0.012	0.00	0.000	FLEXCON COMPANY INC
0.012	0.00	0.000	FLEXCON COMPANY INC
0.003	2.29	0.006	ST GOBAIN
0.000	0.03	0.000	ST GOBAIN
0.002	1.15	0.003	ST GOBAIN

' Emissions   2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.000	0.06	0.000	ST GOBAIN
0.000	0.03	0.000	ST GOBAIN
0.000	0.00	0.000	NEW ENGLAND WOODEN W
0.024	0.00	0.000	NYLCO CORPORATION
0.003	0.00	0.000	NYLCO CORPORATION
0.003	1.87	0.005	NYLCO CORPORATION
0.004	0.00	0.000	NYLCO CORPORATION
0.001	0.00	0.000	NYLCO CORPORATION
0.000	0.00	0.000	BULLARD ABRASIVE PRODUCTS
0.000	0.00	0.000	BULLARD ABRASIVE PRODUCTS
0.008	0.00	0.000	INDUSTRIAL POLYMERS
0.000	0.00	0.000	ST GOBAIN CERAMICS & PLASTICS
0.000	0.00	0.000	ST GOBAIN CERAMICS & PLASTICS
0.020	0.00	0.000	FLEXCON COMPANY INC
0.035	0.00	0.000	FLEXCON COMPANY INC
0.000	0.00	0.000	FLEXCON COMPANY INC
0.004	0.00	0.000	FLEXCON COMPANY INC
0.027	0.00	0.000	FLEXCON COMPANY INC
0.000	0.00	0.000	FLEXCON COMPANY INC
0.004	0.00	0.000	FLEXCON COMPANY INC
0.003	0.00	0.000	FLEXCON COMPANY INC
0.008	5.51	0.015	FLEXCON COMPANY INC
0.020	0.00	0.000	FLEXCON COMPANY INC
0.000	0.00	0.000	FLEXCON COMPANY INC
0.012	0.00	0.000	FLEXCON COMPANY INC
0.016	0.00	0.000	FLEXCON COMPANY INC
0.012	0.00	0.000	FLEXCON COMPANY INC
0.008	0.00	0.000	FLEXCON COMPANY INC
0.051	0.00	0.000	FLEXCON COMPANY INC
0.000	0.19	0.001	ST GOBAIN CONTAINERS
0.000	0.19	0.001	ST GOBAIN CONTAINERS
0.010	4.26	0.017	KALWALL PANELS & ACCESSORIES
0.010	4.26	0.017	KALWALL PANELS & ACCESSORIES
0.005	2.51	0.010	KALWALL PANELS & ACCESSORIES
0.088	19.26	0.159	TAPE-O CORPORATION
0.110	24.92	0.200	TAPE-O CORPORATION
0.003	0.00	0.000	SCAPA TAPES NORTH AMERICA
0.000	0.00	0.000	SCAPA TAPES NORTH AMERICA
0.019	0.00	0.000	SCAPA TAPES NORTH AMERICA
0.011	0.00	0.000	SCAPA TAPES NORTH AMERICA
0.000	0.00	0.000	SCAPA TAPES NORTH AMERICA
0.107	0.00	0.000	BEMIS CO. INC.
0.014	0.00	0.000	FERRO INDUSTRIES, INC.
0.000	0.00	0.000	FERRO INDUSTRIES, INC.
0.011	0.00	0.000	FERRO INDUSTRIES, INC.
0.001	0.00	0.000	FERRO INDUSTRIES, INC.
0.011	0.00	0.000	FERRO INDUSTRIES, INC.
0.001	0.00	0.000	FERRO INDUSTRIES, INC.
0.011	0.00	0.000	FERRO INDUSTRIES, INC.
0.001	0.00	0.000	FERRO INDUSTRIES, INC.
0.003	0.00	0.000	Perth Amboy Tire
0.001	0.00	0.000	PERMACEL

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.011	0.00	0.000	PERMACEL
0.027	0.00	0.000	PERMACEL
0.030	0.00	0.000	PERMACEL
0.007	0.00	0.000	PERMACEL
0.007	0.00	0.000	PERMACEL
0.019	0.00	0.000	PERMACEL
0.313	0.00	0.000	PERMACEL
0.002	0.00	0.000	PERMACEL
0.161	0.00	0.000	PERMACEL
0.117	0.00	0.000	PERMACEL
0.001	0.00	0.000	PERMACEL
0.000	0.00	0.000	PERMACEL
0.001	0.49	0.001	DELPHI AUTOMOTIVE SYSTEMS - LOCKPORT
0.004	2.90	0.008	MERIDIAN AUTOMOTIVE SYSTEMS
0.001	0.70	0.002	ADCHEM CORPORATION
0.003	1.92	0.006	ADCHEM CORPORATION
0.001	0.46	0.001	PLIANT SOLUTIONS CORPORATION
0.013	8.56	0.024	GARLOCK SEALING TECHNOLOGIES
0.001	0.94	0.003	GARLOCK SEALING TECHNOLOGIES
0.019	11.77	0.035	SCHINDLER ELEVATOR CORP/GETTYSBURG
0.088	0.00	0.000	PACKAGING GROUP/BOYERTOWN PRINTING PLT
0.000	0.00	0.000	PACKAGING GROUP/BOYERTOWN PRINTING PLT
0.050	33.98	0.090	HH BROWN SHOE CO/COVE SHOE MARTINSBURG
0.000	0.14	0.000	ROGERS FOAM CORP/MORRISVILLE
0.001	0.43	0.001	CASTLE RUBBER LLC/EAST BUTLER BORO
0.000	0.17	0.000	CASTLE RUBBER LLC/EAST BUTLER BORO
0.001	0.88	0.002	CUE INC/CRANBERRY TWP PLT
0.001	0.88	0.002	CUE INC/CRANBERRY TWP PLT
0.001	0.88	0.002	CUE INC/CRANBERRY TWP PLT
0.001	0.88	0.002	CUE INC/CRANBERRY TWP PLT
0.001	0.88	0.002	CUE INC/CRANBERRY TWP PLT
0.002	1.10	0.003	CUE INC/CRANBERRY TWP PLT
0.013	8.13	0.024	XL ACQUISITION CORP/AVIS AMER HENRY ST PLT
0.001	0.64	0.002	XL ACQUISITION CORP/AVIS AMER HENRY ST PLT
0.092	60.73	0.167	LORD CORP/SAEGERTOWN
0.013	8.59	0.024	LORD CORP/MECH PROD DIV
0.010	6.50	0.018	LORD CORP/MECH PROD DIV
0.028	18.58	0.051	LORD CORP/MECH PROD DIV
0.028	18.58	0.051	LORD CORP/MECH PROD DIV
0.001	0.62	0.002	JEFFERSON SMURFIT CO/ASTON CONTAINER DIV
0.009	4.45	0.017	ARMACLAD INC/QUINCY PLT
0.002	1.30	0.004	ARMACLAD INC/QUINCY PLT
0.007	4.78	0.013	AGY HUNTINGDON LLC/HUNTINGDON
0.001	0.44	0.001	AGY HUNTINGDON LLC/HUNTINGDON
0.004	2.63	0.007	OWENS CORNING/HUNTINGDON MAT PLANT
0.001	0.86	0.002	OWENS CORNING/HUNTINGDON MAT PLANT
0.004	2.63	0.007	OWENS CORNING/HUNTINGDON MAT PLANT
0.003	2.17	0.006	OWENS CORNING/HUNTINGDON MAT PLANT
0.001	0.71	0.002	OWENS CORNING/HUNTINGDON MAT PLANT
0.003	2.17	0.006	OWENS CORNING/HUNTINGDON MAT PLANT
0.010	6.29	0.018	OWENS CORNING/HUNTINGDON MAT PLANT
0.004	2.57	0.007	OWENS CORNING/HUNTINGDON MAT PLANT

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.001	0.50	0.001	MACTAC INC/SCRANTON FAC
0.065	22.32	0.118	MACTAC INC/SCRANTON FAC
0.001	0.82	0.002	HOMETTE CORP/SKYLINE HOMES EPHRATA
0.001	0.49	0.001	HOMETTE CORP/SKYLINE HOMES LEOLA
0.001	0.62	0.002	ALLEN ORGAN CO/MACUNGIE
0.000	0.23	0.001	ALLEN ORGAN CO/MACUNGIE
0.003	1.77	0.005	ALLEN ORGAN CO/MACUNGIE
0.002	1.34	0.004	ALLEN ORGAN CO/MACUNGIE
0.000	0.09	0.000	ALLEN ORGAN CO/MACUNGIE
0.018	11.60	0.032	ALLEN ORGAN CO/MACUNGIE
0.001	0.62	0.002	ALLEN ORGAN CO/MACUNGIE
0.000	0.18	0.000	SPECIALIZED VEHICLES CORP/MONTGOMERY PLT
0.000	0.12	0.000	JOHN SAVOY & SON INC/MONTOURSVILLE PLT
0.000	0.27	0.000	LOCKHEED MARTIN CORP/MISSILES & SPACE OPR
0.002	0.00	0.000	ATOFINA CHEM INC/KING OF PRUSSIA
0.007	0.00	0.000	ATOFINA CHEM INC/KING OF PRUSSIA
0.012	8.11	0.022	RESILITE SPORTS PROD/NORTHUMBERLAND PLT
0.003	2.06	0.006	RESILITE SPORTS PROD/NORTHUMBERLAND PLT
0.032	21.14	0.058	RESILITE SPORTS PROD/NORTHUMBERLAND PLT
0.002	1.17	0.003	FLEETWOOD MOTOR HOMES/MAIN PLT
0.009	6.57	0.017	FLEETWOOD MOTOR HOMES/MAIN PLT
0.000	0.00	0.000	PERFECSEAL
0.000	0.10	0.000	SMURFIT-STONE CONTAINER CORPORATION
0.000	0.08	0.000	SMURFIT-STONE CONTAINER CORPORATION
0.000	0.00	0.000	SMURFIT-STONE CONTAINER CORPORATION
0.000	0.08	0.000	SMURFIT-STONE CONTAINER CORPORATION
0.000	0.08	0.000	SMURFIT-STONE CONTAINER CORPORATION
0.000	0.08	0.000	SMURFIT-STONE CONTAINER CORPORATION
0.000	0.08	0.000	SMURFIT-STONE CONTAINER CORPORATION
0.000	0.00	0.000	GEII INSPECTION & REPAIR SERVICES
0.009	5.84	0.017	WOOD MODE INC/KREAMER PLT
0.045	26.29	0.081	WOOD MODE INC/KREAMER PLT
0.009	6.01	0.017	RITZ CRAFT CORP/MIFFLINBURG PLT
0.001	1.25	0.002	CHESTNUT RIDGE FOAM /LATROBE PLT
0.001	0.29	0.001	ADVANCE USA INC/NEW STANTON PLT
0.007	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.007	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.001	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.001	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.003	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.003	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.009	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.009	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.005	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.005	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.008	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.008	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.008	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.008	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.005	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.005	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.002	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK

' Emissions	2009 BOTW Reductions		
Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.002	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.001	0.42	0.001	UNITED DEFENSE LTD P/YORK
0.001	0.89	0.003	TATE ACCESS FLOORS/RED LION
0.001	0.89	0.003	TATE ACCESS FLOORS/RED LION
0.009	6.10	0.017	STANLEY-BOSTITCH, INC. (EG)
0.004	2.31	0.006	ARLON INC.
0.001	0.37	0.001	LAMINATED PRODUCTS
0.001	0.38	0.001	FLAIR INDUSTRIES, INC.
0.004	2.77	0.008	ELECTRIC BOAT CORPORATION
0.026	15.36	0.048	EHV WEIDMANN INDUSTRIES
3.10	562.46	1.94	
0.00	0.00	0.00	
3.10	562.46	1.94	

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
F	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
G	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

SCC: 24-60-xxx-xxx, 24-65-xxx-xxx

COLUMN	COLUMN DESCRIPTIONS
K	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3.1 and VISTAS BaseG Inventories
L	VOC 2009 Summer Day (tons/day) from MANEVU Version 3.1 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
M	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
N	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
O	Incremental OTB Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Incremental BOTW Control Factor (percent reduction due to OTC 2006 Control Measure)
Q, R	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW control factor/100)
S, T	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

CONSUMER PRODUCTS

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
CT	Fairfield	09001	2465000000	3,759.86	10.3010	10.301	25.0	25.1	3,324.25	9.1075	9.108	1.03	14.20	2.00	3,257.76	8.925	66.48	0.182	All Products/Processes
CT	Hartford	09003	2465000000	2,485.81	6.8104	6.810	25.0	25.1	2,197.81	6.0214	6.021	1.03	14.20	2.00	2,153.85	5.901	43.96	0.120	All Products/Processes
CT	Litchfield	09005	2465000000	465.45	1.2752	1.275	25.0	25.1	411.52	1.1275	1.127	1.03	14.20	2.00	403.29	1.105	8.23	0.023	All Products/Processes
CT	Middlesex	09007	2465000000	564.22	1.5458	1.546	25.0	25.1	498.85	1.3667	1.367	1.03	14.20	2.00	488.87	1.339	9.98	0.027	All Products/Processes
CT	New Haven	09009	2465000000	4,362.35	11.9516	11.952	25.0	25.1	3,856.93	10.5669	10.567	1.03	14.20	2.00	3,779.79	10.356	77.14	0.211	All Products/Processes
CT	New London	09011	2465000000	2,319.84	6.3557	6.356	25.0	25.1	2,051.06	5.6194	5.619	1.03	14.20	2.00	2,010.04	5.507	41.02	0.112	All Products/Processes
CT	Tolland	09013	2465000000	383.36	1.0503	1.050	25.0	25.1	338.94	0.9286	0.929	1.03	14.20	2.00	332.17	0.910	6.78	0.019	All Products/Processes
CT	Windham	09015	2465000000	284.06	0.7783	0.778	25.0	25.1	251.15	0.6881	0.688	1.03	14.20	2.00	246.13	0.674	5.02	0.014	All Products/Processes
DE	Kent	10001	2460100000	68.81	0.1892	0.189	25.0	25.0	62.59	0.1721	0.172	1.06	14.20	2.00	61.34	0.169	1.25	0.003	All Personal Care Products
DE	Kent	10001	2460200000	84.54	0.2325	0.233	25.0	25.0	76.90	0.2115	0.212	1.06	14.20	2.00	75.36	0.207	1.54	0.004	All Household Products
DE	Kent	10001	2460400000	51.12	0.1406	0.141	25.0	25.0	46.49	0.1279	0.128	1.06	14.20	2.00	45.57	0.125	0.93	0.003	All Automotive Aftermarket Products
DE	Kent	10001	2460500000	90.44	0.2487	0.249	25.0	25.0	82.26	0.2262	0.226	1.06	14.20	2.00	80.61	0.222	1.65	0.005	All Coatings and Related Products
DE	Kent	10001	2460600000	18.35	0.0505	0.051	25.0	25.0	16.69	0.0459	0.046	1.06	14.20	2.00	16.36	0.045	0.33	0.001	All Adhesives and Sealants
DE	Kent	10001	2460800000	49.81	0.1916	0.192	25.0	25.0	45.30	0.1742	0.174	1.06	14.20	2.00	44.40	0.171	0.91	0.003	All FIFRA Related Products
DE	Kent	10001	2460900000	47.84	0.1316	0.132	25.0	25.0	43.51	0.1197	0.120	1.06	14.20	2.00	42.64	0.117	0.87	0.002	Miscellaneous Products (Not Otherw
DE	New Castle	10003	2460100000	268.99	0.7397	0.740	25.0	25.0	240.70	0.6619	0.662	1.04	14.20	2.00	235.89	0.649	4.81	0.013	All Personal Care Products
DE	New Castle	10003	2460200000	330.47	0.9088	0.909	25.0	25.0	295.72	0.8132	0.813	1.04	14.20	2.00	289.81	0.797	5.91	0.016	All Household Products
DE	New Castle	10003	2460400000	199.82	0.5495	0.550	25.0	25.0	178.81	0.4917	0.492	1.04	14.20	2.00	175.23	0.482	3.58	0.010	All Automotive Aftermarket Products
DE	New Castle	10003	2460500000	353.53	0.9722	0.972	25.0	25.0	316.35	0.8700	0.870	1.04	14.20	2.00	310.02	0.853	6.33	0.017	All Coatings and Related Products
DE	New Castle	10003	2460600000	71.73	0.1973	0.197	25.0	25.0	64.19	0.1765	0.177	1.04	14.20	2.00	62.90	0.173	1.28	0.004	All Adhesives and Sealants
DE	New Castle	10003	2460800000	194.70	0.7488	0.749	25.0	25.0	174.22	0.6701	0.670	1.04	14.20	2.00	170.74	0.657	3.48	0.013	All FIFRA Related Products
DE	New Castle	10003	2460900000	187.01	0.5143	0.514	25.0	25.0	167.35	0.4602	0.460	1.04	14.20	2.00	164.00	0.451	3.35	0.009	Miscellaneous Products (Not Otherw
DE	Sussex	10005	2460100000	86.07	0.2367	0.237	25.0	25.0	83.14	0.2286	0.229	1.13	14.20	2.00	81.48	0.224	1.66	0.005	All Personal Care Products
DE	Sussex	10005	2460200000	105.75	0.2908	0.291	25.0	25.0	102.15	0.2809	0.281	1.13	14.20	2.00	100.10	0.275	2.04	0.006	All Household Products
DE	Sussex	10005	2460400000	63.94	0.1758	0.176	25.0	25.0	61.76	0.1698	0.170	1.13	14.20	2.00	60.53	0.166	1.24	0.003	All Automotive Aftermarket Products
DE	Sussex	10005	2460500000	113.12	0.3111	0.311	25.0	25.0	109.27	0.3005	0.301	1.13	14.20	2.00	107.09	0.294	2.19	0.006	All Coatings and Related Products
DE	Sussex	10005	2460600000	22.95	0.0631	0.063	25.0	25.0	22.17	0.0610	0.061	1.13	14.20	2.00	21.73	0.060	0.44	0.001	All Adhesives and Sealants
DE	Sussex	10005	2460800000	62.30	0.2396	0.240	25.0	25.0	60.18	0.2315	0.232	1.13	14.20	2.00	58.97	0.227	1.20	0.005	All FIFRA Related Products
DE	Sussex	10005	2460900000	59.84	0.1646	0.165	25.0	25.0	57.80	0.1590	0.159	1.13	14.20	2.00	56.65	0.156	1.16	0.003	Miscellaneous Products (Not Otherw
DC	Washington	11001	2460100000	582.32	Missing	1.600	Missing	25.0	524.11	Missing	1.440	1.08	14.20	2.00	513.63	1.411	10.48	0.029	All Personal Care Products
DC	Washington	11001	2460200000	200.84	Missing	0.552	Missing	25.0	180.77	Missing	0.497	1.08	14.20	2.00	177.15	0.487	3.62	0.010	All Household Products
DC	Washington	11001	2460400000	353.39	Missing	0.971	Missing	25.0	318.06	Missing	0.874	1.08	14.20	2.00	311.70	0.856	6.36	0.017	All Automotive Aftermarket Products
DC	Washington	11001	2460500000	271.18	Missing	0.745	Missing	25.0	244.07	Missing	0.671	1.08	14.20	2.00	239.19	0.657	4.88	0.013	All Coatings and Related Products
DC	Washington	11001	2460600000	149.20	Missing	0.410	Missing	25.0	134.29	Missing	0.369	1.08	14.20	2.00	131.60	0.362	2.69	0.007	All Adhesives and Sealants
DC	Washington	11001	2460800000	482.29	Missing	1.325	Missing	25.0	434.08	Missing	1.193	1.08	14.20	2.00	425.40	1.169	8.68	0.024	All FIFRA Related Products
DC	Washington	11001	2460900000	19.98	Missing	0.055	Missing	25.0	17.98	Missing	0.049	1.08	14.20	2.00	17.62	0.048	0.36	0.001	Miscellaneous Products (Not Otherw
ME	Androscoggin	23001	2460100000	97.26	Missing	0.267	Missing	25.0	86.69	Missing	0.238	1.04	14.20	2.00	84.96	0.233	1.73	0.005	All Personal Care Products
ME	Androscoggin	23001	2460200000	33.12	Missing	0.091	Missing	25.0	29.52	Missing	0.081	1.04	14.20	2.00	28.93	0.079	0.59	0.002	All Household Products
ME	Androscoggin	23001	2460400000	57.01	Missing	0.157	Missing	25.0	50.82	Missing	0.140	1.04	14.20	2.00	49.80	0.137	1.02	0.003	All Automotive Aftermarket Products
ME	Androscoggin	23001	2460500000	39.83	Missing	0.109	Missing	25.0	35.50	Missing	0.098	1.04	14.20	2.00	34.79	0.096	0.71	0.002	All Coatings and Related Products

CONSUMER PRODUCTS

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
ME	Androscoggin	23001	2460600000	23.90	Missing	0.066	Missing	25.0	21.30	Missing	0.059	1.04	14.20	2.00	20.87	0.057	0.43	0.001	All Adhesives and Sealants
ME	Androscoggin	23001	2460800000	74.62	Missing	0.205	Missing	25.0	66.51	Missing	0.183	1.04	14.20	2.00	65.18	0.179	1.33	0.004	All FIFRA Related Products
ME	Androscoggin	23001	2460900000	2.93	Missing	0.008	Missing	25.0	2.62	Missing	0.007	1.04	14.20	2.00	2.56	0.007	0.05	0.000	Miscellaneous Products (Not Otherw
ME	Aroostook	23003	2460100000	67.86	Missing	0.186	Missing	25.0	60.48	Missing	0.166	1.04	14.20	2.00	59.27	0.163	1.21	0.003	All Personal Care Products
ME	Aroostook	23003	2460200000	23.11	Missing	0.063	Missing	25.0	20.60	Missing	0.057	1.04	14.20	2.00	20.18	0.055	0.41	0.001	All Household Products
ME	Aroostook	23003	2460400000	39.78	Missing	0.109	Missing	25.0	35.46	Missing	0.097	1.04	14.20	2.00	34.75	0.095	0.71	0.002	All Automotive Aftermarket Products
ME	Aroostook	23003	2460500000	27.79	Missing	0.076	Missing	25.0	24.77	Missing	0.068	1.04	14.20	2.00	24.27	0.067	0.50	0.001	All Coatings and Related Products
ME	Aroostook	23003	2460600000	16.67	Missing	0.046	Missing	25.0	14.86	Missing	0.041	1.04	14.20	2.00	14.56	0.040	0.30	0.001	All Adhesives and Sealants
ME	Aroostook	23003	2460800000	52.06	Missing	0.143	Missing	25.0	46.41	Missing	0.127	1.04	14.20	2.00	45.48	0.125	0.93	0.003	All FIFRA Related Products
ME	Aroostook	23003	2460900000	2.05	Missing	0.006	Missing	25.0	1.82	Missing	0.005	1.04	14.20	2.00	1.79	0.005	0.04	0.000	Miscellaneous Products (Not Otherw
ME	Cumberland	23005	2460100000	249.71	Missing	0.686	Missing	25.0	222.57	Missing	0.611	1.04	14.20	2.00	218.12	0.599	4.45	0.012	All Personal Care Products
ME	Cumberland	23005	2460200000	85.03	Missing	0.234	Missing	25.0	75.79	Missing	0.208	1.04	14.20	2.00	74.27	0.204	1.52	0.004	All Household Products
ME	Cumberland	23005	2460400000	146.38	Missing	0.402	Missing	25.0	130.47	Missing	0.358	1.04	14.20	2.00	127.86	0.351	2.61	0.007	All Automotive Aftermarket Products
ME	Cumberland	23005	2460500000	102.25	Missing	0.281	Missing	25.0	91.14	Missing	0.250	1.04	14.20	2.00	89.32	0.245	1.82	0.005	All Coatings and Related Products
ME	Cumberland	23005	2460600000	61.35	Missing	0.169	Missing	25.0	54.68	Missing	0.150	1.04	14.20	2.00	53.59	0.147	1.09	0.003	All Adhesives and Sealants
ME	Cumberland	23005	2460800000	191.59	Missing	0.526	Missing	25.0	170.77	Missing	0.469	1.04	14.20	2.00	167.35	0.460	3.42	0.009	All FIFRA Related Products
ME	Cumberland	23005	2460900000	7.53	Missing	0.021	Missing	25.0	6.72	Missing	0.018	1.04	14.20	2.00	6.58	0.018	0.13	0.000	Miscellaneous Products (Not Otherw
ME	Franklin	23007	2460100000	27.55	Missing	0.076	Missing	25.0	24.55	Missing	0.067	1.04	14.20	2.00	24.06	0.066	0.49	0.001	All Personal Care Products
ME	Franklin	23007	2460200000	9.38	Missing	0.026	Missing	25.0	8.36	Missing	0.023	1.04	14.20	2.00	8.19	0.023	0.17	0.000	All Household Products
ME	Franklin	23007	2460400000	16.15	Missing	0.044	Missing	25.0	14.39	Missing	0.040	1.04	14.20	2.00	14.10	0.039	0.29	0.001	All Automotive Aftermarket Products
ME	Franklin	23007	2460500000	11.28	Missing	0.031	Missing	25.0	10.05	Missing	0.028	1.04	14.20	2.00	9.85	0.027	0.20	0.001	All Coatings and Related Products
ME	Franklin	23007	2460600000	6.77	Missing	0.019	Missing	25.0	6.03	Missing	0.017	1.04	14.20	2.00	5.91	0.016	0.12	0.000	All Adhesives and Sealants
ME	Franklin	23007	2460800000	21.13	Missing	0.058	Missing	25.0	18.84	Missing	0.052	1.04	14.20	2.00	18.46	0.051	0.38	0.001	All FIFRA Related Products
ME	Franklin	23007	2460900000	0.83	Missing	0.002	Missing	25.0	0.74	Missing	0.002	1.04	14.20	2.00	0.73	0.002	0.01	0.000	Miscellaneous Products (Not Otherw
ME	Hancock	23009	2460100000	48.59	Missing	0.133	Missing	25.0	43.31	Missing	0.119	1.04	14.20	2.00	42.44	0.117	0.87	0.002	All Personal Care Products
ME	Hancock	23009	2460200000	16.55	Missing	0.045	Missing	25.0	14.75	Missing	0.041	1.04	14.20	2.00	14.45	0.040	0.29	0.001	All Household Products
ME	Hancock	23009	2460400000	28.48	Missing	0.078	Missing	25.0	25.39	Missing	0.070	1.04	14.20	2.00	24.88	0.068	0.51	0.001	All Automotive Aftermarket Products
ME	Hancock	23009	2460500000	19.90	Missing	0.055	Missing	25.0	17.73	Missing	0.049	1.04	14.20	2.00	17.38	0.048	0.35	0.001	All Coatings and Related Products
ME	Hancock	23009	2460600000	11.94	Missing	0.033	Missing	25.0	10.64	Missing	0.029	1.04	14.20	2.00	10.43	0.029	0.21	0.001	All Adhesives and Sealants
ME	Hancock	23009	2460800000	37.28	Missing	0.102	Missing	25.0	33.23	Missing	0.091	1.04	14.20	2.00	32.56	0.089	0.66	0.002	All FIFRA Related Products
ME	Hancock	23009	2460900000	1.47	Missing	0.004	Missing	25.0	1.31	Missing	0.004	1.04	14.20	2.00	1.28	0.004	0.03	0.000	Miscellaneous Products (Not Otherw
ME	Kennebec	23011	2460100000	109.73	Missing	0.301	Missing	25.0	97.81	Missing	0.269	1.04	14.20	2.00	95.85	0.263	1.96	0.005	All Personal Care Products
ME	Kennebec	23011	2460200000	37.37	Missing	0.103	Missing	25.0	33.30	Missing	0.091	1.04	14.20	2.00	32.64	0.090	0.67	0.002	All Household Products
ME	Kennebec	23011	2460400000	64.32	Missing	0.177	Missing	25.0	57.33	Missing	0.158	1.04	14.20	2.00	56.19	0.154	1.15	0.003	All Automotive Aftermarket Products
ME	Kennebec	23011	2460500000	44.93	Missing	0.123	Missing	25.0	40.05	Missing	0.110	1.04	14.20	2.00	39.25	0.108	0.80	0.002	All Coatings and Related Products
ME	Kennebec	23011	2460600000	26.96	Missing	0.074	Missing	25.0	24.03	Missing	0.066	1.04	14.20	2.00	23.55	0.065	0.48	0.001	All Adhesives and Sealants
ME	Kennebec	23011	2460800000	84.19	Missing	0.231	Missing	25.0	75.04	Missing	0.206	1.04	14.20	2.00	73.54	0.202	1.50	0.004	All FIFRA Related Products
ME	Kennebec	23011	2460900000	3.31	Missing	0.009	Missing	25.0	2.95	Missing	0.008	1.04	14.20	2.00	2.89	0.008	0.06	0.000	Miscellaneous Products (Not Otherw
ME	Knox	23013	2460100000	37.56	Missing	0.103	Missing	25.0	33.48	Missing	0.092	1.04	14.20	2.00	32.81	0.090	0.67	0.002	All Personal Care Products
ME	Knox	23013	2460200000	12.79	Missing	0.035	Missing	25.0	11.40	Missing	0.031	1.04	14.20	2.00	11.17	0.031	0.23	0.001	All Household Products
ME	Knox	23013	2460400000	22.02	Missing	0.060	Missing	25.0	19.63	Missing	0.054	1.04	14.20	2.00	19.23	0.053	0.39	0.001	All Automotive Aftermarket Products
ME	Knox	23013	2460500000	15.38	Missing	0.042	Missing	25.0	13.71	Missing	0.038	1.04	14.20	2.00	13.44	0.037	0.27	0.001	All Coatings and Related Products
ME	Knox	23013	2460600000	9.23	Missing	0.025	Missing	25.0	8.23	Missing	0.023	1.04	14.20	2.00	8.06	0.022	0.16	0.000	All Adhesives and Sealants
ME	Knox	23013	2460800000	28.82	Missing	0.079	Missing	25.0	25.69	Missing	0.071	1.04	14.20	2.00	25.17	0.069	0.51	0.001	All FIFRA Related Products
ME	Knox	23013	2460900000	1.13	Missing	0.003	Missing	25.0	1.01	Missing	0.003	1.04	14.20	2.00	0.99	0.003	0.02	0.000	Miscellaneous Products (Not Otherw
ME	Lincoln	23015	2460100000	31.93	Missing	0.088	Missing	25.0	28.46	Missing	0.078	1.04	14.20	2.00	27.89	0.077	0.57	0.002	All Personal Care Products
ME	Lincoln	23015	2460200000	10.87	Missing	0.030	Missing	25.0	9.69	Missing	0.027	1.04	14.20	2.00	9.50	0.026	0.19	0.001	All Household Products
ME	Lincoln	23015	2460400000	18.72	Missing	0.051	Missing	25.0	16.68	Missing	0.046	1.04	14.20	2.00	16.35	0.045	0.33	0.001	All Automotive Aftermarket Products
ME	Lincoln	23015	2460500000	13.07	Missing	0.036	Missing	25.0	11.65	Missing	0.032	1.04	14.20	2.00	11.42	0.031	0.23	0.001	All Coatings and Related Products
ME	Lincoln	23015	2460600000	7.84	Missing	0.022	Missing	25.0	6.99	Missing	0.019	1.04	14.20	2.00	6.85	0.019	0.14	0.000	All Adhesives and Sealants
ME	Lincoln	23015	2460800000	24.50	Missing	0.067	Missing	25.0	21.84	Missing	0.060	1.04	14.20	2.00	21.40	0.059	0.44	0.001	All FIFRA Related Products
ME	Lincoln	23015	2460900000	0.96	Missing	0.003	Missing	25.0	0.86	Missing	0.002	1.04	14.20	2.00	0.84	0.002	0.02	0.000	Miscellaneous Products (Not Otherw
ME	Oxford	23017	2460100000	51.60	Missing	0.142	Missing	25.0	45.99	Missing	0.126	1.04	14.20	2.00	45.07	0.124	0.92	0.003	All Personal Care Products
ME	Oxford	23017	2460200000	17.57	Missing	0.048	Missing	25.0	15.66	Missing	0.043	1.04	14.20	2.00	15.35	0.042	0.31	0.001	All Household Products
ME	Oxford	23017	2460400000	30.25	Missing	0.083	Missing	25.0	26.96	Missing	0.074	1.04	14.20	2.00	26.42	0.073	0.54	0.001	All Automotive Aftermarket Products
ME	Oxford	23017	2460500000	21.13	Missing	0.058	Missing	25.0	18.83	Missing	0.052	1.04	14.20	2.00	18.46	0.051	0.38	0.001	All Coatings and Related Products
ME	Oxford	23017	2460600000	12.68	Missing	0.035	Missing	25.0	11.30	Missing	0.031	1.04	14.20	2.00	11.07	0.030	0.23	0.001	All Adhesives and Sealants
ME	Oxford	23017	2460800000	39.59	Missing	0.109	Missing	25.0	35.29	Missing	0.097	1.04	14.20	2.00	34.58	0.095	0.71	0.002	All FIFRA Related Products
ME	Oxford	23017	2460900000	1.56	Missing	0.004	Missing	25.0	1.39	Missing	0.004	1.04	14.20	2.00	1.36	0.004	0.03	0.000	Miscellaneous Products (Not Otherw
ME	Penobscot	23019	2460100000	135.50	Missing	0.372	Missing	25.0	120.78	Missing	0.332	1.04	14.20	2.00	118.36	0.325	2.42	0.007	All Personal Care Products

CONSUMER PRODUCTS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
ME	Penobscot	23019	2460200000	46.14	Missing	0.127	Missing	25.0	41.13	Missing	0.113	1.04	14.20	2.00	40.30	0.111	0.82	0.002	All Household Products
ME	Penobscot	23019	2460400000	79.43	Missing	0.218	Missing	25.0	70.80	Missing	0.195	1.04	14.20	2.00	69.38	0.191	1.42	0.004	All Automotive Aftermarket Products
ME	Penobscot	23019	2460500000	55.49	Missing	0.152	Missing	25.0	49.46	Missing	0.136	1.04	14.20	2.00	48.47	0.133	0.99	0.003	All Coatings and Related Products
ME	Penobscot	23019	2460600000	33.29	Missing	0.091	Missing	25.0	29.67	Missing	0.082	1.04	14.20	2.00	29.08	0.080	0.59	0.002	All Adhesives and Sealants
ME	Penobscot	23019	2460800000	12.25	Missing	0.034	Missing	25.0	10.92	Missing	0.030	1.04	14.20	2.00	10.70	0.029	0.22	0.001	All FIFRA Related Products
ME	Penobscot	23019	2460900000	4.09	Missing	0.011	Missing	25.0	3.64	Missing	0.010	1.04	14.20	2.00	3.57	0.010	0.07	0.000	Miscellaneous Products (Not Otherw
ME	Piscataquis	23021	2460100000	15.96	Missing	0.044	Missing	25.0	14.23	Missing	0.039	1.04	14.20	2.00	13.95	0.038	0.28	0.001	All Personal Care Products
ME	Piscataquis	23021	2460200000	5.44	Missing	0.015	Missing	25.0	4.85	Missing	0.013	1.04	14.20	2.00	4.75	0.013	0.10	0.000	All Household Products
ME	Piscataquis	23021	2460400000	9.36	Missing	0.026	Missing	25.0	8.34	Missing	0.023	1.04	14.20	2.00	8.17	0.022	0.17	0.000	All Automotive Aftermarket Products
ME	Piscataquis	23021	2460500000	6.54	Missing	0.018	Missing	25.0	5.83	Missing	0.016	1.04	14.20	2.00	5.71	0.016	0.12	0.000	All Coatings and Related Products
ME	Piscataquis	23021	2460600000	3.92	Missing	0.011	Missing	25.0	3.50	Missing	0.010	1.04	14.20	2.00	3.43	0.009	0.07	0.000	All Adhesives and Sealants
ME	Piscataquis	23021	2460800000	12.25	Missing	0.034	Missing	25.0	10.92	Missing	0.030	1.04	14.20	2.00	10.70	0.029	0.22	0.001	All FIFRA Related Products
ME	Piscataquis	23021	2460900000	0.48	Missing	0.001	Missing	25.0	0.43	Missing	0.001	1.04	14.20	2.00	0.42	0.001	0.01	0.000	Miscellaneous Products (Not Otherw
ME	Sagadahoc	23023	2460100000	33.39	Missing	0.092	Missing	25.0	29.76	Missing	0.082	1.04	14.20	2.00	29.17	0.080	0.60	0.002	All Personal Care Products
ME	Sagadahoc	23023	2460200000	11.37	Missing	0.031	Missing	25.0	10.14	Missing	0.028	1.04	14.20	2.00	9.93	0.027	0.20	0.001	All Household Products
ME	Sagadahoc	23023	2460400000	19.57	Missing	0.054	Missing	25.0	17.45	Missing	0.048	1.04	14.20	2.00	17.10	0.047	0.35	0.001	All Automotive Aftermarket Products
ME	Sagadahoc	23023	2460500000	13.67	Missing	0.038	Missing	25.0	12.19	Missing	0.033	1.04	14.20	2.00	11.94	0.033	0.24	0.001	All Coatings and Related Products
ME	Sagadahoc	23023	2460600000	8.20	Missing	0.023	Missing	25.0	7.31	Missing	0.020	1.04	14.20	2.00	7.17	0.020	0.15	0.000	All Adhesives and Sealants
ME	Sagadahoc	23023	2460800000	25.62	Missing	0.070	Missing	25.0	22.84	Missing	0.063	1.04	14.20	2.00	22.38	0.061	0.46	0.001	All FIFRA Related Products
ME	Sagadahoc	23023	2460900000	1.01	Missing	0.003	Missing	25.0	0.90	Missing	0.002	1.04	14.20	2.00	0.88	0.002	0.02	0.000	Miscellaneous Products (Not Otherw
ME	Somerset	23025	2460100000	47.29	Missing	0.130	Missing	25.0	42.15	Missing	0.116	1.04	14.20	2.00	41.31	0.113	0.84	0.002	All Personal Care Products
ME	Somerset	23025	2460200000	16.10	Missing	0.044	Missing	25.0	14.35	Missing	0.039	1.04	14.20	2.00	14.07	0.039	0.29	0.001	All Household Products
ME	Somerset	23025	2460400000	27.72	Missing	0.076	Missing	25.0	24.71	Missing	0.068	1.04	14.20	2.00	24.22	0.067	0.49	0.001	All Automotive Aftermarket Products
ME	Somerset	23025	2460500000	19.37	Missing	0.053	Missing	25.0	17.26	Missing	0.047	1.04	14.20	2.00	16.92	0.046	0.35	0.001	All Coatings and Related Products
ME	Somerset	23025	2460600000	11.62	Missing	0.032	Missing	25.0	10.36	Missing	0.028	1.04	14.20	2.00	10.15	0.028	0.21	0.001	All Adhesives and Sealants
ME	Somerset	23025	2460800000	36.29	Missing	0.100	Missing	25.0	32.34	Missing	0.089	1.04	14.20	2.00	31.70	0.087	0.65	0.002	All FIFRA Related Products
ME	Somerset	23025	2460900000	1.43	Missing	0.004	Missing	25.0	1.27	Missing	0.003	1.04	14.20	2.00	1.25	0.003	0.03	0.000	Miscellaneous Products (Not Otherw
ME	Waldo	23027	2460100000	34.92	Missing	0.096	Missing	25.0	31.12	Missing	0.086	1.04	14.20	2.00	30.50	0.084	0.62	0.002	All Personal Care Products
ME	Waldo	23027	2460200000	11.89	Missing	0.033	Missing	25.0	10.60	Missing	0.029	1.04	14.20	2.00	10.39	0.029	0.21	0.001	All Household Products
ME	Waldo	23027	2460400000	20.47	Missing	0.056	Missing	25.0	18.25	Missing	0.050	1.04	14.20	2.00	17.88	0.049	0.36	0.001	All Automotive Aftermarket Products
ME	Waldo	23027	2460500000	14.30	Missing	0.039	Missing	25.0	12.74	Missing	0.035	1.04	14.20	2.00	12.49	0.034	0.25	0.001	All Coatings and Related Products
ME	Waldo	23027	2460600000	8.58	Missing	0.024	Missing	25.0	7.65	Missing	0.021	1.04	14.20	2.00	7.49	0.021	0.15	0.000	All Adhesives and Sealants
ME	Waldo	23027	2460800000	26.79	Missing	0.074	Missing	25.0	23.88	Missing	0.066	1.04	14.20	2.00	23.40	0.064	0.48	0.001	All FIFRA Related Products
ME	Waldo	23027	2460900000	1.05	Missing	0.003	Missing	25.0	0.94	Missing	0.003	1.04	14.20	2.00	0.92	0.003	0.02	0.000	Miscellaneous Products (Not Otherw
ME	Washington	23029	2460100000	31.00	Missing	0.085	Missing	25.0	27.63	Missing	0.076	1.04	14.20	2.00	27.08	0.074	0.55	0.002	All Personal Care Products
ME	Washington	23029	2460200000	10.55	Missing	0.029	Missing	25.0	9.41	Missing	0.026	1.04	14.20	2.00	9.22	0.025	0.19	0.001	All Household Products
ME	Washington	23029	2460400000	18.17	Missing	0.050	Missing	25.0	16.20	Missing	0.044	1.04	14.20	2.00	15.87	0.044	0.32	0.001	All Automotive Aftermarket Products
ME	Washington	23029	2460500000	12.69	Missing	0.035	Missing	25.0	11.31	Missing	0.031	1.04	14.20	2.00	11.09	0.030	0.23	0.001	All Coatings and Related Products
ME	Washington	23029	2460600000	7.62	Missing	0.021	Missing	25.0	6.79	Missing	0.019	1.04	14.20	2.00	6.65	0.018	0.14	0.000	All Adhesives and Sealants
ME	Washington	23029	2460800000	23.78	Missing	0.065	Missing	25.0	21.20	Missing	0.058	1.04	14.20	2.00	20.77	0.057	0.42	0.001	All FIFRA Related Products
ME	Washington	23029	2460900000	0.94	Missing	0.003	Missing	25.0	0.83	Missing	0.002	1.04	14.20	2.00	0.82	0.002	0.02	0.000	Miscellaneous Products (Not Otherw
ME	York	23031	2460100000	181.41	Missing	0.498	Missing	25.0	161.70	Missing	0.444	1.04	14.20	2.00	158.46	0.435	3.23	0.009	All Personal Care Products
ME	York	23031	2460200000	61.77	Missing	0.170	Missing	25.0	55.06	Missing	0.151	1.04	14.20	2.00	53.96	0.148	1.10	0.003	All Household Products
ME	York	23031	2460400000	106.34	Missing	0.292	Missing	25.0	94.79	Missing	0.260	1.04	14.20	2.00	92.89	0.255	1.90	0.005	All Automotive Aftermarket Products
ME	York	23031	2460500000	74.29	Missing	0.204	Missing	25.0	66.21	Missing	0.182	1.04	14.20	2.00	64.89	0.178	1.32	0.004	All Coatings and Related Products
ME	York	23031	2460600000	44.57	Missing	0.122	Missing	25.0	39.73	Missing	0.109	1.04	14.20	2.00	38.93	0.107	0.79	0.002	All Adhesives and Sealants
ME	York	23031	2460800000	139.19	Missing	0.382	Missing	25.0	124.06	Missing	0.341	1.04	14.20	2.00	121.58	0.334	2.48	0.007	All FIFRA Related Products
ME	York	23031	2460900000	5.47	Missing	0.015	Missing	25.0	4.88	Missing	0.013	1.04	14.20	2.00	4.78	0.013	0.10	0.000	Miscellaneous Products (Not Otherw
MD	Allegany	24001	2465000000	261.94	0.7176	0.718	Missing	25.1	221.13	0.6058	0.606	0.98	14.20	2.00	216.71	0.594	4.42	0.012	All Products/Processes
MD	Anne Arundel	24003	2465000000	1,776.96	4.8684	4.868	Missing	25.1	1,592.66	4.3635	4.364	1.04	14.20	2.00	1,560.81	4.276	31.85	0.087	All Products/Processes
MD	Baltimore	24005	2465000000	2,719.15	7.4497	7.450	Missing	25.1	2,426.28	6.6474	6.647	1.04	14.20	2.00	2,377.76	6.514	48.53	0.133	All Products/Processes
MD	Calvert	24009	2465000000	285.60	0.7825	0.783	Missing	25.1	281.17	0.7703	0.770	1.15	14.20	2.00	275.54	0.755	5.62	0.015	All Products/Processes
MD	Caroline	24011	2465000000	106.96	0.2930	0.293	Missing	25.1	97.47	0.2670	0.267	1.06	14.20	2.00	95.52	0.262	1.95	0.005	All Products/Processes
MD	Carroll	24013	2465000000	561.36	1.5380	1.538	Missing	25.1	538.08	1.4742	1.474	1.12	14.20	2.00	527.32	1.445	10.76	0.029	All Products/Processes
MD	Cecil	24015	2465000000	318.88	0.8737	0.874	Missing	25.1	303.15	0.8305	0.831	1.11	14.20	2.00	297.08	0.814	6.06	0.017	All Products/Processes
MD	Charles	24017	2465000000	455.51	1.2480	1.248	Missing	25.1	457.67	1.2539	1.254	1.17	14.20	2.00	448.52	1.229	9.15	0.025	All Products/Processes
MD	Dorchester	24019	2465000000	107.49	0.2945	0.295	Missing	25.1	95.41	0.2614	0.261	1.03	14.20	2.00	93.50	0.256	1.91	0.005	All Products/Processes
MD	Frederick	24021	2465000000	738.21	2.0225	2.023	Missing	25.1	735.70	2.0156	2.016	1.16	14.20	2.00	720.98	1.975	14.71	0.040	All Products/Processes
MD	Garrett	24023	2465000000	105.47	0.2890	0.289	Missing	25.1	93.10	0.2551	0.255	1.03	14.20	2.00	91.24	0.250	1.86	0.005	All Products/Processes
MD	Harford	24025	2465000000	803.83	2.2023	2.202	Missing	25.1	768.76	2.1062	2.106	1.11	14.20	2.00	753.38	2.064	15.38	0.042	All Products/Processes

CONSUMER PRODUCTS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
MD	Howard	24027	2465000000	918.21	2.5157	2.516	Missing	25.1	877.49	2.4041	2.404	1.11	14.20	2.00	859.94	2.356	17.55	0.048	All Products/Processes
MD	Kent	24029	2465000000	69.23	0.1897	0.190	Missing	25.1	64.15	0.1758	0.176	1.08	14.20	2.00	62.87	0.172	1.28	0.004	All Products/Processes
MD	Montgomery	24031	2465000000	3,212.85	8.8023	8.802	Missing	25.1	3,024.76	8.2870	8.287	1.10	14.20	2.00	2,964.27	8.121	60.50	0.166	All Products/Processes
MD	Prince Georges	24033	2465000000	2,940.79	8.0569	8.057	Missing	25.1	2,653.82	7.2707	7.271	1.05	14.20	2.00	2,600.74	7.125	53.08	0.145	All Products/Processes
MD	Queen Annes	24035	2465000000	151.21	0.4143	0.414	Missing	25.1	147.83	0.4050	0.405	1.14	14.20	2.00	144.88	0.397	2.96	0.008	All Products/Processes
MD	St. Marys	24037	2465000000	317.86	0.8708	0.871	Missing	25.1	306.69	0.8402	0.840	1.12	14.20	2.00	300.56	0.823	6.13	0.017	All Products/Processes
MD	Somerset	24039	2465000000	90.21	0.2471	0.247	Missing	25.1	79.17	0.2169	0.217	1.02	14.20	2.00	77.59	0.213	1.58	0.004	All Products/Processes
MD	Talbot	24041	2465000000	120.95	0.3314	0.331	Missing	25.1	111.16	0.3045	0.305	1.07	14.20	2.00	108.93	0.298	2.22	0.006	All Products/Processes
MD	Washington	24043	2465000000	473.89	1.2983	1.298	Missing	25.1	433.99	1.1890	1.189	1.07	14.20	2.00	425.31	1.165	8.68	0.024	All Products/Processes
MD	Wicomico	24045	2465000000	304.70	0.8348	0.835	Missing	25.1	282.82	0.7749	0.775	1.08	14.20	2.00	277.17	0.759	5.66	0.015	All Products/Processes
MD	Worcester	24047	2465000000	171.66	0.4703	0.470	Missing	25.1	161.80	0.4433	0.443	1.10	14.20	2.00	158.56	0.434	3.24	0.009	All Products/Processes
MD	Baltimore City	24510	2465000000	2,254.31	6.1762	6.176	Missing	25.1	1,911.66	5.2374	5.237	0.99	14.20	2.00	1,873.43	5.133	38.23	0.105	All Products/Processes
MA	Barnstable	25001	2460000000	806.90	2.2100	2.210	25.0	25.4	831.48	2.2773	2.277	1.03	0.00	15.92	699.14	1.915	132.34	0.362	All Processes
MA	Berkshire	25003	2460000000	471.10	1.2900	1.290	25.0	25.4	485.45	1.3293	1.329	1.03	0.00	15.92	408.19	1.118	77.26	0.212	All Processes
MA	Bristol	25005	2460000000	1,918.30	5.2600	5.260	25.0	25.4	1,976.74	5.4203	5.420	1.03	0.00	15.92	1,662.13	4.558	314.62	0.863	All Processes
MA	Dukes	25007	2460000000	54.50	0.1500	0.150	25.0	25.4	56.16	0.1546	0.155	1.03	0.00	15.92	47.22	0.130	8.94	0.025	All Processes
MA	Essex	25009	2460000000	2,596.70	7.1100	7.110	25.0	25.4	2,675.81	7.3266	7.327	1.03	0.00	15.92	2,249.93	6.161	425.88	1.166	All Processes
MA	Franklin	25011	2460000000	253.20	0.6900	0.690	25.0	25.4	260.91	0.7110	0.711	1.03	0.00	15.92	219.39	0.598	41.53	0.113	All Processes
MA	Hampden	25013	2460000000	1,620.70	4.4400	4.440	25.0	25.4	1,670.08	4.5753	4.575	1.03	0.00	15.92	1,404.27	3.847	265.81	0.728	All Processes
MA	Hampshire	25015	2460000000	541.50	1.4800	1.480	25.0	25.4	558.00	1.5251	1.525	1.03	0.00	15.92	469.19	1.282	88.81	0.243	All Processes
MA	Middlesex	25017	2460000000	5,203.80	14.2600	14.260	25.0	25.4	5,362.34	14.6945	14.694	1.03	0.00	15.92	4,508.87	12.356	853.47	2.339	All Processes
MA	Nantucket	25019	2460000000	36.80	0.1000	0.100	25.0	25.4	37.92	0.1030	0.103	1.03	0.00	15.92	31.89	0.087	6.04	0.016	All Processes
MA	Norfolk	25021	2460000000	2,317.40	6.3500	6.350	25.0	25.4	2,388.00	6.5435	6.543	1.03	0.00	15.92	2,007.93	5.502	380.07	1.041	All Processes
MA	Plymouth	25023	2460000000	1,714.70	4.7000	4.700	25.0	25.4	1,766.94	4.8432	4.843	1.03	0.00	15.92	1,485.72	4.072	281.23	0.771	All Processes
MA	Suffolk	25025	2460000000	2,435.40	6.6700	6.670	25.0	25.4	2,509.60	6.8732	6.873	1.03	0.00	15.92	2,110.17	5.779	399.43	1.094	All Processes
MA	Worcester	25027	2460000000	2,719.20	7.4500	7.450	25.0	25.4	2,802.05	7.6770	7.677	1.03	0.00	15.92	2,356.07	6.455	445.97	1.222	All Processes
NH	Belknap	33001	2460000000	228.84	0.6270	0.627	Missing	25.4	210.95	0.5779	0.578	1.07	14.20	2.00	206.73	0.566	4.22	0.012	All Processes
NH	Carroll	33003	2460000000	176.90	0.4847	0.485	Missing	25.4	163.07	0.4468	0.447	1.07	14.20	2.00	159.81	0.438	3.26	0.009	All Processes
NH	Cheshire	33005	2460000000	296.42	0.8121	0.812	Missing	25.4	273.24	0.7486	0.749	1.07	14.20	2.00	267.78	0.734	5.46	0.015	All Processes
NH	Coos	33007	2460000000	132.86	0.3640	0.364	Missing	25.4	122.47	0.3355	0.336	1.07	14.20	2.00	120.02	0.329	2.45	0.007	All Processes
NH	Grafton	33009	2460000000	329.46	0.9026	0.903	Missing	25.4	303.70	0.8321	0.832	1.07	14.20	2.00	297.62	0.815	6.07	0.017	All Processes
NH	Hillsborough	33011	2460000000	1,535.31	4.2063	4.206	Missing	25.4	1,415.26	3.8774	3.877	1.07	14.20	2.00	1,386.96	3.800	28.31	0.078	All Processes
NH	Merrimack	33013	2460000000	552.51	1.5137	1.514	Missing	25.4	509.31	1.3954	1.395	1.07	14.20	2.00	499.12	1.367	10.19	0.028	All Processes
NH	Rockingham	33015	2460000000	1,128.80	3.0926	3.093	Missing	25.4	1,040.54	2.8508	2.851	1.07	14.20	2.00	1,019.73	2.794	20.81	0.057	All Processes
NH	Strafford	33017	2460000000	455.06	1.2467	1.247	Missing	25.4	419.48	1.1492	1.149	1.07	14.20	2.00	411.09	1.126	8.39	0.023	All Processes
NH	Sullivan	33019	2460000000	161.83	0.4434	0.443	Missing	25.4	149.18	0.4087	0.409	1.07	14.20	2.00	146.19	0.401	2.98	0.008	All Processes
NJ	Atlantic	34001	2465000000	891.00	2.4470	2.447	33.0	25.1	772.91	2.1226	2.123	1.01	14.20	2.00	757.45	2.080	15.46	0.042	All Products/Processes
NJ	Bergen	34003	2465000000	3,139.00	8.6235	8.624	33.0	25.1	2,722.95	7.4806	7.481	1.01	14.20	2.00	2,668.49	7.331	54.46	0.150	All Products/Processes
NJ	Burlington	34005	2465000000	1,517.00	4.1670	4.167	33.0	25.1	1,315.93	3.6147	3.615	1.01	14.20	2.00	1,289.62	3.542	26.32	0.072	All Products/Processes
NJ	Camden	34007	2465000000	1,801.00	4.9481	4.948	33.0	25.1	1,562.29	4.2923	4.292	1.01	14.20	2.00	1,531.05	4.206	31.25	0.086	All Products/Processes
NJ	Cape May	34009	2465000000	376.00	1.0316	1.032	33.0	25.1	326.16	0.8949	0.895	1.01	14.20	2.00	319.64	0.877	6.52	0.018	All Products/Processes
NJ	Cumberland	34011	2465000000	518.00	1.4225	1.423	33.0	25.1	449.34	1.2339	1.234	1.01	14.20	2.00	440.36	1.209	8.99	0.025	All Products/Processes
NJ	Essex	34013	2465000000	2,819.00	7.7442	7.744	33.0	25.1	2,445.37	6.7178	6.718	1.01	14.20	2.00	2,396.46	6.583	48.91	0.134	All Products/Processes
NJ	Gloucester	34015	2465000000	915.00	2.5126	2.513	33.0	25.1	793.72	2.1796	2.180	1.01	14.20	2.00	777.85	2.136	15.87	0.044	All Products/Processes
NJ	Hudson	34017	2465000000	2,180.00	5.9890	5.989	33.0	25.1	1,891.06	5.1952	5.195	1.01	14.20	2.00	1,853.24	5.091	37.82	0.104	All Products/Processes
NJ	Hunterdon	34019	2465000000	441.00	1.2113	1.211	33.0	25.1	382.55	1.0507	1.051	1.01	14.20	2.00	374.90	1.030	7.65	0.021	All Products/Processes
NJ	Mercer	34021	2465000000	1,255.00	3.4467	3.447	33.0	25.1	1,088.66	2.9898	2.990	1.01	14.20	2.00	1,066.89	2.930	21.77	0.060	All Products/Processes
NJ	Middlesex	34023	2465000000	2,690.00	7.3899	7.390	33.0	25.1	2,333.46	6.4104	6.410	1.01	14.20	2.00	2,286.79	6.282	46.67	0.128	All Products/Processes
NJ	Monmouth	34025	2465000000	2,232.00	6.1311	6.131	33.0	25.1	1,936.17	5.3184	5.318	1.01	14.20	2.00	1,897.44	5.212	38.72	0.106	All Products/Processes
NJ	Morris	34027	2465000000	1,745.00	4.7926	4.793	33.0	25.1	1,513.72	4.1574	4.157	1.01	14.20	2.00	1,483.44	4.074	30.27	0.083	All Products/Processes
NJ	Ocean	34029	2465000000	1,894.00	5.2022	5.202	33.0	25.1	1,642.97	4.5127	4.513	1.01	14.20	2.00	1,610.11	4.422	32.86	0.090	All Products/Processes
NJ	Passaic	34031	2465000000	1,744.00	4.7918	4.792	33.0	25.1	1,512.85	4.1567	4.157	1.01	14.20	2.00	1,482.59	4.074	30.26	0.083	All Products/Processes
NJ	Salem	34033	2465000000	232.00	0.6368	0.637	33.0	25.1	201.25	0.5524	0.552	1.01	14.20	2.00	197.23	0.541	4.03	0.011	All Products/Processes
NJ	Somerset	34035	2465000000	1,066.00	2.9278	2.928	33.0	25.1	924.71	2.5397	2.540	1.01	14.20	2.00	906.22	2.489	18.49	0.051	All Products/Processes
NJ	Sussex	34037	2465000000	515.00	1.4155	1.416	33.0	25.1	446.74	1.2279	1.228	1.01	14.20	2.00	437.81	1.203	8.93	0.025	All Products/Processes
NJ	Union	34039	2465000000	1,852.00	5.0869	5.087	33.0	25.1	1,606.53	4.4127	4.413	1.01	14.20	2.00	1,574.40	4.324	32.13	0.088	All Products/Processes
NJ	Warren	34041	2465000000	368.00	1.0107	1.011	33.0	25.1	319.22	0.8768	0.877	1.01	14.20	2.00	312.84	0.859	6.38	0.018	All Products/Processes
NY	Albany	36001	2460000000	1,161.00	Missing	3.241	Missing	25.4	998.14	Missing	2.786	1.00	14.20	2.00	978.18	2.730	19.96	0.056	All Processes
NY	Allegany	36003	2460000000	196.71	Missing	0.549	Missing	25.4	177.37	Missing	0.495	1.05	14.20	2.00	173.82	0.485	3.55	0.010	All Processes
NY	Bronx	36005	2460000000	5,307.95	Missing	14.816	Missing	25.4	4,771.44	Missing	13.318	1.05	14.20	2.00	4,676.01	13.052	95.43	0.266	All Processes

CONSUMER PRODUCTS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
NY	Broome	36007	2460000000	785.27	Missing	2.192	Missing	25.4	677.75	Missing	1.892	1.01	14.20	2.00	664.19	1.854	13.55	0.038	All Processes
NY	Cattaraugus	36009	2460000000	326.41	Missing	0.911	Missing	25.4	279.36	Missing	0.780	1.00	14.20	2.00	273.78	0.764	5.59	0.016	All Processes
NY	Cayuga	36011	2460000000	319.72	Missing	0.892	Missing	25.4	269.30	Missing	0.752	0.98	14.20	2.00	263.92	0.737	5.39	0.015	All Processes
NY	Chautauqua	36013	2460000000	542.26	Missing	1.514	Missing	25.4	459.52	Missing	1.283	0.99	14.20	2.00	450.33	1.257	9.19	0.026	All Processes
NY	Chemung	36015	2460000000	355.21	Missing	0.991	Missing	25.4	292.08	Missing	0.815	0.96	14.20	2.00	286.24	0.799	5.84	0.016	All Processes
NY	Chenango	36017	2460000000	201.19	Missing	0.562	Missing	25.4	169.21	Missing	0.472	0.98	14.20	2.00	165.83	0.463	3.38	0.009	All Processes
NY	Clinton	36019	2460000000	317.79	Missing	0.887	Missing	25.4	284.14	Missing	0.793	1.04	14.20	2.00	278.46	0.777	5.68	0.016	All Processes
NY	Columbia	36021	2460000000	249.05	Missing	0.695	Missing	25.4	209.14	Missing	0.584	0.98	14.20	2.00	204.96	0.572	4.18	0.012	All Processes
NY	Cortland	36023	2460000000	191.35	Missing	0.534	Missing	25.4	163.92	Missing	0.458	1.00	14.20	2.00	160.64	0.448	3.28	0.009	All Processes
NY	Delaware	36025	2460000000	185.42	Missing	0.518	Missing	25.4	159.10	Missing	0.444	1.00	14.20	2.00	155.92	0.435	3.18	0.009	All Processes
NY	Dutchess	36027	2460000000	1,127.99	Missing	3.148	Missing	25.4	999.47	Missing	2.790	1.03	14.20	2.00	979.48	2.734	19.99	0.056	All Processes
NY	Erie	36029	2460000000	3,704.59	Missing	10.340	Missing	25.4	3,074.35	Missing	8.581	0.97	14.20	2.00	3,012.86	8.410	61.49	0.172	All Processes
NY	Essex	36031	2460000000	152.63	Missing	0.426	Missing	25.4	133.94	Missing	0.374	1.02	14.20	2.00	131.27	0.366	2.68	0.007	All Processes
NY	Franklin	36033	2460000000	199.78	Missing	0.558	Missing	25.4	182.00	Missing	0.508	1.06	14.20	2.00	178.36	0.498	3.64	0.010	All Processes
NY	Fulton	36035	2460000000	215.79	Missing	0.602	Missing	25.4	183.81	Missing	0.513	0.99	14.20	2.00	180.13	0.503	3.68	0.010	All Processes
NY	Genesee	36037	2460000000	234.41	Missing	0.654	Missing	25.4	197.27	Missing	0.551	0.98	14.20	2.00	193.32	0.540	3.95	0.011	All Processes
NY	Greene	36039	2460000000	190.27	Missing	0.531	Missing	25.4	169.31	Missing	0.473	1.04	14.20	2.00	165.92	0.463	3.39	0.009	All Processes
NY	Hamilton	36041	2460000000	20.76	Missing	0.058	Missing	25.4	17.73	Missing	0.049	1.00	14.20	2.00	17.38	0.049	0.35	0.001	All Processes
NY	Herkimer	36043	2460000000	249.86	Missing	0.697	Missing	25.4	207.70	Missing	0.580	0.97	14.20	2.00	203.55	0.568	4.15	0.012	All Processes
NY	Jefferson	36045	2460000000	423.99	Missing	1.183	Missing	25.4	363.38	Missing	1.014	1.00	14.20	2.00	356.12	0.994	7.27	0.020	All Processes
NY	Kings	36047	2460000000	9,753.72	Missing	27.225	Missing	25.4	8,521.82	Missing	23.786	1.02	14.20	2.00	8,351.39	23.310	170.44	0.476	All Processes
NY	Lewis	36049	2460000000	104.56	Missing	0.292	Missing	25.4	88.85	Missing	0.248	0.99	14.20	2.00	87.07	0.243	1.78	0.005	All Processes
NY	Livingston	36051	2460000000	254.11	Missing	0.709	Missing	25.4	222.86	Missing	0.622	1.02	14.20	2.00	218.40	0.610	4.46	0.012	All Processes
NY	Madison	36053	2460000000	273.57	Missing	0.764	Missing	25.4	234.52	Missing	0.655	1.00	14.20	2.00	229.83	0.642	4.69	0.013	All Processes
NY	Monroe	36055	2460000000	2,894.61	Missing	8.079	Missing	25.4	2,478.24	Missing	6.917	1.00	14.20	2.00	2,428.67	6.779	49.56	0.138	All Processes
NY	Montgomery	36057	2460000000	193.60	Missing	0.540	Missing	25.4	157.35	Missing	0.439	0.95	14.20	2.00	154.21	0.430	3.15	0.009	All Processes
NY	Nassau	36059	2460000000	5,271.98	Missing	14.715	Missing	25.4	4,468.22	Missing	12.472	0.99	14.20	2.00	4,378.85	12.222	89.36	0.249	All Processes
NY	New York	36061	2460000000	6,063.68	Missing	16.925	Missing	25.4	5,317.05	Missing	14.841	1.02	14.20	2.00	5,210.71	14.544	106.34	0.297	All Processes
NY	Niagara	36063	2460000000	854.95	Missing	2.386	Missing	25.4	718.75	Missing	2.006	0.98	14.20	2.00	704.37	1.966	14.37	0.040	All Processes
NY	Oneida	36065	2460000000	921.07	Missing	2.571	Missing	25.4	786.16	Missing	2.194	0.99	14.20	2.00	770.44	2.150	15.72	0.044	All Processes
NY	Onondaga	36067	2460000000	1,806.24	Missing	5.042	Missing	25.4	1,511.48	Missing	4.219	0.98	14.20	2.00	1,481.25	4.134	30.23	0.084	All Processes
NY	Ontario	36069	2460000000	398.14	Missing	1.111	Missing	25.4	348.25	Missing	0.972	1.02	14.20	2.00	341.29	0.953	6.97	0.019	All Processes
NY	Orange	36071	2460000000	1,398.55	Missing	3.904	Missing	25.4	1,270.67	Missing	3.547	1.06	14.20	2.00	1,245.25	3.476	25.41	0.071	All Processes
NY	Orleans	36073	2460000000	172.05	Missing	0.480	Missing	25.4	152.91	Missing	0.427	1.04	14.20	2.00	149.86	0.418	3.06	0.009	All Processes
NY	Oswego	36075	2460000000	481.89	Missing	1.345	Missing	25.4	415.83	Missing	1.161	1.01	14.20	2.00	407.51	1.137	8.32	0.023	All Processes
NY	Otsego	36077	2460000000	243.31	Missing	0.679	Missing	25.4	213.35	Missing	0.596	1.02	14.20	2.00	209.08	0.584	4.27	0.012	All Processes
NY	Putnam	36079	2460000000	385.17	Missing	1.075	Missing	25.4	349.38	Missing	0.975	1.06	14.20	2.00	342.40	0.956	6.99	0.020	All Processes
NY	Queens	36081	2460000000	8,772.24	Missing	24.485	Missing	25.4	8,043.16	Missing	22.450	1.07	14.20	2.00	7,882.30	22.001	160.86	0.449	All Processes
NY	Rensselaer	36083	2460000000	600.93	Missing	1.677	Missing	25.4	504.48	Missing	1.408	0.98	14.20	2.00	494.39	1.380	10.09	0.028	All Processes
NY	Richmond	36085	2460000000	1,792.94	Missing	5.004	Missing	25.4	1,684.78	Missing	4.703	1.10	14.20	2.00	1,651.08	4.609	33.70	0.094	All Processes
NY	Rockland	36087	2460000000	1,143.99	Missing	3.193	Missing	25.4	992.43	Missing	2.770	1.01	14.20	2.00	972.58	2.715	19.85	0.055	All Processes
NY	St. Lawrence	36089	2460000000	435.80	Missing	1.216	Missing	25.4	379.06	Missing	1.058	1.01	14.20	2.00	371.48	1.037	7.58	0.021	All Processes
NY	Saratoga	36091	2460000000	811.97	Missing	2.266	Missing	25.4	726.67	Missing	2.028	1.04	14.20	2.00	712.14	1.988	14.53	0.041	All Processes
NY	Schenectady	36093	2460000000	576.71	Missing	1.610	Missing	25.4	479.51	Missing	1.338	0.97	14.20	2.00	469.92	1.312	9.59	0.027	All Processes
NY	Schoharie	36095	2460000000	124.87	Missing	0.349	Missing	25.4	104.79	Missing	0.293	0.98	14.20	2.00	102.70	0.287	2.10	0.006	All Processes
NY	Schuyler	36097	2460000000	75.95	Missing	0.212	Missing	25.4	65.00	Missing	0.181	1.00	14.20	2.00	63.70	0.178	1.30	0.004	All Processes
NY	Seneca	36099	2460000000	137.11	Missing	0.383	Missing	25.4	114.44	Missing	0.319	0.97	14.20	2.00	112.16	0.313	2.29	0.006	All Processes
NY	Steuben	36101	2460000000	389.31	Missing	1.087	Missing	25.4	328.61	Missing	0.917	0.98	14.20	2.00	322.04	0.899	6.57	0.018	All Processes
NY	Suffolk	36103	2460000000	5,717.93	Missing	15.960	Missing	25.4	4,991.13	Missing	13.931	1.02	14.20	2.00	4,891.31	13.653	99.82	0.279	All Processes
NY	Sullivan	36105	2460000000	291.15	Missing	0.813	Missing	25.4	262.79	Missing	0.733	1.05	14.20	2.00	257.53	0.719	5.26	0.015	All Processes
NY	Tioga	36107	2460000000	202.95	Missing	0.566	Missing	25.4	167.75	Missing	0.468	0.96	14.20	2.00	164.40	0.459	3.36	0.009	All Processes
NY	Tompkins	36109	2460000000	388.89	Missing	1.085	Missing	25.4	338.24	Missing	0.944	1.01	14.20	2.00	331.47	0.925	6.76	0.019	All Processes
NY	Ulster	36111	2460000000	705.55	Missing	1.969	Missing	25.4	635.14	Missing	1.773	1.05	14.20	2.00	622.43	1.737	12.70	0.035	All Processes
NY	Warren	36113	2460000000	250.51	Missing	0.699	Missing	25.4	221.22	Missing	0.617	1.03	14.20	2.00	216.79	0.605	4.42	0.012	All Processes
NY	Washington	36115	2460000000	239.88	Missing	0.670	Missing	25.4	207.33	Missing	0.579	1.01	14.20	2.00	203.19	0.567	4.15	0.012	All Processes
NY	Wayne	36117	2460000000	368.79	Missing	1.029	Missing	25.4	322.35	Missing	0.900	1.02	14.20	2.00	315.91	0.882	6.45	0.018	All Processes
NY	Westchester	36119	2460000000	3,674.13	Missing	10.255	Missing	25.4	3,158.92	Missing	8.817	1.00	14.20	2.00	3,095.74	8.641	63.18	0.176	All Processes
NY	Wyoming	36121	2460000000	169.21	Missing	0.472	Missing	25.4	147.42	Missing	0.411	1.02	14.20	2.00	144.47	0.403	2.95	0.008	All Processes
NY	Yates	36123	2460000000	96.13	Missing	0.268	Missing	25.4	86.25	Missing	0.241	1.05	14.20	2.00	84.52	0.236	1.72	0.005	All Processes
PA	Adams	42001	2465000000	334.21	0.9156	0.916	Missing	25.1	299.99	0.8219	0.822	1.05	14.20	2.00	293.99	0.805	6.00	0.016	All Products/Processes

CONSUMER PRODUCTS

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
PA	Allegheny	42003	2465000000	4,494.16	12.3128	12.313	Missing	25.1	3,693.90	10.1203	10.120	0.96	14.20	2.00	3,620.02	9.918	73.88	0.202	All Products/Processes
PA	Armstrong	42005	2465000000	253.65	0.6949	0.695	Missing	25.1	205.33	0.5625	0.563	0.94	14.20	2.00	201.22	0.551	4.11	0.011	All Products/Processes
PA	Beaver	42007	2465000000	634.72	1.7390	1.739	Missing	25.1	522.62	1.4318	1.432	0.96	14.20	2.00	512.17	1.403	10.45	0.029	All Products/Processes
PA	Bedford	42009	2465000000	176.75	0.4842	0.484	Missing	25.1	156.30	0.4282	0.428	1.03	14.20	2.00	153.17	0.420	3.13	0.009	All Products/Processes
PA	Berks	42011	2465000000	1,352.27	3.7049	3.705	Missing	25.1	1,204.42	3.2998	3.300	1.04	14.20	2.00	1,180.33	3.234	24.09	0.066	All Products/Processes
PA	Blair	42013	2465000000	452.42	1.2395	1.240	Missing	25.1	383.85	1.0517	1.052	0.99	14.20	2.00	376.18	1.031	7.68	0.021	All Products/Processes
PA	Bradford	42015	2465000000	222.28	0.6090	0.609	Missing	25.1	202.61	0.5551	0.555	1.06	14.20	2.00	198.56	0.544	4.05	0.011	All Products/Processes
PA	Bucks	42017	2465000000	2,160.33	5.9187	5.919	Missing	25.1	1,972.44	5.4039	5.404	1.06	14.20	2.00	1,932.99	5.296	39.45	0.108	All Products/Processes
PA	Butler	42019	2465000000	630.21	1.7266	1.727	Missing	25.1	544.83	1.4927	1.493	1.01	14.20	2.00	533.94	1.463	10.90	0.030	All Products/Processes
PA	Cambria	42021	2465000000	532.45	1.4588	1.459	Missing	25.1	435.20	1.1923	1.192	0.95	14.20	2.00	426.50	1.168	8.70	0.024	All Products/Processes
PA	Cameron	42023	2465000000	20.68	0.0567	0.057	Missing	25.1	17.06	0.0467	0.047	0.96	14.20	2.00	16.72	0.046	0.34	0.001	All Products/Processes
PA	Carbon	42025	2465000000	211.23	0.5787	0.579	Missing	25.1	187.34	0.5133	0.513	1.03	14.20	2.00	183.60	0.503	3.75	0.010	All Products/Processes
PA	Centre	42027	2465000000	490.23	1.3431	1.343	Missing	25.1	436.83	1.1968	1.197	1.04	14.20	2.00	428.09	1.173	8.74	0.024	All Products/Processes
PA	Chester	42029	2465000000	1,593.11	4.3647	4.365	Missing	25.1	1,468.74	4.0239	4.024	1.07	14.20	2.00	1,439.36	3.943	29.37	0.080	All Products/Processes
PA	Clarion	42031	2465000000	146.22	0.4006	0.401	Missing	25.1	124.42	0.3409	0.341	0.99	14.20	2.00	121.93	0.334	2.49	0.007	All Products/Processes
PA	Clearfield	42033	2465000000	294.45	0.8067	0.807	Missing	25.1	238.85	0.6544	0.654	0.95	14.20	2.00	234.07	0.641	4.78	0.013	All Products/Processes
PA	Clinton	42035	2465000000	133.35	0.3653	0.365	Missing	25.1	116.43	0.3190	0.319	1.02	14.20	2.00	114.10	0.313	2.33	0.006	All Products/Processes
PA	Columbia	42037	2465000000	226.97	0.6218	0.622	Missing	25.1	190.07	0.5207	0.521	0.98	14.20	2.00	186.26	0.510	3.80	0.010	All Products/Processes
PA	Crawford	42039	2465000000	318.00	0.8712	0.871	Missing	25.1	275.68	0.7553	0.755	1.01	14.20	2.00	270.17	0.740	5.51	0.015	All Products/Processes
PA	Cumberland	42041	2465000000	770.59	2.1112	2.111	Missing	25.1	743.44	2.0368	2.037	1.12	14.20	2.00	728.57	1.996	14.87	0.041	All Products/Processes
PA	Dauphin	42043	2465000000	895.12	2.4524	2.452	Missing	25.1	795.28	2.1788	2.179	1.04	14.20	2.00	779.37	2.135	15.91	0.044	All Products/Processes
PA	Delaware	42045	2465000000	1,958.59	5.3660	5.366	Missing	25.1	1,676.32	4.5927	4.593	1.00	14.20	2.00	1,642.79	4.501	33.53	0.092	All Products/Processes
PA	Elk	42047	2465000000	121.93	0.3341	0.334	Missing	25.1	99.30	0.2721	0.272	0.95	14.20	2.00	97.32	0.267	1.99	0.005	All Products/Processes
PA	Erie	42049	2465000000	992.22	2.7184	2.718	Missing	25.1	863.35	2.3654	2.365	1.01	14.20	2.00	846.09	2.318	17.27	0.047	All Products/Processes
PA	Fayette	42051	2465000000	519.01	1.4219	1.422	Missing	25.1	430.20	1.1786	1.179	0.97	14.20	2.00	421.60	1.155	8.60	0.024	All Products/Processes
PA	Forest	42053	2465000000	17.30	0.0474	0.047	Missing	25.1	15.06	0.0413	0.041	1.01	14.20	2.00	14.76	0.040	0.30	0.001	All Products/Processes
PA	Franklin	42055	2465000000	465.72	1.2760	1.276	Missing	25.1	403.90	1.1066	1.107	1.01	14.20	2.00	395.82	1.084	8.08	0.022	All Products/Processes
PA	Fulton	42057	2465000000	50.84	0.1393	0.139	Missing	25.1	46.01	0.1261	0.126	1.05	14.20	2.00	45.09	0.124	0.92	0.003	All Products/Processes
PA	Greene	42059	2465000000	143.40	0.3929	0.393	Missing	25.1	124.94	0.3423	0.342	1.02	14.20	2.00	122.45	0.335	2.50	0.007	All Products/Processes
PA	Huntingdon	42061	2465000000	161.76	0.4432	0.443	Missing	25.1	142.36	0.3900	0.390	1.03	14.20	2.00	139.51	0.382	2.85	0.008	All Products/Processes
PA	Indiana	42063	2465000000	314.19	0.8608	0.861	Missing	25.1	273.98	0.7506	0.751	1.02	14.20	2.00	268.50	0.736	5.48	0.015	All Products/Processes
PA	Jefferson	42065	2465000000	162.15	0.4442	0.444	Missing	25.1	133.28	0.3652	0.365	0.96	14.20	2.00	130.62	0.358	2.67	0.007	All Products/Processes
PA	Juniata	42067	2465000000	80.55	0.2207	0.221	Missing	25.1	67.20	0.1841	0.184	0.97	14.20	2.00	65.86	0.180	1.34	0.004	All Products/Processes
PA	Lackawanna	42069	2465000000	745.70	2.0430	2.043	Missing	25.1	635.41	1.7409	1.741	0.99	14.20	2.00	622.70	1.706	12.71	0.035	All Products/Processes
PA	Lancaster	42071	2465000000	1,693.62	4.6400	4.640	Missing	25.1	1,586.48	4.3465	4.347	1.09	14.20	2.00	1,554.75	4.260	31.73	0.087	All Products/Processes
PA	Lawrence	42073	2465000000	333.03	0.9124	0.912	Missing	25.1	273.46	0.7492	0.749	0.96	14.20	2.00	267.99	0.734	5.47	0.015	All Products/Processes
PA	Lebanon	42075	2465000000	428.92	1.1751	1.175	Missing	25.1	377.97	1.0355	1.036	1.03	14.20	2.00	370.41	1.015	7.56	0.021	All Products/Processes
PA	Lehigh	42077	2465000000	1,123.74	3.0787	3.079	Missing	25.1	1,001.81	2.7447	2.745	1.04	14.20	2.00	981.77	2.690	20.04	0.055	All Products/Processes
PA	Luzerne	42079	2465000000	1,113.51	3.0507	3.051	Missing	25.1	953.96	2.6136	2.614	1.00	14.20	2.00	934.88	2.561	19.08	0.052	All Products/Processes
PA	Lycoming	42081	2465000000	421.14	1.1538	1.154	Missing	25.1	365.62	1.0017	1.002	1.01	14.20	2.00	358.31	0.982	7.31	0.020	All Products/Processes
PA	McKean	42083	2465000000	158.84	0.4352	0.435	Missing	25.1	137.53	0.3768	0.377	1.01	14.20	2.00	134.78	0.369	2.75	0.008	All Products/Processes
PA	Mercer	42085	2465000000	422.96	1.1588	1.159	Missing	25.1	367.43	1.0067	1.007	1.01	14.20	2.00	360.08	0.987	7.35	0.020	All Products/Processes
PA	Mifflin	42087	2465000000	164.33	0.4502	0.450	Missing	25.1	139.64	0.3826	0.383	0.99	14.20	2.00	136.84	0.375	2.79	0.008	All Products/Processes
PA	Monroe	42089	2465000000	526.74	1.4431	1.443	Missing	25.1	531.95	1.4574	1.457	1.18	14.20	2.00	521.31	1.428	10.64	0.029	All Products/Processes
PA	Montgomery	42091	2465000000	2,712.69	7.4320	7.432	Missing	25.1	2,422.44	6.6368	6.637	1.04	14.20	2.00	2,373.99	6.504	48.45	0.133	All Products/Processes
PA	Montour	42093	2465000000	64.46	0.1766	0.177	Missing	25.1	57.72	0.1581	0.158	1.04	14.20	2.00	56.57	0.155	1.15	0.003	All Products/Processes
PA	Northampton	42095	2465000000	967.29	2.6501	2.650	Missing	25.1	882.29	2.4172	2.417	1.06	14.20	2.00	864.65	2.369	17.65	0.048	All Products/Processes
PA	Northumberland	42097	2465000000	330.44	0.9053	0.905	Missing	25.1	281.71	0.7718	0.772	0.99	14.20	2.00	276.08	0.756	5.63	0.015	All Products/Processes
PA	Perry	42099	2465000000	155.28	0.4254	0.425	Missing	25.1	154.12	0.4222	0.422	1.16	14.20	2.00	151.04	0.414	3.08	0.008	All Products/Processes
PA	Philadelphia	42101	2465000000	5,280.97	14.4684	14.468	Missing	25.1	4,528.40	12.4066	12.407	1.00	14.20	2.00	4,437.83	12.158	90.57	0.248	All Products/Processes
PA	Pike	42103	2465000000	177.29	0.4857	0.486	Missing	25.1	197.47	0.5410	0.541	1.30	14.20	2.00	193.52	0.530	3.95	0.011	All Products/Processes
PA	Potter	42105	2465000000	64.47	0.1766	0.177	Missing	25.1	51.72	0.1417	0.142	0.93	14.20	2.00	50.68	0.139	1.03	0.003	All Products/Processes
PA	Schuylkill	42107	2465000000	525.56	1.4399	1.440	Missing	25.1	446.36	1.2229	1.223	0.99	14.20	2.00	437.43	1.198	8.93	0.024	All Products/Processes
PA	Snyder	42109	2465000000	133.87	0.3668	0.367	Missing	25.1	127.59	0.3496	0.350	1.11	14.20	2.00	125.04	0.343	2.55	0.007	All Products/Processes
PA	Somerset	42111	2465000000	281.19	0.7704	0.770	Missing	25.1	230.82	0.6324	0.632	0.96	14.20	2.00	226.20	0.620	4.62	0.013	All Products/Processes
PA	Sullivan	42113	2465000000	22.94	0.0628	0.063	Missing	25.1	20.61	0.0565	0.057	1.05	14.20	2.00	20.20	0.055	0.41	0.001	All Products/Processes
PA	Susquehanna	42115	2465000000	148.93	0.4080	0.408	Missing	25.1	133.30	0.3652	0.365	1.04	14.20	2.00	130.64	0.358	2.67	0.007	All Products/Processes
PA	Tioga	42117	2465000000	146.73	0.4020	0.402	Missing	25.1	127.99	0.3506	0.351	1.02	14.20	2.00	125.43	0.344	2.56	0.007	All Products/Processes
PA	Union	42119	2465000000	148.66	0.4073	0.407	Missing	25.1	135.17	0.3703	0.370	1.06	14.20	2.00	132.47	0.363	2.70	0.007	All Products/Processes
PA	Venango	42121	2465000000	201.05	0.5508	0.551	Missing	25.1	165.33	0.4530	0.453	0.96	14.20	2.00	162.02	0.444	3.31	0.009	All Products/Processes

CONSUMER PRODUCTS

State	County	FIPS	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Emissions Annual (tpy)	2009 BOTW Emissions Summer Day Calculated (tpd)	2009 BOTW Reductions Annual (tpy)	2009 BOTW Reductions Summer Day (tpd)	SCC Description
PA	Warren	42123	2465000000	153.20	0.4197	0.420	Missing	25.1	125.51	0.3439	0.344	0.95	14.20	2.00	123.00	0.337	2.51	0.007	All Products/Processes
PA	Washington	42125	2465000000	722.34	1.9790	1.979	Missing	25.1	607.06	1.6632	1.663	0.98	14.20	2.00	594.92	1.630	12.14	0.033	All Products/Processes
PA	Wayne	42127	2465000000	173.02	0.4740	0.474	Missing	25.1	152.34	0.4174	0.417	1.03	14.20	2.00	149.30	0.409	3.05	0.008	All Products/Processes
PA	Westmoreland	42129	2465000000	1,303.86	3.5722	3.572	Missing	25.1	1,101.26	3.0171	3.017	0.98	14.20	2.00	1,079.23	2.957	22.03	0.060	All Products/Processes
PA	Wyoming	42131	2465000000	98.39	0.2696	0.270	Missing	25.1	93.45	0.2560	0.256	1.11	14.20	2.00	91.58	0.251	1.87	0.005	All Products/Processes
PA	York	42133	2465000000	1,377.40	3.7737	3.774	Missing	25.1	1,218.38	3.3380	3.338	1.03	14.20	2.00	1,194.02	3.271	24.37	0.067	All Products/Processes
RI	Bristol	44001	2460100000	52.31	Missing	0.144	Missing	25.0	45.59	Missing	0.125	1.02	14.20	2.00	44.68	0.123	0.91	0.003	All Personal Care Products
RI	Bristol	44001	2460200000	18.04	Missing	0.050	Missing	25.0	15.72	Missing	0.043	1.02	14.20	2.00	15.41	0.042	0.31	0.001	All Household Products
RI	Bristol	44001	2460400000	31.75	Missing	0.087	Missing	25.0	27.67	Missing	0.076	1.02	14.20	2.00	27.11	0.074	0.55	0.002	All Automotive Aftermarket Products
RI	Bristol	44001	2460500000	24.36	Missing	0.067	Missing	25.0	21.23	Missing	0.058	1.02	14.20	2.00	20.81	0.057	0.42	0.001	All Coatings and Related Products
RI	Bristol	44001	2460600000	13.40	Missing	0.037	Missing	25.0	11.68	Missing	0.032	1.02	14.20	2.00	11.45	0.031	0.23	0.001	All Adhesives and Sealants
RI	Bristol	44001	2460800000	43.33	Missing	0.119	Missing	25.0	37.76	Missing	0.104	1.02	14.20	2.00	37.00	0.102	0.76	0.002	All FIFRA Related Products
RI	Bristol	44001	2460900000	1.80	Missing	0.005	Missing	25.0	1.56	Missing	0.004	1.02	14.20	2.00	1.53	0.004	0.03	0.000	Miscellaneous Products (Not Otherw
RI	Kent	44003	2460100000	173.91	Missing	0.478	Missing	25.0	151.69	Missing	0.417	1.02	14.20	2.00	148.66	0.408	3.03	0.008	All Personal Care Products
RI	Kent	44003	2460200000	59.98	Missing	0.165	Missing	25.0	52.32	Missing	0.144	1.02	14.20	2.00	51.27	0.141	1.05	0.003	All Household Products
RI	Kent	44003	2460400000	105.54	Missing	0.290	Missing	25.0	92.06	Missing	0.253	1.02	14.20	2.00	90.22	0.248	1.84	0.005	All Automotive Aftermarket Products
RI	Kent	44003	2460500000	80.99	Missing	0.222	Missing	25.0	70.64	Missing	0.194	1.02	14.20	2.00	69.23	0.190	1.41	0.004	All Coatings and Related Products
RI	Kent	44003	2460600000	44.56	Missing	0.122	Missing	25.0	38.87	Missing	0.107	1.02	14.20	2.00	38.09	0.105	0.78	0.002	All Adhesives and Sealants
RI	Kent	44003	2460800000	144.04	Missing	0.396	Missing	25.0	125.63	Missing	0.345	1.02	14.20	2.00	123.12	0.338	2.51	0.007	All FIFRA Related Products
RI	Kent	44003	2460900000	5.97	Missing	0.016	Missing	25.0	5.21	Missing	0.014	1.02	14.20	2.00	5.10	0.014	0.10	0.000	Miscellaneous Products (Not Otherw
RI	Newport	44005	2460100000	87.71	Missing	0.241	Missing	25.0	76.02	Missing	0.209	1.01	14.20	2.00	74.50	0.205	1.52	0.004	All Personal Care Products
RI	Newport	44005	2460200000	30.25	Missing	0.083	Missing	25.0	26.22	Missing	0.072	1.01	14.20	2.00	25.69	0.071	0.52	0.001	All Household Products
RI	Newport	44005	2460400000	53.23	Missing	0.146	Missing	25.0	46.13	Missing	0.127	1.01	14.20	2.00	45.21	0.124	0.92	0.003	All Automotive Aftermarket Products
RI	Newport	44005	2460500000	40.84	Missing	0.112	Missing	25.0	35.40	Missing	0.097	1.01	14.20	2.00	34.69	0.095	0.71	0.002	All Coatings and Related Products
RI	Newport	44005	2460600000	22.47	Missing	0.062	Missing	25.0	19.48	Missing	0.054	1.01	14.20	2.00	19.09	0.052	0.39	0.001	All Adhesives and Sealants
RI	Newport	44005	2460800000	72.64	Missing	0.200	Missing	25.0	62.96	Missing	0.173	1.01	14.20	2.00	61.70	0.170	1.26	0.003	All FIFRA Related Products
RI	Newport	44005	2460900000	3.01	Missing	0.008	Missing	25.0	2.61	Missing	0.007	1.01	14.20	2.00	2.56	0.007	0.05	0.000	Miscellaneous Products (Not Otherw
RI	Providence	44007	2460100000	647.52	Missing	1.779	Missing	25.0	565.22	Missing	1.553	1.02	14.20	2.00	553.91	1.522	11.30	0.031	All Personal Care Products
RI	Providence	44007	2460200000	223.33	Missing	0.614	Missing	25.0	194.94	Missing	0.536	1.02	14.20	2.00	191.05	0.525	3.90	0.011	All Household Products
RI	Providence	44007	2460400000	392.96	Missing	1.080	Missing	25.0	343.01	Missing	0.942	1.02	14.20	2.00	336.15	0.923	6.86	0.019	All Automotive Aftermarket Products
RI	Providence	44007	2460500000	301.54	Missing	0.828	Missing	25.0	263.21	Missing	0.723	1.02	14.20	2.00	257.95	0.709	5.26	0.014	All Coatings and Related Products
RI	Providence	44007	2460600000	165.91	Missing	0.456	Missing	25.0	144.82	Missing	0.398	1.02	14.20	2.00	141.93	0.390	2.90	0.008	All Adhesives and Sealants
RI	Providence	44007	2460800000	536.29	Missing	1.473	Missing	25.0	468.13	Missing	1.286	1.02	14.20	2.00	458.76	1.260	9.36	0.026	All FIFRA Related Products
RI	Providence	44007	2460900000	22.22	Missing	0.061	Missing	25.0	19.39	Missing	0.053	1.02	14.20	2.00	19.01	0.052	0.39	0.001	Miscellaneous Products (Not Otherw
RI	Washington	44009	2460100000	129.67	Missing	0.356	Missing	25.0	117.06	Missing	0.322	1.05	14.20	2.00	114.72	0.315	2.34	0.006	All Personal Care Products
RI	Washington	44009	2460200000	44.72	Missing	0.123	Missing	25.0	40.37	Missing	0.111	1.05	14.20	2.00	39.57	0.109	0.81	0.002	All Household Products
RI	Washington	44009	2460400000	78.69	Missing	0.216	Missing	25.0	71.04	Missing	0.195	1.05	14.20	2.00	69.62	0.191	1.42	0.004	All Automotive Aftermarket Products
RI	Washington	44009	2460500000	60.38	Missing	0.166	Missing	25.0	54.51	Missing	0.150	1.05	14.20	2.00	53.42	0.147	1.09	0.003	All Coatings and Related Products
RI	Washington	44009	2460600000	33.22	Missing	0.091	Missing	25.0	29.99	Missing	0.082	1.05	14.20	2.00	29.39	0.081	0.60	0.002	All Adhesives and Sealants
RI	Washington	44009	2460800000	107.39	Missing	0.295	Missing	25.0	96.95	Missing	0.266	1.05	14.20	2.00	95.01	0.261	1.94	0.005	All FIFRA Related Products
RI	Washington	44009	2460900000	4.45	Missing	0.012	Missing	25.0	4.02	Missing	0.011	1.05	14.20	2.00	3.94	0.011	0.08	0.000	Miscellaneous Products (Not Otherw
VT	Addison	50001	2460100000	37.28	Missing	0.102	Missing	25.0	34.22	Missing	0.094	1.07	14.20	2.00	33.54	0.092	0.68	0.002	All Personal Care Products
VT	Addison	50001	2460200000	12.86	Missing	0.035	Missing	25.0	11.80	Missing	0.032	1.07	14.20	2.00	11.57	0.032	0.24	0.001	All Household Products
VT	Addison	50001	2460400000	22.62	Missing	0.062	Missing	25.0	20.77	Missing	0.057	1.07	14.20	2.00	20.35	0.056	0.42	0.001	All Automotive Aftermarket Products
VT	Addison	50001	2460500000	17.36	Missing	0.048	Missing	25.0	15.94	Missing	0.044	1.07	14.20	2.00	15.62	0.043	0.32	0.001	All Coatings and Related Products
VT	Addison	50001	2460600000	9.55	Missing	0.026	Missing	25.0	8.77	Missing	0.024	1.07	14.20	2.00	8.59	0.024	0.18	0.000	All Adhesives and Sealants
VT	Addison	50001	2460800000	30.87	Missing	0.085	Missing	25.0	28.35	Missing	0.078	1.07	14.20	2.00	27.78	0.076	0.57	0.002	All FIFRA Related Products
VT	Addison	50001	2460900000	1.28	Missing	0.004	Missing	25.0	1.17	Missing	0.003	1.07	14.20	2.00	1.15	0.003	0.02	0.000	Miscellaneous Products (Not Otherw
VT	Bennington	50003	2460100000	37.90	Missing	0.104	Missing	25.0	34.79	Missing	0.096	1.07	14.20	2.00	34.10	0.094	0.70	0.002	All Personal Care Products
VT	Bennington	50003	2460200000	13.07	Missing	0.036	Missing	25.0	12.00	Missing	0.033	1.07	14.20	2.00	11.76	0.032	0.24	0.001	All Household Products
VT	Bennington	50003	2460400000	23.00	Missing	0.063	Missing	25.0	21.12	Missing	0.058	1.07	14.20	2.00	20.69	0.057	0.42	0.001	All Automotive Aftermarket Products
VT	Bennington	50003	2460500000	17.65	Missing	0.048	Missing	25.0	16.20	Missing	0.045	1.07	14.20	2.00	15.88	0.044	0.32	0.001	All Coatings and Related Products
VT	Bennington	50003	2460600000	9.71	Missing	0.027	Missing	25.0	8.92	Missing	0.024	1.07	14.20	2.00	8.74	0.024	0.18	0.000	All Adhesives and Sealants
VT	Bennington	50003	2460800000	31.39	Missing	0.086	Missing	25.0	28.82	Missing	0.079	1.07	14.20	2.00	28.24	0.078	0.58	0.002	All FIFRA Related Products
VT	Bennington	50003	2460900000	1.30	Missing	0.004	Missing	25.0	1.19	Missing	0.003	1.07	14.20	2.00	1.17	0.003	0.02	0.000	Miscellaneous Products (Not Otherw
VT	Caledonia	50005	2460100000	30.66	Missing	0.084	Missing	25.0	28.15	Missing	0.077	1.07	14.20	2.00	27.58	0.076	0.56	0.002	All Personal Care Products
VT	Caledonia	50005	2460200000	10.57	Missing	0.029	Missing	25.0	9.71	Missing	0.027	1.07	14.20	2.00	9.51	0.026	0.19	0.001	All Household Products
VT	Caledonia	50005	2460400000	18.60	Missing	0.051	Missing	25.0	17.08	Missing	0.047	1.07	14.20	2.00	16.74	0.046	0.34	0.001	All Automotive Aftermarket Products
VT	Caledonia	50005	2460500000	14.28	Missing	0.039	Missing	25.0	13.11	Missing	0.036	1.07	14.20	2.00	12.85	0.035	0.26	0.001	All Coatings and Related Products
VT	Caledonia	50005	2460600000	7.86	Missing	0.022	Missing	25.0	7.21	Missing	0.020	1.07	14.20	2.00	7.07	0.019	0.14	0.000	All Adhesives and Sealants

CONSUMER PRODUCTS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
VT	Caledonia	50005	2460800000	25.39	Missing	0.070	Missing	25.0	23.31	Missing	0.064	1.07	14.20	2.00	22.85	0.063	0.47	0.001	All FIFRA Related Products
VT	Caledonia	50005	2460900000	1.05	Missing	0.003	Missing	25.0	0.97	Missing	0.003	1.07	14.20	2.00	0.95	0.003	0.02	0.000	Miscellaneous Products (Not Otherw
VT	Chittenden	50007	2460100000	151.89	Missing	0.417	Missing	25.0	139.46	Missing	0.383	1.07	14.20	2.00	136.67	0.375	2.79	0.008	All Personal Care Products
VT	Chittenden	50007	2460200000	52.39	Missing	0.144	Missing	25.0	48.10	Missing	0.132	1.07	14.20	2.00	47.14	0.130	0.96	0.003	All Household Products
VT	Chittenden	50007	2460400000	92.18	Missing	0.253	Missing	25.0	84.63	Missing	0.233	1.07	14.20	2.00	82.94	0.228	1.69	0.005	All Automotive Aftermarket Products
VT	Chittenden	50007	2460500000	70.74	Missing	0.194	Missing	25.0	64.95	Missing	0.178	1.07	14.20	2.00	63.65	0.175	1.30	0.004	All Coatings and Related Products
VT	Chittenden	50007	2460600000	38.92	Missing	0.107	Missing	25.0	35.73	Missing	0.098	1.07	14.20	2.00	35.02	0.096	0.71	0.002	All Adhesives and Sealants
VT	Chittenden	50007	2460800000	125.80	Missing	0.346	Missing	25.0	115.51	Missing	0.317	1.07	14.20	2.00	113.20	0.311	2.31	0.006	All FIFRA Related Products
VT	Chittenden	50007	2460900000	5.21	Missing	0.014	Missing	25.0	4.79	Missing	0.013	1.07	14.20	2.00	4.69	0.013	0.10	0.000	Miscellaneous Products (Not Otherw
VT	Essex	50009	2460100000	6.67	Missing	0.018	Missing	25.0	6.13	Missing	0.017	1.07	14.20	2.00	6.00	0.016	0.12	0.000	All Personal Care Products
VT	Essex	50009	2460200000	2.30	Missing	0.006	Missing	25.0	2.11	Missing	0.006	1.07	14.20	2.00	2.07	0.006	0.04	0.000	All Household Products
VT	Essex	50009	2460400000	4.05	Missing	0.011	Missing	25.0	3.72	Missing	0.010	1.07	14.20	2.00	3.64	0.010	0.07	0.000	All Automotive Aftermarket Products
VT	Essex	50009	2460500000	3.11	Missing	0.009	Missing	25.0	2.85	Missing	0.008	1.07	14.20	2.00	2.80	0.008	0.06	0.000	All Coatings and Related Products
VT	Essex	50009	2460600000	1.71	Missing	0.005	Missing	25.0	1.57	Missing	0.004	1.07	14.20	2.00	1.54	0.004	0.03	0.000	All Adhesives and Sealants
VT	Essex	50009	2460800000	5.53	Missing	0.015	Missing	25.0	5.07	Missing	0.014	1.07	14.20	2.00	4.97	0.014	0.10	0.000	All FIFRA Related Products
VT	Essex	50009	2460900000	0.23	Missing	0.001	Missing	25.0	0.21	Missing	0.001	1.07	14.20	2.00	0.21	0.001	0.00	0.000	Miscellaneous Products (Not Otherw
VT	Franklin	50011	2460100000	47.63	Missing	0.131	Missing	25.0	43.73	Missing	0.120	1.07	14.20	2.00	42.86	0.118	0.87	0.002	All Personal Care Products
VT	Franklin	50011	2460200000	16.43	Missing	0.045	Missing	25.0	15.08	Missing	0.041	1.07	14.20	2.00	14.78	0.041	0.30	0.001	All Household Products
VT	Franklin	50011	2460400000	28.90	Missing	0.079	Missing	25.0	26.54	Missing	0.073	1.07	14.20	2.00	26.01	0.071	0.53	0.001	All Automotive Aftermarket Products
VT	Franklin	50011	2460500000	22.18	Missing	0.061	Missing	25.0	20.36	Missing	0.056	1.07	14.20	2.00	19.96	0.055	0.41	0.001	All Coatings and Related Products
VT	Franklin	50011	2460600000	12.20	Missing	0.034	Missing	25.0	11.20	Missing	0.031	1.07	14.20	2.00	10.98	0.030	0.22	0.001	All Adhesives and Sealants
VT	Franklin	50011	2460800000	39.45	Missing	0.108	Missing	25.0	36.22	Missing	0.100	1.07	14.20	2.00	35.49	0.098	0.72	0.002	All FIFRA Related Products
VT	Franklin	50011	2460900000	1.63	Missing	0.004	Missing	25.0	1.50	Missing	0.004	1.07	14.20	2.00	1.47	0.004	0.03	0.000	Miscellaneous Products (Not Otherw
VT	Grand Isle	50013	2460100000	7.48	Missing	0.021	Missing	25.0	6.87	Missing	0.019	1.07	14.20	2.00	6.73	0.018	0.14	0.000	All Personal Care Products
VT	Grand Isle	50013	2460200000	2.58	Missing	0.007	Missing	25.0	2.37	Missing	0.007	1.07	14.20	2.00	2.32	0.006	0.05	0.000	All Household Products
VT	Grand Isle	50013	2460400000	4.54	Missing	0.012	Missing	25.0	4.17	Missing	0.011	1.07	14.20	2.00	4.08	0.011	0.08	0.000	All Automotive Aftermarket Products
VT	Grand Isle	50013	2460500000	3.48	Missing	0.010	Missing	25.0	3.20	Missing	0.009	1.07	14.20	2.00	3.13	0.009	0.06	0.000	All Coatings and Related Products
VT	Grand Isle	50013	2460600000	1.92	Missing	0.005	Missing	25.0	1.76	Missing	0.005	1.07	14.20	2.00	1.72	0.005	0.04	0.000	All Adhesives and Sealants
VT	Grand Isle	50013	2460800000	6.20	Missing	0.017	Missing	25.0	5.69	Missing	0.016	1.07	14.20	2.00	5.57	0.015	0.11	0.000	All FIFRA Related Products
VT	Grand Isle	50013	2460900000	0.26	Missing	0.001	Missing	25.0	0.24	Missing	0.001	1.07	14.20	2.00	0.23	0.001	0.00	0.000	Miscellaneous Products (Not Otherw
VT	Lamoille	50015	2460100000	24.39	Missing	0.067	Missing	25.0	22.40	Missing	0.062	1.07	14.20	2.00	21.95	0.060	0.45	0.001	All Personal Care Products
VT	Lamoille	50015	2460200000	8.41	Missing	0.023	Missing	25.0	7.72	Missing	0.021	1.07	14.20	2.00	7.57	0.021	0.15	0.000	All Household Products
VT	Lamoille	50015	2460400000	14.80	Missing	0.041	Missing	25.0	13.59	Missing	0.037	1.07	14.20	2.00	13.32	0.037	0.27	0.001	All Automotive Aftermarket Products
VT	Lamoille	50015	2460500000	11.36	Missing	0.031	Missing	25.0	10.43	Missing	0.029	1.07	14.20	2.00	10.22	0.028	0.21	0.001	All Coatings and Related Products
VT	Lamoille	50015	2460600000	6.25	Missing	0.017	Missing	25.0	5.74	Missing	0.016	1.07	14.20	2.00	5.62	0.015	0.11	0.000	All Adhesives and Sealants
VT	Lamoille	50015	2460800000	20.20	Missing	0.056	Missing	25.0	18.55	Missing	0.051	1.07	14.20	2.00	18.18	0.050	0.37	0.001	All FIFRA Related Products
VT	Lamoille	50015	2460900000	0.84	Missing	0.002	Missing	25.0	0.77	Missing	0.002	1.07	14.20	2.00	0.75	0.002	0.02	0.000	Miscellaneous Products (Not Otherw
VT	Orange	50017	2460100000	29.26	Missing	0.080	Missing	25.0	26.86	Missing	0.074	1.07	14.20	2.00	26.32	0.072	0.54	0.001	All Personal Care Products
VT	Orange	50017	2460200000	10.09	Missing	0.028	Missing	25.0	9.26	Missing	0.025	1.07	14.20	2.00	9.08	0.025	0.19	0.001	All Household Products
VT	Orange	50017	2460400000	17.75	Missing	0.049	Missing	25.0	16.30	Missing	0.045	1.07	14.20	2.00	15.97	0.044	0.33	0.001	All Automotive Aftermarket Products
VT	Orange	50017	2460500000	13.62	Missing	0.037	Missing	25.0	12.51	Missing	0.034	1.07	14.20	2.00	12.26	0.034	0.25	0.001	All Coatings and Related Products
VT	Orange	50017	2460600000	7.50	Missing	0.021	Missing	25.0	6.88	Missing	0.019	1.07	14.20	2.00	6.74	0.019	0.14	0.000	All Adhesives and Sealants
VT	Orange	50017	2460800000	24.23	Missing	0.067	Missing	25.0	22.25	Missing	0.061	1.07	14.20	2.00	21.80	0.060	0.44	0.001	All FIFRA Related Products
VT	Orange	50017	2460900000	1.00	Missing	0.003	Missing	25.0	0.92	Missing	0.003	1.07	14.20	2.00	0.90	0.002	0.02	0.000	Miscellaneous Products (Not Otherw
VT	Orleans	50019	2460100000	27.15	Missing	0.075	Missing	25.0	24.93	Missing	0.068	1.07	14.20	2.00	24.43	0.067	0.50	0.001	All Personal Care Products
VT	Orleans	50019	2460200000	9.37	Missing	0.026	Missing	25.0	8.60	Missing	0.024	1.07	14.20	2.00	8.43	0.023	0.17	0.000	All Household Products
VT	Orleans	50019	2460400000	16.48	Missing	0.045	Missing	25.0	15.13	Missing	0.042	1.07	14.20	2.00	14.83	0.041	0.30	0.001	All Automotive Aftermarket Products
VT	Orleans	50019	2460500000	12.65	Missing	0.035	Missing	25.0	11.61	Missing	0.032	1.07	14.20	2.00	11.38	0.031	0.23	0.001	All Coatings and Related Products
VT	Orleans	50019	2460600000	6.96	Missing	0.019	Missing	25.0	6.39	Missing	0.018	1.07	14.20	2.00	6.26	0.017	0.13	0.000	All Adhesives and Sealants
VT	Orleans	50019	2460800000	22.49	Missing	0.062	Missing	25.0	20.65	Missing	0.057	1.07	14.20	2.00	20.24	0.056	0.41	0.001	All FIFRA Related Products
VT	Orleans	50019	2460900000	0.93	Missing	0.003	Missing	25.0	0.86	Missing	0.002	1.07	14.20	2.00	0.84	0.002	0.02	0.000	Miscellaneous Products (Not Otherw
VT	Rutland	50021	2460100000	64.52	Missing	0.177	Missing	25.0	59.23	Missing	0.163	1.07	14.20	2.00	58.05	0.159	1.18	0.003	All Personal Care Products
VT	Rutland	50021	2460200000	22.25	Missing	0.061	Missing	25.0	20.43	Missing	0.056	1.07	14.20	2.00	20.02	0.055	0.41	0.001	All Household Products
VT	Rutland	50021	2460400000	39.15	Missing	0.108	Missing	25.0	35.95	Missing	0.099	1.07	14.20	2.00	35.23	0.097	0.72	0.002	All Automotive Aftermarket Products
VT	Rutland	50021	2460500000	30.04	Missing	0.083	Missing	25.0	27.59	Missing	0.076	1.07	14.20	2.00	27.03	0.074	0.55	0.002	All Coatings and Related Products
VT	Rutland	50021	2460600000	16.53	Missing	0.045	Missing	25.0	15.18	Missing	0.042	1.07	14.20	2.00	14.87	0.041	0.30	0.001	All Adhesives and Sealants
VT	Rutland	50021	2460800000	53.43	Missing	0.147	Missing	25.0	49.06	Missing	0.135	1.07	14.20	2.00	48.08	0.132	0.98	0.003	All FIFRA Related Products
VT	Rutland	50021	2460900000	2.21	Missing	0.006	Missing	25.0	2.03	Missing	0.006	1.07	14.20	2.00	1.99	0.005	0.04	0.000	Miscellaneous Products (Not Otherw
VT	Washington	50023	2460100000	60.01	Missing	0.165	Missing	25.0	55.10	Missing	0.151	1.07	14.20	2.00	54.00	0.148	1.10	0.003	All Personal Care Products
VT	Washington	50023	2460200000	20.70	Missing	0.057	Missing	25.0	19.00	Missing	0.052	1.07	14.20	2.00	18.62	0.051	0.38	0.001	All Household Products

CONSUMER PRODUCTS

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
VT	Washington	50023	2460400000	36.42	Missing	0.100	Missing	25.0	33.44	Missing	0.092	1.07	14.20	2.00	32.77	0.090	0.67	0.002	All Automotive Aftermarket Products
VT	Washington	50023	2460500000	27.95	Missing	0.077	Missing	25.0	25.66	Missing	0.070	1.07	14.20	2.00	25.15	0.069	0.51	0.001	All Coatings and Related Products
VT	Washington	50023	2460600000	15.38	Missing	0.042	Missing	25.0	14.12	Missing	0.039	1.07	14.20	2.00	13.84	0.038	0.28	0.001	All Adhesives and Sealants
VT	Washington	50023	2460800000	49.71	Missing	0.137	Missing	25.0	45.64	Missing	0.125	1.07	14.20	2.00	44.72	0.123	0.91	0.003	All FIFRA Related Products
VT	Washington	50023	2460900000	2.06	Missing	0.006	Missing	25.0	1.89	Missing	0.005	1.07	14.20	2.00	1.85	0.005	0.04	0.000	Miscellaneous Products (Not Otherw
VT	Windham	50025	2460100000	45.12	Missing	0.124	Missing	25.0	41.42	Missing	0.114	1.07	14.20	2.00	40.59	0.112	0.83	0.002	All Personal Care Products
VT	Windham	50025	2460200000	15.56	Missing	0.043	Missing	25.0	14.29	Missing	0.039	1.07	14.20	2.00	14.00	0.038	0.29	0.001	All Household Products
VT	Windham	50025	2460400000	27.38	Missing	0.075	Missing	25.0	25.14	Missing	0.069	1.07	14.20	2.00	24.64	0.068	0.50	0.001	All Automotive Aftermarket Products
VT	Windham	50025	2460500000	21.01	Missing	0.058	Missing	25.0	19.29	Missing	0.053	1.07	14.20	2.00	18.90	0.052	0.39	0.001	All Coatings and Related Products
VT	Windham	50025	2460600000	11.56	Missing	0.032	Missing	25.0	10.61	Missing	0.029	1.07	14.20	2.00	10.40	0.029	0.21	0.001	All Adhesives and Sealants
VT	Windham	50025	2460800000	37.37	Missing	0.103	Missing	25.0	34.31	Missing	0.094	1.07	14.20	2.00	33.62	0.092	0.69	0.002	All FIFRA Related Products
VT	Windham	50025	2460900000	1.55	Missing	0.004	Missing	25.0	1.42	Missing	0.004	1.07	14.20	2.00	1.39	0.004	0.03	0.000	Miscellaneous Products (Not Otherw
VT	Windsor	50027	2460100000	58.98	Missing	0.162	Missing	25.0	54.15	Missing	0.149	1.07	14.20	2.00	53.07	0.146	1.08	0.003	All Personal Care Products
VT	Windsor	50027	2460200000	20.34	Missing	0.056	Missing	25.0	18.68	Missing	0.051	1.07	14.20	2.00	18.30	0.050	0.37	0.001	All Household Products
VT	Windsor	50027	2460400000	35.79	Missing	0.098	Missing	25.0	32.86	Missing	0.090	1.07	14.20	2.00	32.20	0.088	0.66	0.002	All Automotive Aftermarket Products
VT	Windsor	50027	2460500000	27.46	Missing	0.075	Missing	25.0	25.22	Missing	0.069	1.07	14.20	2.00	24.71	0.068	0.50	0.001	All Coatings and Related Products
VT	Windsor	50027	2460600000	15.11	Missing	0.042	Missing	25.0	13.87	Missing	0.038	1.07	14.20	2.00	13.60	0.037	0.28	0.001	All Adhesives and Sealants
VT	Windsor	50027	2460800000	48.85	Missing	0.134	Missing	25.0	44.85	Missing	0.123	1.07	14.20	2.00	43.95	0.121	0.90	0.002	All FIFRA Related Products
VT	Windsor	50027	2460900000	2.02	Missing	0.006	Missing	25.0	1.86	Missing	0.005	1.07	14.20	2.00	1.82	0.005	0.04	0.000	Miscellaneous Products (Not Otherw
VA	Arlington	51013	2465800000	49.66	Missing	0.175	32.0	25.1	40.80	Missing	0.143	0.00	25.00	2.00	39.98	0.141	0.82	0.003	Pesticide Application
VA	Arlington	51013	2465900000	679.97	Missing	1.868	25.0	25.1	744.80	Missing	2.046	0.00	20.00	2.00	729.90	2.005	14.90	0.041	Miscellaneous Products: NEC
VA	Fairfax	51059	2465800000	319.99	Missing	1.125	32.0	25.1	262.88	Missing	0.924	0.00	25.00	2.00	257.62	0.906	5.26	0.018	Pesticide Application
VA	Fairfax	51059	2465900000	3,529.46	Missing	9.696	25.0	25.1	3,865.94	Missing	10.621	0.00	20.00	2.00	3,788.62	10.408	77.32	0.212	Miscellaneous Products: NEC
VA	Loudoun	51107	2465800000	38.11	Missing	0.134	32.0	25.1	31.31	Missing	0.110	0.00	25.00	2.00	30.68	0.108	0.63	0.002	Pesticide Application
VA	Loudoun	51107	2465900000	697.04	Missing	1.915	25.0	25.1	763.49	Missing	2.098	0.00	20.00	2.00	748.22	2.056	15.27	0.042	Miscellaneous Products: NEC
VA	Prince William	51153	2465800000	84.47	Missing	0.297	32.0	25.1	69.40	Missing	0.244	0.00	25.00	2.00	68.01	0.239	1.39	0.005	Pesticide Application
VA	Prince William	51153	2465900000	1,074.63	Missing	2.952	25.0	25.1	1,177.08	Missing	3.234	0.00	20.00	2.00	1,153.54	3.169	23.54	0.065	Miscellaneous Products: NEC
VA	Stafford	51179	2465800000	26.43	Missing	0.093	32.0	25.1	21.71	Missing	0.076	0.00	25.00	2.00	21.28	0.075	0.43	0.002	Pesticide Application
VA	Stafford	51179	2465900000	347.01	Missing	0.953	25.0	25.1	380.10	Missing	1.044	0.00	20.00	2.00	372.50	1.023	7.60	0.021	Miscellaneous Products: NEC
VA	Alexandria	51510	2465800000	27.65	Missing	0.097	32.0	25.1	22.72	Missing	0.080	0.00	25.00	2.00	22.27	0.078	0.45	0.002	Pesticide Application
VA	Alexandria	51510	2465900000	464.48	Missing	1.276	25.0	25.1	508.76	Missing	1.398	0.00	20.00	2.00	498.58	1.370	10.18	0.028	Miscellaneous Products: NEC
VA	Fairfax City	51600	2465800000	7.64	Missing	0.027	32.0	25.1	6.28	Missing	0.022	0.00	25.00	2.00	6.15	0.022	0.13	0.000	Pesticide Application
VA	Fairfax City	51600	2465900000	81.62	Missing	0.224	25.0	25.1	89.41	Missing	0.246	0.00	20.00	2.00	87.62	0.241	1.79	0.005	Miscellaneous Products: NEC
VA	Falls Chruch	51610	2465800000	3.97	Missing	0.014	32.0	25.1	3.26	Missing	0.011	0.00	25.00	2.00	3.19	0.011	0.07	0.000	Pesticide Application
VA	Falls Chruch	51610	2465900000	36.91	Missing	0.101	25.0	25.1	40.43	Missing	0.111	0.00	20.00	2.00	39.62	0.109	0.81	0.002	Miscellaneous Products: NEC
VA	Manassas City	51683	2465800000	10.57	Missing	0.037	32.0	25.1	8.68	Missing	0.031	0.00	25.00	2.00	8.51	0.030	0.17	0.001	Pesticide Application
VA	Manassas City	51683	2465900000	125.57	Missing	0.345	25.0	25.1	137.56	Missing	0.378	0.00	20.00	2.00	134.81	0.370	2.75	0.008	Miscellaneous Products: NEC
VA	Manassas Park City	51685	2465800000	3.08	Missing	0.011	32.0	25.1	2.54	Missing	0.009	0.00	25.00	2.00	2.49	0.009	0.05	0.000	Pesticide Application
VA	Manassas Park City	51685	2465900000	42.67	Missing	0.117	25.0	25.1	46.74	Missing	0.128	0.00	20.00	2.00	45.81	0.126	0.93	0.003	Miscellaneous Products: NEC
			MANEVU	225,161.96		621.41			201,672.72		556.50				194,385.49	536.46	7,287.22	20.04	

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
F	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
G	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

COLUMN	COLUMN DESCRIPTIONS
K	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
L	VOC 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
M	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
N	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
O, P	Year new containers requried: Incremental Control Factor for 2009 , assumes 10% turnover per year
Q	Incremental Control Factor (percent reduction due to OTC 2006 Control Measure) See Section 3.4.3 for derivation
R, S	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW control factor/100)
T, U	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

Effective Date	CE	RE	RP	Control Factor
2003	65	100	65	42.3
2004	65	100	55	35.8
2005	65	100	45	29.3
2006	65	100	35	22.8
2007	65	100	25	16.3
2008	65	100	15	9.8
2009	65	100	5	3.3

PORTABLE FUEL CONTAINERS

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descripti
CT	Fairfield	09001	2501060300	915.30	2.5077	2.508	Missing	24.9	610.68	1.5297	1.673	1.04	2004	35.80	5.80	575.26	1.576	35.42	0.097	Total
CT	Hartford	09003	2501060300	886.92	2.4299	2.430	Missing	24.9	591.75	1.4823	1.621	1.04	2004	35.80	5.80	557.43	1.527	34.32	0.094	Total
CT	Litchfield	09005	2501060300	190.68	0.5224	0.522	Missing	24.9	127.22	0.3187	0.349	1.04	2004	35.80	5.80	119.84	0.328	7.38	0.020	Total
CT	Middlesex	09007	2501060300	163.24	0.4472	0.447	Missing	24.9	108.91	0.2729	0.298	1.04	2004	35.80	5.80	102.60	0.281	6.32	0.017	Total
CT	New Haven	09009	2501060300	853.97	2.3396	2.340	Missing	24.9	569.76	1.4273	1.561	1.04	2004	35.80	5.80	536.71	1.470	33.05	0.091	Total
CT	New London	09011	2501060300	268.73	0.7363	0.736	Missing	24.9	179.30	0.4491	0.491	1.04	2004	35.80	5.80	168.90	0.463	10.40	0.028	Total
CT	Tolland	09013	2501060300	145.65	0.3990	0.399	Missing	24.9	97.18	0.2434	0.266	1.04	2004	35.80	5.80	91.54	0.251	5.64	0.015	Total
CT	Windham	09015	2501060300	113.69	0.3115	0.312	Missing	24.9	75.86	0.1900	0.208	1.04	2004	35.80	5.80	71.46	0.196	4.40	0.012	Total
DE	Kent	10001	2501011010	2.83	0.0083	0.008	27.0	30.9	1.93	0.0052	0.006	1.06	2004	35.80	5.80	1.81	0.005	0.11	0.000	Vapor Losses
DE	Kent	10001	2501011011	11.04	0.0325	0.033	27.0	30.9	7.52	0.0202	0.022	1.06	2004	35.80	5.80	7.08	0.021	0.44	0.001	Permeation
DE	Kent	10001	2501011012	95.38	0.2804	0.280	27.0	30.9	64.91	0.1745	0.191	1.06	2004	35.80	5.80	61.15	0.180	3.76	0.011	Diurnal
DE	Kent	10001	2501011015	10.26	0.0302	0.030	27.0	30.9	6.98	0.0187	0.021	1.06	2004	35.80	5.80	6.58	0.019	0.40	0.001	Spillage
DE	Kent	10001	2501011016	5.23	0.0154	0.015	27.0	30.9	3.56	0.0095	0.010	1.06	2004	35.80	5.80	3.36	0.010	0.21	0.001	Transport
DE	Kent	10001	2501012010	3.09	0.0091	0.009	27.0	30.9	2.10	0.0057	0.006	1.06	2004	35.80	5.80	1.98	0.006	0.12	0.000	Vapor Losses
DE	Kent	10001	2501012011	0.65	0.0019	0.002	27.0	30.9	0.44	0.0012	0.001	1.06	2004	35.80	5.80	0.41	0.001	0.03	0.000	Permeation
DE	Kent	10001	2501012012	6.31	0.0185	0.019	27.0	30.9	4.29	0.0115	0.013	1.06	2004	35.80	5.80	4.04	0.012	0.25	0.001	Diurnal
DE	Kent	10001	2501012015	13.32	0.0392	0.039	27.0	30.9	9.07	0.0243	0.027	1.06	2004	35.80	5.80	8.54	0.025	0.53	0.002	Spillage
DE	Kent	10001	2501012016	3.95	0.0116	0.012	27.0	30.9	2.69	0.0072	0.008	1.06	2004	35.80	5.80	2.53	0.007	0.16	0.000	Transport
DE	New Castle	10003	2501011010	8.12	0.0239	0.024	27.0	30.9	5.43	0.0146	0.016	1.04	2004	35.80	5.80	5.12	0.015	0.32	0.001	Vapor Losses
DE	New Castle	10003	2501011011	43.22	0.1271	0.127	27.0	30.9	28.94	0.0778	0.085	1.04	2004	35.80	5.80	27.26	0.080	1.68	0.005	Permeation
DE	New Castle	10003	2501011012	373.28	1.0973	1.097	27.0	30.9	249.93	0.6718	0.735	1.04	2004	35.80	5.80	235.44	0.692	14.50	0.043	Diurnal
DE	New Castle	10003	2501011015	38.46	0.1131	0.113	27.0	30.9	25.75	0.0692	0.076	1.04	2004	35.80	5.80	24.26	0.071	1.49	0.004	Spillage
DE	New Castle	10003	2501011016	20.48	0.0602	0.060	27.0	30.9	13.72	0.0368	0.040	1.04	2004	35.80	5.80	12.92	0.038	0.80	0.002	Transport
DE	New Castle	10003	2501012010	23.58	0.0693	0.069	27.0	30.9	15.79	0.0424	0.046	1.04	2004	35.80	5.80	14.87	0.044	0.92	0.003	Vapor Losses
DE	New Castle	10003	2501012011	1.97	0.0058	0.006	27.0	30.9	1.32	0.0035	0.004	1.04	2004	35.80	5.80	1.24	0.004	0.08	0.000	Permeation
DE	New Castle	10003	2501012012	19.19	0.0564	0.056	27.0	30.9	12.85	0.0345	0.038	1.04	2004	35.80	5.80	12.10	0.036	0.75	0.002	Diurnal
DE	New Castle	10003	2501012015	112.46	0.3306	0.331	27.0	30.9	75.30	0.2024	0.221	1.04	2004	35.80	5.80	70.93	0.209	4.37	0.013	Spillage
DE	New Castle	10003	2501012016	12.01	0.0353	0.035	27.0	30.9	8.04	0.0216	0.024	1.04	2004	35.80	5.80	7.58	0.022	0.47	0.001	Transport
DE	Sussex	10005	2501011010	5.72	0.0168	0.017	27.0	30.9	4.13	0.0111	0.012	1.13	2004	35.80	5.80	3.89	0.011	0.24	0.001	Vapor Losses

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descripti
DE	Sussex	10005	2501011011	14.53	0.0427	0.043	27.0	30.9	10.50	0.0282	0.031	1.13	2004	35.80	5.80	9.90	0.029	0.61	0.002	Permeation
DE	Sussex	10005	2501011012	125.52	0.3690	0.369	27.0	30.9	90.72	0.2438	0.267	1.13	2004	35.80	5.80	85.46	0.251	5.26	0.015	Diurnal
DE	Sussex	10005	2501011015	19.32	0.0568	0.057	27.0	30.9	13.97	0.0376	0.041	1.13	2004	35.80	5.80	13.16	0.039	0.81	0.002	Spillage
DE	Sussex	10005	2501011016	6.89	0.0202	0.020	27.0	30.9	4.98	0.0134	0.015	1.13	2004	35.80	5.80	4.69	0.014	0.29	0.001	Transport
DE	Sussex	10005	2501012010	5.60	0.0165	0.017	27.0	30.9	4.05	0.0109	0.012	1.13	2004	35.80	5.80	3.81	0.011	0.23	0.001	Vapor Losses
DE	Sussex	10005	2501012011	1.02	0.0030	0.003	27.0	30.9	0.74	0.0020	0.002	1.13	2004	35.80	5.80	0.69	0.002	0.04	0.000	Permeation
DE	Sussex	10005	2501012012	9.96	0.0293	0.029	27.0	30.9	7.20	0.0193	0.021	1.13	2004	35.80	5.80	6.78	0.020	0.42	0.001	Diurnal
DE	Sussex	10005	2501012015	26.31	0.0774	0.077	27.0	30.9	19.02	0.0511	0.056	1.13	2004	35.80	5.80	17.92	0.053	1.10	0.003	Spillage
DE	Sussex	10005	2501012016	6.24	0.0183	0.018	27.0	30.9	4.51	0.0121	0.013	1.13	2004	35.80	5.80	4.25	0.012	0.26	0.001	Transport
DC	Washington	11001	2501011011	54.37	Missing	0.185	Missing	30.9	37.76	Missing	0.128	1.08	2004	35.80	5.80	35.57	0.121	2.19	0.007	Permeation
DC	Washington	11001	2501011012	469.50	Missing	1.594	Missing	30.9	326.10	Missing	1.107	1.08	2004	35.80	5.80	307.19	1.043	18.91	0.064	Diurnal
DC	Washington	11001	2501011016	25.77	Missing	0.087	Missing	30.9	17.90	Missing	0.061	1.08	2004	35.80	5.80	16.86	0.057	1.04	0.004	Transport
DC	Washington	11001	2501012011	2.42	Missing	0.008	Missing	30.9	1.68	Missing	0.006	1.08	2004	35.80	5.80	1.58	0.005	0.10	0.000	Permeation
DC	Washington	11001	2501012012	31.51	Missing	0.107	Missing	30.9	21.88	Missing	0.074	1.08	2004	35.80	5.80	20.61	0.070	1.27	0.004	Diurnal
DC	Washington	11001	2501012016	477.85	Missing	1.623	Missing	30.9	331.90	Missing	1.127	1.08	2004	35.80	5.80	312.65	1.062	19.25	0.065	Transport
ME	Androscoggin	23001	2501060300	107.64	0.2949	0.295	Missing	24.9	71.79	0.1798	0.197	1.04	2004	35.80	5.80	67.62	0.185	4.16	0.011	Total
ME	Aroostook	23003	2501060300	74.83	0.2050	0.205	Missing	24.9	49.90	0.1250	0.137	1.04	2004	35.80	5.80	47.01	0.129	2.89	0.008	Total
ME	Cumberland	23005	2501060300	276.05	0.7563	0.756	Missing	24.9	184.11	0.4612	0.504	1.04	2004	35.80	5.80	173.43	0.475	10.68	0.029	Total
ME	Franklin	23007	2501060300	30.41	0.0833	0.083	Missing	24.9	20.28	0.0508	0.056	1.04	2004	35.80	5.80	19.11	0.052	1.18	0.003	Total
ME	Hancock	23009	2501060300	53.44	0.1464	0.146	Missing	24.9	35.64	0.0893	0.098	1.04	2004	35.80	5.80	33.57	0.092	2.07	0.006	Total
ME	Kennebec	23011	2501060300	121.37	0.3325	0.333	Missing	24.9	80.94	0.2027	0.222	1.04	2004	35.80	5.80	76.25	0.209	4.69	0.013	Total
ME	Knox	23013	2501060300	41.45	0.1136	0.114	Missing	24.9	27.64	0.0692	0.076	1.04	2004	35.80	5.80	26.04	0.071	1.60	0.004	Total
ME	Lincoln	23015	2501060300	35.27	0.0966	0.097	Missing	24.9	23.52	0.0589	0.064	1.04	2004	35.80	5.80	22.16	0.061	1.36	0.004	Total
ME	Oxford	23017	2501060300	57.12	0.1565	0.157	Missing	24.9	38.10	0.0954	0.104	1.04	2004	35.80	5.80	35.89	0.098	2.21	0.006	Total
ME	Penobscot	23019	2501060300	150.26	0.4117	0.412	Missing	24.9	100.22	0.2511	0.275	1.04	2004	35.80	5.80	94.40	0.259	5.81	0.016	Total
ME	Piscataquis	23021	2501060300	17.66	0.0484	0.048	Missing	24.9	11.77	0.0295	0.032	1.04	2004	35.80	5.80	11.09	0.030	0.68	0.002	Total
ME	Sagadahoc	23023	2501060300	36.82	0.1009	0.101	Missing	24.9	24.55	0.0615	0.067	1.04	2004	35.80	5.80	23.13	0.063	1.42	0.004	Total
ME	Somerset	23025	2501060300	52.21	0.1430	0.143	Missing	24.9	34.82	0.0872	0.095	1.04	2004	35.80	5.80	32.80	0.090	2.02	0.006	Total
ME	Waldo	23027	2501060300	38.59	0.1057	0.106	Missing	24.9	25.73	0.0645	0.070	1.04	2004	35.80	5.80	24.24	0.066	1.49	0.004	Total
ME	Washington	23029	2501060300	34.18	0.0936	0.094	Missing	24.9	22.79	0.0571	0.062	1.04	2004	35.80	5.80	21.47	0.059	1.32	0.004	Total
ME	York	23031	2501060300	200.18	0.5484	0.548	Missing	24.9	133.51	0.3459	0.366	1.04	2004	35.80	5.80	125.77	0.345	7.74	0.021	Total
MD	Allegany	24001	2501011011	6.62	0.0180	0.018	Missing	30.9	3.76	0.0090	0.010	0.98	2003	42.30	5.80	3.54	0.010	0.22	0.001	Permeation
MD	Allegany	24001	2501011012	57.17	0.1570	0.157	Missing	30.9	32.45	0.0791	0.089	0.98	2003	42.30	5.80	30.57	0.084	1.88	0.005	Diurnal
MD	Allegany	24001	2501011016	3.14	0.0090	0.009	Missing	30.9	1.78	0.0045	0.005	0.98	2003	42.30	5.80	1.68	0.005	0.10	0.000	Transport
MD	Allegany	24001	2501012011	0.64	0.0020	0.002	Missing	30.9	0.36	0.0010	0.001	0.98	2003	42.30	5.80	0.34	0.001	0.02	0.000	Permeation
MD	Allegany	24001	2501012012	8.35	0.0230	0.023	Missing	30.9	4.74	0.0116	0.013	0.98	2003	42.30	5.80	4.47	0.012	0.28	0.001	Diurnal
MD	Allegany	24001	2501012016	126.70	0.3470	0.347	Missing	30.9	71.93	0.1748	0.197	0.98	2003	42.30	5.80	67.76	0.186	4.17	0.011	Transport
MD	Anne Arundel	24003	2501011011	41.08	0.1130	0.113	Missing	30.9	24.76	0.0605	0.068	1.04	2003	42.30	5.80	23.33	0.064	1.44	0.004	Permeation
MD	Anne Arundel	24003	2501011012	354.77	0.9720	0.972	Missing	30.9	213.84	0.5199	0.586	1.04	2003	42.30	5.80	201.43	0.552	12.40	0.034	Diurnal
MD	Anne Arundel	24003	2501011016	19.47	0.0530	0.053	Missing	30.9	11.74	0.0283	0.032	1.04	2003	42.30	5.80	11.05	0.030	0.68	0.002	Transport
MD	Anne Arundel	24003	2501012011	4.89	0.0130	0.013	Missing	30.9	2.94	0.0070	0.008	1.04	2003	42.30	5.80	2.77	0.007	0.17	0.000	Permeation
MD	Anne Arundel	24003	2501012012	63.64	0.1740	0.174	Missing	30.9	38.36	0.0931	0.105	1.04	2003	42.30	5.80	36.14	0.099	2.22	0.006	Diurnal
MD	Anne Arundel	24003	2501012016	965.25	2.6450	2.645	Missing	30.9	581.80	1.4147	1.594	1.04	2003	42.30	5.80	548.06	1.502	33.74	0.092	Transport
MD	Baltimore	24005	2501011011	68.39	0.1870	0.187	Missing	30.9	41.04	0.0996	0.112	1.04	2003	42.30	5.80	38.66	0.106	2.38	0.007	Permeation
MD	Baltimore	24005	2501011012	590.61	1.6180	1.618	Missing	30.9	354.40	0.8615	0.971	1.04	2003	42.30	5.80	333.85	0.915	20.56	0.056	Diurnal
MD	Baltimore	24005	2501011016	32.41	0.0890	0.089	Missing	30.9	19.45	0.0474	0.053	1.04	2003	42.30	5.80	18.32	0.050	1.13	0.003	Transport
MD	Baltimore	24005	2501012011	6.06	0.0170	0.017	Missing	30.9	3.64	0.0090	0.010	1.04	2003	42.30	5.80	3.43	0.010	0.21	0.001	Permeation
MD	Baltimore	24005	2501012012	78.96	0.2160	0.216	Missing	30.9	47.38	0.1150	0.130	1.04	2003	42.30	5.80	44.64	0.122	2.75	0.008	Diurnal
MD	Baltimore	24005	2501012016	1,197.62	3.2810	3.281	Missing	30.9	718.65	1.7470	1.969	1.04	2003	42.30	5.80	676.96	1.855	41.68	0.114	Transport
MD	Calvert	24009	2501011011	6.07	0.0170	0.017	Missing	30.9	4.02	0.0100	0.011	1.15	2003	42.30	5.80	3.79	0.011	0.23	0.001	Permeation
MD	Calvert	24009	2501011012	52.43	0.1440	0.144	Missing	30.9	34.71	0.0846	0.095	1.15	2003	42.30	5.80	32.70	0.090	2.01	0.006	Diurnal
MD	Calvert	24009	2501011016	2.88	0.0080	0.008	Missing	30.9	1.91	0.0047	0.005	1.15	2003	42.30	5.80	1.79	0.005	0.11	0.000	Transport
MD	Calvert	24009	2501012011	0.83	0.0020	0.002	Missing	30.9	0.55	0.0011	0.001	1.15	2003	42.30	5.80	0.51	0.001	0.03	0.000	Permeation
MD	Calvert	24009	2501012012	10.75	0.0290	0.029	Missing	30.9	7.12	0.0171	0.019	1.15	2003	42.30	5.80	6.70	0.018	0.41	0.001	Diurnal
MD	Calvert	24009	2501012016	163.01	0.4470	0.447	Missing	30.9	107.92	0.2626	0.296	1.15	2003	42.30	5.80	101.66	0.279	6.26	0.017	Transport
MD	Caroline	24011	2501011011	2.56	0.0070	0.007	Missing	30.9	1.57	0.0038	0.004	1.06	2003	42.30	5.80	1.48	0.004	0.09	0.000	Permeation
MD	Caroline	24011	2501011012	22.09	0.0610	0.061	Missing	30.9	13.54	0.0332	0.037	1.06	2003	42.30	5.80	12.75	0.035	0.79	0.002	Diurnal
MD	Caroline	24011	2501011016	1.21	0.0030	0.003	Missing	30.9	0.74	0.0016	0.002	1.06	2003	42.30	5.80	0.70	0.002	0.04	0.000	Transport
MD	Caroline	24011	2501012011	0.42	0.0010	0.001	Missing	30.9	0.26	0.0006	0.001	1.06	2003	42.30	5.80	0.24	0.001	0.01	0.000	Permeation

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descripti
MD	Caroline	24011	2501012012	5.44	0.0150	0.015	Missing	30.9	3.33	0.0082	0.009	1.06	2003	42.30	5.80	3.14	0.009	0.19	0.001	Diurnal
MD	Caroline	24011	2501012016	82.46	0.2260	0.226	Missing	30.9	50.53	0.1229	0.138	1.06	2003	42.30	5.80	47.60	0.130	2.93	0.008	Transport
MD	Carroll	24013	2501011011	12.40	0.0340	0.034	Missing	30.9	7.99	0.0194	0.022	1.12	2003	42.30	5.80	7.53	0.021	0.46	0.001	Permeation
MD	Carroll	24013	2501011012	107.06	0.2930	0.293	Missing	30.9	69.01	0.1676	0.189	1.12	2003	42.30	5.80	65.01	0.178	4.00	0.011	Diurnal
MD	Carroll	24013	2501011016	5.88	0.0160	0.016	Missing	30.9	3.79	0.0092	0.010	1.12	2003	42.30	5.80	3.57	0.010	0.22	0.001	Transport
MD	Carroll	24013	2501012011	2.20	0.0060	0.006	Missing	30.9	1.42	0.0034	0.004	1.12	2003	42.30	5.80	1.33	0.004	0.08	0.000	Permeation
MD	Carroll	24013	2501012012	28.61	0.0780	0.078	Missing	30.9	18.44	0.0446	0.050	1.12	2003	42.30	5.80	17.37	0.047	1.07	0.003	Diurnal
MD	Carroll	24013	2501012016	433.88	1.1890	1.189	Missing	30.9	279.69	0.6801	0.766	1.12	2003	42.30	5.80	263.47	0.722	16.22	0.044	Transport
MD	Cecil	24015	2501011011	7.39	0.0200	0.020	Missing	30.9	4.73	0.0113	0.013	1.11	2003	42.30	5.80	4.45	0.012	0.27	0.001	Permeation
MD	Cecil	24015	2501011012	63.84	0.1750	0.175	Missing	30.9	40.81	0.0992	0.112	1.11	2003	42.30	5.80	38.45	0.105	2.37	0.006	Diurnal
MD	Cecil	24015	2501011016	3.50	0.0100	0.010	Missing	30.9	2.24	0.0057	0.006	1.11	2003	42.30	5.80	2.11	0.006	0.13	0.000	Transport
MD	Cecil	24015	2501012011	0.86	0.0020	0.002	Missing	30.9	0.55	0.0011	0.001	1.11	2003	42.30	5.80	0.52	0.001	0.03	0.000	Permeation
MD	Cecil	24015	2501012012	11.16	0.0310	0.031	Missing	30.9	7.14	0.0176	0.020	1.11	2003	42.30	5.80	6.72	0.019	0.41	0.001	Diurnal
MD	Cecil	24015	2501012016	169.29	0.4640	0.464	Missing	30.9	108.23	0.2632	0.297	1.11	2003	42.30	5.80	101.95	0.279	6.28	0.017	Transport
MD	Charles	24017	2501011011	9.94	0.0270	0.027	Missing	30.9	6.72	0.0162	0.018	1.17	2003	42.30	5.80	6.33	0.017	0.39	0.001	Permeation
MD	Charles	24017	2501011012	85.87	0.2350	0.235	Missing	30.9	58.02	0.1409	0.159	1.17	2003	42.30	5.80	54.66	0.150	3.37	0.009	Diurnal
MD	Charles	24017	2501011016	4.71	0.0130	0.013	Missing	30.9	3.18	0.0078	0.009	1.17	2003	42.30	5.80	3.00	0.008	0.18	0.001	Transport
MD	Charles	24017	2501012011	1.04	0.0030	0.003	Missing	30.9	0.70	0.0018	0.002	1.17	2003	42.30	5.80	0.66	0.002	0.04	0.000	Permeation
MD	Charles	24017	2501012012	13.59	0.0370	0.037	Missing	30.9	9.18	0.0222	0.025	1.17	2003	42.30	5.80	8.65	0.024	0.53	0.001	Diurnal
MD	Charles	24017	2501012016	206.16	0.5650	0.565	Missing	30.9	139.30	0.3388	0.382	1.17	2003	42.30	5.80	131.22	0.360	8.08	0.022	Transport
MD	Dorchester	24019	2501011011	2.91	0.0080	0.008	Missing	30.9	1.74	0.0042	0.005	1.03	2003	42.30	5.80	1.64	0.004	0.10	0.000	Permeation
MD	Dorchester	24019	2501011012	25.13	0.0690	0.069	Missing	30.9	15.00	0.0366	0.041	1.03	2003	42.30	5.80	14.13	0.039	0.87	0.002	Diurnal
MD	Dorchester	24019	2501011016	1.38	0.0040	0.004	Missing	30.9	0.82	0.0022	0.002	1.03	2003	42.30	5.80	0.78	0.002	0.05	0.000	Transport
MD	Dorchester	24019	2501012011	0.35	0.0010	0.001	Missing	30.9	0.21	0.0005	0.001	1.03	2003	42.30	5.80	0.20	0.001	0.01	0.000	Permeation
MD	Dorchester	24019	2501012012	4.54	0.0120	0.012	Missing	30.9	2.71	0.0064	0.007	1.03	2003	42.30	5.80	2.55	0.007	0.16	0.000	Diurnal
MD	Dorchester	24019	2501012016	68.81	0.1890	0.189	Missing	30.9	41.07	0.1001	0.113	1.03	2003	42.30	5.80	38.69	0.106	2.38	0.007	Transport
MD	Frederick	24021	2501011011	16.44	0.0450	0.045	Missing	30.9	11.02	0.0267	0.030	1.16	2003	42.30	5.80	10.38	0.028	0.64	0.002	Permeation
MD	Frederick	24021	2501011012	141.97	0.3890	0.389	Missing	30.9	95.15	0.2313	0.261	1.16	2003	42.30	5.80	89.63	0.246	5.52	0.015	Diurnal
MD	Frederick	24021	2501011016	7.79	0.0210	0.021	Missing	30.9	5.22	0.0125	0.014	1.16	2003	42.30	5.80	4.92	0.013	0.30	0.001	Transport
MD	Frederick	24021	2501012011	2.37	0.0060	0.006	Missing	30.9	1.59	0.0036	0.004	1.16	2003	42.30	5.80	1.50	0.004	0.09	0.000	Permeation
MD	Frederick	24021	2501012012	30.89	0.0850	0.085	Missing	30.9	20.71	0.0506	0.057	1.16	2003	42.30	5.80	19.50	0.054	1.20	0.003	Diurnal
MD	Frederick	24021	2501012016	468.56	1.2840	1.284	Missing	30.9	314.03	0.7636	0.861	1.16	2003	42.30	5.80	295.82	0.811	18.21	0.050	Transport
MD	Garrett	24023	2501011011	2.71	0.0070	0.007	Missing	30.9	1.61	0.0037	0.004	1.03	2003	42.30	5.80	1.52	0.004	0.09	0.000	Permeation
MD	Garrett	24023	2501011012	23.41	0.0640	0.064	Missing	30.9	13.90	0.0337	0.038	1.03	2003	42.30	5.80	13.09	0.036	0.81	0.002	Diurnal
MD	Garrett	24023	2501011016	1.29	0.0040	0.004	Missing	30.9	0.76	0.0021	0.002	1.03	2003	42.30	5.80	0.72	0.002	0.04	0.000	Transport
MD	Garrett	24023	2501012011	0.51	0.0010	0.001	Missing	30.9	0.30	0.0005	0.001	1.03	2003	42.30	5.80	0.29	0.001	0.02	0.000	Permeation
MD	Garrett	24023	2501012012	6.66	0.0180	0.018	Missing	30.9	3.95	0.0095	0.011	1.03	2003	42.30	5.80	3.72	0.010	0.23	0.001	Diurnal
MD	Garrett	24023	2501012016	101.03	0.2770	0.277	Missing	30.9	59.98	0.1459	0.164	1.03	2003	42.30	5.80	56.50	0.155	3.48	0.010	Transport
MD	Harford	24025	2501011011	18.66	0.0510	0.051	Missing	30.9	12.00	0.0291	0.033	1.11	2003	42.30	5.80	11.30	0.031	0.70	0.002	Permeation
MD	Harford	24025	2501011012	161.12	0.4410	0.441	Missing	30.9	103.62	0.2517	0.284	1.11	2003	42.30	5.80	97.61	0.267	6.01	0.016	Diurnal
MD	Harford	24025	2501011016	8.84	0.0240	0.024	Missing	30.9	5.69	0.0137	0.015	1.11	2003	42.30	5.80	5.36	0.015	0.33	0.001	Transport
MD	Harford	24025	2501012011	2.28	0.0060	0.006	Missing	30.9	1.46	0.0034	0.004	1.11	2003	42.30	5.80	1.38	0.004	0.08	0.000	Permeation
MD	Harford	24025	2501012012	29.67	0.0810	0.081	Missing	30.9	19.08	0.0463	0.052	1.11	2003	42.30	5.80	17.98	0.049	1.11	0.003	Diurnal
MD	Harford	24025	2501012016	450.00	1.2330	1.233	Missing	30.9	289.42	0.7037	0.793	1.11	2003	42.30	5.80	272.63	0.747	16.79	0.046	Transport
MD	Howard	24027	2501011011	20.78	0.0570	0.057	Missing	30.9	13.35	0.0325	0.037	1.11	2003	42.30	5.80	12.58	0.035	0.77	0.002	Permeation
MD	Howard	24027	2501011012	179.43	0.4920	0.492	Missing	30.9	115.31	0.2806	0.316	1.11	2003	42.30	5.80	108.62	0.298	6.69	0.018	Diurnal
MD	Howard	24027	2501011016	9.85	0.0270	0.027	Missing	30.9	6.33	0.0154	0.017	1.11	2003	42.30	5.80	5.96	0.016	0.37	0.001	Transport
MD	Howard	24027	2501012011	2.48	0.0070	0.007	Missing	30.9	1.59	0.0040	0.004	1.11	2003	42.30	5.80	1.50	0.004	0.09	0.000	Permeation
MD	Howard	24027	2501012012	32.25	0.0880	0.088	Missing	30.9	20.72	0.0502	0.057	1.11	2003	42.30	5.80	19.52	0.053	1.20	0.003	Diurnal
MD	Howard	24027	2501012016	489.04	1.3400	1.340	Missing	30.9	314.29	0.7641	0.861	1.11	2003	42.30	5.80	296.06	0.811	18.23	0.050	Transport
MD	Kent	24029	2501011011	1.83	0.0050	0.005	Missing	30.9	1.14	0.0028	0.003	1.08	2003	42.30	5.80	1.07	0.003	0.07	0.000	Permeation
MD	Kent	24029	2501011012	15.76	0.0430	0.043	Missing	30.9	9.82	0.0238	0.027	1.08	2003	42.30	5.80	9.25	0.025	0.57	0.002	Diurnal
MD	Kent	24029	2501011016	0.87	0.0020	0.002	Missing	30.9	0.54	0.0011	0.001	1.08	2003	42.30	5.80	0.51	0.001	0.03	0.000	Transport
MD	Kent	24029	2501012011	0.31	0.0010	0.001	Missing	30.9	0.19	0.0006	0.001	1.08	2003	42.30	5.80	0.18	0.001	0.01	0.000	Permeation
MD	Kent	24029	2501012012	4.05	0.0110	0.011	Missing	30.9	2.52	0.0061	0.007	1.08	2003	42.30	5.80	2.38	0.006	0.15	0.000	Diurnal
MD	Kent	24029	2501012016	61.44	0.1680	0.168	Missing	30.9	38.28	0.0929	0.105	1.08	2003	42.30	5.80	36.06	0.099	2.22	0.006	Transport
MD	Montgomery	24031	2501011011	74.65	0.2050	0.205	Missing	30.9	47.26	0.1152	0.130	1.10	2003	42.30	5.80	44.52	0.122	2.74	0.008	Permeation
MD	Montgomery	24031	2501011012	644.63	1.7660	1.766	Missing	30.9	408.13	0.9922	1.118	1.10	2003	42.30	5.80	384.46	1.053	23.67	0.065	Diurnal
MD	Montgomery	24031	2501011016	35.38	0.0970	0.097	Missing	30.9	22.40	0.0545	0.061	1.10	2003	42.30	5.80	21.10	0.058	1.30	0.004	Transport

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descripti
MD	Montgomery	24031	2501012011	7.21	0.0200	0.020	Missing	30.9	4.56	0.0113	0.013	1.10	2003	42.30	5.80	4.30	0.012	0.26	0.001	Permeation
MD	Montgomery	24031	2501012012	93.89	0.2570	0.257	Missing	30.9	59.44	0.1443	0.163	1.10	2003	42.30	5.80	56.00	0.153	3.45	0.009	Diurnal
MD	Montgomery	24031	2501012016	1,423.98	3.9010	3.901	Missing	30.9	901.56	2.1916	2.470	1.10	2003	42.30	5.80	849.27	2.327	52.29	0.143	Transport
MD	Prince Georges	24033	2501011011	65.56	0.1800	0.180	Missing	30.9	39.78	0.0970	0.109	1.05	2003	42.30	5.80	37.48	0.103	2.31	0.006	Permeation
MD	Prince Georges	24033	2501011012	566.10	1.5510	1.551	Missing	30.9	343.55	0.8352	0.941	1.05	2003	42.30	5.80	323.62	0.887	19.93	0.055	Diurnal
MD	Prince Georges	24033	2501011016	31.07	0.0850	0.085	Missing	30.9	18.85	0.0458	0.052	1.05	2003	42.30	5.80	17.76	0.049	1.09	0.003	Transport
MD	Prince Georges	24033	2501012011	4.89	0.0130	0.013	Missing	30.9	2.96	0.0070	0.008	1.05	2003	42.30	5.80	2.79	0.007	0.17	0.000	Permeation
MD	Prince Georges	24033	2501012012	63.64	0.1740	0.174	Missing	30.9	38.62	0.0937	0.106	1.05	2003	42.30	5.80	36.38	0.099	2.24	0.006	Diurnal
MD	Prince Georges	24033	2501012016	965.25	2.6450	2.645	Missing	30.9	585.78	1.4243	1.605	1.05	2003	42.30	5.80	551.81	1.512	33.98	0.093	Transport
MD	Queen Annes	24035	2501011011	3.67	0.0100	0.010	Missing	30.9	2.41	0.0058	0.007	1.14	2003	42.30	5.80	2.27	0.006	0.14	0.000	Permeation
MD	Queen Annes	24035	2501011012	31.69	0.0870	0.087	Missing	30.9	20.84	0.0508	0.057	1.14	2003	42.30	5.80	19.63	0.054	1.21	0.003	Diurnal
MD	Queen Annes	24035	2501011016	1.74	0.0050	0.005	Missing	30.9	1.14	0.0029	0.003	1.14	2003	42.30	5.80	1.08	0.003	0.07	0.000	Transport
MD	Queen Annes	24035	2501012011	0.71	0.0020	0.002	Missing	30.9	0.46	0.0011	0.001	1.14	2003	42.30	5.80	0.44	0.001	0.03	0.000	Permeation
MD	Queen Annes	24035	2501012012	9.18	0.0250	0.025	Missing	30.9	6.04	0.0146	0.016	1.14	2003	42.30	5.80	5.69	0.015	0.35	0.001	Diurnal
MD	Queen Annes	24035	2501012016	139.26	0.3820	0.382	Missing	30.9	91.56	0.2229	0.251	1.14	2003	42.30	5.80	86.25	0.237	5.31	0.015	Transport
MD	St. Marys	24037	2501011011	6.90	0.0190	0.019	Missing	30.9	4.48	0.0110	0.012	1.12	2003	42.30	5.80	4.22	0.012	0.26	0.001	Permeation
MD	St. Marys	24037	2501011012	59.61	0.1630	0.163	Missing	30.9	38.68	0.0939	0.106	1.12	2003	42.30	5.80	36.44	0.100	2.24	0.006	Diurnal
MD	St. Marys	24037	2501011016	3.27	0.0090	0.009	Missing	30.9	2.12	0.0052	0.006	1.12	2003	42.30	5.80	2.00	0.006	0.12	0.000	Transport
MD	St. Marys	24037	2501012011	0.74	0.0020	0.002	Missing	30.9	0.48	0.0011	0.001	1.12	2003	42.30	5.80	0.45	0.001	0.03	0.000	Permeation
MD	St. Marys	24037	2501012012	9.58	0.0260	0.026	Missing	30.9	6.21	0.0150	0.017	1.12	2003	42.30	5.80	5.85	0.016	0.36	0.001	Diurnal
MD	St. Marys	24037	2501012016	145.27	0.3980	0.398	Missing	30.9	94.26	0.2292	0.258	1.12	2003	42.30	5.80	88.79	0.243	5.47	0.015	Transport
MD	Somerset	24039	2501011011	2.16	0.0060	0.006	Missing	30.9	1.27	0.0032	0.004	1.02	2003	42.30	5.80	1.20	0.003	0.07	0.000	Permeation
MD	Somerset	24039	2501011012	18.63	0.0510	0.051	Missing	30.9	11.00	0.0267	0.030	1.02	2003	42.30	5.80	10.36	0.028	0.64	0.002	Diurnal
MD	Somerset	24039	2501011016	1.02	0.0030	0.003	Missing	30.9	0.60	0.0016	0.002	1.02	2003	42.30	5.80	0.57	0.002	0.03	0.000	Transport
MD	Somerset	24039	2501012011	0.23	0.0010	0.001	Missing	30.9	0.14	0.0005	0.001	1.02	2003	42.30	5.80	0.13	0.001	0.01	0.000	Permeation
MD	Somerset	24039	2501012012	2.99	0.0080	0.008	Missing	30.9	1.76	0.0042	0.005	1.02	2003	42.30	5.80	1.66	0.004	0.10	0.000	Diurnal
MD	Somerset	24039	2501012016	45.33	0.1240	0.124	Missing	30.9	26.75	0.0650	0.073	1.02	2003	42.30	5.80	25.20	0.069	1.55	0.004	Transport
MD	Talbot	24041	2501011011	3.37	0.0090	0.009	Missing	30.9	2.08	0.0049	0.006	1.07	2003	42.30	5.80	1.96	0.005	0.12	0.000	Permeation
MD	Talbot	24041	2501011012	29.06	0.0800	0.080	Missing	30.9	17.96	0.0439	0.049	1.07	2003	42.30	5.80	16.92	0.047	1.04	0.003	Diurnal
MD	Talbot	24041	2501011016	1.60	0.0040	0.004	Missing	30.9	0.99	0.0022	0.002	1.07	2003	42.30	5.80	0.93	0.002	0.06	0.000	Transport
MD	Talbot	24041	2501012011	0.63	0.0020	0.002	Missing	30.9	0.39	0.0011	0.001	1.07	2003	42.30	5.80	0.37	0.001	0.02	0.000	Permeation
MD	Talbot	24041	2501012012	8.23	0.0230	0.023	Missing	30.9	5.09	0.0126	0.014	1.07	2003	42.30	5.80	4.79	0.013	0.29	0.001	Diurnal
MD	Talbot	24041	2501012016	124.79	0.3420	0.342	Missing	30.9	77.12	0.1876	0.211	1.07	2003	42.30	5.80	72.65	0.199	4.47	0.012	Transport
MD	Washington	24043	2501011011	11.58	0.0320	0.032	Missing	30.9	7.13	0.0175	0.020	1.07	2003	42.30	5.80	6.72	0.019	0.41	0.001	Permeation
MD	Washington	24043	2501011012	100.01	0.2740	0.274	Missing	30.9	61.59	0.1497	0.169	1.07	2003	42.30	5.80	58.02	0.159	3.57	0.010	Diurnal
MD	Washington	24043	2501011016	5.49	0.0150	0.015	Missing	30.9	3.38	0.0082	0.009	1.07	2003	42.30	5.80	3.18	0.009	0.20	0.001	Transport
MD	Washington	24043	2501012011	1.36	0.0040	0.004	Missing	30.9	0.84	0.0022	0.002	1.07	2003	42.30	5.80	0.79	0.002	0.05	0.000	Permeation
MD	Washington	24043	2501012012	17.75	0.0490	0.049	Missing	30.9	10.93	0.0267	0.030	1.07	2003	42.30	5.80	10.30	0.028	0.63	0.002	Diurnal
MD	Washington	24043	2501012016	269.23	0.7380	0.738	Missing	30.9	165.81	0.4033	0.455	1.07	2003	42.30	5.80	156.20	0.428	9.62	0.026	Transport
MD	Wicomico	24045	2501011011	7.53	0.0210	0.021	Missing	30.9	4.70	0.0116	0.013	1.08	2003	42.30	5.80	4.43	0.012	0.27	0.001	Permeation
MD	Wicomico	24045	2501011012	65.02	0.1780	0.178	Missing	30.9	40.59	0.0986	0.111	1.08	2003	42.30	5.80	38.23	0.105	2.35	0.006	Diurnal
MD	Wicomico	24045	2501011016	3.57	0.0100	0.010	Missing	30.9	2.23	0.0055	0.006	1.08	2003	42.30	5.80	2.10	0.006	0.13	0.000	Transport
MD	Wicomico	24045	2501012011	1.02	0.0030	0.003	Missing	30.9	0.63	0.0016	0.002	1.08	2003	42.30	5.80	0.60	0.002	0.04	0.000	Permeation
MD	Wicomico	24045	2501012012	13.25	0.0360	0.036	Missing	30.9	8.27	0.0199	0.022	1.08	2003	42.30	5.80	7.79	0.021	0.48	0.001	Diurnal
MD	Wicomico	24045	2501012016	200.97	0.5510	0.551	Missing	30.9	125.45	0.3052	0.344	1.08	2003	42.30	5.80	118.17	0.324	7.28	0.020	Transport
MD	Worcester	24047	2501011011	4.76	0.0130	0.013	Missing	30.9	3.02	0.0073	0.008	1.10	2003	42.30	5.80	2.84	0.008	0.17	0.000	Permeation
MD	Worcester	24047	2501011012	41.09	0.1130	0.113	Missing	30.9	26.04	0.0635	0.072	1.10	2003	42.30	5.80	24.53	0.067	1.51	0.004	Diurnal
MD	Worcester	24047	2501011016	2.26	0.0060	0.006	Missing	30.9	1.43	0.0034	0.004	1.10	2003	42.30	5.80	1.35	0.004	0.08	0.000	Transport
MD	Worcester	24047	2501012011	0.75	0.0020	0.002	Missing	30.9	0.47	0.0011	0.001	1.10	2003	42.30	5.80	0.45	0.001	0.03	0.000	Permeation
MD	Worcester	24047	2501012012	9.74	0.0270	0.027	Missing	30.9	6.17	0.0152	0.017	1.10	2003	42.30	5.80	5.82	0.016	0.36	0.001	Diurnal
MD	Worcester	24047	2501012016	147.72	0.4050	0.405	Missing	30.9	93.63	0.2278	0.257	1.10	2003	42.30	5.80	88.20	0.242	5.43	0.015	Transport
MD	Baltimore City	24510	2501011011	58.01	0.1590	0.159	Missing	30.9	33.08	0.0805	0.091	0.99	2003	42.30	5.80	31.16	0.085	1.92	0.005	Permeation
MD	Baltimore City	24510	2501011012	500.97	1.3730	1.373	Missing	30.9	285.69	0.6948	0.783	0.99	2003	42.30	5.80	269.12	0.738	16.57	0.045	Diurnal
MD	Baltimore City	24510	2501011016	27.49	0.0750	0.075	Missing	30.9	15.68	0.0379	0.043	0.99	2003	42.30	5.80	14.77	0.040	0.91	0.002	Transport
MD	Baltimore City	24510	2501012011	3.84	0.0110	0.011	Missing	30.9	2.19	0.0056	0.006	0.99	2003	42.30	5.80	2.06	0.006	0.13	0.000	Permeation
MD	Baltimore City	24510	2501012012	50.07	0.1370	0.137	Missing	30.9	28.55	0.0693	0.078	0.99	2003	42.30	5.80	26.90	0.074	1.66	0.005	Diurnal
MD	Baltimore City	24510	2501012016	759.37	2.0800	2.080	Missing	30.9	433.05	1.0525	1.186	0.99	2003	42.30	5.80	407.93	1.117	25.12	0.069	Transport
MA	Barnstable	25001	2501011000	233.30	0.6400	0.640	Missing		259.79	0.5787	0.713	1.11	2009	0.00	8.91	236.65	0.649	23.14	0.063	
MA	Barnstable	25001	2501012000	44.40	0.1200	0.120	Missing		49.44	0.1085	0.134	1.11	2009	0.00	8.91	45.04	0.122	4.40	0.012	

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descripti
MA	Berkshire	25003	2501011000	147.20	0.4000	0.400	Missing		142.00	0.3133	0.386	0.96	2009	0.00	8.91	129.35	0.351	12.65	0.034	
MA	Berkshire	25003	2501012000	28.00	0.0800	0.080	Missing		27.01	0.0627	0.077	0.96	2009	0.00	8.91	24.60	0.070	2.41	0.007	
MA	Bristol	25005	2501011000	460.70	1.2600	1.260	Missing		475.92	1.0570	1.302	1.03	2009	0.00	8.91	433.53	1.186	42.40	0.116	
MA	Bristol	25005	2501012000	87.80	0.2400	0.240	Missing		90.70	0.2013	0.248	1.03	2009	0.00	8.91	82.62	0.226	8.08	0.022	
MA	Dukes	25007	2501011000	14.80	0.0400	0.040	Missing		16.93	0.0372	0.046	1.14	2009	0.00	8.91	15.42	0.042	1.51	0.004	
MA	Dukes	25007	2501012000	2.80	0.0100	0.010	Missing		3.20	0.0093	0.011	1.14	2009	0.00	8.91	2.92	0.010	0.29	0.001	
MA	Essex	25009	2501011000	638.80	1.7500	1.750	Missing		663.06	1.4749	1.816	1.04	2009	0.00	8.91	603.99	1.655	59.07	0.162	
MA	Essex	25009	2501012000	121.70	0.3300	0.330	Missing		126.32	0.2782	0.343	1.04	2009	0.00	8.91	115.07	0.312	11.25	0.031	
MA	Franklin	25011	2501011000	75.30	0.2100	0.210	Missing		76.88	0.1741	0.214	1.02	2009	0.00	8.91	70.03	0.195	6.85	0.019	
MA	Franklin	25011	2501012000	14.30	0.0400	0.040	Missing		14.60	0.0332	0.041	1.02	2009	0.00	8.91	13.30	0.037	1.30	0.004	
MA	Hampden	25013	2501011000	425.30	1.1700	1.170	Missing		426.47	0.9527	1.173	1.00	2009	0.00	8.91	388.48	1.069	37.99	0.105	
MA	Hampden	25013	2501012000	81.00	0.2200	0.220	Missing		81.22	0.1791	0.221	1.00	2009	0.00	8.91	73.99	0.201	7.24	0.020	
MA	Hampshire	25015	2501011000	129.50	0.3500	0.350	Missing		133.07	0.2920	0.360	1.03	2009	0.00	8.91	121.22	0.328	11.85	0.032	
MA	Hampshire	25015	2501012000	24.70	0.0700	0.070	Missing		25.38	0.0585	0.072	1.03	2009	0.00	8.91	23.12	0.066	2.26	0.006	
MA	Middlesex	25017	2501011000	1,287.70	3.5300	3.530	Missing		1,305.30	2.9056	3.578	1.01	2009	0.00	8.91	1,189.02	3.259	116.28	0.319	
MA	Middlesex	25017	2501012000	245.30	0.6700	0.670	Missing		248.65	0.5515	0.679	1.01	2009	0.00	8.91	226.50	0.619	22.15	0.061	
MA	Nantucket	25019	2501011000	6.80	0.0200	0.020	Missing		7.98	0.0191	0.023	1.17	2009	0.00	8.91	7.27	0.021	0.71	0.002	
MA	Nantucket	25019	2501012000	1.30	0.0000	0.000	Missing		1.53	0.0000	0.000	1.17	2009	0.00	8.91	1.39	0.000	0.14	0.000	
MA	Norfolk	25021	2501011000	640.80	1.7600	1.760	Missing		649.92	1.4494	1.785	1.01	2009	0.00	8.91	592.02	1.626	57.90	0.159	
MA	Norfolk	25021	2501012000	122.10	0.3300	0.330	Missing		123.84	0.2718	0.335	1.01	2009	0.00	8.91	112.81	0.305	11.03	0.030	
MA	Plymouth	25023	2501011000	453.60	1.2400	1.240	Missing		472.82	1.0496	1.293	1.04	2009	0.00	8.91	430.70	1.177	42.12	0.115	
MA	Plymouth	25023	2501012000	86.40	0.2400	0.240	Missing		90.06	0.2031	0.250	1.04	2009	0.00	8.91	82.04	0.228	8.02	0.022	
MA	Suffolk	25025	2501011000	357.00	0.9800	0.980	Missing		368.30	0.8210	1.011	1.03	2009	0.00	8.91	335.49	0.921	32.81	0.090	
MA	Suffolk	25025	2501012000	68.00	0.1900	0.190	Missing		70.15	0.1592	0.196	1.03	2009	0.00	8.91	63.90	0.179	6.25	0.017	
MA	Worcester	25027	2501011000	663.50	1.8200	1.820	Missing		692.78	1.5430	1.900	1.04	2009	0.00	8.91	631.07	1.731	61.72	0.169	
MA	Worcester	25027	2501012000	126.40	0.3500	0.350	Missing		131.98	0.2967	0.365	1.04	2009	0.00	8.91	120.22	0.333	11.76	0.033	
NH	Belknap	33001	2501060300	60.54	0.1659	0.166	Missing	24.9	50.21	0.1313	0.138	1.07	2006	22.80	5.80	47.30	0.130	2.91	0.008	Total
NH	Carroll	33003	2501060300	46.35	0.1270	0.127	Missing	24.9	38.44	0.1005	0.105	1.07	2006	22.80	5.80	36.21	0.099	2.23	0.006	Total
NH	Cheshire	33005	2501060300	76.94	0.2108	0.211	Missing	24.9	63.82	0.1669	0.175	1.07	2006	22.80	5.80	60.12	0.165	3.70	0.010	Total
NH	Coos	33007	2501060300	34.17	0.0936	0.094	Missing	24.9	28.34	0.0741	0.078	1.07	2006	22.80	5.80	26.70	0.073	1.64	0.005	Total
NH	Grafton	33009	2501060300	84.83	0.2324	0.232	Missing	24.9	70.36	0.1840	0.193	1.07	2006	22.80	5.80	66.28	0.182	4.08	0.011	Total
NH	Hillsborough	33011	2501060300	401.28	1.0994	1.099	Missing	24.9	332.82	0.8705	0.912	1.07	2006	22.80	5.80	313.52	0.859	19.30	0.053	Total
NH	Merrimack	33013	2501060300	145.06	0.3974	0.397	Missing	24.9	120.32	0.3147	0.330	1.07	2006	22.80	5.80	113.34	0.310	6.98	0.019	Total
NH	Rockingham	33015	2501060300	294.50	0.8068	0.807	Missing	24.9	244.26	0.6388	0.669	1.07	2006	22.80	5.80	230.09	0.630	14.17	0.039	Total
NH	Strafford	33017	2501060300	118.72	0.3253	0.325	Missing	24.9	98.47	0.2575	0.270	1.07	2006	22.80	5.80	92.76	0.254	5.71	0.016	Total
NH	Sullivan	33019	2501060300	42.42	0.1162	0.116	Missing	24.9	35.18	0.0920	0.096	1.07	2006	22.80	5.80	33.14	0.091	2.04	0.006	Total
NJ	Atlantic	34001	2501000120	309.55	0.8504	0.850	25.0	24.9	224.45	1.1547	0.617	1.03	2005	29.30	5.80	211.43	0.581	13.02	0.036	Gasoline
NJ	Bergen	34003	2501000120	929.69	2.5541	2.554	25.0	24.9	674.09	3.4681	1.852	1.03	2005	29.30	5.80	635.00	1.745	39.10	0.107	Gasoline
NJ	Burlington	34005	2501000120	438.18	1.2038	1.204	25.0	24.9	317.71	1.6346	0.873	1.03	2005	29.30	5.80	299.29	0.822	18.43	0.051	Gasoline
NJ	Camden	34007	2501000120	520.39	1.4296	1.430	25.0	24.9	377.32	1.9412	1.037	1.03	2005	29.30	5.80	355.44	0.976	21.88	0.060	Gasoline
NJ	Cape May	34009	2501000120	238.19	0.6544	0.654	25.0	24.9	172.70	0.8885	0.474	1.03	2005	29.30	5.80	162.69	0.447	10.02	0.028	Gasoline
NJ	Cumberland	34011	2501000120	146.08	0.4013	0.401	25.0	24.9	105.92	0.5449	0.291	1.03	2005	29.30	5.80	99.78	0.274	6.14	0.017	Gasoline
NJ	Essex	34013	2501000120	773.10	2.1239	2.124	25.0	24.9	560.56	2.8839	1.540	1.03	2005	29.30	5.80	528.04	1.451	32.51	0.089	Gasoline
NJ	Gloucester	34015	2501000120	265.64	0.7298	0.730	25.0	24.9	192.61	0.9909	0.529	1.03	2005	29.30	5.80	181.44	0.498	11.17	0.031	Gasoline
NJ	Hudson	34017	2501000120	594.86	1.6342	1.634	25.0	24.9	431.32	2.2190	1.185	1.03	2005	29.30	5.80	406.30	1.116	25.02	0.069	Gasoline
NJ	Hunterdon	34019	2501000120	137.54	0.3778	0.378	25.0	24.9	99.72	0.5131	0.274	1.03	2005	29.30	5.80	93.94	0.258	5.78	0.016	Gasoline
NJ	Mercer	34021	2501000120	352.56	0.9686	0.969	25.0	24.9	255.63	1.3152	0.702	1.03	2005	29.30	5.80	240.81	0.662	14.83	0.041	Gasoline
NJ	Middlesex	34023	2501000120	717.29	1.9706	1.971	25.0	24.9	520.09	2.6757	1.429	1.03	2005	29.30	5.80	489.92	1.346	30.17	0.083	Gasoline
NJ	Monmouth	34025	2501000120	664.38	1.8252	1.825	25.0	24.9	481.72	2.4784	1.323	1.03	2005	29.30	5.80	453.78	1.247	27.94	0.077	Gasoline
NJ	Morris	34027	2501000120	499.15	1.3713	1.371	25.0	24.9	361.92	1.8620	0.994	1.03	2005	29.30	5.80	340.93	0.937	20.99	0.058	Gasoline
NJ	Ocean	34029	2501000120	663.70	1.8234	1.823	25.0	24.9	481.23	2.4758	1.322	1.03	2005	29.30	5.80	453.32	1.245	27.91	0.077	Gasoline
NJ	Passaic	34031	2501000120	455.08	1.2502	1.250	25.0	24.9	329.96	1.6976	0.906	1.03	2005	29.30	5.80	310.83	0.854	19.14	0.053	Gasoline
NJ	Salem	34033	2501000120	71.81	0.1973	0.197	25.0	24.9	52.07	0.2679	0.143	1.03	2005	29.30	5.80	49.05	0.135	3.02	0.008	Gasoline
NJ	Somerset	34035	2501000120	311.98	0.8571	0.857	25.0	24.9	226.21	1.1638	0.621	1.03	2005	29.30	5.80	213.09	0.585	13.12	0.036	Gasoline
NJ	Sussex	34037	2501000120	163.97	0.4505	0.451	25.0	24.9	118.89	0.6117	0.327	1.03	2005	29.30	5.80	111.99	0.308	6.90	0.019	Gasoline
NJ	Union	34039	2501000120	514.65	1.4139	1.414	25.0	24.9	373.16	1.9198	1.025	1.03	2005	29.30	5.80	351.51	0.966	21.64	0.059	Gasoline
NJ	Warren	34041	2501000120	119.58	0.3285	0.329	25.0	24.9	86.70	0.4461	0.238	1.03	2005	29.30	5.80	81.67	0.224	5.03	0.014	Gasoline
NY	Albany	36001	2501011011	29.39	Missing	0.100	Missing	30.9	16.99	Missing	0.058	1.00	2003	42.30	5.80	16.01	0.054	0.99	0.003	Permeation
NY	Albany	36001	2501011012	253.79	Missing	0.862	Missing	30.9	146.73	Missing	0.498	1.00	2003	42.30	5.80	138.22	0.469	8.51	0.029	Diurnal

PORTABLE FUEL CONTAINERS | 2002 VOC Emissions | 2009 VOC OTB/OTW Emissions | 2009 BOTW Emissions | 2009 BOTW Reductions

State	County	FIPS	SCC	2002 VOC Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Emissions Annual (tpy)	Summer Day Calculated (tpd)	2009 BOTW Reductions Annual (tpy)	Summer Day (tpd)	SCC Descripti
NY	Albany	36001	2501011016	13.93	Missing	0.047	Missing	30.9	8.05	Missing	0.027	1.00	2003	42.30	5.80	7.59	0.026	0.47	0.002	Transport
NY	Albany	36001	2501012011	2.96	Missing	0.010	Missing	30.9	1.71	Missing	0.006	1.00	2003	42.30	5.80	1.61	0.005	0.10	0.000	Permeation
NY	Albany	36001	2501012012	24.22	Missing	0.082	Missing	30.9	14.00	Missing	0.048	1.00	2003	42.30	5.80	13.19	0.045	0.81	0.003	Diurnal
NY	Albany	36001	2501012016	62.69	Missing	0.213	Missing	30.9	36.24	Missing	0.123	1.00	2003	42.30	5.80	34.14	0.116	2.10	0.007	Transport
NY	Allegany	36003	2501011011	5.55	Missing	0.019	Missing	30.9	3.36	Missing	0.011	1.05	2003	42.30	5.80	3.17	0.011	0.20	0.001	Permeation
NY	Allegany	36003	2501011012	47.89	Missing	0.163	Missing	30.9	29.04	Missing	0.099	1.05	2003	42.30	5.80	27.35	0.093	1.68	0.006	Diurnal
NY	Allegany	36003	2501011016	2.63	Missing	0.009	Missing	30.9	1.59	Missing	0.005	1.05	2003	42.30	5.80	1.50	0.005	0.09	0.000	Transport
NY	Allegany	36003	2501012011	0.40	Missing	0.001	Missing	30.9	0.24	Missing	0.001	1.05	2003	42.30	5.80	0.23	0.001	0.01	0.000	Permeation
NY	Allegany	36003	2501012012	3.25	Missing	0.011	Missing	30.9	1.97	Missing	0.007	1.05	2003	42.30	5.80	1.86	0.006	0.11	0.000	Diurnal
NY	Allegany	36003	2501012016	8.42	Missing	0.029	Missing	30.9	5.10	Missing	0.017	1.05	2003	42.30	5.80	4.81	0.016	0.30	0.001	Transport
NY	Bronx	36005	2501011011	110.35	Missing	0.375	Missing	30.9	66.71	Missing	0.227	1.05	2003	42.30	5.80	62.84	0.213	3.87	0.013	Permeation
NY	Bronx	36005	2501011012	952.88	Missing	3.236	Missing	30.9	576.04	Missing	1.956	1.05	2003	42.30	5.80	542.63	1.843	33.41	0.113	Diurnal
NY	Bronx	36005	2501011016	52.30	Missing	0.178	Missing	30.9	31.61	Missing	0.107	1.05	2003	42.30	5.80	29.78	0.101	1.83	0.006	Transport
NY	Bronx	36005	2501012011	4.57	Missing	0.016	Missing	30.9	2.76	Missing	0.009	1.05	2003	42.30	5.80	2.60	0.009	0.16	0.001	Permeation
NY	Bronx	36005	2501012012	37.42	Missing	0.127	Missing	30.9	22.62	Missing	0.077	1.05	2003	42.30	5.80	21.31	0.072	1.31	0.004	Diurnal
NY	Bronx	36005	2501012016	96.88	Missing	0.329	Missing	30.9	58.56	Missing	0.199	1.05	2003	42.30	5.80	55.17	0.187	3.40	0.012	Transport
NY	Broome	36007	2501011011	19.92	Missing	0.068	Missing	30.9	11.56	Missing	0.039	1.01	2003	42.30	5.80	10.89	0.037	0.67	0.002	Permeation
NY	Broome	36007	2501011012	172.04	Missing	0.584	Missing	30.9	99.85	Missing	0.339	1.01	2003	42.30	5.80	94.06	0.319	5.79	0.020	Diurnal
NY	Broome	36007	2501011016	9.44	Missing	0.032	Missing	30.9	5.48	Missing	0.019	1.01	2003	42.30	5.80	5.16	0.018	0.32	0.001	Transport
NY	Broome	36007	2501012011	1.67	Missing	0.006	Missing	30.9	0.97	Missing	0.003	1.01	2003	42.30	5.80	0.91	0.003	0.06	0.000	Permeation
NY	Broome	36007	2501012012	13.68	Missing	0.046	Missing	30.9	7.94	Missing	0.027	1.01	2003	42.30	5.80	7.48	0.025	0.46	0.002	Diurnal
NY	Broome	36007	2501012016	35.41	Missing	0.120	Missing	30.9	20.55	Missing	0.070	1.01	2003	42.30	5.80	19.36	0.066	1.19	0.004	Transport
NY	Cattaraugus	36009	2501011011	8.99	Missing	0.031	Missing	30.9	5.17	Missing	0.018	1.00	2003	42.30	5.80	4.87	0.017	0.30	0.001	Permeation
NY	Cattaraugus	36009	2501011012	77.59	Missing	0.263	Missing	30.9	44.66	Missing	0.152	1.00	2003	42.30	5.80	42.07	0.143	2.59	0.009	Diurnal
NY	Cattaraugus	36009	2501011016	4.26	Missing	0.014	Missing	30.9	2.45	Missing	0.008	1.00	2003	42.30	5.80	2.31	0.008	0.14	0.000	Transport
NY	Cattaraugus	36009	2501012011	0.82	Missing	0.003	Missing	30.9	0.47	Missing	0.002	1.00	2003	42.30	5.80	0.44	0.002	0.03	0.000	Permeation
NY	Cattaraugus	36009	2501012012	6.70	Missing	0.023	Missing	30.9	3.86	Missing	0.013	1.00	2003	42.30	5.80	3.63	0.012	0.22	0.001	Diurnal
NY	Cattaraugus	36009	2501012016	17.36	Missing	0.059	Missing	30.9	9.99	Missing	0.034	1.00	2003	42.30	5.80	9.41	0.032	0.58	0.002	Transport
NY	Cayuga	36011	2501011011	8.00	Missing	0.027	Missing	30.9	4.53	Missing	0.015	0.98	2003	42.30	5.80	4.27	0.014	0.26	0.001	Permeation
NY	Cayuga	36011	2501011012	69.09	Missing	0.235	Missing	30.9	39.13	Missing	0.133	0.98	2003	42.30	5.80	36.86	0.125	2.27	0.008	Diurnal
NY	Cayuga	36011	2501011016	3.79	Missing	0.013	Missing	30.9	2.15	Missing	0.007	0.98	2003	42.30	5.80	2.02	0.007	0.12	0.000	Transport
NY	Cayuga	36011	2501012011	0.68	Missing	0.002	Missing	30.9	0.38	Missing	0.001	0.98	2003	42.30	5.80	0.36	0.001	0.02	0.000	Permeation
NY	Cayuga	36011	2501012012	5.56	Missing	0.019	Missing	30.9	3.15	Missing	0.011	0.98	2003	42.30	5.80	2.97	0.010	0.18	0.001	Diurnal
NY	Cayuga	36011	2501012016	14.40	Missing	0.049	Missing	30.9	8.15	Missing	0.028	0.98	2003	42.30	5.80	7.68	0.026	0.47	0.002	Transport
NY	Chautauqua	36013	2501011011	14.59	Missing	0.050	Missing	30.9	8.32	Missing	0.028	0.99	2003	42.30	5.80	7.83	0.027	0.48	0.002	Permeation
NY	Chautauqua	36013	2501011012	126.03	Missing	0.428	Missing	30.9	71.82	Missing	0.244	0.99	2003	42.30	5.80	67.65	0.230	4.17	0.014	Diurnal
NY	Chautauqua	36013	2501011016	6.92	Missing	0.023	Missing	30.9	3.94	Missing	0.013	0.99	2003	42.30	5.80	3.71	0.013	0.23	0.001	Transport
NY	Chautauqua	36013	2501012011	1.28	Missing	0.004	Missing	30.9	0.73	Missing	0.002	0.99	2003	42.30	5.80	0.69	0.002	0.04	0.000	Permeation
NY	Chautauqua	36013	2501012012	10.45	Missing	0.035	Missing	30.9	5.95	Missing	0.020	0.99	2003	42.30	5.80	5.61	0.019	0.35	0.001	Diurnal
NY	Chautauqua	36013	2501012016	27.05	Missing	0.092	Missing	30.9	15.41	Missing	0.052	0.99	2003	42.30	5.80	14.52	0.049	0.89	0.003	Transport
NY	Chemung	36015	2501011011	8.51	Missing	0.029	Missing	30.9	4.71	Missing	0.016	0.96	2003	42.30	5.80	4.44	0.015	0.27	0.001	Permeation
NY	Chemung	36015	2501011012	73.52	Missing	0.250	Missing	30.9	40.66	Missing	0.138	0.96	2003	42.30	5.80	38.30	0.130	2.36	0.008	Diurnal
NY	Chemung	36015	2501011016	4.04	Missing	0.014	Missing	30.9	2.23	Missing	0.008	0.96	2003	42.30	5.80	2.10	0.007	0.13	0.000	Transport
NY	Chemung	36015	2501012011	0.73	Missing	0.002	Missing	30.9	0.40	Missing	0.001	0.96	2003	42.30	5.80	0.38	0.001	0.02	0.000	Permeation
NY	Chemung	36015	2501012012	5.99	Missing	0.020	Missing	30.9	3.31	Missing	0.011	0.96	2003	42.30	5.80	3.12	0.011	0.19	0.001	Diurnal
NY	Chemung	36015	2501012016	15.50	Missing	0.053	Missing	30.9	8.57	Missing	0.029	0.96	2003	42.30	5.80	8.07	0.027	0.50	0.002	Transport
NY	Chenango	36017	2501011011	5.40	Missing	0.018	Missing	30.9	3.05	Missing	0.010	0.98	2003	42.30	5.80	2.88	0.010	0.18	0.001	Permeation
NY	Chenango	36017	2501011012	46.64	Missing	0.158	Missing	30.9	26.38	Missing	0.090	0.98	2003	42.30	5.80	24.85	0.084	1.53	0.005	Diurnal
NY	Chenango	36017	2501011016	2.56	Missing	0.009	Missing	30.9	1.45	Missing	0.005	0.98	2003	42.30	5.80	1.36	0.005	0.08	0.000	Transport
NY	Chenango	36017	2501012011	0.42	Missing	0.001	Missing	30.9	0.24	Missing	0.001	0.98	2003	42.30	5.80	0.23	0.001	0.01	0.000	Permeation
NY	Chenango	36017	2501012012	3.48	Missing	0.012	Missing	30.9	1.97	Missing	0.007	0.98	2003	42.30	5.80	1.85	0.006	0.11	0.000	Diurnal
NY	Chenango	36017	2501012016	9.00	Missing	0.031	Missing	30.9	5.09	Missing	0.017	0.98	2003	42.30	5.80	4.79	0.016	0.30	0.001	Transport
NY	Clinton	36019	2501011011	7.54	Missing	0.026	Missing	30.9	4.54	Missing	0.015	1.04	2003	42.30	5.80	4.27	0.015	0.26	0.001	Permeation
NY	Clinton	36019	2501011012	65.14	Missing	0.221	Missing	30.9	39.17	Missing	0.133	1.04	2003	42.30	5.80	36.90	0.125	2.27	0.008	Diurnal
NY	Clinton	36019	2501011016	3.58	Missing	0.012	Missing	30.9	2.15	Missing	0.007	1.04	2003	42.30	5.80	2.03	0.007	0.12	0.000	Transport
NY	Clinton	36019	2501012011	0.79	Missing	0.003	Missing	30.9	0.48	Missing	0.002	1.04	2003	42.30	5.80	0.45	0.002	0.03	0.000	Permeation
NY	Clinton	36019	2501012012	6.50	Missing	0.022	Missing	30.9	3.91	Missing	0.013	1.04	2003	42.30	5.80	3.68	0.013	0.23	0.001	Diurnal
NY	Clinton	36019	2501012016	16.83	Missing	0.057	Missing	30.9	10.12	Missing	0.034	1.04	2003	42.30	5.80	9.53	0.032	0.59	0.002	Transport
NY	Columbia	36021	2501011011	6.85	Missing	0.023	Missing	30.9	3.87	Missing	0.013	0.98	2003	42.30	5.80	3.64	0.012	0.22	0.001	Permeation

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descripti
NY	Columbia	36021	2501011012	59.14	Missing	0.201	Missing	30.9	33.40	Missing	0.113	0.98	2003	42.30	5.80	31.46	0.107	1.94	0.007	Diurnal
NY	Columbia	36021	2501011016	3.25	Missing	0.011	Missing	30.9	1.83	Missing	0.006	0.98	2003	42.30	5.80	1.73	0.006	0.11	0.000	Transport
NY	Columbia	36021	2501012011	0.84	Missing	0.003	Missing	30.9	0.47	Missing	0.002	0.98	2003	42.30	5.80	0.44	0.002	0.03	0.000	Permeation
NY	Columbia	36021	2501012012	6.84	Missing	0.023	Missing	30.9	3.86	Missing	0.013	0.98	2003	42.30	5.80	3.64	0.012	0.22	0.001	Diurnal
NY	Columbia	36021	2501012016	17.70	Missing	0.060	Missing	30.9	10.00	Missing	0.034	0.98	2003	42.30	5.80	9.42	0.032	0.58	0.002	Transport
NY	Cortland	36023	2501011011	4.52	Missing	0.015	Missing	30.9	2.60	Missing	0.009	1.00	2003	42.30	5.80	2.45	0.008	0.15	0.001	Permeation
NY	Cortland	36023	2501011012	39.03	Missing	0.133	Missing	30.9	22.48	Missing	0.076	1.00	2003	42.30	5.80	21.18	0.072	1.30	0.004	Diurnal
NY	Cortland	36023	2501011016	2.14	Missing	0.007	Missing	30.9	1.23	Missing	0.004	1.00	2003	42.30	5.80	1.16	0.004	0.07	0.000	Transport
NY	Cortland	36023	2501012011	0.44	Missing	0.001	Missing	30.9	0.25	Missing	0.001	1.00	2003	42.30	5.80	0.24	0.001	0.01	0.000	Permeation
NY	Cortland	36023	2501012012	3.57	Missing	0.012	Missing	30.9	2.05	Missing	0.007	1.00	2003	42.30	5.80	1.93	0.007	0.12	0.000	Diurnal
NY	Cortland	36023	2501012016	9.23	Missing	0.031	Missing	30.9	5.32	Missing	0.018	1.00	2003	42.30	5.80	5.01	0.017	0.31	0.001	Transport
NY	Delaware	36025	2501011011	6.54	Missing	0.022	Missing	30.9	3.77	Missing	0.013	1.00	2003	42.30	5.80	3.55	0.012	0.22	0.001	Permeation
NY	Delaware	36025	2501011012	56.44	Missing	0.192	Missing	30.9	32.57	Missing	0.111	1.00	2003	42.30	5.80	30.68	0.104	1.89	0.006	Diurnal
NY	Delaware	36025	2501011016	3.10	Missing	0.011	Missing	30.9	1.79	Missing	0.006	1.00	2003	42.30	5.80	1.68	0.006	0.10	0.000	Transport
NY	Delaware	36025	2501012011	0.57	Missing	0.002	Missing	30.9	0.33	Missing	0.001	1.00	2003	42.30	5.80	0.31	0.001	0.02	0.000	Permeation
NY	Delaware	36025	2501012012	4.66	Missing	0.016	Missing	30.9	2.69	Missing	0.009	1.00	2003	42.30	5.80	2.54	0.009	0.16	0.001	Diurnal
NY	Delaware	36025	2501012016	12.07	Missing	0.041	Missing	30.9	6.97	Missing	0.024	1.00	2003	42.30	5.80	6.56	0.022	0.40	0.001	Transport
NY	Dutchess	36027	2501011011	24.24	Missing	0.082	Missing	30.9	14.44	Missing	0.049	1.03	2003	42.30	5.80	13.61	0.046	0.84	0.003	Permeation
NY	Dutchess	36027	2501011012	209.32	Missing	0.711	Missing	30.9	124.73	Missing	0.424	1.03	2003	42.30	5.80	117.49	0.399	7.23	0.025	Diurnal
NY	Dutchess	36027	2501011016	11.49	Missing	0.039	Missing	30.9	6.85	Missing	0.023	1.03	2003	42.30	5.80	6.45	0.022	0.40	0.001	Transport
NY	Dutchess	36027	2501012011	3.48	Missing	0.012	Missing	30.9	2.08	Missing	0.007	1.03	2003	42.30	5.80	1.96	0.007	0.12	0.000	Permeation
NY	Dutchess	36027	2501012012	28.52	Missing	0.097	Missing	30.9	17.00	Missing	0.058	1.03	2003	42.30	5.80	16.01	0.054	0.99	0.003	Diurnal
NY	Dutchess	36027	2501012016	73.83	Missing	0.251	Missing	30.9	44.00	Missing	0.149	1.03	2003	42.30	5.80	41.44	0.141	2.55	0.009	Transport
NY	Erie	36029	2501011011	93.80	Missing	0.319	Missing	30.9	52.35	Missing	0.178	0.97	2003	42.30	5.80	49.31	0.167	3.04	0.010	Permeation
NY	Erie	36029	2501011012	810.04	Missing	2.751	Missing	30.9	452.07	Missing	1.535	0.97	2003	42.30	5.80	425.85	1.446	26.22	0.089	Diurnal
NY	Erie	36029	2501011016	44.46	Missing	0.151	Missing	30.9	24.81	Missing	0.084	0.97	2003	42.30	5.80	23.37	0.079	1.44	0.005	Transport
NY	Erie	36029	2501012011	8.66	Missing	0.029	Missing	30.9	4.83	Missing	0.016	0.97	2003	42.30	5.80	4.55	0.015	0.28	0.001	Permeation
NY	Erie	36029	2501012012	70.90	Missing	0.241	Missing	30.9	39.57	Missing	0.134	0.97	2003	42.30	5.80	37.27	0.127	2.29	0.008	Diurnal
NY	Erie	36029	2501012016	183.54	Missing	0.623	Missing	30.9	102.43	Missing	0.348	0.97	2003	42.30	5.80	96.49	0.328	5.94	0.020	Transport
NY	Essex	36031	2501011011	5.24	Missing	0.018	Missing	30.9	3.09	Missing	0.011	1.02	2003	42.30	5.80	2.91	0.010	0.18	0.001	Permeation
NY	Essex	36031	2501011012	45.28	Missing	0.154	Missing	30.9	26.72	Missing	0.091	1.02	2003	42.30	5.80	25.17	0.085	1.55	0.005	Diurnal
NY	Essex	36031	2501011016	2.48	Missing	0.008	Missing	30.9	1.47	Missing	0.005	1.02	2003	42.30	5.80	1.38	0.005	0.09	0.000	Transport
NY	Essex	36031	2501012011	0.56	Missing	0.002	Missing	30.9	0.33	Missing	0.001	1.02	2003	42.30	5.80	0.31	0.001	0.02	0.000	Permeation
NY	Essex	36031	2501012012	4.57	Missing	0.016	Missing	30.9	2.70	Missing	0.009	1.02	2003	42.30	5.80	2.54	0.009	0.16	0.001	Diurnal
NY	Essex	36031	2501012016	11.84	Missing	0.040	Missing	30.9	6.99	Missing	0.024	1.02	2003	42.30	5.80	6.58	0.022	0.41	0.001	Transport
NY	Franklin	36033	2501011011	5.39	Missing	0.018	Missing	30.9	3.30	Missing	0.011	1.06	2003	42.30	5.80	3.11	0.011	0.19	0.001	Permeation
NY	Franklin	36033	2501011012	46.57	Missing	0.158	Missing	30.9	28.53	Missing	0.097	1.06	2003	42.30	5.80	26.88	0.091	1.65	0.006	Diurnal
NY	Franklin	36033	2501011016	2.56	Missing	0.009	Missing	30.9	1.57	Missing	0.005	1.06	2003	42.30	5.80	1.48	0.005	0.09	0.000	Transport
NY	Franklin	36033	2501012011	0.51	Missing	0.002	Missing	30.9	0.31	Missing	0.001	1.06	2003	42.30	5.80	0.30	0.001	0.02	0.000	Permeation
NY	Franklin	36033	2501012012	4.19	Missing	0.014	Missing	30.9	2.57	Missing	0.009	1.06	2003	42.30	5.80	2.42	0.008	0.15	0.001	Diurnal
NY	Franklin	36033	2501012016	10.85	Missing	0.037	Missing	30.9	6.65	Missing	0.023	1.06	2003	42.30	5.80	6.26	0.021	0.39	0.001	Transport
NY	Fulton	36035	2501011011	6.25	Missing	0.021	Missing	30.9	3.58	Missing	0.012	0.99	2003	42.30	5.80	3.37	0.011	0.21	0.001	Permeation
NY	Fulton	36035	2501011012	53.99	Missing	0.183	Missing	30.9	30.93	Missing	0.105	0.99	2003	42.30	5.80	29.13	0.099	1.79	0.006	Diurnal
NY	Fulton	36035	2501011016	2.96	Missing	0.010	Missing	30.9	1.70	Missing	0.006	0.99	2003	42.30	5.80	1.60	0.005	0.10	0.000	Transport
NY	Fulton	36035	2501012011	0.47	Missing	0.002	Missing	30.9	0.27	Missing	0.001	0.99	2003	42.30	5.80	0.26	0.001	0.02	0.000	Permeation
NY	Fulton	36035	2501012012	3.88	Missing	0.013	Missing	30.9	2.22	Missing	0.008	0.99	2003	42.30	5.80	2.09	0.007	0.13	0.000	Diurnal
NY	Fulton	36035	2501012016	10.04	Missing	0.034	Missing	30.9	5.75	Missing	0.020	0.99	2003	42.30	5.80	5.42	0.018	0.33	0.001	Transport
NY	Genesee	36037	2501011011	5.45	Missing	0.018	Missing	30.9	3.08	Missing	0.010	0.98	2003	42.30	5.80	2.90	0.010	0.18	0.001	Permeation
NY	Genesee	36037	2501011012	47.05	Missing	0.160	Missing	30.9	26.62	Missing	0.090	0.98	2003	42.30	5.80	25.08	0.085	1.54	0.005	Diurnal
NY	Genesee	36037	2501011016	2.58	Missing	0.009	Missing	30.9	1.46	Missing	0.005	0.98	2003	42.30	5.80	1.38	0.005	0.08	0.000	Transport
NY	Genesee	36037	2501012011	0.67	Missing	0.002	Missing	30.9	0.38	Missing	0.001	0.98	2003	42.30	5.80	0.36	0.001	0.02	0.000	Permeation
NY	Genesee	36037	2501012012	5.52	Missing	0.019	Missing	30.9	3.12	Missing	0.011	0.98	2003	42.30	5.80	2.94	0.010	0.18	0.001	Diurnal
NY	Genesee	36037	2501012016	14.28	Missing	0.048	Missing	30.9	8.08	Missing	0.027	0.98	2003	42.30	5.80	7.61	0.026	0.47	0.002	Transport
NY	Greene	36039	2501011011	6.01	Missing	0.020	Missing	30.9	3.60	Missing	0.012	1.04	2003	42.30	5.80	3.39	0.012	0.21	0.001	Permeation
NY	Greene	36039	2501011012	51.91	Missing	0.176	Missing	30.9	31.06	Missing	0.105	1.04	2003	42.30	5.80	29.26	0.099	1.80	0.006	Diurnal
NY	Greene	36039	2501011016	2.85	Missing	0.010	Missing	30.9	1.70	Missing	0.006	1.04	2003	42.30	5.80	1.61	0.005	0.10	0.000	Transport
NY	Greene	36039	2501012011	0.63	Missing	0.002	Missing	30.9	0.38	Missing	0.001	1.04	2003	42.30	5.80	0.36	0.001	0.02	0.000	Permeation
NY	Greene	36039	2501012012	5.18	Missing	0.018	Missing	30.9	3.10	Missing	0.011	1.04	2003	42.30	5.80	2.92	0.010	0.18	0.001	Diurnal
NY	Greene	36039	2501012016	13.41	Missing	0.046	Missing	30.9	8.02	Missing	0.027	1.04	2003	42.30	5.80	7.56	0.026	0.47	0.002	Transport

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descripti
NY	Hamilton	36041	2501011011	1.80	Missing	0.006	Missing	30.9	1.03	Missing	0.004	1.00	2003	42.30	5.80	0.97	0.003	0.06	0.000	Permeation
NY	Hamilton	36041	2501011012	15.52	Missing	0.053	Missing	30.9	8.92	Missing	0.030	1.00	2003	42.30	5.80	8.40	0.029	0.52	0.002	Diurnal
NY	Hamilton	36041	2501011016	0.85	Missing	0.003	Missing	30.9	0.49	Missing	0.002	1.00	2003	42.30	5.80	0.46	0.002	0.03	0.000	Transport
NY	Hamilton	36041	2501012011	0.15	Missing	0.000	Missing	30.9	0.08	Missing	0.000	1.00	2003	42.30	5.80	0.08	0.000	0.00	0.000	Permeation
NY	Hamilton	36041	2501012012	1.19	Missing	0.004	Missing	30.9	0.68	Missing	0.002	1.00	2003	42.30	5.80	0.64	0.002	0.04	0.000	Diurnal
NY	Hamilton	36041	2501012016	3.08	Missing	0.010	Missing	30.9	1.77	Missing	0.006	1.00	2003	42.30	5.80	1.67	0.006	0.10	0.000	Transport
NY	Herkimer	36043	2501011011	7.21	Missing	0.024	Missing	30.9	4.03	Missing	0.014	0.97	2003	42.30	5.80	3.80	0.013	0.23	0.001	Permeation
NY	Herkimer	36043	2501011012	62.25	Missing	0.211	Missing	30.9	34.80	Missing	0.118	0.97	2003	42.30	5.80	32.78	0.111	2.02	0.007	Diurnal
NY	Herkimer	36043	2501011016	3.42	Missing	0.012	Missing	30.9	1.91	Missing	0.006	0.97	2003	42.30	5.80	1.80	0.006	0.11	0.000	Transport
NY	Herkimer	36043	2501012011	0.55	Missing	0.002	Missing	30.9	0.31	Missing	0.001	0.97	2003	42.30	5.80	0.29	0.001	0.02	0.000	Permeation
NY	Herkimer	36043	2501012012	4.51	Missing	0.015	Missing	30.9	2.52	Missing	0.009	0.97	2003	42.30	5.80	2.37	0.008	0.15	0.000	Diurnal
NY	Herkimer	36043	2501012016	11.67	Missing	0.040	Missing	30.9	6.52	Missing	0.022	0.97	2003	42.30	5.80	6.14	0.021	0.38	0.001	Transport
NY	Jefferson	36045	2501011011	12.17	Missing	0.041	Missing	30.9	7.02	Missing	0.024	1.00	2003	42.30	5.80	6.61	0.022	0.41	0.001	Permeation
NY	Jefferson	36045	2501011012	105.11	Missing	0.357	Missing	30.9	60.58	Missing	0.206	1.00	2003	42.30	5.80	57.07	0.194	3.51	0.012	Diurnal
NY	Jefferson	36045	2501011016	5.77	Missing	0.020	Missing	30.9	3.32	Missing	0.011	1.00	2003	42.30	5.80	3.13	0.011	0.19	0.001	Transport
NY	Jefferson	36045	2501012011	0.97	Missing	0.003	Missing	30.9	0.56	Missing	0.002	1.00	2003	42.30	5.80	0.53	0.002	0.03	0.000	Permeation
NY	Jefferson	36045	2501012012	7.94	Missing	0.027	Missing	30.9	4.58	Missing	0.016	1.00	2003	42.30	5.80	4.31	0.015	0.27	0.001	Diurnal
NY	Jefferson	36045	2501012016	20.55	Missing	0.070	Missing	30.9	11.84	Missing	0.040	1.00	2003	42.30	5.80	11.16	0.038	0.69	0.002	Transport
NY	Kings	36047	2501011011	208.65	Missing	0.708	Missing	30.9	122.59	Missing	0.416	1.02	2003	42.30	5.80	115.48	0.392	7.11	0.024	Permeation
NY	Kings	36047	2501011012	1,801.78	Missing	6.118	Missing	30.9	1,058.65	Missing	3.595	1.02	2003	42.30	5.80	997.25	3.386	61.40	0.208	Diurnal
NY	Kings	36047	2501011016	98.88	Missing	0.336	Missing	30.9	58.10	Missing	0.197	1.02	2003	42.30	5.80	54.73	0.186	3.37	0.011	Transport
NY	Kings	36047	2501012011	11.48	Missing	0.039	Missing	30.9	6.75	Missing	0.023	1.02	2003	42.30	5.80	6.35	0.022	0.39	0.001	Permeation
NY	Kings	36047	2501012012	93.97	Missing	0.319	Missing	30.9	55.22	Missing	0.187	1.02	2003	42.30	5.80	52.01	0.177	3.20	0.011	Diurnal
NY	Kings	36047	2501012016	243.27	Missing	0.826	Missing	30.9	142.93	Missing	0.485	1.02	2003	42.30	5.80	134.64	0.457	8.29	0.028	Transport
NY	Lewis	36049	2501011011	3.46	Missing	0.012	Missing	30.9	1.98	Missing	0.007	0.99	2003	42.30	5.80	1.86	0.006	0.11	0.000	Permeation
NY	Lewis	36049	2501011012	29.85	Missing	0.101	Missing	30.9	17.06	Missing	0.058	0.99	2003	42.30	5.80	16.07	0.055	0.99	0.003	Diurnal
NY	Lewis	36049	2501011016	1.64	Missing	0.006	Missing	30.9	0.94	Missing	0.003	0.99	2003	42.30	5.80	0.88	0.003	0.05	0.000	Transport
NY	Lewis	36049	2501012011	0.32	Missing	0.001	Missing	30.9	0.18	Missing	0.001	0.99	2003	42.30	5.80	0.17	0.001	0.01	0.000	Permeation
NY	Lewis	36049	2501012012	2.62	Missing	0.009	Missing	30.9	1.50	Missing	0.005	0.99	2003	42.30	5.80	1.41	0.005	0.09	0.000	Diurnal
NY	Lewis	36049	2501012016	6.79	Missing	0.023	Missing	30.9	3.88	Missing	0.013	0.99	2003	42.30	5.80	3.66	0.012	0.23	0.001	Transport
NY	Livingston	36051	2501011011	5.49	Missing	0.019	Missing	30.9	3.24	Missing	0.011	1.02	2003	42.30	5.80	3.05	0.010	0.19	0.001	Permeation
NY	Livingston	36051	2501011012	47.40	Missing	0.161	Missing	30.9	27.95	Missing	0.095	1.02	2003	42.30	5.80	26.33	0.089	1.62	0.006	Diurnal
NY	Livingston	36051	2501011016	2.60	Missing	0.009	Missing	30.9	1.53	Missing	0.005	1.02	2003	42.30	5.80	1.45	0.005	0.09	0.000	Transport
NY	Livingston	36051	2501012011	0.64	Missing	0.002	Missing	30.9	0.38	Missing	0.001	1.02	2003	42.30	5.80	0.36	0.001	0.02	0.000	Permeation
NY	Livingston	36051	2501012012	5.27	Missing	0.018	Missing	30.9	3.11	Missing	0.011	1.02	2003	42.30	5.80	2.93	0.010	0.18	0.001	Diurnal
NY	Livingston	36051	2501012016	13.64	Missing	0.046	Missing	30.9	8.04	Missing	0.027	1.02	2003	42.30	5.80	7.58	0.026	0.47	0.002	Transport
NY	Madison	36053	2501011011	6.47	Missing	0.022	Missing	30.9	3.73	Missing	0.013	1.00	2003	42.30	5.80	3.51	0.012	0.22	0.001	Permeation
NY	Madison	36053	2501011012	55.88	Missing	0.190	Missing	30.9	32.21	Missing	0.109	1.00	2003	42.30	5.80	30.34	0.103	1.87	0.006	Diurnal
NY	Madison	36053	2501011016	3.07	Missing	0.010	Missing	30.9	1.77	Missing	0.006	1.00	2003	42.30	5.80	1.67	0.006	0.10	0.000	Transport
NY	Madison	36053	2501012011	0.79	Missing	0.003	Missing	30.9	0.45	Missing	0.002	1.00	2003	42.30	5.80	0.43	0.001	0.03	0.000	Permeation
NY	Madison	36053	2501012012	6.44	Missing	0.022	Missing	30.9	3.71	Missing	0.013	1.00	2003	42.30	5.80	3.49	0.012	0.22	0.001	Diurnal
NY	Madison	36053	2501012016	16.66	Missing	0.057	Missing	30.9	9.60	Missing	0.033	1.00	2003	42.30	5.80	9.05	0.031	0.56	0.002	Transport
NY	Monroe	36055	2501011011	68.93	Missing	0.234	Missing	30.9	39.69	Missing	0.135	1.00	2003	42.30	5.80	37.39	0.127	2.30	0.008	Permeation
NY	Monroe	36055	2501011012	595.26	Missing	2.021	Missing	30.9	342.73	Missing	1.164	1.00	2003	42.30	5.80	322.85	1.096	19.88	0.067	Diurnal
NY	Monroe	36055	2501011016	32.67	Missing	0.111	Missing	30.9	18.81	Missing	0.064	1.00	2003	42.30	5.80	17.72	0.060	1.09	0.004	Transport
NY	Monroe	36055	2501012011	6.29	Missing	0.021	Missing	30.9	3.62	Missing	0.012	1.00	2003	42.30	5.80	3.41	0.012	0.21	0.001	Permeation
NY	Monroe	36055	2501012012	51.53	Missing	0.175	Missing	30.9	29.67	Missing	0.101	1.00	2003	42.30	5.80	27.95	0.095	1.72	0.006	Diurnal
NY	Monroe	36055	2501012016	133.39	Missing	0.453	Missing	30.9	76.80	Missing	0.261	1.00	2003	42.30	5.80	72.34	0.246	4.45	0.015	Transport
NY	Montgomery	36057	2501011011	5.05	Missing	0.017	Missing	30.9	2.76	Missing	0.009	0.95	2003	42.30	5.80	2.60	0.009	0.16	0.001	Permeation
NY	Montgomery	36057	2501011012	43.60	Missing	0.148	Missing	30.9	23.83	Missing	0.081	0.95	2003	42.30	5.80	22.45	0.076	1.38	0.005	Diurnal
NY	Montgomery	36057	2501011016	2.39	Missing	0.008	Missing	30.9	1.31	Missing	0.004	0.95	2003	42.30	5.80	1.23	0.004	0.08	0.000	Transport
NY	Montgomery	36057	2501012011	0.51	Missing	0.002	Missing	30.9	0.28	Missing	0.001	0.95	2003	42.30	5.80	0.26	0.001	0.02	0.000	Permeation
NY	Montgomery	36057	2501012012	4.19	Missing	0.014	Missing	30.9	2.29	Missing	0.008	0.95	2003	42.30	5.80	2.16	0.007	0.13	0.000	Diurnal
NY	Montgomery	36057	2501012016	10.85	Missing	0.037	Missing	30.9	5.93	Missing	0.020	0.95	2003	42.30	5.80	5.59	0.019	0.34	0.001	Transport
NY	Nassau	36059	2501011011	102.90	Missing	0.349	Missing	30.9	58.65	Missing	0.199	0.99	2003	42.30	5.80	55.25	0.188	3.40	0.012	Permeation
NY	Nassau	36059	2501011012	888.58	Missing	3.017	Missing	30.9	506.46	Missing	1.720	0.99	2003	42.30	5.80	477.09	1.620	29.37	0.100	Diurnal
NY	Nassau	36059	2501011016	48.77	Missing	0.166	Missing	30.9	27.80	Missing	0.094	0.99	2003	42.30	5.80	26.18	0.089	1.61	0.005	Transport
NY	Nassau	36059	2501012011	15.92	Missing	0.054	Missing	30.9	9.07	Missing	0.031	0.99	2003	42.30	5.80	8.55	0.029	0.53	0.002	Permeation
NY	Nassau	36059	2501012012	130.30	Missing	0.442	Missing	30.9	74.27	Missing	0.252	0.99	2003	42.30	5.80	69.96	0.238	4.31	0.015	Diurnal

PORTABLE FUEL CONTAINERS | **2002 VOC Emissions** | **2009 VOC OTB/OTW Emissions** | **2009 BOTW Emissions** | **2009 BOTW Reductions**

State	County	FIPS	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Emissions Annual (tpy)	2009 BOTW Emissions Summer Day Calculated (tpd)	2009 BOTW Reductions Annual (tpy)	2009 BOTW Reductions Summer Day (tpd)	SCC Descripti
NY	Nassau	36059	2501012016	337.30	Missing	1.145	Missing	30.9	192.25	Missing	0.653	0.99	2003	42.30	5.80	181.10	0.615	11.15	0.038	Transport
NY	New York	36061	2501011011	180.38	Missing	0.613	Missing	30.9	106.37	Missing	0.361	1.02	2003	42.30	5.80	100.20	0.340	6.17	0.021	Permeation
NY	New York	36061	2501011012	1,557.70	Missing	5.289	Missing	30.9	918.56	Missing	3.119	1.02	2003	42.30	5.80	865.29	2.938	53.28	0.181	Diurnal
NY	New York	36061	2501011016	85.49	Missing	0.290	Missing	30.9	50.41	Missing	0.171	1.02	2003	42.30	5.80	47.49	0.161	2.92	0.010	Transport
NY	New York	36061	2501012011	10.65	Missing	0.036	Missing	30.9	6.28	Missing	0.021	1.02	2003	42.30	5.80	5.92	0.020	0.36	0.001	Permeation
NY	New York	36061	2501012012	87.18	Missing	0.296	Missing	30.9	51.41	Missing	0.175	1.02	2003	42.30	5.80	48.43	0.164	2.98	0.010	Diurnal
NY	New York	36061	2501012016	225.68	Missing	0.766	Missing	30.9	133.08	Missing	0.452	1.02	2003	42.30	5.80	125.36	0.426	7.72	0.026	Transport
NY	Niagara	36063	2501011011	21.62	Missing	0.073	Missing	30.9	12.22	Missing	0.041	0.98	2003	42.30	5.80	11.51	0.039	0.71	0.002	Permeation
NY	Niagara	36063	2501011012	186.66	Missing	0.634	Missing	30.9	105.53	Missing	0.358	0.98	2003	42.30	5.80	99.41	0.338	6.12	0.021	Diurnal
NY	Niagara	36063	2501011016	10.24	Missing	0.035	Missing	30.9	5.79	Missing	0.020	0.98	2003	42.30	5.80	5.46	0.019	0.34	0.001	Transport
NY	Niagara	36063	2501012011	1.91	Missing	0.006	Missing	30.9	1.08	Missing	0.004	0.98	2003	42.30	5.80	1.02	0.003	0.06	0.000	Permeation
NY	Niagara	36063	2501012012	15.61	Missing	0.053	Missing	30.9	8.82	Missing	0.030	0.98	2003	42.30	5.80	8.31	0.028	0.51	0.002	Diurnal
NY	Niagara	36063	2501012016	40.40	Missing	0.137	Missing	30.9	22.84	Missing	0.078	0.98	2003	42.30	5.80	21.52	0.073	1.32	0.004	Transport
NY	Oneida	36065	2501011011	23.08	Missing	0.078	Missing	30.9	13.25	Missing	0.045	0.99	2003	42.30	5.80	12.48	0.042	0.77	0.003	Permeation
NY	Oneida	36065	2501011012	199.33	Missing	0.677	Missing	30.9	114.41	Missing	0.388	0.99	2003	42.30	5.80	107.78	0.366	6.64	0.023	Diurnal
NY	Oneida	36065	2501011016	10.94	Missing	0.037	Missing	30.9	6.28	Missing	0.021	0.99	2003	42.30	5.80	5.91	0.020	0.36	0.001	Transport
NY	Oneida	36065	2501012011	1.93	Missing	0.007	Missing	30.9	1.11	Missing	0.004	0.99	2003	42.30	5.80	1.04	0.004	0.06	0.000	Permeation
NY	Oneida	36065	2501012012	15.79	Missing	0.054	Missing	30.9	9.06	Missing	0.031	0.99	2003	42.30	5.80	8.54	0.029	0.53	0.002	Diurnal
NY	Oneida	36065	2501012016	40.86	Missing	0.139	Missing	30.9	23.46	Missing	0.080	0.99	2003	42.30	5.80	22.10	0.075	1.36	0.005	Transport
NY	Onondaga	36067	2501011011	44.46	Missing	0.151	Missing	30.9	25.02	Missing	0.085	0.98	2003	42.30	5.80	23.57	0.080	1.45	0.005	Permeation
NY	Onondaga	36067	2501011012	383.92	Missing	1.304	Missing	30.9	216.05	Missing	0.734	0.98	2003	42.30	5.80	203.52	0.691	12.53	0.043	Diurnal
NY	Onondaga	36067	2501011016	21.07	Missing	0.072	Missing	30.9	11.86	Missing	0.040	0.98	2003	42.30	5.80	11.17	0.038	0.69	0.002	Transport
NY	Onondaga	36067	2501012011	4.52	Missing	0.015	Missing	30.9	2.54	Missing	0.009	0.98	2003	42.30	5.80	2.39	0.008	0.15	0.001	Permeation
NY	Onondaga	36067	2501012012	36.98	Missing	0.126	Missing	30.9	20.81	Missing	0.071	0.98	2003	42.30	5.80	19.60	0.067	1.21	0.004	Diurnal
NY	Onondaga	36067	2501012016	95.72	Missing	0.325	Missing	30.9	53.86	Missing	0.183	0.98	2003	42.30	5.80	50.74	0.172	3.12	0.011	Transport
NY	Ontario	36069	2501011011	9.76	Missing	0.033	Missing	30.9	5.74	Missing	0.019	1.02	2003	42.30	5.80	5.41	0.018	0.33	0.001	Permeation
NY	Ontario	36069	2501011012	84.27	Missing	0.286	Missing	30.9	49.57	Missing	0.168	1.02	2003	42.30	5.80	46.69	0.159	2.87	0.010	Diurnal
NY	Ontario	36069	2501011016	4.62	Missing	0.016	Missing	30.9	2.72	Missing	0.009	1.02	2003	42.30	5.80	2.56	0.009	0.16	0.001	Transport
NY	Ontario	36069	2501012011	1.22	Missing	0.004	Missing	30.9	0.72	Missing	0.002	1.02	2003	42.30	5.80	0.67	0.002	0.04	0.000	Permeation
NY	Ontario	36069	2501012012	9.96	Missing	0.034	Missing	30.9	5.86	Missing	0.020	1.02	2003	42.30	5.80	5.52	0.019	0.34	0.001	Diurnal
NY	Ontario	36069	2501012016	25.77	Missing	0.088	Missing	30.9	15.16	Missing	0.051	1.02	2003	42.30	5.80	14.28	0.048	0.88	0.003	Transport
NY	Orange	36071	2501011011	28.39	Missing	0.096	Missing	30.9	17.34	Missing	0.059	1.06	2003	42.30	5.80	16.34	0.055	1.01	0.003	Permeation
NY	Orange	36071	2501011012	245.13	Missing	0.832	Missing	30.9	149.78	Missing	0.509	1.06	2003	42.30	5.80	141.09	0.479	8.69	0.029	Diurnal
NY	Orange	36071	2501011016	13.45	Missing	0.046	Missing	30.9	8.22	Missing	0.028	1.06	2003	42.30	5.80	7.74	0.026	0.48	0.002	Transport
NY	Orange	36071	2501012011	3.93	Missing	0.013	Missing	30.9	2.40	Missing	0.008	1.06	2003	42.30	5.80	2.26	0.008	0.14	0.000	Permeation
NY	Orange	36071	2501012012	32.15	Missing	0.109	Missing	30.9	19.65	Missing	0.067	1.06	2003	42.30	5.80	18.51	0.063	1.14	0.004	Diurnal
NY	Orange	36071	2501012016	83.24	Missing	0.283	Missing	30.9	50.86	Missing	0.173	1.06	2003	42.30	5.80	47.91	0.163	2.95	0.010	Transport
NY	Orleans	36073	2501011011	3.90	Missing	0.013	Missing	30.9	2.33	Missing	0.008	1.04	2003	42.30	5.80	2.20	0.007	0.14	0.000	Permeation
NY	Orleans	36073	2501011012	33.71	Missing	0.114	Missing	30.9	20.15	Missing	0.068	1.04	2003	42.30	5.80	18.98	0.064	1.17	0.004	Diurnal
NY	Orleans	36073	2501011016	1.85	Missing	0.006	Missing	30.9	1.11	Missing	0.004	1.04	2003	42.30	5.80	1.04	0.004	0.06	0.000	Transport
NY	Orleans	36073	2501012011	0.38	Missing	0.001	Missing	30.9	0.23	Missing	0.001	1.04	2003	42.30	5.80	0.21	0.001	0.01	0.000	Permeation
NY	Orleans	36073	2501012012	3.09	Missing	0.011	Missing	30.9	1.85	Missing	0.006	1.04	2003	42.30	5.80	1.74	0.006	0.11	0.000	Diurnal
NY	Orleans	36073	2501012016	8.01	Missing	0.027	Missing	30.9	4.79	Missing	0.016	1.04	2003	42.30	5.80	4.51	0.015	0.28	0.001	Transport
NY	Oswego	36075	2501011011	11.96	Missing	0.041	Missing	30.9	6.94	Missing	0.024	1.01	2003	42.30	5.80	6.54	0.022	0.40	0.001	Permeation
NY	Oswego	36075	2501011012	103.30	Missing	0.351	Missing	30.9	59.95	Missing	0.204	1.01	2003	42.30	5.80	56.47	0.192	3.48	0.012	Diurnal
NY	Oswego	36075	2501011016	5.67	Missing	0.019	Missing	30.9	3.29	Missing	0.011	1.01	2003	42.30	5.80	3.10	0.011	0.19	0.001	Transport
NY	Oswego	36075	2501012011	1.14	Missing	0.004	Missing	30.9	0.66	Missing	0.002	1.01	2003	42.30	5.80	0.62	0.002	0.04	0.000	Permeation
NY	Oswego	36075	2501012012	9.35	Missing	0.032	Missing	30.9	5.43	Missing	0.018	1.01	2003	42.30	5.80	5.11	0.017	0.31	0.001	Diurnal
NY	Oswego	36075	2501012016	24.20	Missing	0.082	Missing	30.9	14.05	Missing	0.048	1.01	2003	42.30	5.80	13.23	0.045	0.81	0.003	Transport
NY	Otsego	36077	2501011011	6.66	Missing	0.023	Missing	30.9	3.93	Missing	0.013	1.02	2003	42.30	5.80	3.70	0.013	0.23	0.001	Permeation
NY	Otsego	36077	2501011012	57.49	Missing	0.195	Missing	30.9	33.90	Missing	0.115	1.02	2003	42.30	5.80	31.94	0.108	1.97	0.007	Diurnal
NY	Otsego	36077	2501011016	3.16	Missing	0.011	Missing	30.9	1.86	Missing	0.006	1.02	2003	42.30	5.80	1.75	0.006	0.11	0.000	Transport
NY	Otsego	36077	2501012011	0.53	Missing	0.002	Missing	30.9	0.31	Missing	0.001	1.02	2003	42.30	5.80	0.29	0.001	0.02	0.000	Permeation
NY	Otsego	36077	2501012012	4.31	Missing	0.015	Missing	30.9	2.54	Missing	0.009	1.02	2003	42.30	5.80	2.39	0.008	0.15	0.000	Diurnal
NY	Otsego	36077	2501012016	11.14	Missing	0.038	Missing	30.9	6.57	Missing	0.022	1.02	2003	42.30	5.80	6.19	0.021	0.38	0.001	Transport
NY	Putnam	36079	2501011011	8.00	Missing	0.027	Missing	30.9	4.88	Missing	0.017	1.06	2003	42.30	5.80	4.59	0.016	0.28	0.001	Permeation
NY	Putnam	36079	2501011012	69.05	Missing	0.234	Missing	30.9	42.12	Missing	0.143	1.06	2003	42.30	5.80	39.68	0.135	2.44	0.008	Diurnal
NY	Putnam	36079	2501011016	3.79	Missing	0.013	Missing	30.9	2.31	Missing	0.008	1.06	2003	42.30	5.80	2.18	0.007	0.13	0.000	Transport
NY	Putnam	36079	2501012011	1.73	Missing	0.006	Missing	30.9	1.06	Missing	0.004	1.06	2003	42.30	5.80	1.00	0.003	0.06	0.000	Permeation

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Increment al Control Factor TOTAL_EFF	2009 BOTW Increment al Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descripti
NY	Putnam	36079	2501012012	14.19	Missing	0.048	Missing	30.9	8.66	Missing	0.029	1.06	2003	42.30	5.80	8.16	0.028	0.50	0.002	Diurnal
NY	Putnam	36079	2501012016	36.74	Missing	0.125	Missing	30.9	22.41	Missing	0.076	1.06	2003	42.30	5.80	21.11	0.072	1.30	0.004	Transport
NY	Queens	36081	2501011011	183.98	Missing	0.625	Missing	30.9	113.44	Missing	0.385	1.07	2003	42.30	5.80	106.86	0.363	6.58	0.022	Permeation
NY	Queens	36081	2501011012	1,588.74	Missing	5.395	Missing	30.9	979.62	Missing	3.326	1.07	2003	42.30	5.80	922.80	3.133	56.82	0.193	Diurnal
NY	Queens	36081	2501011016	87.19	Missing	0.296	Missing	30.9	53.76	Missing	0.183	1.07	2003	42.30	5.80	50.64	0.172	3.12	0.011	Transport
NY	Queens	36081	2501012011	14.48	Missing	0.049	Missing	30.9	8.93	Missing	0.030	1.07	2003	42.30	5.80	8.41	0.029	0.52	0.002	Permeation
NY	Queens	36081	2501012012	118.55	Missing	0.403	Missing	30.9	73.10	Missing	0.248	1.07	2003	42.30	5.80	68.86	0.234	4.24	0.014	Diurnal
NY	Queens	36081	2501012016	306.88	Missing	1.042	Missing	30.9	189.23	Missing	0.643	1.07	2003	42.30	5.80	178.25	0.605	10.98	0.037	Transport
NY	Rensselaer	36083	2501011011	14.93	Missing	0.051	Missing	30.9	8.43	Missing	0.029	0.98	2003	42.30	5.80	7.94	0.027	0.49	0.002	Permeation
NY	Rensselaer	36083	2501011012	128.93	Missing	0.438	Missing	30.9	72.79	Missing	0.247	0.98	2003	42.30	5.80	68.57	0.233	4.22	0.014	Diurnal
NY	Rensselaer	36083	2501011016	7.08	Missing	0.024	Missing	30.9	3.99	Missing	0.014	0.98	2003	42.30	5.80	3.76	0.013	0.23	0.001	Transport
NY	Rensselaer	36083	2501012011	1.40	Missing	0.005	Missing	30.9	0.79	Missing	0.003	0.98	2003	42.30	5.80	0.75	0.003	0.05	0.000	Permeation
NY	Rensselaer	36083	2501012012	11.48	Missing	0.039	Missing	30.9	6.48	Missing	0.022	0.98	2003	42.30	5.80	6.11	0.021	0.38	0.001	Diurnal
NY	Rensselaer	36083	2501012016	29.72	Missing	0.101	Missing	30.9	16.78	Missing	0.057	0.98	2003	42.30	5.80	15.80	0.054	0.97	0.003	Transport
NY	Richmond	36085	2501011011	37.82	Missing	0.128	Missing	30.9	23.90	Missing	0.081	1.10	2003	42.30	5.80	22.52	0.076	1.39	0.005	Permeation
NY	Richmond	36085	2501011012	326.62	Missing	1.109	Missing	30.9	206.40	Missing	0.701	1.10	2003	42.30	5.80	194.43	0.660	11.97	0.041	Diurnal
NY	Richmond	36085	2501011016	17.93	Missing	0.061	Missing	30.9	11.33	Missing	0.038	1.10	2003	42.30	5.80	10.67	0.036	0.66	0.002	Transport
NY	Richmond	36085	2501012011	3.33	Missing	0.011	Missing	30.9	2.10	Missing	0.007	1.10	2003	42.30	5.80	1.98	0.007	0.12	0.000	Permeation
NY	Richmond	36085	2501012012	27.27	Missing	0.093	Missing	30.9	17.23	Missing	0.059	1.10	2003	42.30	5.80	16.23	0.055	1.00	0.003	Diurnal
NY	Richmond	36085	2501012016	70.58	Missing	0.240	Missing	30.9	44.60	Missing	0.151	1.10	2003	42.30	5.80	42.02	0.143	2.59	0.009	Transport
NY	Rockland	36087	2501011011	21.49	Missing	0.073	Missing	30.9	12.54	Missing	0.043	1.01	2003	42.30	5.80	11.81	0.040	0.73	0.002	Permeation
NY	Rockland	36087	2501011012	185.58	Missing	0.630	Missing	30.9	108.26	Missing	0.368	1.01	2003	42.30	5.80	101.99	0.346	6.28	0.021	Diurnal
NY	Rockland	36087	2501011016	10.18	Missing	0.035	Missing	30.9	5.94	Missing	0.020	1.01	2003	42.30	5.80	5.60	0.019	0.34	0.001	Transport
NY	Rockland	36087	2501012011	3.13	Missing	0.011	Missing	30.9	1.83	Missing	0.006	1.01	2003	42.30	5.80	1.72	0.006	0.11	0.000	Permeation
NY	Rockland	36087	2501012012	25.61	Missing	0.087	Missing	30.9	14.94	Missing	0.051	1.01	2003	42.30	5.80	14.07	0.048	0.87	0.003	Diurnal
NY	Rockland	36087	2501012016	66.29	Missing	0.225	Missing	30.9	38.67	Missing	0.131	1.01	2003	42.30	5.80	36.43	0.124	2.24	0.008	Transport
NY	St. Lawrence	36089	2501011011	11.23	Missing	0.038	Missing	30.9	6.57	Missing	0.022	1.01	2003	42.30	5.80	6.19	0.021	0.38	0.001	Permeation
NY	St. Lawrence	36089	2501011012	97.01	Missing	0.329	Missing	30.9	56.74	Missing	0.193	1.01	2003	42.30	5.80	53.45	0.181	3.29	0.011	Diurnal
NY	St. Lawrence	36089	2501011016	5.32	Missing	0.018	Missing	30.9	3.11	Missing	0.011	1.01	2003	42.30	5.80	2.93	0.010	0.18	0.001	Transport
NY	St. Lawrence	36089	2501012011	0.28	Missing	0.001	Missing	30.9	0.17	Missing	0.001	1.01	2003	42.30	5.80	0.16	0.001	0.01	0.000	Permeation
NY	St. Lawrence	36089	2501012012	2.31	Missing	0.008	Missing	30.9	1.35	Missing	0.005	1.01	2003	42.30	5.80	1.27	0.004	0.08	0.000	Diurnal
NY	St. Lawrence	36089	2501012016	5.98	Missing	0.020	Missing	30.9	3.50	Missing	0.012	1.01	2003	42.30	5.80	3.29	0.011	0.20	0.001	Transport
NY	Saratoga	36091	2501011011	19.99	Missing	0.068	Missing	30.9	12.03	Missing	0.041	1.04	2003	42.30	5.80	11.33	0.038	0.70	0.002	Permeation
NY	Saratoga	36091	2501011012	172.62	Missing	0.586	Missing	30.9	103.89	Missing	0.353	1.04	2003	42.30	5.80	97.86	0.332	6.03	0.020	Diurnal
NY	Saratoga	36091	2501011016	9.47	Missing	0.032	Missing	30.9	5.70	Missing	0.019	1.04	2003	42.30	5.80	5.37	0.018	0.33	0.001	Transport
NY	Saratoga	36091	2501012011	1.06	Missing	0.004	Missing	30.9	0.64	Missing	0.002	1.04	2003	42.30	5.80	0.60	0.002	0.04	0.000	Permeation
NY	Saratoga	36091	2501012012	8.68	Missing	0.029	Missing	30.9	5.22	Missing	0.018	1.04	2003	42.30	5.80	4.92	0.017	0.30	0.001	Diurnal
NY	Saratoga	36091	2501012016	22.46	Missing	0.076	Missing	30.9	13.52	Missing	0.046	1.04	2003	42.30	5.80	12.74	0.043	0.78	0.003	Transport
NY	Schenectady	36093	2501011011	14.60	Missing	0.050	Missing	30.9	8.17	Missing	0.028	0.97	2003	42.30	5.80	7.69	0.026	0.47	0.002	Permeation
NY	Schenectady	36093	2501011012	126.11	Missing	0.428	Missing	30.9	70.51	Missing	0.239	0.97	2003	42.30	5.80	66.42	0.226	4.09	0.014	Diurnal
NY	Schenectady	36093	2501011016	6.92	Missing	0.024	Missing	30.9	3.87	Missing	0.013	0.97	2003	42.30	5.80	3.65	0.012	0.22	0.001	Transport
NY	Schenectady	36093	2501012011	2.12	Missing	0.007	Missing	30.9	1.18	Missing	0.004	0.97	2003	42.30	5.80	1.12	0.004	0.07	0.000	Permeation
NY	Schenectady	36093	2501012012	17.33	Missing	0.059	Missing	30.9	9.69	Missing	0.033	0.97	2003	42.30	5.80	9.13	0.031	0.56	0.002	Diurnal
NY	Schenectady	36093	2501012016	44.87	Missing	0.152	Missing	30.9	25.09	Missing	0.085	0.97	2003	42.30	5.80	23.63	0.080	1.46	0.005	Transport
NY	Schoharie	36095	2501011011	3.60	Missing	0.012	Missing	30.9	2.03	Missing	0.007	0.98	2003	42.30	5.80	1.92	0.007	0.12	0.000	Permeation
NY	Schoharie	36095	2501011012	31.11	Missing	0.106	Missing	30.9	17.56	Missing	0.060	0.98	2003	42.30	5.80	16.54	0.056	1.02	0.003	Diurnal
NY	Schoharie	36095	2501011016	1.71	Missing	0.006	Missing	30.9	0.96	Missing	0.003	0.98	2003	42.30	5.80	0.91	0.003	0.06	0.000	Transport
NY	Schoharie	36095	2501012011	1.36	Missing	0.005	Missing	30.9	0.77	Missing	0.003	0.98	2003	42.30	5.80	0.72	0.002	0.04	0.000	Permeation
NY	Schoharie	36095	2501012012	11.10	Missing	0.038	Missing	30.9	6.26	Missing	0.021	0.98	2003	42.30	5.80	5.90	0.020	0.36	0.001	Diurnal
NY	Schoharie	36095	2501012016	28.73	Missing	0.098	Missing	30.9	16.22	Missing	0.055	0.98	2003	42.30	5.80	15.28	0.052	0.94	0.003	Transport
NY	Schuyler	36097	2501011011	2.08	Missing	0.007	Missing	30.9	1.20	Missing	0.004	1.00	2003	42.30	5.80	1.13	0.004	0.07	0.000	Permeation
NY	Schuyler	36097	2501011012	17.94	Missing	0.061	Missing	30.9	10.32	Missing	0.035	1.00	2003	42.30	5.80	9.73	0.033	0.60	0.002	Diurnal
NY	Schuyler	36097	2501011016	0.98	Missing	0.003	Missing	30.9	0.57	Missing	0.002	1.00	2003	42.30	5.80	0.53	0.002	0.03	0.000	Transport
NY	Schuyler	36097	2501012011	0.33	Missing	0.001	Missing	30.9	0.19	Missing	0.001	1.00	2003	42.30	5.80	0.18	0.001	0.01	0.000	Permeation
NY	Schuyler	36097	2501012012	2.74	Missing	0.009	Missing	30.9	1.57	Missing	0.005	1.00	2003	42.30	5.80	1.48	0.005	0.09	0.000	Diurnal
NY	Schuyler	36097	2501012016	7.08	Missing	0.024	Missing	30.9	4.08	Missing	0.014	1.00	2003	42.30	5.80	3.84	0.013	0.24	0.001	Transport
NY	Seneca	36099	2501011011	3.33	Missing	0.011	Missing	30.9	1.87	Missing	0.006	0.97	2003	42.30	5.80	1.76	0.006	0.11	0.000	Permeation
NY	Seneca	36099	2501011012	28.77	Missing	0.098	Missing	30.9	16.15	Missing	0.055	0.97	2003	42.30	5.80	15.21	0.052	0.94	0.003	Diurnal
NY	Seneca	36099	2501011016	1.58	Missing	0.005	Missing	30.9	0.89	Missing	0.003	0.97	2003	42.30	5.80	0.83	0.003	0.05	0.000	Transport

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descripti
NY	Seneca	36099	2501012011	0.16	Missing	0.001	Missing	30.9	0.09	Missing	0.000	0.97	2003	42.30	5.80	0.09	0.000	0.01	0.000	Permeation
NY	Seneca	36099	2501012012	1.32	Missing	0.004	Missing	30.9	0.74	Missing	0.003	0.97	2003	42.30	5.80	0.70	0.002	0.04	0.000	Diurnal
NY	Seneca	36099	2501012016	3.42	Missing	0.012	Missing	30.9	1.92	Missing	0.007	0.97	2003	42.30	5.80	1.81	0.006	0.11	0.000	Transport
NY	Steuben	36101	2501011011	10.46	Missing	0.036	Missing	30.9	5.94	Missing	0.020	0.98	2003	42.30	5.80	5.59	0.019	0.34	0.001	Permeation
NY	Steuben	36101	2501011012	90.32	Missing	0.307	Missing	30.9	51.27	Missing	0.174	0.98	2003	42.30	5.80	48.30	0.164	2.97	0.010	Diurnal
NY	Steuben	36101	2501011016	4.96	Missing	0.017	Missing	30.9	2.81	Missing	0.010	0.98	2003	42.30	5.80	2.65	0.009	0.16	0.001	Transport
NY	Steuben	36101	2501012011	0.64	Missing	0.002	Missing	30.9	0.37	Missing	0.001	0.98	2003	42.30	5.80	0.34	0.001	0.02	0.000	Permeation
NY	Steuben	36101	2501012012	5.27	Missing	0.018	Missing	30.9	2.99	Missing	0.010	0.98	2003	42.30	5.80	2.82	0.010	0.17	0.001	Diurnal
NY	Steuben	36101	2501012016	13.64	Missing	0.046	Missing	30.9	7.74	Missing	0.026	0.98	2003	42.30	5.80	7.29	0.025	0.45	0.002	Transport
NY	Suffolk	36103	2501011011	119.04	Missing	0.404	Missing	30.9	69.88	Missing	0.237	1.02	2003	42.30	5.80	65.82	0.224	4.05	0.014	Permeation
NY	Suffolk	36103	2501011012	1,027.93	Missing	3.490	Missing	30.9	603.41	Missing	2.049	1.02	2003	42.30	5.80	568.41	1.930	35.00	0.119	Diurnal
NY	Suffolk	36103	2501011016	56.41	Missing	0.192	Missing	30.9	33.12	Missing	0.112	1.02	2003	42.30	5.80	31.20	0.106	1.92	0.007	Transport
NY	Suffolk	36103	2501012011	21.20	Missing	0.072	Missing	30.9	12.45	Missing	0.042	1.02	2003	42.30	5.80	11.73	0.040	0.72	0.002	Permeation
NY	Suffolk	36103	2501012012	173.58	Missing	0.589	Missing	30.9	101.89	Missing	0.346	1.02	2003	42.30	5.80	95.98	0.326	5.91	0.020	Diurnal
NY	Suffolk	36103	2501012016	449.33	Missing	1.526	Missing	30.9	263.76	Missing	0.896	1.02	2003	42.30	5.80	248.46	0.844	15.30	0.052	Transport
NY	Sullivan	36105	2501011011	10.15	Missing	0.034	Missing	30.9	6.16	Missing	0.021	1.05	2003	42.30	5.80	5.81	0.020	0.36	0.001	Permeation
NY	Sullivan	36105	2501011012	87.68	Missing	0.298	Missing	30.9	53.22	Missing	0.181	1.05	2003	42.30	5.80	50.13	0.170	3.09	0.010	Diurnal
NY	Sullivan	36105	2501011016	4.81	Missing	0.016	Missing	30.9	2.92	Missing	0.010	1.05	2003	42.30	5.80	2.75	0.009	0.17	0.001	Transport
NY	Sullivan	36105	2501012011	0.93	Missing	0.003	Missing	30.9	0.56	Missing	0.002	1.05	2003	42.30	5.80	0.53	0.002	0.03	0.000	Permeation
NY	Sullivan	36105	2501012012	7.60	Missing	0.026	Missing	30.9	4.61	Missing	0.016	1.05	2003	42.30	5.80	4.35	0.015	0.27	0.001	Diurnal
NY	Sullivan	36105	2501012016	19.68	Missing	0.067	Missing	30.9	11.94	Missing	0.041	1.05	2003	42.30	5.80	11.25	0.038	0.69	0.002	Transport
NY	Tioga	36107	2501011011	4.85	Missing	0.016	Missing	30.9	2.69	Missing	0.009	0.96	2003	42.30	5.80	2.54	0.009	0.16	0.001	Permeation
NY	Tioga	36107	2501011012	41.86	Missing	0.142	Missing	30.9	23.27	Missing	0.079	0.96	2003	42.30	5.80	21.92	0.074	1.35	0.005	Diurnal
NY	Tioga	36107	2501011016	2.30	Missing	0.008	Missing	30.9	1.28	Missing	0.004	0.96	2003	42.30	5.80	1.20	0.004	0.07	0.000	Transport
NY	Tioga	36107	2501012011	0.45	Missing	0.002	Missing	30.9	0.25	Missing	0.001	0.96	2003	42.30	5.80	0.24	0.001	0.01	0.000	Permeation
NY	Tioga	36107	2501012012	3.72	Missing	0.013	Missing	30.9	2.07	Missing	0.007	0.96	2003	42.30	5.80	1.95	0.007	0.12	0.000	Diurnal
NY	Tioga	36107	2501012016	9.64	Missing	0.033	Missing	30.9	5.36	Missing	0.018	0.96	2003	42.30	5.80	5.05	0.017	0.31	0.001	Transport
NY	Tompkins	36109	2501011011	8.85	Missing	0.030	Missing	30.9	5.18	Missing	0.018	1.01	2003	42.30	5.80	4.88	0.017	0.30	0.001	Permeation
NY	Tompkins	36109	2501011012	76.45	Missing	0.260	Missing	30.9	44.71	Missing	0.152	1.01	2003	42.30	5.80	42.12	0.143	2.59	0.009	Diurnal
NY	Tompkins	36109	2501011016	4.20	Missing	0.014	Missing	30.9	2.45	Missing	0.008	1.01	2003	42.30	5.80	2.31	0.008	0.14	0.000	Transport
NY	Tompkins	36109	2501012011	0.62	Missing	0.002	Missing	30.9	0.37	Missing	0.001	1.01	2003	42.30	5.80	0.34	0.001	0.02	0.000	Permeation
NY	Tompkins	36109	2501012012	5.11	Missing	0.017	Missing	30.9	2.99	Missing	0.010	1.01	2003	42.30	5.80	2.82	0.010	0.17	0.001	Diurnal
NY	Tompkins	36109	2501012016	13.23	Missing	0.045	Missing	30.9	7.74	Missing	0.026	1.01	2003	42.30	5.80	7.29	0.025	0.45	0.002	Transport
NY	Ulster	36111	2501011011	17.62	Missing	0.060	Missing	30.9	10.67	Missing	0.036	1.05	2003	42.30	5.80	10.05	0.034	0.62	0.002	Permeation
NY	Ulster	36111	2501011012	152.13	Missing	0.517	Missing	30.9	92.10	Missing	0.313	1.05	2003	42.30	5.80	86.76	0.295	5.34	0.018	Diurnal
NY	Ulster	36111	2501011016	8.35	Missing	0.028	Missing	30.9	5.05	Missing	0.017	1.05	2003	42.30	5.80	4.76	0.016	0.29	0.001	Transport
NY	Ulster	36111	2501012011	2.00	Missing	0.007	Missing	30.9	1.21	Missing	0.004	1.05	2003	42.30	5.80	1.14	0.004	0.07	0.000	Permeation
NY	Ulster	36111	2501012012	16.37	Missing	0.056	Missing	30.9	9.91	Missing	0.034	1.05	2003	42.30	5.80	9.33	0.032	0.57	0.002	Diurnal
NY	Ulster	36111	2501012016	42.37	Missing	0.144	Missing	30.9	25.65	Missing	0.087	1.05	2003	42.30	5.80	24.16	0.082	1.49	0.005	Transport
NY	Warren	36113	2501011011	7.94	Missing	0.027	Missing	30.9	4.71	Missing	0.016	1.03	2003	42.30	5.80	4.44	0.015	0.27	0.001	Permeation
NY	Warren	36113	2501011012	68.53	Missing	0.233	Missing	30.9	40.70	Missing	0.138	1.03	2003	42.30	5.80	38.34	0.130	2.36	0.008	Diurnal
NY	Warren	36113	2501011016	3.76	Missing	0.013	Missing	30.9	2.23	Missing	0.008	1.03	2003	42.30	5.80	2.10	0.007	0.13	0.000	Transport
NY	Warren	36113	2501012011	0.95	Missing	0.003	Missing	30.9	0.56	Missing	0.002	1.03	2003	42.30	5.80	0.53	0.002	0.03	0.000	Permeation
NY	Warren	36113	2501012012	7.76	Missing	0.026	Missing	30.9	4.61	Missing	0.016	1.03	2003	42.30	5.80	4.34	0.015	0.27	0.001	Diurnal
NY	Warren	36113	2501012016	20.08	Missing	0.068	Missing	30.9	11.93	Missing	0.040	1.03	2003	42.30	5.80	11.24	0.038	0.69	0.002	Transport
NY	Washington	36115	2501011011	6.06	Missing	0.021	Missing	30.9	3.52	Missing	0.012	1.01	2003	42.30	5.80	3.32	0.011	0.20	0.001	Permeation
NY	Washington	36115	2501011012	52.33	Missing	0.178	Missing	30.9	30.42	Missing	0.103	1.01	2003	42.30	5.80	28.65	0.097	1.76	0.006	Diurnal
NY	Washington	36115	2501011016	2.87	Missing	0.010	Missing	30.9	1.67	Missing	0.006	1.01	2003	42.30	5.80	1.57	0.005	0.10	0.000	Transport
NY	Washington	36115	2501012011	0.60	Missing	0.002	Missing	30.9	0.35	Missing	0.001	1.01	2003	42.30	5.80	0.33	0.001	0.02	0.000	Permeation
NY	Washington	36115	2501012012	4.89	Missing	0.017	Missing	30.9	2.84	Missing	0.010	1.01	2003	42.30	5.80	2.68	0.009	0.16	0.001	Diurnal
NY	Washington	36115	2501012016	12.65	Missing	0.043	Missing	30.9	7.35	Missing	0.025	1.01	2003	42.30	5.80	6.93	0.024	0.43	0.001	Transport
NY	Wayne	36117	2501011011	8.81	Missing	0.030	Missing	30.9	5.18	Missing	0.018	1.02	2003	42.30	5.80	4.88	0.017	0.30	0.001	Permeation
NY	Wayne	36117	2501011012	76.08	Missing	0.258	Missing	30.9	44.72	Missing	0.152	1.02	2003	42.30	5.80	42.13	0.143	2.59	0.009	Diurnal
NY	Wayne	36117	2501011016	4.18	Missing	0.014	Missing	30.9	2.45	Missing	0.008	1.02	2003	42.30	5.80	2.31	0.008	0.14	0.000	Transport
NY	Wayne	36117	2501012011	0.92	Missing	0.003	Missing	30.9	0.54	Missing	0.002	1.02	2003	42.30	5.80	0.51	0.002	0.03	0.000	Permeation
NY	Wayne	36117	2501012012	7.51	Missing	0.026	Missing	30.9	4.42	Missing	0.015	1.02	2003	42.30	5.80	4.16	0.014	0.26	0.001	Diurnal
NY	Wayne	36117	2501012016	19.45	Missing	0.066	Missing	30.9	11.43	Missing	0.039	1.02	2003	42.30	5.80	10.77	0.037	0.66	0.002	Transport
NY	Westchester	36119	2501011011	78.91	Missing	0.268	Missing	30.9	45.63	Missing	0.155	1.00	2003	42.30	5.80	42.98	0.146	2.65	0.009	Permeation
NY	Westchester	36119	2501011012	681.43	Missing	2.314	Missing	30.9	394.00	Missing	1.338	1.00	2003	42.30	5.80	371.15	1.260	22.85	0.078	Diurnal

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descripti
NY	Westchester	36119	2501011016	37.40	Missing	0.127	Missing	30.9	21.62	Missing	0.073	1.00	2003	42.30	5.80	20.37	0.069	1.25	0.004	Transport
NY	Westchester	36119	2501012011	12.11	Missing	0.041	Missing	30.9	7.00	Missing	0.024	1.00	2003	42.30	5.80	6.60	0.022	0.41	0.001	Permeation
NY	Westchester	36119	2501012012	99.13	Missing	0.337	Missing	30.9	57.32	Missing	0.195	1.00	2003	42.30	5.80	53.99	0.183	3.32	0.011	Diurnal
NY	Westchester	36119	2501012016	256.62	Missing	0.871	Missing	30.9	148.37	Missing	0.504	1.00	2003	42.30	5.80	139.77	0.475	8.61	0.029	Transport
NY	Wyoming	36121	2501011011	3.82	Missing	0.013	Missing	30.9	2.24	Missing	0.008	1.02	2003	42.30	5.80	2.11	0.007	0.13	0.000	Permeation
NY	Wyoming	36121	2501011012	32.99	Missing	0.112	Missing	30.9	19.33	Missing	0.066	1.02	2003	42.30	5.80	18.21	0.062	1.12	0.004	Diurnal
NY	Wyoming	36121	2501011016	1.81	Missing	0.006	Missing	30.9	1.06	Missing	0.004	1.02	2003	42.30	5.80	1.00	0.003	0.06	0.000	Transport
NY	Wyoming	36121	2501012011	0.41	Missing	0.001	Missing	30.9	0.24	Missing	0.001	1.02	2003	42.30	5.80	0.23	0.001	0.01	0.000	Permeation
NY	Wyoming	36121	2501012012	3.36	Missing	0.011	Missing	30.9	1.97	Missing	0.007	1.02	2003	42.30	5.80	1.86	0.006	0.11	0.000	Diurnal
NY	Wyoming	36121	2501012016	8.71	Missing	0.030	Missing	30.9	5.10	Missing	0.017	1.02	2003	42.30	5.80	4.81	0.016	0.30	0.001	Transport
NY	Yates	36123	2501011011	2.73	Missing	0.009	Missing	30.9	1.64	Missing	0.006	1.05	2003	42.30	5.80	1.55	0.005	0.10	0.000	Permeation
NY	Yates	36123	2501011012	23.53	Missing	0.080	Missing	30.9	14.20	Missing	0.048	1.05	2003	42.30	5.80	13.38	0.045	0.82	0.003	Diurnal
NY	Yates	36123	2501011016	1.29	Missing	0.004	Missing	30.9	0.78	Missing	0.003	1.05	2003	42.30	5.80	0.73	0.002	0.05	0.000	Transport
NY	Yates	36123	2501012011	0.26	Missing	0.001	Missing	30.9	0.16	Missing	0.001	1.05	2003	42.30	5.80	0.15	0.001	0.01	0.000	Permeation
NY	Yates	36123	2501012012	2.13	Missing	0.007	Missing	30.9	1.29	Missing	0.004	1.05	2003	42.30	5.80	1.21	0.004	0.07	0.000	Diurnal
NY	Yates	36123	2501012016	5.51	Missing	0.019	Missing	30.9	3.33	Missing	0.011	1.05	2003	42.30	5.80	3.13	0.011	0.19	0.001	Transport
PA	Adams	42001	2501060300	93.21	0.3572	0.357	36.0	24.9	56.27	0.1913	0.216	1.05	2003	42.30	5.80	53.00	0.203	3.26	0.013	Total
PA	Allegheny	42003	2501060300	1,321.52	5.0639	5.064	36.0	24.9	730.47	2.4837	2.799	0.96	2003	42.30	5.80	688.10	2.637	42.37	0.162	Total
PA	Armstrong	42005	2501060300	66.95	0.2566	0.257	36.0	24.9	36.45	0.1239	0.140	0.94	2003	42.30	5.80	34.33	0.132	2.11	0.008	Total
PA	Beaver	42007	2501060300	164.34	0.6297	0.630	36.0	24.9	91.00	0.3094	0.349	0.96	2003	42.30	5.80	85.72	0.328	5.28	0.020	Total
PA	Bedford	42009	2501060300	48.98	0.1877	0.188	36.0	24.9	29.13	0.0990	0.112	1.03	2003	42.30	5.80	27.44	0.105	1.69	0.006	Total
PA	Berks	42011	2501060300	359.02	1.3757	1.376	36.0	24.9	215.04	0.7311	0.824	1.04	2003	42.30	5.80	202.57	0.776	12.47	0.048	Total
PA	Blair	42013	2501060300	120.32	0.4610	0.461	36.0	24.9	68.65	0.2334	0.263	0.99	2003	42.30	5.80	64.67	0.248	3.98	0.015	Total
PA	Bradford	42015	2501060300	60.67	0.2325	0.233	36.0	24.9	37.19	0.1264	0.143	1.06	2003	42.30	5.80	35.03	0.134	2.16	0.008	Total
PA	Bucks	42017	2501060300	731.49	2.8030	2.803	36.0	24.9	449.14	1.5272	1.721	1.06	2003	42.30	5.80	423.09	1.621	26.05	0.100	Total
PA	Butler	42019	2501060300	183.09	0.7016	0.702	36.0	24.9	106.44	0.3619	0.408	1.01	2003	42.30	5.80	100.27	0.384	6.17	0.024	Total
PA	Cambria	42021	2501060300	131.00	0.5020	0.502	36.0	24.9	72.01	0.2448	0.276	0.95	2003	42.30	5.80	67.83	0.260	4.18	0.016	Total
PA	Cameron	42023	2501060300	4.89	0.0187	0.019	36.0	24.9	2.71	0.0093	0.010	0.96	2003	42.30	5.80	2.55	0.010	0.16	0.001	Total
PA	Carbon	42025	2501060300	50.68	0.1942	0.194	36.0	24.9	30.23	0.1028	0.116	1.03	2003	42.30	5.80	28.48	0.109	1.75	0.007	Total
PA	Centre	42027	2501060300	115.36	0.4421	0.442	36.0	24.9	69.13	0.2351	0.265	1.04	2003	42.30	5.80	65.12	0.250	4.01	0.015	Total
PA	Chester	42029	2501060300	508.36	1.9479	1.948	36.0	24.9	315.18	1.0717	1.208	1.07	2003	42.30	5.80	296.90	1.138	18.28	0.070	Total
PA	Clarion	42031	2501060300	39.77	0.1524	0.152	36.0	24.9	22.76	0.0774	0.087	0.99	2003	42.30	5.80	21.44	0.082	1.32	0.005	Total
PA	Clearfield	42033	2501060300	71.59	0.2743	0.274	36.0	24.9	39.05	0.1328	0.150	0.95	2003	42.30	5.80	36.79	0.141	2.26	0.009	Total
PA	Clinton	42035	2501060300	30.96	0.1186	0.119	36.0	24.9	18.18	0.0618	0.070	1.02	2003	42.30	5.80	17.12	0.066	1.05	0.004	Total
PA	Columbia	42037	2501060300	59.65	0.2286	0.229	36.0	24.9	33.59	0.1142	0.129	0.98	2003	42.30	5.80	31.64	0.121	1.95	0.007	Total
PA	Crawford	42039	2501060300	85.40	0.3273	0.327	36.0	24.9	49.79	0.1693	0.191	1.01	2003	42.30	5.80	46.90	0.180	2.89	0.011	Total
PA	Cumberland	42041	2501060300	217.61	0.8338	0.834	36.0	24.9	141.18	0.4800	0.541	1.12	2003	42.30	5.80	133.00	0.510	8.19	0.031	Total
PA	Dauphin	42043	2501060300	300.63	1.1520	1.152	36.0	24.9	179.62	0.6107	0.688	1.04	2003	42.30	5.80	169.21	0.648	10.42	0.040	Total
PA	Delaware	42045	2501060300	531.44	2.0364	2.036	36.0	24.9	305.89	1.0401	1.172	1.00	2003	42.30	5.80	288.14	1.104	17.74	0.068	Total
PA	Elk	42047	2501060300	33.30	0.1276	0.128	36.0	24.9	18.24	0.0620	0.070	0.95	2003	42.30	5.80	17.18	0.066	1.06	0.004	Total
PA	Erie	42049	2501060300	275.89	1.0572	1.057	36.0	24.9	161.44	0.5489	0.619	1.01	2003	42.30	5.80	152.07	0.583	9.36	0.036	Total
PA	Fayette	42051	2501060300	141.33	0.5416	0.542	36.0	24.9	78.78	0.2679	0.302	0.97	2003	42.30	5.80	74.21	0.284	4.57	0.018	Total
PA	Forest	42053	2501060300	6.51	0.0249	0.025	36.0	24.9	3.81	0.0130	0.015	1.01	2003	42.30	5.80	3.59	0.014	0.22	0.001	Total
PA	Franklin	42055	2501060300	131.11	0.5024	0.502	36.0	24.9	76.46	0.2600	0.293	1.01	2003	42.30	5.80	72.03	0.276	4.43	0.017	Total
PA	Fulton	42057	2501060300	15.16	0.0581	0.058	36.0	24.9	9.22	0.0313	0.035	1.05	2003	42.30	5.80	8.69	0.033	0.54	0.002	Total
PA	Greene	42059	2501060300	30.12	0.1154	0.115	36.0	24.9	17.65	0.0600	0.068	1.02	2003	42.30	5.80	16.62	0.064	1.02	0.004	Total
PA	Huntingdon	42061	2501060300	41.13	0.1576	0.158	36.0	24.9	24.34	0.0828	0.093	1.03	2003	42.30	5.80	22.93	0.088	1.41	0.005	Total
PA	Indiana	42063	2501060300	76.61	0.2935	0.294	36.0	24.9	44.92	0.1527	0.172	1.02	2003	42.30	5.80	42.32	0.162	2.61	0.010	Total
PA	Jefferson	42065	2501060300	42.78	0.1639	0.164	36.0	24.9	23.65	0.0804	0.091	0.96	2003	42.30	5.80	22.28	0.085	1.37	0.005	Total
PA	Juniata	42067	2501060300	23.76	0.0910	0.091	36.0	24.9	13.33	0.0453	0.051	0.97	2003	42.30	5.80	12.56	0.048	0.77	0.003	Total
PA	Lackawanna	42069	2501060300	196.05	0.7512	0.751	36.0	24.9	112.34	0.3820	0.430	0.99	2003	42.30	5.80	105.83	0.405	6.52	0.025	Total
PA	Lancaster	42071	2501060300	526.91	2.0190	2.019	36.0	24.9	331.93	1.1286	1.272	1.09	2003	42.30	5.80	312.67	1.198	19.25	0.074	Total
PA	Lawrence	42073	2501060300	82.73	0.3170	0.317	36.0	24.9	45.68	0.1553	0.175	0.96	2003	42.30	5.80	43.03	0.165	2.65	0.010	Total
PA	Lebanon	42075	2501060300	125.89	0.4824	0.482	36.0	24.9	74.60	0.2536	0.286	1.03	2003	42.30	5.80	70.28	0.269	4.33	0.017	Total
PA	Lehigh	42077	2501060300	339.44	1.3007	1.301	36.0	24.9	203.50	0.6919	0.780	1.04	2003	42.30	5.80	191.70	0.735	11.80	0.045	Total
PA	Luzerne	42079	2501060300	324.72	1.2443	1.244	36.0	24.9	187.08	0.6361	0.717	1.00	2003	42.30	5.80	176.23	0.675	10.85	0.042	Total
PA	Lycoming	42081	2501060300	109.79	0.4207	0.421	36.0	24.9	64.10	0.2180	0.246	1.01	2003	42.30	5.80	60.38	0.231	3.72	0.014	Total
PA	McKean	42083	2501060300	39.58	0.1517	0.152	36.0	24.9	23.04	0.0784	0.088	1.01	2003	42.30	5.80	21.71	0.083	1.34	0.005	Total
PA	Mercer	42085	2501060300	114.34	0.4381	0.438	36.0	24.9	66.80	0.2271	0.256	1.01	2003	42.30	5.80	62.92	0.241	3.87	0.015	Total

PORTABLE FUEL CONTAINERS

State	County	FIPS	SCC	2002 VOC Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Emissions Annual (tpy)	Summer Day Calculated (tpd)	2009 BOTW Reductions Annual (tpy)	Summer Day (tpd)	SCC Descripti
PA	Mifflin	42087	2501060300	41.33	0.1584	0.158	36.0	24.9	23.62	0.0803	0.091	0.99	2003	42.30	5.80	22.25	0.085	1.37	0.005	Total
PA	Monroe	42089	2501060300	135.93	0.5209	0.521	36.0	24.9	92.32	0.3139	0.354	1.18	2003	42.30	5.80	86.96	0.333	5.35	0.021	Total
PA	Montgomery	42091	2501060300	958.96	3.6746	3.675	36.0	24.9	575.90	1.9581	2.207	1.04	2003	42.30	5.80	542.49	2.079	33.40	0.128	Total
PA	Montour	42093	2501060300	15.08	0.0578	0.058	36.0	24.9	9.08	0.0308	0.035	1.04	2003	42.30	5.80	8.55	0.033	0.53	0.002	Total
PA	Northampton	42095	2501060300	254.16	0.9739	0.974	36.0	24.9	155.90	0.5301	0.597	1.06	2003	42.30	5.80	146.86	0.563	9.04	0.035	Total
PA	Northumberland	42097	2501060300	83.70	0.3207	0.321	36.0	24.9	47.99	0.1631	0.184	0.99	2003	42.30	5.80	45.21	0.173	2.78	0.011	Total
PA	Perry	42099	2501060300	43.55	0.1669	0.167	36.0	24.9	29.07	0.0988	0.111	1.16	2003	42.30	5.80	27.38	0.105	1.69	0.006	Total
PA	Philadelphia	42101	2501060300	1,116.42	4.2779	4.278	36.0	24.9	643.79	2.1890	2.467	1.00	2003	42.30	5.80	606.45	2.324	37.34	0.143	Total
PA	Pike	42103	2501060300	50.47	0.1934	0.193	36.0	24.9	37.80	0.1285	0.145	1.30	2003	42.30	5.80	35.61	0.136	2.19	0.008	Total
PA	Potter	42105	2501060300	17.55	0.0672	0.067	36.0	24.9	9.46	0.0322	0.036	0.93	2003	42.30	5.80	8.92	0.034	0.55	0.002	Total
PA	Schuylkill	42107	2501060300	135.18	0.5180	0.518	36.0	24.9	77.21	0.2625	0.296	0.99	2003	42.30	5.80	72.73	0.279	4.48	0.017	Total
PA	Snyder	42109	2501060300	33.45	0.1282	0.128	36.0	24.9	21.44	0.0729	0.082	1.11	2003	42.30	5.80	20.20	0.077	1.24	0.005	Total
PA	Somerset	42111	2501060300	82.02	0.3143	0.314	36.0	24.9	45.27	0.1540	0.173	0.96	2003	42.30	5.80	42.65	0.163	2.63	0.010	Total
PA	Sullivan	42113	2501060300	9.83	0.0377	0.038	36.0	24.9	5.94	0.0202	0.023	1.05	2003	42.30	5.80	5.59	0.021	0.34	0.001	Total
PA	Susquehanna	42115	2501060300	41.38	0.1586	0.159	36.0	24.9	24.91	0.0847	0.095	1.04	2003	42.30	5.80	23.47	0.090	1.44	0.006	Total
PA	Tioga	42117	2501060300	39.71	0.1522	0.152	36.0	24.9	23.29	0.0792	0.089	1.02	2003	42.30	5.80	21.94	0.084	1.35	0.005	Total
PA	Union	42119	2501060300	36.33	0.1392	0.139	36.0	24.9	22.21	0.0755	0.085	1.06	2003	42.30	5.80	20.92	0.080	1.29	0.005	Total
PA	Venango	42121	2501060300	54.07	0.2072	0.207	36.0	24.9	29.90	0.1017	0.115	0.96	2003	42.30	5.80	28.17	0.108	1.73	0.007	Total
PA	Warren	42123	2501060300	41.86	0.1604	0.160	36.0	24.9	23.06	0.0784	0.088	0.95	2003	42.30	5.80	21.72	0.083	1.34	0.005	Total
PA	Washington	42125	2501060300	198.85	0.7619	0.762	36.0	24.9	112.38	0.3821	0.431	0.98	2003	42.30	5.80	105.86	0.406	6.52	0.025	Total
PA	Wayne	42127	2501060300	83.68	0.3207	0.321	36.0	24.9	49.55	0.1685	0.190	1.03	2003	42.30	5.80	46.68	0.179	2.87	0.011	Total
PA	Westmoreland	42129	2501060300	411.57	1.5771	1.577	36.0	24.9	233.77	0.7949	0.896	0.98	2003	42.30	5.80	220.21	0.844	13.56	0.052	Total
PA	Wyoming	42131	2501060300	31.36	0.1202	0.120	36.0	24.9	20.03	0.0681	0.077	1.11	2003	42.30	5.80	18.87	0.072	1.16	0.004	Total
PA	York	42133	2501060300	364.85	1.3980	1.398	36.0	24.9	217.03	0.7380	0.832	1.03	2003	42.30	5.80	204.44	0.783	12.59	0.048	Total
RI	Bristol	44001	2501060300	53.34	0.1461	0.146	Missing	24.9	47.95	0.1275	0.131	1.07	2007	16.30	5.80	45.17	0.124	2.78	0.008	Total
RI	Kent	44003	2501060300	173.95	0.4766	0.477	Missing	24.9	156.37	0.4157	0.428	1.07	2007	16.30	5.80	147.30	0.404	9.07	0.025	Total
RI	Newport	44005	2501060300	87.64	0.2401	0.240	Missing	24.9	78.79	0.2094	0.216	1.07	2007	16.30	5.80	74.22	0.203	4.57	0.013	Total
RI	Providence	44007	2501060300	648.72	1.7773	1.777	Missing	24.9	583.16	1.5500	1.598	1.07	2007	16.30	5.80	549.34	1.505	33.82	0.093	Total
RI	Washington	44009	2501060300	129.71	0.3554	0.355	Missing	24.9	116.60	0.3099	0.319	1.07	2007	16.30	5.80	109.84	0.301	6.76	0.019	Total
VT	Addison	50001	2501060300	37.32	0.1022	0.102	Missing	24.9	33.42	0.0888	0.092	1.07	2007	16.30	5.80	31.48	0.086	1.94	0.005	Total
VT	Bennington	50003	2501060300	37.97	0.1040	0.104	Missing	24.9	34.01	0.0904	0.093	1.07	2007	16.30	5.80	32.04	0.088	1.97	0.005	Total
VT	Caledonia	50005	2501060300	30.66	0.0840	0.084	Missing	24.9	27.46	0.0730	0.075	1.07	2007	16.30	5.80	25.87	0.071	1.59	0.004	Total
VT	Chittenden	50007	2501060300	151.90	0.4162	0.416	Missing	24.9	136.06	0.3616	0.373	1.07	2007	16.30	5.80	128.16	0.351	7.89	0.022	Total
VT	Essex	50009	2501060300	6.70	0.0184	0.018	Missing	24.9	6.00	0.0159	0.016	1.07	2007	16.30	5.80	5.66	0.016	0.35	0.001	Total
VT	Franklin	50011	2501060300	47.71	0.1307	0.131	Missing	24.9	42.73	0.1136	0.117	1.07	2007	16.30	5.80	40.25	0.110	2.48	0.007	Total
VT	Grand Isle	50013	2501060300	7.48	0.0205	0.021	Missing	24.9	6.70	0.0179	0.018	1.07	2007	16.30	5.80	6.31	0.017	0.39	0.001	Total
VT	Lamoille	50015	2501060300	24.55	0.0673	0.067	Missing	24.9	21.99	0.0585	0.060	1.07	2007	16.30	5.80	20.71	0.057	1.28	0.003	Total
VT	Orange	50017	2501060300	29.51	0.0809	0.081	Missing	24.9	26.43	0.0703	0.072	1.07	2007	16.30	5.80	24.90	0.068	1.53	0.004	Total
VT	Orleans	50019	2501060300	27.30	0.0748	0.075	Missing	24.9	24.45	0.0651	0.067	1.07	2007	16.30	5.80	23.04	0.063	1.42	0.004	Total
VT	Rutland	50021	2501060300	64.78	0.1775	0.178	Missing	24.9	58.02	0.1542	0.159	1.07	2007	16.30	5.80	54.66	0.150	3.37	0.009	Total
VT	Washington	50023	2501060300	60.29	0.1652	0.165	Missing	24.9	54.00	0.1435	0.148	1.07	2007	16.30	5.80	50.87	0.139	3.13	0.009	Total
VT	Windham	50025	2501060300	45.21	0.1239	0.124	Missing	24.9	40.49	0.1076	0.111	1.07	2007	16.30	5.80	38.14	0.105	2.35	0.006	Total
VT	Windsor	50027	2501060300	59.23	0.1623	0.162	Missing	24.9	53.05	0.1410	0.145	1.07	2007	16.30	5.80	49.97	0.137	3.08	0.008	Total
VA	Arlington	51013	2501060300	86.84	Missing	0.353	37.0	24.9	61.40	Missing	0.250	1.00	2005	29.30	5.80	57.83	0.235	3.56	0.014	Total
VA	Fairfax	51059	2501060300	1,046.16	Missing	4.254	37.0	24.9	739.64	Missing	3.007	1.00	2005	29.30	5.80	696.74	2.833	42.90	0.174	Total
VA	Loudoun	51107	2501060300	460.02	Missing	1.870	37.0	24.9	325.23	Missing	1.322	1.00	2005	29.30	5.80	306.37	1.246	18.86	0.077	Total
VA	Prince William	51153	2501060300	280.71	Missing	1.141	37.0	24.9	198.46	Missing	0.807	1.00	2005	29.30	5.80	186.95	0.760	11.51	0.047	Total
VA	Stafford	51179	2501060300	51.78	Missing	0.211	37.0	24.9	36.61	Missing	0.149	1.00	2005	29.30	5.80	34.49	0.140	2.12	0.009	Total
VA	Alexandria	51510	2501060300	88.95	Missing	0.362	37.0	24.9	62.89	Missing	0.256	1.00	2005	29.30	5.80	59.24	0.241	3.65	0.015	Total
VA	Fairfax City	51600	2501060300	37.09	Missing	0.151	37.0	24.9	26.22	Missing	0.107	1.00	2005	29.30	5.80	24.70	0.100	1.52	0.006	Total
VA	Falls Chruch	51610	2501060300	22.42	Missing	0.091	37.0	24.9	15.85	Missing	0.064	1.00	2005	29.30	5.80	14.93	0.061	0.92	0.004	Total
VA	Manassas City	51683	2501060300	18.35	Missing	0.075	37.0	24.9	12.97	Missing	0.053	1.00	2005	29.30	5.80	12.22	0.050	0.75	0.003	Total
VA	Manassas Park City	51685	2501060300	21.02	Missing	0.085	37.0	24.9	14.86	Missing	0.060	1.00	2005	29.30	5.80	14.00	0.057	0.86	0.004	Total
			MANEVU	74,747.81		233.96			49,939.38		154.07					46,832.28	144.55	3,107.10	9.51	

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	30% of 2002 Area Source PFC Emissions
F	Blank
G	30% of 2002 Area Source PFC Emissions
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

COLUMN	COLUMN DESCRIPTIONS
K	30% of 2009 Area Source PFC Emissions
L	Blank
M	30% of 2009 Area Source PFC Emissions
N	Blank
O, P	Year new containers requried: Incremental Control Factor for 2009 , assumes 10% turnover per year

Effective Date	CE	RE	RP	Control Factor
2003	65	100	65	42.3
2004	65	100	55	35.8
2005	65	100	45	29.3
2006	65	100	35	22.8
2007	65	100	25	16.3
2008	65	100	15	9.8
2009	65	100	5	3.3

COLUMN	COLUMN DESCRIPTIONS
Q	Incremental Control Factor (percent reduction due to OTC 2006 Control Measure) See Section 3.4.3 for derivation
R, S	30% of 2009 Area Source PFC Emissions
T, U	30% of 2009 Area Source PFC Emissions

PORTABLE FUEL CONTAINERS

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descript
CT			2501060300	1,061.46		2.91			708.20		1.94		2004	35.80	5.80	667.12	1.83	41.08	0.11	
DE			2501011010	307.78		0.90			210.11		0.62		2004	35.80	5.80	197.93	0.58	12.19	0.04	
DC			2501011011	318.42		1.08			221.17		0.75		2004	35.80	5.80	208.34	0.71	12.83	0.04	
ME			2501060300	398.24		1.09			265.60		0.73		2004	35.80	5.80	250.20	0.69	15.40	0.04	
MD			2501011011	4,340.22		11.89			2,685.84		7.36		2003	42.30	5.80	2,530.06	6.93	155.78	0.43	
MA			2501011000	1,976.55		5.42			2,032.60		5.57		2009	0.00	8.91	1,851.52	5.08	181.08	0.50	
NH			2501060300	391.44		1.07			324.67		0.89		2006	22.80	5.80	305.84	0.84	18.83	0.05	
NJ			2501000120	2,666.20		7.32			1,933.20		5.31		2005	29.30	5.80	1,821.07	5.00	112.13	0.31	
NY			2501011011	6,770.24		22.99			3,972.84		13.49		2003	42.30	5.80	3,742.41	12.71	230.42	0.78	
PA			2501060300	3,676.60		14.09			2,163.28		8.29		2003	42.30	5.80	2,037.81	7.81	125.47	0.48	
RI			2501060300	328.01		0.90			294.86		0.81		2007	16.30	5.80	277.76	0.76	17.10	0.05	
VT			2501060300	189.18		0.52			169.45		0.46		2007	16.30	5.80	159.62	0.44	9.83	0.03	
VA			2501060300	634.00		2.58			448.24		1.82		2005	29.30	5.80	422.24	1.72	26.00	0.11	
			MANEVU	22,424.34		70.19			14,981.81		46.22					14,049.68	43.37	932.13	2.85	

Data Supplied by NESCAUM - need documentation for how these were derived

ESTIMATED 2006 EMISSIONS (TONS PER SUMMER DAY)

	Current RFG Fraction	Current VOC tpsd	Full-RFG VOC tpsd	Reduction VOC tpsd
CT	100%	87.9	87.9	0.0
DE	100%	26.6	26.6	0.0
DC	100%	9.1	9.1	0.0
ME	0%	56.2	47.1	9.1
MD	86%	158.7	155.6	3.2
MA	100%	148.6	148.6	0.0
NH	64%	45.3	41.0	4.3
NJ	100%	219.6	219.6	0.0
NY	54%	465.0	408.1	56.9
PA	24%	363.0	305.0	58.0
RI	100%	22.2	22.2	0.0
VT	0%	35.9	27.9	7.9
VA	100%	54.9	54.9	0.0
OTR	**67%**	**1693.1**	**1553.7**	**139.4**

Appendix E – NOx Emissions by County for 2002 and 2009

Table E-1 Reformulated Gasoline Emission Summary by State

Table E-2 Chip Reflash Emission Summary by State

Table E-3 Asphalt Production Plant NOx Emission Summary for 2002 and 2009 by County

Table E-4 Cement Kiln NOx Emission Summary for 2002 and 2009 by County

Table E-5 Glass and Fiberglass Furnace NOx Emission Summary for 2002 and 2009 by County

Table E-6 ICI Boiler NOx Area Source Emission Summary for 2002 and 2009 by State

Table E-7 ICI Boiler NOx Point Source Emission Summary for 2002 and 2009 by State

Due to their large size, these tables are being transmitted electronically in the spreadsheet named Appendix_E_NOx_2009.xls. There are separate tabs for each of the tables listed above.

	RFG* NOx Emissions (tpd)				Chip Reflash NOx Emissions (tpd)				Asphalt Production Plants NOx Emissions (tpd)				Cement Kilns NOx Emissions (tpd)			
State	2006	2006 OTB/W	2006 BOTW	2006 Benefit	2002	2009 OTB/W	2009 BOTW	2009 Benefit	2002	2009 OTB/W	2009 BOTW	2009 Benefit	2002	2009 OTB/W	2009 BOTW	2009 Benefit
CT	81.3	81.3	81.3	0.0	66.7	n/a	n/a	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DE	24.8	24.8	24.8	0.0	21.8	n/a	n/a	0.6	0.6	0.6	0.4	0.2	0.0	0.0	0.0	0.0
DC	8.4	8.4	8.4	0.0	8.1	n/a	n/a	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ME	44.1	44.1	43.8	0.2	82.8	n/a	n/a	1.4	1.7	2.0	1.3	0.7	4.7	4.7	4.7	0.0
MD	144.0	144.0	144.0	0.0	105.0	n/a	n/a	5.6	0.2	0.2	0.1	0.1	17.2	17.2	4.1	13.1
MA	137.4	137.4	137.4	0.0	152.7	n/a	n/a	6.7	1.1	1.8	1.2	0.6	0.0	0.0	0.0	0.0
NH	38.4	38.4	38.2	0.2	30.5	n/a	n/a	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NJ	204.2	204.2	204.2	0.0	133.5	n/a	n/a	9.7	1.3	2.8	1.8	1.0	0.0	0.0	0.0	0.0
NY	381.3	381.3	379.1	2.1	177.6	n/a	n/a	16.1	0.0	0.1	0.0	0.0	35.1	35.1	19.8	15.3
PA	284.8	284.8	282.9	2.0	437.1	n/a	n/a	12.4	0.6	0.7	0.5	0.2	44.7	44.7	30.7	14.0
RI	20.5	20.5	20.5	0.0	8.3	n/a	n/a	0.8	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
VT	26.3	26.3	26.0	0.3	13.7	n/a	n/a	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No. VA	50.8	50.8	50.8	0.0	16.6	n/a	n/a	2.5	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.0
OTR	**1446.2**	**1446.2**	**1441.4**	**4.8**	**1254.5**	**0.0**	**0.0**	**63.0**	**5.9**	**8.6**	**5.6**	**3.0**	**101.9**	**101.9**	**59.4**	**42.5**

	Glass Furnaces NOx Emissions (tpd)				ICI Boilers (minor/area) NOx Emissions (tpd)				ICI Boilers (major/point) NOx Emissions (tpd)				Total for Seven Categories NOx Emissions (tpd)			
State	2002	2009 OTB/W	2009 BOTW	2009 Benefit	2002	2009 OTB/W	2009 BOTW	2009 Benefit	2002	2009 OTB/W	2009 BOTW	2009 Benefit	2002	2009 OTB/W	2009 BOTW	2009 Benefit
CT	0.0	0.0	0.0	0.0	8.9	9.4	6.5	2.8	5.8	5.6	3.5	2.1	162.7	n/a	n/a	8.4
DE	0.0	0.0	0.0	0.0	3.4	3.5	2.3	1.2	7.7	7.3	7.2	0.1	58.2	n/a	n/a	2.1
DC	0.0	0.0	0.0	0.0	1.3	1.6	1.1	0.4	1.0	1.1	0.8	0.4	18.8	n/a	n/a	1.6
ME	0.0	0.0	0.0	0.0	5.0	5.3	4.2	1.1	10.2	12.8	10.1	2.8	148.5	n/a	n/a	6.2
MD	0.3	0.3	0.1	0.3	3.5	4.0	2.9	1.2	14.2	11.2	8.8	2.4	284.4	n/a	n/a	22.7
MA	1.4	1.8	0.3	1.5	24.4	25.8	19.1	6.6	13.8	15.4	8.7	6.8	330.8	n/a	n/a	22.2
NH	0.0	0.0	0.0	0.0	21.3	24.2	20.8	3.4	3.9	4.8	2.9	1.9	94.1	n/a	n/a	7.5
NJ	7.7	7.1	2.2	4.9	20.5	15.6	15.6	0.0	12.9	10.8	7.4	3.4	380.0	n/a	n/a	19.0
NY	6.1	6.8	1.0	5.8	105.2	112.2	78.4	33.8	31.4	30.8	23.8	7.0	736.8	n/a	n/a	80.1
PA	36.3	44.3	20.0	24.3	38.0	39.8	27.6	12.2	33.4	36.5	26.7	9.8	874.9	n/a	n/a	74.9
RI	0.7	0.5	0.1	0.5	6.6	7.3	5.3	2.1	4.2	4.9	4.3	0.5	40.5	n/a	n/a	3.9
VT	0.0	0.0	0.0	0.0	2.3	2.9	1.9	0.9	0.7	0.9	0.5	0.4	42.9	n/a	n/a	2.5
No. VA	0.0	0.0	0.0	0.0	11.8	11.9	8.1	3.9	0.2	0.2	0.0	0.1	79.6	n/a	n/a	6.6
OTR	**52.5**	**60.9**	**23.6**	**37.3**	**252.0**	**263.4**	**193.9**	**69.5**	**139.3**	**142.3**	**104.6**	**37.7**	**3252.3**	n/a	n/a	**257.8**

* 2006 Emission Estimates from NESCAUM

Data Supplied by NESCAUM - need documentation for how these were derived

ESTIMATED 2006 EMISSIONS (TONS PER SUMMER DAY)

	Current RFG Fraction	Current NOx tpsd	Full-RFG NOx tpsd	Reduction NOx tpsd
CT	100%	81.3	81.3	0.0
DE	100%	24.8	24.8	0.0
DC	100%	8.4	8.4	0.0
ME	0%	44.1	43.8	0.2
MD	86%	144.0	144.0	0.0
MA	100%	137.4	137.4	0.0
NH	64%	38.4	38.2	0.2
NJ	100%	204.2	204.2	0.0
NY	54%	381.3	379.1	2.1
PA	24%	284.8	282.9	2.0
RI	100%	20.5	20.5	0.0
VT	0%	26.3	26.0	0.3
VA	100%	50.8	50.8	0.0
OTR	**67%**	**1446.2**	**1441.4**	**4.8**

* 2006 Emission Estimates from NESCAUM
2009 estimates are not currently available

ESTIMATED 2009 EMISSIONS (TONS PER SUMMER DAY)

	2002 NOx tons/year	2002 NOx tpsd	2009 OTB/W NOx tpsd	2009 BOTW NOx tpsd	Reduction NOx tpsd
CT	24349.0	66.7	n/a	n/a	3.5
DE	7959.0	21.8	n/a	n/a	0.6
DC	2962.0	8.1	n/a	n/a	0.8
ME	30236.0	82.8	n/a	n/a	1.4
MD	38333.0	105.0	n/a	n/a	5.6
MA	55732.0	152.7	n/a	n/a	6.7
NH	11140.0	30.5	n/a	n/a	2
NJ	48727.0	133.5	n/a	n/a	9.7
NY	64836.0	177.6	n/a	n/a	16.1
PA	159524.0	437.1	n/a	n/a	12.4
RI	3033.0	8.3	n/a	n/a	0.8
VT	4984.0	13.7	n/a	n/a	0.9
VA	6066.0	16.6	n/a	n/a	2.5
OTR	**457881.0**		**0.0**	**0.0**	**63.0**

2002 NOx ton per year from MANEVU 2002 Inventory Version 2
2002 NOx ton per day = annual divided by 365
2009 NOx emissions are not currently available
Reductions from NESCAUM Feb 20, 2006 Staff Report and analysis

COLUMN	COLUMN DESCRIPTIONS
A-F	State abbreviation, County Name, FIPS state/county code, Site ID, Emission Unit ID, Process ID
G	SCC-Source Classification Code
H	NOx 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
I	NOx 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
J	NOx 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
K	Summer season percentage from NIF Emission Process (EP) file
L	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
M	Total capture/control efficiency from NIF 2002 CE file
N	Blank

COLUMN	COLUMN DESCRIPTIONS
O	NOx 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS B
P	NOx 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS
Q	NOx 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in invento 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 day b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
R	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
S	Total capture/control efficiency from NIF 2009 CE file
T	Incremental BOTW Control Factor (35% if uncontrolled or 0 according to state specificatior BOTW_Regional_Modeling_Compilation_060828.xls)
U, V	NOx 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW incremental control facto
W, X	NOx 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)
Y	Plant Name

							2002 NOx Emissions						2009 NOx OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
CT	Hartford	09003	0719	P0046	01	30500104	0.0000	0.0000	0.000	25.0	35.0	0.00	0.0000	0.0000	0.000	0.898	0.00	35.00	0.00
DE	Kent	10001	1000100006	001	1	30500259	4.3645	0.0282	0.028	42.0	25.0	0.00	4.3645	0.0282	0.028	1.000	0.00	35.00	2.84
DE	Kent	10001	1000100006	001	2	30500256	0.8842	0.0057	0.006	42.0	25.0	0.00	0.8842	0.0057	0.006	1.000	0.00	35.00	0.57
DE	Kent	10001	1000100006	001	4	30500208	0.0000	0.0000	0.000	42.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
DE	Kent	10001	1000100006	011	1	20200102	8.7852	0.0378	0.038	28.0	25.8	0.00	7.6654	0.0397	0.040	1.051	0.00	35.00	4.98
DE	Kent	10001	1000100006	011	2	20200102	0.0000	0.0000	0.000	28.0	25.8	0.00	0.0000	0.0000	0.000	1.051	0.00	35.00	0.00
DE	Kent	10001	1000100014	001	1	30500252	7.2628	0.0358	0.036	32.0	25.0	0.00	7.2628	0.0358	0.036	1.000	0.00	35.00	4.72
DE	Kent	10001	1000100014	001	2	30500251	0.5596	0.0028	0.003	32.0	25.0	0.00	0.5596	0.0028	0.003	1.000	0.00	35.00	0.36
DE	Kent	10001	1000100014	001	3	30500206	0.0000	0.0000	0.000	32.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
DE	Kent	10001	1000100014	002	1	30590001	0.0000	0.0000	0.000	0.0	25.0	0.00	0.0000	0.0000	0.000	1.057	0.00	35.00	0.00
DE	Kent	10001	1000100014	003	1	20200102	0.0000	0.0000	0.000	0.0	25.8	0.00	0.0000	0.0000	0.000	1.051	0.00	35.00	0.00
DE	Kent	10001	1000100014	004	1	20200102	0.0000	0.0000	0.000	0.0	25.8	0.00	0.0000	0.0000	0.000	1.051	0.00	35.00	0.00
DE	New Castle	10003	1000300040	001	1	30500255	2.0567	0.0118	0.012	35.0	25.0	0.00	2.0567	0.0118	0.012	1.000	0.00	35.00	1.34
DE	New Castle	10003	1000300040	001	2	30500206	0.0000	0.0000	0.000	35.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
DE	New Castle	10003	1000300040	002	1	30500206	0.0000	0.0000	0.000	0.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
DE	New Castle	10003	1000300048	001	1	30500260	3.4181	0.0179	0.018	34.0	25.0	0.00	3.4181	0.0179	0.018	1.000	0.00	35.00	2.22
DE	New Castle	10003	1000300048	001	2	30500257	0.9089	0.0048	0.005	34.0	25.0	0.00	0.9089	0.0048	0.005	1.000	0.00	35.00	0.59
DE	New Castle	10003	1000300066	002	1	30500256	1.8740	0.0141	0.014	49.0	25.0	0.00	1.8740	0.0141	0.014	1.000	0.00	35.00	1.22
DE	New Castle	10003	1000300068	001	1	30500260	0.0428	0.0002	0.000	33.0	25.0	0.00	0.0428	0.0002	0.000	1.000	0.00	35.00	0.03
DE	New Castle	10003	1000300068	001	2	30500257	1.9243	0.0106	0.011	33.0	25.0	0.00	1.9243	0.0106	0.011	1.000	0.00	35.00	1.25
DE	New Castle	10003	1000300068	002	1	20200102	1.3527	0.0173	0.017	37.0	25.8	0.00	1.1803	0.0182	0.018	1.051	0.00	35.00	0.77
DE	New Castle	10003	1000300069	001	1	30500256	3.2219	0.0166	0.017	35.0	25.0	0.00	3.2219	0.0166	0.017	1.000	0.00	35.00	2.09
DE	New Castle	10003	1000300069	001	2	30500259	0.0000	0.0000	0.000	35.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
DE	New Castle	10003	1000300069	002	1	20200102	0.6988	0.0000	0.002	0.0	25.8	0.00	0.6097	0.0021	0.002	1.051	0.00	35.00	0.40
DE	New Castle	10003	1000300069	002	2	30500205	0.0000	0.0000	0.000	0.0	25.2	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
DE	New Castle	10003	1000300069	002	3	30500205	0.0000	0.0000	0.000	0.0	25.2	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
DE	New Castle	10003	1000300069	003	1	30500206	0.0000	0.0000	0.000	0.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
DE	New Castle	10003	1000300463	001	1	30500201	0.4960	0.0022	0.002	29.0	26.4	0.00	0.4960	0.0022	0.002	1.000	0.00	35.00	0.32
DE	New Castle	10003	1000300463	001	2	30500202	0.0000	0.0000	0.000	29.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
DE	New Castle	10003	1000300463	002	1	20200102	0.2868	0.0358	0.036	25.0	25.8	0.00	0.2502	0.0376	0.038	1.051	0.00	35.00	0.16
DE	New Castle	10003	1000300463	003	1	30500208	0.0000	0.0000	0.000	0.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
DE	Sussex	10005	1000500026	001	1	30500257	3.2688	0.0156	0.016	30.0	25.0	0.00	3.2688	0.0156	0.016	1.000	0.00	35.00	2.12
DE	Sussex	10005	1000500120	001	1	30500252	6.8809	0.0381	0.038	36.0	25.0	0.00	6.8809	0.0381	0.038	1.000	0.00	35.00	4.47
DE	Sussex	10005	1000500120	002	1	20200102	0.4530	0.2854	0.285	63.0	25.8	0.00	0.3953	0.3000	0.300	1.051	0.00	35.00	0.26
DE	Sussex	10005	1000500130	001	1	30500260	5.8851	0.0263	0.026	29.0	25.0	0.00	5.8851	0.0263	0.026	1.000	0.00	35.00	3.83
ME	Androscoggin	23001	2300100056	001	1	30500201	9.6316	0.0466	0.047	44.0	26.4	0.00	11.5287	0.0558	0.056	1.197	0.00	35.00	7.49
ME	Androscoggin	23001	2300100083	001	1	30500201	12.5792	0.0608	0.061	44.0	26.4	0.00	15.0569	0.0728	0.073	1.197	0.00	35.00	9.79
ME	Androscoggin	23001	2300100083	002	2	20200102	5.0465	0.0244	0.024	44.0	25.8	0.00	4.4567	0.0260	0.026	1.064	0.00	35.00	2.90
ME	Androscoggin	23001	2300100083	002	3	20200102	6.2611	0.0303	0.030	44.0	25.8	0.00	5.5294	0.0322	0.032	1.064	0.00	35.00	3.59
ME	Androscoggin	23001	2300100083	002	4	20200102	8.6286	0.0417	0.042	44.0	25.8	0.00	7.6202	0.0444	0.044	1.064	0.00	35.00	4.95
ME	Aroostook	23003	2300300036	001	1	30500252	0.3835	0.0000	0.004	84.0	25.0	0.00	0.4590	0.0042	0.004	1.197	0.00	35.00	0.30
ME	Aroostook	23003	2300300036	004	1	20200102	0.5019	0.0000	0.004	77.0	25.8	0.00	0.4432	0.0045	0.005	1.064	0.00	35.00	0.29
ME	Aroostook	23003	2300300036	005	1	20200102	0.2199	0.0000	0.002	65.0	25.8	0.00	0.1942	0.0017	0.002	1.064	0.00	35.00	0.13
ME	Aroostook	23003	2300300036	006	1	20200102	0.0000	0.0000	0.000	0.0	25.8	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	Aroostook	23003	2300300040	001	1	30500252	6.5136	0.0000	0.044	62.0	25.0	0.00	7.7966	0.0531	0.053	1.197	0.00	35.00	5.07
ME	Aroostook	23003	2300300040	002	4	10200503	0.0084	0.0000	0.000	49.0	25.0	0.00	0.0089	0.0000	0.000	1.064	0.00	35.00	0.01
ME	Aroostook	23003	2300300040	004	1	20200102	0.4267	0.0000	0.002	51.0	25.8	0.00	0.3768	0.0025	0.003	1.064	0.00	35.00	0.24
ME	Aroostook	23003	2300300067	001	1	30500252	0.0000	0.0000	0.000	53.0	25.0	0.00	0.0000	0.0000	0.000	1.197	0.00	35.00	0.00
ME	Aroostook	23003	2300300067	001	2	30500208	0.0000	0.0000	0.000	53.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
ME	Aroostook	23003	2300300071	001	1	30500252	1.0710	0.0000	0.003	25.0	25.0	0.00	1.2820	0.0035	0.004	1.197	0.00	35.00	0.83
ME	Cumberland	23005	2300500148	001	1	30500201	16.6524	0.0805	0.081	44.0	26.4	0.00	19.9324	0.0964	0.096	1.197	0.00	35.00	12.96
ME	Cumberland	23005	2300500151	001	1	30500252	1.1655	0.0050	0.005	39.0	25.0	0.00	1.3951	0.0060	0.006	1.197	0.00	35.00	0.91
ME	Cumberland	23005	2300500151	001	2	30500208	0.2848	0.0012	0.001	39.0	25.0	0.00	0.2848	0.0012	0.001	1.000	0.00	35.00	0.19
ME	Cumberland	23005	2300500151	003	1	20200102	26.2920	0.0982	0.098	34.0	25.8	0.00	23.2194	0.1045	0.104	1.064	0.00	35.00	15.09
ME	Franklin	23007	2300700034	001	1	30500201	2.4475	0.0000	0.007	25.0	26.4	0.00	2.9296	0.0080	0.008	1.197	0.00	35.00	1.90
ME	Franklin	23007	2300700034	002	2	20200101	11.9151	0.0000	0.033	25.0	25.5	0.00	12.6779	0.0348	0.035	1.064	0.00	35.00	8.24
ME	Franklin	23007	2300700037	001	1	30500201	11.4493	0.0000	0.065	52.0	26.4	0.00	13.7045	0.0783	0.078	1.197	0.00	35.00	8.91
ME	Franklin	23007	2300700037	001	2	30500208	0.2600	0.0000	0.001	52.0	25.0	0.00	0.2600	0.0015	0.001	1.000	0.00	35.00	0.17
ME	Hancock	23009	2300900015	001	1	30500252	0.0000	0.0000	0.000	46.0	25.0	0.00	0.0000	0.0000	0.000	1.197	0.00	35.00	0.00
ME	Hancock	23009	2300900015	001	4	10200503	0.0535	0.0000	0.000	46.0	25.0	0.00	0.0569	0.0003	0.000	1.064	0.00	35.00	0.04
ME	Kennebec	23011	2301100069	001	1	30500201	12.0500	0.0768	0.077	58.0	26.4	0.00	14.4235	0.0919	0.092	1.197	0.00	35.00	9.38
ME	Kennebec	23011	2301100069	002	2	30590001	14.0800	0.0696	0.070	45.0	25.0	0.00	14.8856	0.0736	0.074	1.057	0.00	35.00	9.68
ME	Oxford	23017	2301700043	001	1	30500201	6.2737	0.0000	0.041	59.0	26.4	0.00	7.5094	0.0487	0.049	1.197	0.00	35.00	4.88
ME	Penobscot	23019	2301900064	001	1	30500258	1.7890	0.0000	0.012	62.0	25.0	0.00	2.1414	0.0146	0.015	1.197	0.00	35.00	1.39
ME	Penobscot	23019	2301900064	002	1	20200102	3.4044	0.0000	0.023	62.0	25.8	0.00	3.0065	0.0247	0.025	1.064	0.00	35.00	1.95
ME	Penobscot	23019	2301900064	003	1	20200102	0.0000	0.0000	0.000	14.0	25.8	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	Penobscot	23019	2301900064	004	1	20200102	0.0000	0.0000	0.000	61.0	25.8	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	Penobscot	23019	2301900084	001	1	30500252	4.4066	0.0000	0.022	46.0	25.0	0.00	5.2746	0.0267	0.027	1.197	0.00	35.00	3.43
ME	Penobscot	23019	2301900084	002	4	10300502	0.0000	0.0000	0.000	40.0	25.0	0.00	0.0000	0.0000	0.000	1.089	0.00	35.00	0.00
ME	Penobscot	23019	2301900084	004	1	20200102	0.1201	0.0000	0.001	72.0	25.8	0.00	0.1061	0.0010	0.001	1.064	0.00	35.00	0.07
ME	Penobscot	23019	2301900085	001	1	30500252	0.0000	0.0000	0.000	0.0	25.0	0.00	0.0000	0.0000	0.000	1.197	0.00	35.00	0.00
ME	Penobscot	23019	2301900085	001	2	30500208	0.0000	0.0000	0.000	0.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
ME	Penobscot	23019	2301900085	002	1	30500252	0.0000	0.0000	0.000	43.0	25.0	0.00	0.0000	0.0000	0.000	1.197	0.00	35.00	0.00
ME	Penobscot	23019	2301900085	002	4	10200503	0.0000	0.0000	0.000	43.0	25.0	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	Penobscot	23019	2301900085	011	1	20200102	0.0000	0.0000	0.000	46.0	25.8	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	Penobscot	23019	2301900085	013	1	20200102	0.0000	0.0000	0.000	46.0	25.8	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	Penobscot	23019	2301900102	001	1	30500258	6.3076	0.0000	0.034	49.0	25.0	0.00	7.5500	0.0407	0.041	1.197	0.00	35.00	4.91
ME	Penobscot	23019	2301900102	002	1	20200102	5.3902	0.0000	0.032	54.0	25.8	0.00	4.7603	0.0340	0.034	1.064	0.00	35.00	3.09
ME	Penobscot	23019	2301900102	003	1	20200102	1.1870	0.0000	0.009	69.0	25.8	0.00	1.0483	0.0096	0.010	1.064	0.00	35.00	0.68
ME	Penobscot	23019	2301900104	001	1	30500258	1.5005	0.0000	0.010	58.0	25.0	0.00	1.7961	0.0114	0.011	1.197	0.00	35.00	1.17
ME	Penobscot	23019	2301900104	003	1	20200102	1.0954	0.0000	0.004	32.0	25.8	0.00	0.9674	0.0041	0.004	1.064	0.00	35.00	0.63

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions: Annual (tpy)	2002 NOx Emissions: Summer Day from Inventory (tpd)	2002 NOx Emissions: Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions: Annual (tpy)	2009 NOx OTB/OTW Emissions: Summer Day from Inventory (tpd)	2009 NOx OTB/OTW Emissions: Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW: Annual (tpy)
ME	Penobscot	23019	2301900104	004	1	20200102	9.6175	0.0000	0.047	44.0	25.8	0.00	8.4936	0.0495	0.049	1.064	0.00	35.00	5.52
ME	Penobscot	23019	2301900104	005	1	20200102	0.0000	0.0000	0.000	0.0	25.8	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	Penobscot	23019	2301900105	001	1	30500258	2.9555	0.0000	0.023	70.0	25.0	0.00	3.5376	0.0272	0.027	1.197	0.00	35.00	2.30
ME	Penobscot	23019	2301900105	001	3	30500208	0.0262	0.0000	0.000	70.0	25.0	0.00	0.0262	0.0002	0.000	1.000	0.00	35.00	0.02
ME	Penobscot	23019	2301900105	002	1	20200102	3.1436	0.0000	0.010	30.0	25.8	0.00	2.7762	0.0110	0.011	1.064	0.00	35.00	1.80
ME	Penobscot	23019	2301900105	003	1	20200102	0.3360	0.0000	0.003	78.0	25.8	0.00	0.2967	0.0031	0.003	1.064	0.00	35.00	0.19
ME	Penobscot	23019	2301900114	001	1	30500258	0.0000	0.0000	0.000	0.0	25.0	0.00	0.0000	0.0000	0.000	1.197	0.00	35.00	0.00
ME	Penobscot	23019	2301900114	002	1	20200102	2.5120	0.0000	0.017	60.0	25.8	0.00	2.2184	0.0176	0.018	1.064	0.00	35.00	1.44
ME	Penobscot	23019	2301900114	003	1	20200102	3.2063	0.0000	0.032	92.0	25.8	0.00	2.8316	0.0345	0.034	1.064	0.00	35.00	1.84
ME	Piscataquis	23021	2302100016	001	1	30500252	8.7760	0.0000	0.061	63.0	25.0	0.00	10.5046	0.0727	0.073	1.197	0.00	35.00	6.83
ME	Piscataquis	23021	2302100016	001	2	20200102	8.0332	0.0000	0.056	63.0	25.8	0.00	7.0944	0.0592	0.059	1.064	0.00	35.00	4.61
ME	Piscataquis	23021	2302100016	001	3	30500208	0.0940	0.0000	0.001	63.0	25.0	0.00	0.0940	0.0007	0.001	1.000	0.00	35.00	0.06
ME	Piscataquis	23021	2302100016	002	1	30500258	1.0664	0.0000	0.010	87.0	25.0	0.00	1.2764	0.0122	0.012	1.197	0.00	35.00	0.83
ME	Piscataquis	23021	2302100016	002	2	20200102	2.2650	0.0000	0.022	87.0	25.8	0.00	2.0003	0.0230	0.023	1.064	0.00	35.00	1.30
ME	Piscataquis	23021	2302100016	002	3	30500208	0.0290	0.0000	0.000	87.0	25.0	0.00	0.0290	0.0003	0.000	1.000	0.00	35.00	0.02
ME	Piscataquis	23021	2302100016	003	4	20200102	6.9158	0.0000	0.037	49.0	25.8	0.00	6.1076	0.0396	0.040	1.064	0.00	35.00	3.97
ME	Piscataquis	23021	2302100016	003	5	20200102	0.6342	0.0000	0.003	49.0	25.8	0.00	0.5601	0.0036	0.004	1.064	0.00	35.00	0.36
ME	Piscataquis	23021	2302100016	003	6	20200102	1.7456	0.0000	0.009	49.0	25.8	0.00	1.5416	0.0100	0.010	1.064	0.00	35.00	1.00
ME	Sagadahoc	23023	2302300011	001	3	30500252	2.3261	0.0230	0.023	90.0	25.0	0.00	2.7843	0.0275	0.028	1.197	0.00	35.00	1.81
ME	Sagadahoc	23023	2302300011	002	1	30500208	0.0480	0.0000	0.000	1.0	25.0	0.00	0.0480	0.0000	0.000	1.000	0.00	35.00	0.03
ME	Sagadahoc	23023	2302300011	003	1	30500208	0.0719	0.0000	0.000	1.0	25.0	0.00	0.0719	0.0000	0.000	1.000	0.00	35.00	0.05
ME	Somerset	23025	2302500023	001	1	30500201	14.7945	0.0000	0.073	45.0	26.4	0.00	17.7086	0.0876	0.088	1.197	0.00	35.00	11.51
ME	Somerset	23025	2302500023	002	2	30590001	0.7600	0.0000	0.003	36.0	25.0	0.00	0.8035	0.0032	0.003	1.057	0.00	35.00	0.52
ME	Somerset	23025	2302500031	001	1	30500201	8.4502	0.0000	0.048	52.0	26.4	0.00	10.1146	0.0578	0.058	1.197	0.00	35.00	6.57
ME	Somerset	23025	2302500032	001	1	30500201	1.5404	0.0000	0.004	25.0	26.4	0.00	1.8438	0.0051	0.005	1.197	0.00	35.00	1.20
ME	Somerset	23025	2302500032	004	1	20200102	2.9596	0.0000	0.008	25.0	25.8	0.00	2.6137	0.0087	0.009	1.064	0.00	35.00	1.70
ME	Waldo	23027	2302700016	001	1	30500252	0.0000	0.0000	0.000	0.0	25.0	0.00	0.0000	0.0000	0.000	1.197	0.00	35.00	0.00
ME	Waldo	23027	2302700016	005	1	20200102	1.6320	0.0000	0.008	46.0	25.8	0.00	1.4413	0.0088	0.009	1.064	0.00	35.00	0.94
ME	Waldo	23027	2302700016	006	1	20200102	0.7541	0.0000	0.004	54.0	25.8	0.00	0.6660	0.0048	0.005	1.064	0.00	35.00	0.43
ME	Waldo	23027	2302700021	001	1	30500252	8.9921	0.0000	0.039	39.0	25.0	0.00	10.7633	0.0461	0.046	1.197	0.00	35.00	7.00
ME	Waldo	23027	2302700021	004	1	20200102	0.8456	0.0000	0.004	46.0	25.8	0.00	0.7468	0.0045	0.005	1.064	0.00	35.00	0.49
ME	Waldo	23027	2302700021	005	1	20200102	0.0000	0.0000	0.000	0.0	25.8	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	Washington	23029	2302900015	001	1	30500252	0.6697	0.0000	0.005	63.0	25.0	0.00	0.8016	0.0055	0.006	1.197	0.00	35.00	0.52
ME	Washington	23029	2302900015	003	1	20200102	1.2778	0.0000	0.007	52.0	25.8	0.00	1.1285	0.0078	0.008	1.064	0.00	35.00	0.73
ME	Washington	23029	2302900015	004	1	20200102	0.0562	0.0000	0.001	99.0	25.8	0.00	0.0496	0.0007	0.001	1.064	0.00	35.00	0.03
ME	Washington	23029	2302900015	005	1	20200102	0.0873	0.0000	0.001	99.0	25.8	0.00	0.0771	0.0010	0.001	1.064	0.00	35.00	0.05
ME	Washington	23029	2302900015	006	1	20200102	0.0000	0.0000	0.000	0.0	25.8	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	York	23031	2303100040	001	1	30500201	15.4097	0.0508	0.051	30.0	26.4	0.00	18.4449	0.0608	0.061	1.197	0.00	35.00	11.99
ME	York	23031	2303100041	001	1	30500252	10.4285	0.0539	0.054	47.0	25.0	0.00	12.4826	0.0645	0.065	1.197	0.00	35.00	8.11
ME	York	23031	2303100041	004	1	10200503	0.1551	0.0000	0.000	0.0	25.0	0.00	0.1650	0.0005	0.000	1.064	0.00	35.00	0.11
ME	York	23031	2303100041	005	1	20200102	16.5396	0.0782	0.078	43.0	25.8	0.00	14.6067	0.0832	0.083	1.064	0.00	35.00	9.49
ME	York	23031	2303100046	001	1	30500252	11.0637	0.0504	0.050	41.0	25.0	0.00	13.2429	0.0603	0.060	1.197	0.00	35.00	8.61
ME	York	23031	2303100046	001	2	10200503	5.9010	0.0269	0.027	41.0	25.0	0.00	6.2788	0.0286	0.029	1.064	0.00	35.00	4.08
ME	York	23031	2303100046	003	5	20200102	2.2348	0.0079	0.008	32.0	25.8	0.00	1.9736	0.0084	0.008	1.064	0.00	35.00	1.28
ME	York	23031	2303100046	004	1	10200501	0.1560	0.0000	0.000	0.0	23.4	0.00	0.1660	0.0004	0.000	1.064	0.00	35.00	0.11
ME	York	23031	2303100087	001	2	30500208	1.5816	0.0088	0.009	40.0	25.0	0.00	1.5816	0.0088	0.009	1.000	0.00	35.00	1.03
MD	Anne Arundel	24003	003-0043	3	01F3	30500201	0.0000	0.0000	0.000	34.0	26.4	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Anne Arundel	24003	003-0043	3	01S3	30500201	1.3370	0.0045	0.005	34.0	26.4	0.00	1.6599	0.0056	0.006	1.242	0.00	35.00	1.08
MD	Anne Arundel	24003	003-0043	4	01F4	30500205	0.0000	0.0000	0.000	38.0	25.2	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Anne Arundel	24003	003-0043	4	01S4	30500205	5.1700	0.0191	0.019	38.0	25.2	0.00	6.4186	0.0237	0.024	1.242	0.00	35.00	4.17
MD	Frederick	24021	021-0037	2	01F2	30500201	0.0000	0.0000	0.000	60.0	26.4	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Frederick	24021	021-0037	2	01S2	30500201	5.4275	0.0260	0.026	60.0	26.4	0.00	6.7382	0.0323	0.032	1.242	0.00	35.00	4.38

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions: Annual (tpy)	2002 NOx Emissions: Summer Day from Inventory (tpd)	2002 NOx Emissions: Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions: Annual (tpy)	2009 NOx OTB/OTW Emissions: Summer Day from Inventory (tpd)	2009 NOx OTB/OTW Emissions: Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW: Annual (tpy)
MD	Frederick	24021	021-0037	3	01F3	40600403	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.002	0.00	35.00	0.00
MD	Frederick	24021	021-0037	3	01S3	40600403	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.002	0.00	35.00	0.00
MD	Frederick	24021	021-0172	3	01F3	30500108	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Frederick	24021	021-0172	3	01S3	30500108	1.4520	0.0040	0.004	25.0	25.0	0.00	1.8027	0.0050	0.005	1.242	0.00	35.00	1.17
MD	Frederick	24021	021-0172	4	01F4	30500103	0.0000	0.0000	0.000	25.0	27.5	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Frederick	24021	021-0172	4	01S4	30500103	2.1450	0.0058	0.006	25.0	27.5	0.00	2.6630	0.0072	0.007	1.242	0.00	35.00	1.73
MD	Frederick	24021	021-0172	5	01F5	30500103	0.0000	0.0000	0.000	25.0	27.5	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Frederick	24021	021-0172	5	01S5	30500103	1.1250	0.0031	0.003	25.0	27.5	0.00	1.3967	0.0038	0.004	1.242	0.00	35.00	0.91
MD	Frederick	24021	021-0172	8	01F8	30500108	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Frederick	24021	021-0172	8	01S8	30500108	2.9370	0.0080	0.008	25.0	25.0	0.00	3.6463	0.0099	0.010	1.242	0.00	35.00	2.37
MD	Howard	24027	027-0055	15	01F15	30500135	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Howard	24027	027-0055	15	01S15	30500135	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Howard	24027	027-0055	16	01F16	30500103	0.0000	0.0000	0.000	25.0	27.5	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Howard	24027	027-0055	16	01S16	30500103	0.0000	0.0000	0.000	25.0	27.5	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Howard	24027	027-0055	3	01F3	30500102	0.0000	0.0000	0.000	30.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Howard	24027	027-0055	3	01S3	30500102	3.2047	0.0098	0.010	30.0	25.0	0.00	3.9786	0.0122	0.012	1.242	0.00	35.00	2.59
MD	Howard	24027	027-0055	8	01F8	30500102	0.0000	0.0000	0.000	30.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Howard	24027	027-0055	8	01S8	30500102	5.9805	0.0182	0.018	30.0	25.0	0.00	7.4248	0.0226	0.023	1.242	0.00	35.00	4.83
MD	Howard	24027	027-0055	9	01F9	30500102	0.0000	0.0000	0.000	30.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Howard	24027	027-0055	9	01S9	30500102	4.5607	0.0139	0.014	30.0	25.0	0.00	5.6621	0.0173	0.017	1.242	0.00	35.00	3.68
MD	Montgomery	24031	031-1361	1	01F1	30500261	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Montgomery	24031	031-1361	1	01S1	30500261	8.3000	0.0344	0.034	50.0	25.0	0.00	10.3045	0.0427	0.043	1.242	0.00	35.00	6.70
MD	Baltimore City	24510	510-0071	15	01F15	30500198	0.0000	0.0000	0.000	25.0	28.2	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Baltimore City	24510	510-0071	15	01S15	30500198	2.1750	0.0059	0.006	25.0	28.2	0.00	2.7003	0.0073	0.007	1.242	0.00	35.00	1.76
MD	Baltimore City	24510	510-0071	22	01F22	30500102	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Baltimore City	24510	510-0071	22	01S22	30500102	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Baltimore City	24510	510-0071	25	01F25	30500102	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Baltimore City	24510	510-0071	25	01S25	30500102	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Baltimore City	24510	510-0071	5	01F5	30500103	0.0000	0.0000	0.000	25.0	27.5	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Baltimore City	24510	510-0071	5	01S5	30500103	1.1200	0.0031	0.003	25.0	27.5	0.00	1.3905	0.0038	0.004	1.242	0.00	35.00	0.90
MA	Barnstable	25001	1200201	01	0101	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Barnstable	25001	1200201	01	0301	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Barnstable	25001	1200211	01	0101	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Barnstable	25001	1200211	01	0201	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Barnstable	25001	1200249	01	0101	30500201	0.0000	0.0000	0.000	30.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Barnstable	25001	1200249	01	0201	30500208	0.0000	0.0000	0.000	30.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Barnstable	25001	1200249	01	0301	30500206	2.0000	0.0000	0.007	30.0	27.0	0.00	2.1360	0.0070	0.007	1.068	0.00	35.00	1.39
MA	Berkshire	25003	1170090	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170090	01	0201	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Berkshire	25003	1170090	02	0102	30500211	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170090	02	0202	30500208	1.0000	0.0000	0.005	50.0	25.0	0.00	1.0000	0.0055	0.005	1.000	0.00	35.00	0.65
MA	Berkshire	25003	1170090	03	0103	30500202	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170090	03	0203	30500203	0.0000	0.0000	0.000	34.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170090	03	0303	30500204	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170090	05	0105	30500208	0.1500	0.0000	0.001	50.0	25.0	0.00	0.1500	0.0008	0.001	1.000	0.00	35.00	0.10
MA	Berkshire	25003	1170090	06	0106	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Berkshire	25003	1170092	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170092	01	0201	30500208	3.0000	0.0000	0.016	50.0	25.0	0.00	3.0000	0.0165	0.016	1.000	0.00	35.00	1.95
MA	Berkshire	25003	1170092	02	0102	30500202	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170092	02	0202	30500203	0.0000	0.0000	0.000	34.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170092	02	0302	30500204	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170102	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
MA	Berkshire	25003	1170102	01	0201	30500208	2.0000	0.0000	0.011	50.0	25.0	0.00	2.0000	0.0110	0.011	1.000	0.00	35.00	1.30
MA	Berkshire	25003	1170102	02	0102	30500202	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170102	02	0202	30500203	0.0000	0.0000	0.000	50.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170102	02	0302	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Bristol	25005	1200182	01	0101	30500201	0.0000	0.0000	0.000	40.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Bristol	25005	1200182	01	0201	30500206	0.0000	0.0000	0.000	40.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Bristol	25005	1200182	01	0301	30500208	15.0000	0.0000	0.066	40.0	25.0	0.00	15.0000	0.0659	0.066	1.000	0.00	35.00	9.75
MA	Bristol	25005	1200367	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Bristol	25005	1200367	01	0201	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Bristol	25005	1200367	01	0301	30500206	0.0000	0.0000	0.000	50.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Bristol	25005	1200367	01	0401	30500207	7.0000	0.0000	0.038	50.0	25.0	0.00	17.0663	0.0938	0.094	2.438	0.00	35.00	11.09
MA	Bristol	25005	1200845	10	0109	30500299	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Dukes	25007	1200348	01	0101	30500201	0.0000	0.0000	0.000	33.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Dukes	25007	1200348	02	0102	30500208	0.0570	0.0000	0.000	33.0	25.0	0.00	0.0570	0.0002	0.000	1.000	0.00	35.00	0.04
MA	Essex	25009	1190266	01	0101	30500206	0.0000	0.0000	0.000	34.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Essex	25009	1190266	01	0201	30500208	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Essex	25009	1190266	02	0101	30500205	0.0000	0.0000	0.000	33.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Essex	25009	1190282	01	0101	30500205	0.0000	0.0000	0.000	33.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Essex	25009	1190282	03	0102	30500203	0.0000	0.0000	0.000	33.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Essex	25009	1190344	01	0101	30500208	1.0000	0.0000	0.003	25.0	25.0	0.00	1.0000	0.0027	0.003	1.000	0.00	35.00	0.65
MA	Essex	25009	1190344	01	0201	30500207	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	2.438	0.00	35.00	0.00
MA	Essex	25009	1190344	02	0101	30500205	0.0000	0.0000	0.000	25.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Essex	25009	1190344	03	0102	30500208	4.0000	0.0000	0.011	25.0	25.0	0.00	4.0000	0.0110	0.011	1.000	0.00	35.00	2.60
MA	Essex	25009	1190344	03	0202	30500207	14.0000	0.0000	0.038	25.0	25.0	0.00	34.1325	0.0938	0.094	2.438	0.00	35.00	22.19
MA	Essex	25009	1190344	04	0102	30500205	0.0000	0.0000	0.000	25.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Essex	25009	1190344	12	0104	30500208	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Essex	25009	1191319	01	0101	30500208	2.0000	0.0000	0.005	25.0	25.0	0.00	2.0000	0.0055	0.005	1.000	0.00	35.00	1.30
MA	Essex	25009	1191319	01	0201	30500207	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	2.438	0.00	35.00	0.00
MA	Essex	25009	1191319	02	0101	30500205	0.0000	0.0000	0.000	25.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Essex	25009	1210016	01	0101	30500208	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Essex	25009	1210016	01	0201	30500207	3.0000	0.0000	0.011	34.0	25.0	0.00	7.3141	0.0273	0.027	2.438	0.00	35.00	4.75
MA	Essex	25009	1210016	02	0101	30500205	0.0000	0.0000	0.000	33.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Essex	25009	1210282	01	0101	30500205	0.0000	0.0000	0.000	35.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Essex	25009	1210282	01	0201	30500206	1.0000	0.0000	0.004	35.0	27.0	0.00	1.0680	0.0041	0.004	1.068	0.00	35.00	0.69
MA	Essex	25009	1210282	03	0102	30500204	0.0000	0.0000	0.000	35.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420475	04	0104	30500201	0.0000	0.0000	0.000	55.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420475	04	0204	30500208	2.0000	0.0000	0.012	55.0	25.0	0.00	2.0000	0.0121	0.012	1.000	0.00	35.00	1.30
MA	Franklin	25011	0420475	05	0105	30500208	0.2500	0.0000	0.002	55.0	25.0	0.00	0.2500	0.0015	0.002	1.000	0.00	35.00	0.16
MA	Franklin	25011	0420475	18	0115	30500202	0.0000	0.0000	0.000	55.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420475	18	0215	30500203	0.0000	0.0000	0.000	55.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420475	18	0315	30500204	0.0000	0.0000	0.000	55.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420720	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420720	01	0201	30500208	2.0000	0.0000	0.011	50.0	25.0	0.00	2.0000	0.0110	0.011	1.000	0.00	35.00	1.30
MA	Franklin	25011	0420720	02	0102	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420720	02	0202	30500208	7.0000	0.0000	0.038	50.0	25.0	0.00	7.0000	0.0385	0.038	1.000	0.00	35.00	4.55
MA	Franklin	25011	0420720	03	0103	30500208	0.0400	0.0000	0.000	50.0	25.0	0.00	0.0400	0.0002	0.000	1.000	0.00	35.00	0.03
MA	Franklin	25011	0420720	06	0105	30500201	0.0000	0.0000	0.000	34.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420720	06	0205	30500202	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420720	07	0106	30500202	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420720	07	0206	30500203	0.0000	0.0000	0.000	50.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420720	07	0306	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420741	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00

							2002 NOx Emissions						2009 NOx OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
MA	Franklin	25011	0420741	01	0201	30500208	5.0000	0.0000	0.027	50.0	25.0	0.00	5.0000	0.0275	0.027	1.000	0.00	35.00	3.25
MA	Franklin	25011	0420741	03	0103	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420741	03	0203	30500203	0.0000	0.0000	0.000	50.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420741	03	0303	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420063	01	0101	30500201	1.0000	0.0000	0.005	50.0	26.4	0.00	1.2095	0.0066	0.007	1.209	0.00	35.00	0.79
MA	Hampden	25013	0420063	01	0201	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Hampden	25013	0420063	01	0301	30500206	0.0000	0.0000	0.000	50.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Hampden	25013	0420063	02	0102	30500202	3.0000	0.0000	0.016	50.0	25.0	0.00	3.6284	0.0199	0.020	1.209	0.00	35.00	2.36
MA	Hampden	25013	0420063	02	0202	30500207	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	2.438	0.00	35.00	0.00
MA	Hampden	25013	0420063	02	0302	30500206	0.0000	0.0000	0.000	50.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Hampden	25013	0420077	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420077	01	0201	30500208	1.0000	0.0000	0.005	50.0	25.0	0.00	1.0000	0.0055	0.005	1.000	0.00	35.00	0.65
MA	Hampden	25013	0420077	02	0102	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Hampden	25013	0420077	03	0103	30500203	0.0000	0.0000	0.000	50.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420077	03	0203	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420078	01	0101	30500208	6.0000	0.0000	0.033	50.0	25.0	0.00	6.0000	0.0330	0.033	1.000	0.00	35.00	3.90
MA	Hampden	25013	0420078	01	0201	30500206	0.0000	0.0000	0.000	50.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Hampden	25013	0420078	01	0301	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420078	01	0401	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Hampden	25013	0420078	02	0102	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420078	02	0202	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Hampden	25013	0420078	02	0302	30500206	0.0000	0.0000	0.000	50.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Hampden	25013	0420078	02	0402	30500205	0.0000	0.0000	0.000	50.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420078	03	0103	30500202	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420078	03	0203	30500203	0.0000	0.0000	0.000	50.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420078	03	0303	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420078	03	0403	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Hampden	25013	0420478	01	0101	30500211	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420478	03	0102	30500208	0.2900	0.0000	0.002	50.0	25.0	0.00	0.2900	0.0016	0.002	1.000	0.00	35.00	0.19
MA	Hampden	25013	0420478	03	0202	30500203	0.0000	0.0000	0.000	50.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420478	03	0302	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420478	04	0103	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420478	05	0104	30500206	0.0000	0.0000	0.000	30.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Hampden	25013	0420565	01	0101	30500201	3.0000	0.0000	0.007	20.0	26.4	0.00	3.6284	0.0080	0.008	1.209	0.00	35.00	2.36
MA	Hampden	25013	0420565	01	0201	30500201	0.0000	0.0000	0.000	20.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420565	02	0102	30500202	0.0000	0.0000	0.000	20.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420565	02	0202	30500203	0.0000	0.0000	0.000	20.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420565	02	0302	30500204	0.0000	0.0000	0.000	20.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420055	01	0101	30500211	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420055	01	0201	30500208	2.0000	0.0000	0.011	50.0	25.0	0.00	2.0000	0.0110	0.011	1.000	0.00	35.00	1.30
MA	Hampshire	25015	0420055	02	0102	30500202	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420055	02	0202	30500203	0.0000	0.0000	0.000	50.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420055	02	0302	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420224	01	0101	30500201	0.0000	0.0000	0.000	33.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420224	01	0201	30500208	2.0000	0.0000	0.007	33.0	25.0	0.00	2.0000	0.0073	0.007	1.000	0.00	35.00	1.30
MA	Hampshire	25015	0420224	02	0102	30500208	0.0000	0.0000	0.000	33.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Hampshire	25015	0420477	01	0101	30500211	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420477	02	0102	30500202	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420477	02	0202	30500203	0.0000	0.0000	0.000	50.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420477	02	0302	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420477	03	0103	30500208	0.0700	0.0000	0.000	25.0	25.0	0.00	0.0700	0.0002	0.000	1.000	0.00	35.00	0.05
MA	Middlesex	25017	1190062	01	0101	30500208	0.0000	0.0000	0.000	33.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions Annual (tpy)	2009 NOx OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 NOx OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
MA	Middlesex	25017	1190062	01	0201	30500206	5.0000	0.0000	0.018	33.0	27.0	0.00	5.3400	0.0194	0.019	1.068	0.00	35.00	3.47
MA	Middlesex	25017	1190062	01	0301	30500201	0.0000	0.0000	0.000	33.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1190062	01	0401	30500202	0.0000	0.0000	0.000	33.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1190062	02	0102	30500203	0.0000	0.0000	0.000	33.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1190623	01	0101	30500112	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1190639	03	0103	30500208	1.0000	0.0000	0.003	25.0	25.0	0.00	1.0000	0.0027	0.003	1.000	0.00	35.00	0.65
MA	Middlesex	25017	1190727	01	0101	30500208	0.0000	0.0000	0.000	33.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1190727	01	0201	30500207	6.0000	0.0000	0.022	33.0	25.0	0.00	14.6282	0.0530	0.053	2.438	0.00	35.00	9.51
MA	Middlesex	25017	1190727	02	0101	30500205	0.0000	0.0000	0.000	33.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1190727	10	0103	30500203	0.0000	0.0000	0.000	25.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1190971	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1190971	01	0201	30500207	3.0000	0.0000	0.016	50.0	25.0	0.00	7.3141	0.0402	0.040	2.438	0.00	35.00	4.75
MA	Middlesex	25017	1190971	01	0301	30500208	1.0000	0.0000	0.005	50.0	25.0	0.00	1.0000	0.0055	0.005	1.000	0.00	35.00	0.65
MA	Middlesex	25017	1190972	01	0101	30500201	0.0000	0.0000	0.000	35.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1190972	01	0201	30500206	1.0000	0.0000	0.004	35.0	27.0	0.00	1.0680	0.0041	0.004	1.068	0.00	35.00	0.69
MA	Middlesex	25017	1190972	01	0301	30500208	0.0000	0.0000	0.000	35.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1190972	01	0401	30500204	0.0000	0.0000	0.000	35.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1191596	01	0101	30500211	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1191596	02	0101	30500208	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1191704	01	0101	30500201	0.0000	0.0000	0.000	33.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1191704	01	0201	30500206	3.0000	0.0000	0.011	33.0	27.0	0.00	3.2040	0.0116	0.012	1.068	0.00	35.00	2.08
MA	Middlesex	25017	1191704	01	0301	30500208	0.0000	0.0000	0.000	33.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1191704	07	0103	30500206	0.0400	0.0000	0.000	25.0	27.0	0.00	0.0427	0.0001	0.000	1.068	0.00	35.00	0.03
MA	Middlesex	25017	1191704	07	0203	30500208	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1191860	01	0101	30500206	0.0000	0.0000	0.000	25.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Middlesex	25017	1210018	01	0101	30500201	0.0000	0.0000	0.000	34.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1210018	01	0201	30500207	17.0000	0.0000	0.064	34.0	25.0	0.00	41.4466	0.1549	0.155	2.438	0.00	35.00	26.94
MA	Middlesex	25017	1210018	01	0301	30500206	0.0000	0.0000	0.000	34.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Middlesex	25017	1210018	01	0401	30500208	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1210018	02	0102	30500208	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1210018	02	0202	30500206	0.1895	0.0000	0.001	34.0	27.0	0.00	0.2024	0.0008	0.001	1.068	0.00	35.00	0.13
MA	Middlesex	25017	1210258	01	0101	30500201	0.0000	0.0000	0.000	40.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1210259	01	0101	30500201	0.0000	0.0000	0.000	36.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1210259	01	0201	30500208	0.0000	0.0000	0.000	36.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1210259	01	0301	30500206	3.0000	0.0000	0.012	36.0	27.0	0.00	3.2040	0.0127	0.013	1.068	0.00	35.00	2.08
MA	Middlesex	25017	1210259	02	0102	30500201	0.0000	0.0000	0.000	38.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1210259	02	0202	30500208	0.0000	0.0000	0.000	38.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1210259	02	0302	30500206	4.0000	0.0000	0.017	38.0	27.0	0.00	4.2720	0.0178	0.018	1.068	0.00	35.00	2.78
MA	Middlesex	25017	1210259	05	0105	30500208	0.0000	0.0000	0.000	13.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1210259	05	0205	30500206	0.1645	0.0000	0.000	13.0	27.0	0.00	0.1757	0.0003	0.000	1.068	0.00	35.00	0.11
MA	Nantucket	25019	1200050	01	0101	30500208	0.0000	0.0000	0.000	33.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Nantucket	25019	1200050	01	0201	30500205	0.0000	0.0000	0.000	33.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Nantucket	25019	1200285	01	0101	30500201	0.0000	0.0000	0.000	30.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Nantucket	25019	1200285	01	0201	30500208	0.0000	0.0000	0.000	30.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Nantucket	25019	1200285	02	0102	30500204	0.0000	0.0000	0.000	30.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Nantucket	25019	1200620	01	0101	30500208	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Nantucket	25019	1200620	02	0102	30500208	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Nantucket	25019	1200620	03	0103	30500201	0.2400	0.0000	0.001	25.0	26.4	0.00	0.2903	0.0008	0.001	1.209	0.00	35.00	0.19
MA	Norfolk	25021	1180359	01	0101	30500201	0.0000	0.0000	0.000	25.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1180359	02	0101	30500206	0.0000	0.0000	0.000	25.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Norfolk	25021	1180359	03	0101	30500202	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1190730	01	0101	30500201	0.0000	0.0000	0.000	33.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions Annual (tpy)	2009 NOx OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 NOx OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
MA	Norfolk	25021	1190797	16	0108	30500111	0.0000	0.0000	0.000	27.0	22.5	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1190797	17	0108	30500111	0.0000	0.0000	0.000	28.0	22.5	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1190797	19	0108	30500113	0.0000	0.0000	0.000	27.0	20.1	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1190797	20	0108	30500113	0.0000	0.0000	0.000	28.0	20.1	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1190797	26	0108	30500102	0.0000	0.0000	0.000	28.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1190797	37	0114	30500113	0.0000	0.0000	0.000	28.0	20.1	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1191170	03	0303	30500103	0.0000	0.0000	0.000	25.0	27.5	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1191170	04	0104	30500103	0.0000	0.0000	0.000	25.0	27.5	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1191851	01	0101	30500208	4.0000	0.0000	0.018	40.0	25.0	0.00	4.0000	0.0176	0.018	1.000	0.00	35.00	2.60
MA	Norfolk	25021	1191851	01	0201	30500201	0.0000	0.0000	0.000	40.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1191851	01	0301	30500204	0.0000	0.0000	0.000	40.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1191851	02	0102	30500203	0.0000	0.0000	0.000	40.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1191851	07	0104	30500208	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Norfolk	25021	1192129	01	0101	30500208	1.0000	0.0000	0.004	33.0	25.0	0.00	1.0000	0.0036	0.004	1.000	0.00	35.00	0.65
MA	Norfolk	25021	1192129	01	0201	30500206	2.0000	0.0000	0.007	33.0	27.0	0.00	2.1360	0.0077	0.008	1.068	0.00	35.00	1.39
MA	Norfolk	25021	1192129	01	0301	30500201	0.0000	0.0000	0.000	33.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1192129	01	0401	30500208	0.0000	0.0000	0.000	33.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Norfolk	25021	1192129	02	0102	30500208	1.0000	0.0000	0.004	33.0	25.0	0.00	1.0000	0.0036	0.004	1.000	0.00	35.00	0.65
MA	Norfolk	25021	1192129	02	0202	30500206	2.0000	0.0000	0.007	33.0	27.0	0.00	2.1360	0.0077	0.008	1.068	0.00	35.00	1.39
MA	Norfolk	25021	1192129	02	0302	30500201	0.0000	0.0000	0.000	33.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1192129	02	0402	30500208	0.0000	0.0000	0.000	33.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Norfolk	25021	1192502	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1192502	01	0201	30500208	1.0000	0.0000	0.005	50.0	25.0	0.00	1.0000	0.0055	0.005	1.000	0.00	35.00	0.65
MA	Norfolk	25021	1192502	01	0301	30500207	4.0000	0.0000	0.022	50.0	25.0	0.00	9.7521	0.0536	0.054	2.438	0.00	35.00	6.34
MA	Norfolk	25021	1192502	02	0102	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1192502	02	0202	30500208	2.0000	0.0000	0.011	50.0	25.0	0.00	2.0000	0.0110	0.011	1.000	0.00	35.00	1.30
MA	Norfolk	25021	1192502	02	0302	30500206	0.0000	0.0000	0.000	50.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Norfolk	25021	1192502	02	0402	30500208	10.0000	0.0000	0.055	50.0	25.0	0.00	10.0000	0.0549	0.055	1.000	0.00	35.00	6.50
MA	Norfolk	25021	1200350	01	0101	30500201	0.0000	0.0000	0.000	34.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1200350	01	0201	30500208	1.0000	0.0000	0.004	34.0	25.0	0.00	1.0000	0.0037	0.004	1.000	0.00	35.00	0.65
MA	Norfolk	25021	1200350	01	0301	30500207	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	2.438	0.00	35.00	0.00
MA	Norfolk	25021	1200350	02	0102	30500205	0.0000	0.0000	0.000	38.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1200350	02	0202	30500208	0.0000	0.0000	0.000	38.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Norfolk	25021	1200350	02	0302	30500207	0.0000	0.0000	0.000	38.0	25.0	0.00	0.0000	0.0000	0.000	2.438	0.00	35.00	0.00
MA	Norfolk	25021	1200350	03	0103	30500208	0.0000	0.0000	0.000	30.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Norfolk	25021	1200404	01	0101	30500201	0.0000	0.0000	0.000	25.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1200404	01	0201	30500208	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Norfolk	25021	1200404	01	0301	30500207	9.0000	0.0000	0.025	25.0	25.0	0.00	21.9423	0.0603	0.060	2.438	0.00	35.00	14.26
MA	Norfolk	25021	1200404	02	0102	30500205	0.0000	0.0000	0.000	50.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1200404	02	0202	30500208	3.0000	0.0000	0.016	50.0	25.0	0.00	3.0000	0.0165	0.016	1.000	0.00	35.00	1.95
MA	Norfolk	25021	1200404	02	0302	30500207	22.0000	0.0000	0.121	50.0	25.0	0.00	53.6368	0.2947	0.295	2.438	0.00	35.00	34.86
MA	Plymouth	25023	1200049	01	0101	30500205	0.0000	0.0000	0.000	35.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Plymouth	25023	1200049	01	0201	30500208	4.0000	0.0000	0.015	35.0	25.0	0.00	4.0000	0.0154	0.015	1.000	0.00	35.00	2.60
MA	Plymouth	25023	1200049	01	0301	30500206	0.0000	0.0000	0.000	35.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Plymouth	25023	1200049	02	0101	30500202	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Plymouth	25023	1200208	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Plymouth	25023	1200208	01	0201	30500208	1.0000	0.0000	0.005	50.0	25.0	0.00	1.0000	0.0055	0.005	1.000	0.00	35.00	0.65
MA	Plymouth	25023	1200208	01	0301	30500207	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	2.438	0.00	35.00	0.00
MA	Plymouth	25023	1200370	01	0101	30500201	0.0000	0.0000	0.000	35.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Plymouth	25023	1200370	01	0201	30500207	6.0000	0.0000	0.023	35.0	25.0	0.00	14.6282	0.0563	0.056	2.438	0.00	35.00	9.51
MA	Plymouth	25023	1200370	01	0301	30500206	0.0000	0.0000	0.000	35.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Plymouth	25023	1200370	02	0102	30500208	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00

							2002 NOx Emissions						2009 NOx OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
MA	Plymouth	25023	1200370	02	0202	30500206	0.0000	0.0000	0.000	25.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Suffolk	25025	1190316	01	0101	30500206	4.0000	0.0000	0.012	27.0	27.0	0.00	4.2720	0.0127	0.013	1.068	0.00	35.00	2.78
MA	Suffolk	25025	1190316	01	0201	30500208	0.0000	0.0000	0.000	27.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Suffolk	25025	1190316	01	0301	30500204	0.0000	0.0000	0.000	27.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Suffolk	25025	1190316	01	0401	30500201	0.0000	0.0000	0.000	27.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Suffolk	25025	1190316	01	0501	30500202	0.0000	0.0000	0.000	27.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Suffolk	25025	1190316	02	0202	30500201	0.0000	0.0000	0.000	25.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Suffolk	25025	1190316	02	0302	30500202	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Suffolk	25025	1190316	02	0402	30500202	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Suffolk	25025	1190316	02	0502	30500203	0.0000	0.0000	0.000	25.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180012	01	0101	30500201	0.0000	0.0000	0.000	40.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180012	01	0201	30500208	1.0000	0.0000	0.004	40.0	25.0	0.00	1.0000	0.0044	0.004	1.000	0.00	35.00	0.65
MA	Worcester	25027	1180057	01	0101	30500205	0.0000	0.0000	0.000	40.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180057	01	0201	30500208	2.0000	0.0000	0.009	40.0	25.0	0.00	2.0000	0.0088	0.009	1.000	0.00	35.00	1.30
MA	Worcester	25027	1180057	01	0301	30500206	0.0000	0.0000	0.000	40.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Worcester	25027	1180057	02	0102	30500205	0.0000	0.0000	0.000	30.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180057	02	0202	30500208	2.0000	0.0000	0.007	30.0	25.0	0.00	2.0000	0.0066	0.007	1.000	0.00	35.00	1.30
MA	Worcester	25027	1180057	02	0302	30500206	1.0000	0.0000	0.003	30.0	27.0	0.00	1.0680	0.0035	0.004	1.068	0.00	35.00	0.69
MA	Worcester	25027	1180057	05	0103	30500203	0.0000	0.0000	0.000	25.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180057	06	0103	30500203	0.0000	0.0000	0.000	25.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180057	07	0103	30500203	0.0000	0.0000	0.000	25.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180057	08	0103	30500203	0.0000	0.0000	0.000	25.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180057	09	0103	30500208	0.2710	0.0000	0.001	30.0	25.0	0.00	0.2710	0.0009	0.001	1.000	0.00	35.00	0.18
MA	Worcester	25027	1180067	01	0101	30500201	0.0000	0.0000	0.000	30.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180067	01	0201	30500207	2.0000	0.0000	0.007	30.0	25.0	0.00	4.8761	0.0161	0.016	2.438	0.00	35.00	3.17
MA	Worcester	25027	1180136	01	0201	30500201	0.0000	0.0000	0.000	30.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180140	01	0201	30500201	0.0000	0.0000	0.000	30.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180140	02	0102	30500199	0.0000	0.0000	0.000	25.0	26.3	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180159	01	0101	30500201	0.0000	0.0000	0.000	33.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180161	01	0101	30500201	0.0000	0.0000	0.000	40.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180161	01	0201	30500208	3.0000	0.0000	0.013	40.0	25.0	0.00	3.0000	0.0132	0.013	1.000	0.00	35.00	1.95
MA	Worcester	25027	1180213	02	0102	30500201	0.0000	0.0000	0.000	40.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180213	03	0102	30500205	2.0000	0.0000	0.009	40.0	25.2	0.00	2.4189	0.0106	0.011	1.209	0.00	35.00	1.57
MA	Worcester	25027	1180213	03	0202	30500205	0.0900	0.0000	0.000	40.0	25.2	0.00	0.1089	0.0005	0.000	1.209	0.00	35.00	0.07
MA	Worcester	25027	1180213	04	0103	30500208	0.2360	0.0000	0.001	40.0	25.0	0.00	0.2360	0.0010	0.001	1.000	0.00	35.00	0.15
MA	Worcester	25027	1180296	01	0101	30500201	0.0000	0.0000	0.000	40.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180296	01	0201	30500207	0.0000	0.0000	0.000	40.0	25.0	0.00	0.0000	0.0000	0.000	2.438	0.00	35.00	0.00
MA	Worcester	25027	1180296	01	0301	30500208	0.0000	0.0000	0.000	40.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Worcester	25027	1180296	01	0401	30500207	18.0000	0.0000	0.079	40.0	25.0	0.00	43.8847	0.1929	0.193	2.438	0.00	35.00	28.53
MA	Worcester	25027	1180296	02	0102	30500201	0.0000	0.0000	0.000	40.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180296	02	0202	30500207	0.0000	0.0000	0.000	40.0	25.0	0.00	0.0000	0.0000	0.000	2.438	0.00	35.00	0.00
MA	Worcester	25027	1180296	02	0302	30500208	0.0000	0.0000	0.000	40.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Worcester	25027	1180306	01	0101	30500201	5.0000	0.0000	0.033	60.0	26.4	0.00	6.0474	0.0399	0.040	1.209	0.00	35.00	3.93
MA	Worcester	25027	1180306	01	0201	30500208	0.0000	0.0000	0.000	60.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
NJ	Atlantic	34001	70003	U101	OS1	30500207	0.8700	0.0033	0.003	32.0	25.0	0.00	2.1211	0.0080	0.008	2.438	0.00	35.00	1.38
NJ	Atlantic	34001	70003	U101	OS2	30500207	0.7900	0.0120	0.012	32.0	25.0	0.00	1.9260	0.0293	0.029	2.438	0.00	35.00	1.25
NJ	Atlantic	34001	70003	U12	OS0	30500207	0.1200	0.0005	0.001		25.0	0.00	0.2926	0.0012	0.001	2.438	0.00	35.00	0.19
NJ	Atlantic	34001	70003	U13	OS0	30500207	0.2900	0.0007	0.001		25.0	0.00	0.7070	0.0017	0.002	2.438	0.00	35.00	0.46
NJ	Atlantic	34001	70003	U6	OS1	30500207	1.4600	0.0093	0.009	34.0	25.0	0.00	3.5595	0.0227	0.023	2.438	0.00	35.00	2.31
NJ	Atlantic	34001	70003	U901	OS1	27000320	0.7100	0.0033	0.003	31.0	25.0	0.00	0.7175	0.0033	0.003	1.011	0.00	35.00	0.47
NJ	Atlantic	34001	70015	IS1	OS0	39999991	0.0900	0.0002	0.000	15.0	25.0	0.00	0.1303	0.0003	0.000	1.448	0.00	35.00	0.08
NJ	Atlantic	34001	70015	U22	OS2	20200101	0.7200	0.0090	0.009	30.0	25.5	0.00	0.7276	0.0091	0.009	1.011	0.00	35.00	0.47

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions Annual (tpy)	2009 NOx OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 NOx OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
NJ	Atlantic	34001	70015	U22	OS4	20200101	0.2400	0.0041	0.004	30.0	25.5	0.00	0.2425	0.0041	0.004	1.011	0.00	35.00	0.16
NJ	Atlantic	34001	70015	U401	OS1601	30500207	7.3400	0.0367	0.037	29.0	25.0	0.00	17.8952	0.0895	0.089	2.438	0.00	35.00	11.63
NJ	Atlantic	34001	70015	U401	OS2101	30500207	0.1000	0.0004	0.000	29.0	25.0	0.00	0.2438	0.0010	0.001	2.438	0.00	35.00	0.16
NJ	Atlantic	34001	70015	U401	OS401	30500207	0.3300	0.0165	0.017	15.0	25.0	0.00	0.8046	0.0402	0.040	2.438	0.00	35.00	0.52
NJ	Camden	34007	50373	IS1	OS0	39999991	0.3700	0.0022	0.002	25.0	25.0	0.00	0.5358	0.0032	0.003	1.448	0.00	35.00	0.35
NJ	Camden	34007	50373	IS2	OS0	39999991	0.2400	0.0014	0.001	25.0	25.0	0.00	0.3475	0.0020	0.002	1.448	0.00	35.00	0.23
NJ	Camden	34007	50373	U11	OS1	30500207	1.0000	0.0222	0.022	6.0	25.0	0.00	2.4380	0.0541	0.054	2.438	0.00	35.00	1.58
NJ	Camden	34007	50373	U13	OS8	30502501	0.1300	0.0000	0.000	0.0	25.0	0.00	0.1562	0.0004	0.000	1.201	0.00	35.00	0.10
NJ	Camden	34007	50373	U6	OS1	30500207	9.1200	0.0647	0.065	30.0	25.0	0.00	22.2349	0.1577	0.158	2.438	0.00	35.00	14.45
NJ	Camden	34007	50580	U8	OS1	10200502	0.3200	0.0012	0.001	33.0	25.0	0.00	0.3234	0.0012	0.001	1.011	0.00	35.00	0.21
NJ	Camden	34007	50580	U8	OS2	10200502	0.4200	0.0012	0.001	25.0	25.0	0.00	0.4244	0.0012	0.001	1.011	0.00	35.00	0.28
NJ	Camden	34007	50580	U8	OS5	10200502	1.6800	0.0062	0.006	33.0	25.0	0.00	1.6977	0.0063	0.006	1.011	0.00	35.00	1.10
NJ	Camden	34007	50580	U8	OS6	10200502	0.1100	0.0003	0.000	25.0	25.0	0.00	0.1112	0.0003	0.000	1.011	0.00	35.00	0.07
NJ	Camden	34007	50580	U8	OS7	10200502	1.6800	0.0062	0.006	33.0	25.0	0.00	1.6977	0.0063	0.006	1.011	0.00	35.00	1.10
NJ	Cape May	34009	73014	U9	OS3	30500207	1.0100	0.0100	0.010	29.0	25.0	0.00	2.4624	0.0244	0.024	2.438	0.00	35.00	1.60
NJ	Cape May	34009	73014	U9	OS7	30500207	0.5800	0.0100	0.010	29.0	25.0	0.00	1.4141	0.0244	0.024	2.438	0.00	35.00	0.92
NJ	Essex	34013	05005	IS1	OS0	39999991	0.0700	0.0000	0.000	10.0	25.0	0.00	0.1014	0.0001	0.000	1.448	0.00	35.00	0.07
NJ	Essex	34013	05005	IS2	OS0	39999991	0.2000	0.0000	0.000	10.0	25.0	0.00	0.2896	0.0003	0.000	1.448	0.00	35.00	0.19
NJ	Essex	34013	05005	U2	OS1	30500207	2.8200	0.0170	0.017	30.0	25.0	0.00	6.8753	0.0414	0.041	2.438	0.00	35.00	4.47
NJ	Gloucester	34015	55261	U4	OS1	30500207	7.8400	0.0475	0.048	34.0	25.0	0.00	19.1142	0.1158	0.116	2.438	0.00	35.00	12.42
NJ	Hudson	34017	11171	U1	OS2	39999991	0.1600	0.0008	0.001	33.0	25.0	0.00	0.2317	0.0012	0.001	1.448	0.00	35.00	0.15
NJ	Hudson	34017	11171	U2	OS1	30500207	4.7800	0.0179	0.018	33.0	25.0	0.00	11.6538	0.0436	0.044	2.438	0.00	35.00	7.57
NJ	Hudson	34017	11171	U6	OS1	10300602	0.1200	0.0004	0.000	33.0	22.5	0.00	0.1213	0.0004	0.000	1.011	0.00	35.00	0.08
NJ	Hudson	34017	12197	U17	OS1	30500107	0.0500	0.0002	0.000	25.0	25.0	0.00	0.0556	0.0002	0.000	1.111	0.00	35.00	0.04
NJ	Hudson	34017	12197	U17	OS10	30500107	0.5000	0.0002	0.000	25.0	25.0	0.00	0.5557	0.0002	0.000	1.111	0.00	35.00	0.36
NJ	Hudson	34017	12197	U17	OS2	30500107	0.0500	0.0002	0.000	25.0	25.0	0.00	0.0556	0.0002	0.000	1.111	0.00	35.00	0.04
NJ	Hudson	34017	12197	U17	OS3	30500107	0.0500	0.0002	0.000	25.0	25.0	0.00	0.0556	0.0002	0.000	1.111	0.00	35.00	0.04
NJ	Hudson	34017	12197	U17	OS5	30500107	0.0500	0.0002	0.000	25.0	25.0	0.00	0.0556	0.0002	0.000	1.111	0.00	35.00	0.04
NJ	Hudson	34017	12197	U17	OS6	30500107	0.5000	0.0002	0.000	25.0	25.0	0.00	0.5557	0.0002	0.000	1.111	0.00	35.00	0.36
NJ	Hudson	34017	12197	U17	OS7	30500107	0.0500	0.0002	0.000	25.0	25.0	0.00	0.0556	0.0002	0.000	1.111	0.00	35.00	0.04
NJ	Hudson	34017	12197	U17	OS8	30500107	0.0500	0.0002	0.000	25.0	25.0	0.00	0.0556	0.0002	0.000	1.111	0.00	35.00	0.04
NJ	Hudson	34017	12197	U17	OS9	30500107	0.0500	0.0002	0.000	25.0	25.0	0.00	0.0556	0.0002	0.000	1.111	0.00	35.00	0.04
NJ	Hudson	34017	12197	U32	OS1	30500107	0.4100	0.0012	0.001	25.0	25.0	0.00	0.4557	0.0013	0.001	1.111	0.00	35.00	0.30
NJ	Hudson	34017	12197	U33	OS1	30500107	0.4100	0.0012	0.001	25.0	25.0	0.00	0.4557	0.0013	0.001	1.111	0.00	35.00	0.30
NJ	Hudson	34017	12197	U33	OS2	30500107	0.4100	0.0012	0.001	25.0	25.0	0.00	0.4557	0.0013	0.001	1.111	0.00	35.00	0.30
NJ	Hudson	34017	12197	U36	OS1	30500107	0.3500	0.0010	0.001	25.0	25.0	0.00	0.3890	0.0011	0.001	1.111	0.00	35.00	0.25
NJ	Hudson	34017	12197	U37	OS2	30500107	0.4100	0.0012	0.001	25.0	25.0	0.00	0.4557	0.0013	0.001	1.111	0.00	35.00	0.30
NJ	Hudson	34017	12197	U39	OS1	30500107	0.3500	0.0010	0.001	25.0	25.0	0.00	0.3890	0.0011	0.001	1.111	0.00	35.00	0.25
NJ	Hudson	34017	12197	U40	OS1	30500107	0.3500	0.0010	0.001	25.0	25.0	0.00	0.3890	0.0011	0.001	1.111	0.00	35.00	0.25
NJ	Hudson	34017	12197	U41	OS1	30500107	0.3500	0.0010	0.001	25.0	25.0	0.00	0.3890	0.0011	0.001	1.111	0.00	35.00	0.25
NJ	Hudson	34017	12197	U84	OS1	30500107	0.6000	0.0018	0.002	25.0	25.0	0.00	0.6668	0.0020	0.002	1.111	0.00	35.00	0.43
NJ	Mercer	34021	60031	U6	OS1	30500207	3.7300	0.0206	0.021	27.0	25.0	0.00	9.0939	0.0502	0.050	2.438	0.00	35.00	5.91
NJ	Middlesex	34023	15129	IS3	OS0	39999991	0.0300	0.0001	0.000	30.0	25.0	0.00	0.0434	0.0001	0.000	1.448	0.00	35.00	0.03
NJ	Middlesex	34023	15129	U7	OS1	30500207	2.0600	0.0118	0.012	30.0	25.0	0.00	5.0224	0.0288	0.029	2.438	0.00	35.00	3.26
NJ	Middlesex	34023	15524	IS1	OS0	39999991	0.0800	0.0002	0.000	24.0	25.0	0.00	0.1158	0.0003	0.000	1.448	0.00	35.00	0.08
NJ	Middlesex	34023	15524	IS2	OS0	39999991	0.2600	0.0010	0.001	22.0	25.0	0.00	0.3765	0.0014	0.001	1.448	0.00	35.00	0.24
NJ	Middlesex	34023	15524	U21	OS1	10300602	0.0800	0.0002	0.000	24.0	22.5	0.00	0.0808	0.0002	0.000	1.011	0.00	35.00	0.05
NJ	Middlesex	34023	15524	U23	OS1	30590003	0.1600	0.0004	0.000	24.0	25.0	0.00	0.1750	0.0004	0.000	1.094	0.00	35.00	0.11
NJ	Middlesex	34023	15524	U25	OS1	30590001	0.2100	0.0007	0.001	22.0	25.0	0.00	0.2220	0.0007	0.001	1.057	0.00	35.00	0.14
NJ	Middlesex	34023	15524	U25	OS2	30590001	0.2100	0.0007	0.001	22.0	25.0	0.00	0.2220	0.0007	0.001	1.057	0.00	35.00	0.14
NJ	Middlesex	34023	15524	U3	OS62	30590013	1.3100	0.0034	0.003	24.0	25.0	0.00	1.4327	0.0037	0.004	1.094	0.00	35.00	0.93
NJ	Monmouth	34025	20022	U1	OS1	30500207	14.2700	0.0671	0.067	27.0	25.0	0.00	34.7908	0.1636	0.164	2.438	0.00	35.00	22.61

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions: Annual (tpy)	2002 NOx Emissions: Summer Day from Inventory (tpd)	2002 NOx Emissions: Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions: Annual (tpy)	2009 NOx OTB/OTW Emissions: Summer Day from Inventory (tpd)	2009 NOx OTB/OTW Emissions: Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
NJ	Monmouth	34025	20023	IS100	OS0	39999991	0.0700	0.0002	0.000	25.0	25.0	0.00	0.1014	0.0003	0.000	1.448	0.00	35.00	0.07
NJ	Monmouth	34025	20023	U1800	OS0	39999991	1.8500	0.0158	0.016	32.0	25.0	0.00	2.6790	0.0229	0.023	1.448	0.00	35.00	1.74
NJ	Monmouth	34025	20023	U2	OS1	30500207	2.6400	0.0146	0.015	32.0	25.0	0.00	6.4364	0.0356	0.036	2.438	0.00	35.00	4.18
NJ	Monmouth	34025	20025	U20	OS1	10200602	0.1700	0.0008	0.001	33.0	24.6	0.00	0.1793	0.0008	0.001	1.055	0.00	35.00	0.12
NJ	Monmouth	34025	20025	U21	OS1	10200602	0.1700	0.0008	0.001	27.0	24.6	0.00	0.1793	0.0008	0.001	1.055	0.00	35.00	0.12
NJ	Monmouth	34025	20025	U26	OS1	30500207	4.3300	0.0204	0.020	33.0	25.0	0.00	10.5567	0.0497	0.050	2.438	0.00	35.00	6.86
NJ	Monmouth	34025	20025	U3	OS2	30500207	4.1500	0.0195	0.020	27.0	25.0	0.00	10.1179	0.0475	0.048	2.438	0.00	35.00	6.58
NJ	Morris	34027	25009	IS1	OS0	39999991	0.0200	0.0001	0.000	25.0	25.0	0.00	0.0290	0.0001	0.000	1.448	0.00	35.00	0.02
NJ	Morris	34027	25009	IS2	OS0	39999991	0.1000	0.0000	0.000	10.0	25.0	0.00	0.1448	0.0002	0.000	1.448	0.00	35.00	0.09
NJ	Morris	34027	25009	U13	OS1	30500207	2.2000	0.0177	0.018	30.0	25.0	0.00	5.3637	0.0432	0.043	2.438	0.00	35.00	3.49
NJ	Morris	34027	25009	U2	OS1	30500207	2.1200	0.0077	0.008	30.0	25.0	0.00	5.1686	0.0188	0.019	2.438	0.00	35.00	3.36
NJ	Morris	34027	25268	U100	OS101	30500207	2.5800	0.0130	0.013	28.0	25.0	0.00	6.2901	0.0317	0.032	2.438	0.00	35.00	4.09
NJ	Morris	34027	25268	U1601	OS1601	30500207	2.7000	0.0244	0.024	35.0	25.0	0.00	6.5827	0.0595	0.059	2.438	0.00	35.00	4.28
NJ	Morris	34027	25268	U1601	OS1602	30500207	2.6600	0.0244	0.024	35.0	25.0	0.00	6.4852	0.0595	0.059	2.438	0.00	35.00	4.22
NJ	Ocean	34029	78010	IS1	OS0	39999991	0.0100	0.0000	0.000	25.0	25.0	0.00	0.0145	0.0000	0.000	1.448	0.00	35.00	0.01
NJ	Ocean	34029	78010	U1500	OS1501	30500207	0.0400	0.0001	0.000	25.0	25.0	0.00	0.0975	0.0002	0.000	2.438	0.00	35.00	0.06
NJ	Ocean	34029	78010	U1500	OS1502	30500207	0.0400	0.0001	0.000	25.0	25.0	0.00	0.0975	0.0002	0.000	2.438	0.00	35.00	0.06
NJ	Ocean	34029	78010	U1601	OS1601	30500207	5.7100	0.0326	0.033	34.0	25.0	0.00	13.9212	0.0795	0.079	2.438	0.00	35.00	9.05
NJ	Ocean	34029	78010	U1700	OS0	39999991	0.2700	0.0043	0.004	28.0	25.0	0.00	0.3910	0.0062	0.006	1.448	0.00	35.00	0.25
NJ	Ocean	34029	78010	U900	OS1	30500207	1.4000	0.0175	0.018	31.0	25.0	0.00	3.4133	0.0427	0.043	2.438	0.00	35.00	2.22
NJ	Ocean	34029	78012	U101	OS1	30500207	1.3600	0.0064	0.006	27.0	25.0	0.00	3.3157	0.0156	0.016	2.438	0.00	35.00	2.16
NJ	Ocean	34029	78014	IS2	OS0	10500205	0.0400	0.0001	0.000		25.0	0.00	0.0429	0.0001	0.000	1.073	0.00	35.00	0.03
NJ	Ocean	34029	78014	U2	OS1	30500207	2.8200	0.0186	0.019		25.0	0.00	6.8753	0.0453	0.045	2.438	0.00	35.00	4.47
NJ	Passaic	34031	30005	U100	OS113	30500207	2.7600	0.0142	0.014	28.0	25.0	0.00	6.7290	0.0346	0.035	2.438	0.00	35.00	4.37
NJ	Passaic	34031	30005	U2300	OS2301	30500207	4.6000	0.0456	0.046	32.0	25.0	0.00	11.2150	0.1112	0.111	2.438	0.00	35.00	7.29
NJ	Passaic	34031	30005	U2300	OS2332	30500207	3.3500	0.0456	0.046	32.0	25.0	0.00	8.1674	0.1112	0.111	2.438	0.00	35.00	5.31
NJ	Passaic	34031	30085	IS1	OS0	39999991	0.0700	0.0001	0.000	15.0	25.0	0.00	0.1014	0.0001	0.000	1.448	0.00	35.00	0.07
NJ	Passaic	34031	30085	U100	OS201	30500207	1.1800	0.0084	0.008	30.0	25.0	0.00	2.8769	0.0205	0.020	2.438	0.00	35.00	1.87
NJ	Passaic	34031	30085	U100	OS203	39999991	0.6600	0.0084	0.008	30.0	25.0	0.00	0.9557	0.0122	0.012	1.448	0.00	35.00	0.62
NJ	Passaic	34031	30085	U100	OS901	30500207	0.2400	0.0224	0.022	31.0	25.0	0.00	0.5851	0.0546	0.055	2.438	0.00	35.00	0.38
NJ	Passaic	34031	30085	U100	OS903	30500207	3.1100	0.0224	0.022	31.0	25.0	0.00	7.5823	0.0546	0.055	2.438	0.00	35.00	4.93
NJ	Passaic	34031	30085	U2000	OS2008	20200101	0.1000	0.0010	0.001	32.0	25.5	0.00	0.1011	0.0010	0.001	1.011	0.00	35.00	0.07
NJ	Somerset	34035	35014	U100	OS113	30500207	10.2800	0.1379	0.138	27.0	25.0	0.00	25.0630	0.3362	0.336	2.438	0.00	35.00	16.29
NJ	Somerset	34035	35014	U100	OS2301	30500207	10.4600	0.0863	0.086	32.0	25.0	0.00	25.5019	0.2104	0.210	2.438	0.00	35.00	16.58
NJ	Somerset	34035	35327	U9	OS13	30500107	1.6000	0.0079	0.008	32.0	25.0	0.00	1.7782	0.0088	0.009	1.111	0.00	35.00	1.16
NJ	Somerset	34035	35884	U105	OS163	30500107	0.6200	0.0028	0.003	25.0	25.0	0.00	0.6890	0.0031	0.003	1.111	0.00	35.00	0.45
NJ	Somerset	34035	35884	U108	OS1081	30500107	0.1000	0.0123	0.012	25.0	25.0	0.00	0.1111	0.0137	0.014	1.111	0.00	35.00	0.07
NJ	Somerset	34035	35884	U109	OS1091	30500107	8.6700	0.0397	0.040	25.0	25.0	0.00	9.6355	0.0441	0.044	1.111	0.00	35.00	6.26
NJ	Somerset	34035	35884	U132	OS132	30500107	0.0800	0.0072	0.007	28.0	25.0	0.00	0.0889	0.0080	0.008	1.111	0.00	35.00	0.06
NJ	Somerset	34035	35884	U34	OS341	30500107	1.9200	0.0075	0.008	25.0	25.0	0.00	2.1338	0.0083	0.008	1.111	0.00	35.00	1.39
NJ	Somerset	34035	35884	U78	OS78	30500107	3.6800	0.0202	0.020	25.0	25.0	0.00	4.0898	0.0224	0.022	1.111	0.00	35.00	2.66
NJ	Somerset	34035	35884	U78	OS781	30500107	3.9400	0.0216	0.022	25.0	25.0	0.00	4.3788	0.0240	0.024	1.111	0.00	35.00	2.85
NJ	Somerset	34035	35884	U79	OS79	30500107	0.3100	0.0017	0.002	25.0	25.0	0.00	0.3445	0.0019	0.002	1.111	0.00	35.00	0.22
NJ	Somerset	34035	35884	U79	OS791	30500107	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.111	0.00	35.00	0.00
NJ	Somerset	34035	36009	U1000	OS1201	30500207	2.6700	0.0149	0.015	30.0	25.0	0.00	6.5096	0.0363	0.036	2.438	0.00	35.00	4.23
NJ	Somerset	34035	36009	U1000	OS1202	30500207	0.3000	0.0149	0.015	30.0	25.0	0.00	0.7314	0.0363	0.036	2.438	0.00	35.00	0.48
NJ	Somerset	34035	36009	U1000	OS1301	30500207	8.9200	0.0396	0.040	30.0	25.0	0.00	21.7473	0.0965	0.097	2.438	0.00	35.00	14.14
NJ	Somerset	34035	36009	U1000	OS1401	30500207	2.6100	0.0116	0.012	30.0	25.0	0.00	6.3633	0.0283	0.028	2.438	0.00	35.00	4.14
NJ	Sussex	34037	83008	U4	OS1	30500207	3.2800	0.0158	0.016	30.0	25.0	0.00	7.9968	0.0385	0.039	2.438	0.00	35.00	5.20
NY	Queens	36081	2630200138	D00001	P01FP	30500251	4.1505	0.0000	0.011		25.0	0.00	5.1271	0.0141	0.014	1.235	0.00	35.00	3.33
NY	Richmond	36085	2640300031	3ADRYR	302FP	30500251	6.9500	0.0000	0.019		25.0	0.00	8.5853	0.0236	0.024	1.235	0.00	35.00	5.58
NY	Westchester	36119	3550800247	1ENGIN	006FP	20200102	0.4516	0.0000	0.001		25.8	0.00	0.3788	0.0013	0.001	1.011	0.00	35.00	0.25

							2002 NOx Emissions						2009 NOx OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
NY	Westchester	36119	3550800247	1MIXER	001FP	30500205	3.3930	0.0000	0.009		25.2	0.00	4.1914	0.0116	0.012	1.235	0.00	35.00	2.72
PA	Allegheny	42003	4200300002	002	1	10100602	0.9140	0.0000	0.004	36.0	24.0	0.00	1.0149	0.0040	0.004	1.110	0.00	35.00	0.66
PA	Allegheny	42003	4200300002	003	1	10200104	21.9621	0.0011	0.001	36.0	25.0	0.00	23.0985	0.0012	0.001	1.052	0.00	35.00	15.01
PA	Allegheny	42003	4200300002	004	1	30500202	2.6036	0.0003	0.000	36.0	25.0	0.00	2.9128	0.0003	0.000	1.119	0.00	35.00	1.89
PA	Allegheny	42003	4200300079	001	2	30500255	0.6606	0.0036	0.004	35.0	25.0	0.00	0.7391	0.0040	0.004	1.119	0.00	35.00	0.48
PA	Allegheny	42003	4200300079	001	4	30500206	0.1565	0.0008	0.001	35.0	27.0	0.00	0.1671	0.0009	0.001	1.068	0.00	35.00	0.11
PA	Allegheny	42003	4200300079	016	1	20300101	16.6880	0.0770	0.077	30.0	25.0	0.00	14.8631	0.0826	0.083	1.073	0.00	35.00	9.66
PA	Allegheny	42003	4200300139	001	1	30500201	4.4996	0.0259	0.026	53.0	26.4	0.00	5.0340	0.0290	0.029	1.119	0.00	35.00	3.27
PA	Allegheny	42003	4200300139	009	1	27000320	3.2228	0.0119	0.012	34.0	25.0	0.00	3.2567	0.0120	0.012	1.011	0.00	35.00	2.12
PA	Allegheny	42003	4200300139	012	1	10100602	0.0252	0.0001	0.000	25.0	24.0	0.00	0.0280	0.0001	0.000	1.110	0.00	35.00	0.02
PA	Allegheny	42003	4200300163	001	2	30500201	0.5785	0.0039	0.004	44.0	26.4	0.00	0.6472	0.0044	0.004	1.119	0.00	35.00	0.42
PA	Allegheny	42003	4200300163	002	1	30590001	0.0100	0.0000	0.000	40.0	25.0	0.00	0.0106	0.0000	0.000	1.057	0.00	35.00	0.01
PA	Allegheny	42003	4200300163	003	1	20100102	0.9750	0.0066	0.007	44.0	24.1	0.00	1.7440	0.0142	0.014	2.155	0.00	35.00	1.13
PA	Allegheny	42003	4200300163	004	2	20300101	1.5100	0.0102	0.010	44.0	25.0	0.00	1.3449	0.0109	0.011	1.073	0.00	35.00	0.87
PA	Allegheny	42003	4200300180	001	1	30500201	1.0350	0.0001	0.000	63.0	26.4	0.00	1.1579	0.0001	0.000	1.119	0.00	35.00	0.75
PA	Allegheny	42003	4200300180	002	1	30500208	0.1843	0.0013	0.001	63.0	25.0	0.00	0.1843	0.0013	0.001	1.000	0.00	35.00	0.12
PA	Allegheny	42003	4200300180	002	2	30500208	0.1238	0.0008	0.001	63.0	25.0	0.00	0.1238	0.0008	0.001	1.000	0.00	35.00	0.08
PA	Allegheny	42003	4200300180	009	1	27000320	1.0553	0.0102	0.010	63.0	25.0	0.00	1.0664	0.0103	0.010	1.011	0.00	35.00	0.69
PA	Allegheny	42003	4200300196	001	1	10200603	1.1601	0.0082	0.008	49.0	23.4	0.00	1.2234	0.0086	0.009	1.055	0.00	35.00	0.80
PA	Allegheny	42003	4200300196	002	1	10200104	26.4070	0.0019	0.002	49.0	25.0	0.00	27.7734	0.0020	0.002	1.052	0.00	35.00	18.05
PA	Allegheny	42003	4200300196	005	1	10200603	0.0000	0.0000	0.000	49.0	23.4	0.00	0.0000	0.0000	0.000	1.055	0.00	35.00	0.00
PA	Allegheny	42003	4200300199	008	1	30500255	3.9794	0.0160	0.016	37.0	25.0	0.00	4.4520	0.0179	0.018	1.119	0.00	35.00	2.89
PA	Allegheny	42003	4200300199	011	1	10100602	0.0250	0.0000	0.000	32.0	24.0	0.00	0.0278	0.0001	0.000	1.110	0.00	35.00	0.02
PA	Allegheny	42003	4200300199	013	1	27000320	4.9052	0.0176	0.018	33.0	25.0	0.00	4.9567	0.0178	0.018	1.011	0.00	35.00	3.22
PA	Allegheny	42003	4200300339	001	1	10200602	0.0000	0.0000	0.000	25.0	24.6	0.00	0.0000	0.0000	0.000	1.055	0.00	35.00	0.00
PA	Allegheny	42003	4200300339	001	2	10200501	0.0000	0.0000	0.000	25.0	23.4	0.00	0.0000	0.0000	0.000	1.011	0.00	35.00	0.00
PA	Allegheny	42003	4200300339	002	1	10100602	0.7000	0.0030	0.003	40.0	24.0	0.00	0.7773	0.0033	0.003	1.110	0.00	35.00	0.51
PA	Allegheny	42003	4200300339	002	2	10200501	0.0000	0.0000	0.000	40.0	23.4	0.00	0.0000	0.0000	0.000	1.011	0.00	35.00	0.00
PA	Berks	42011	420110355	101	1	30500201	6.9800	0.0000	0.027	35.0	26.4	0.00	7.8090	0.0300	0.030	1.119	0.00	35.00	5.08
PA	Berks	42011	420110355	102	1	30500205	2.1100	0.0000	0.012	50.0	25.2	0.00	2.3606	0.0130	0.013	1.119	0.00	35.00	1.53
PA	Berks	42011	420110355	102	2	39000689	2.1100	0.0000	0.006	0.0	25.0	0.00	2.2252	0.0061	0.006	1.055	0.00	35.00	1.45
PA	Berks	42011	420110355	102	3	39000599	2.1100	0.0000	0.006	25.0	25.0	0.00	2.1322	0.0059	0.006	1.011	0.00	35.00	1.39
PA	Berks	42011	420110355	102	4	39001399	2.1100	0.0000	0.010	43.0	25.0	0.00	2.4249	0.0115	0.011	1.149	0.00	35.00	1.58
PA	Bucks	42017	420170014	105	1	30500201	16.8700	0.0000	0.059	32.0	26.4	0.00	18.8736	0.0664	0.066	1.119	0.00	35.00	12.27
PA	Bucks	42017	420170023	106	2	30500201	5.5100	0.0000	0.012	19.0	26.4	0.00	6.1644	0.0129	0.013	1.119	0.00	35.00	4.01
PA	Bucks	42017	420170023	118	2	30500205	0.8100	0.0000	0.002	22.0	25.2	0.00	0.9062	0.0022	0.002	1.119	0.00	35.00	0.59
PA	Bucks	42017	420170024	101	1	30500201	4.2700	0.0000	0.013	28.0	26.4	0.00	4.7771	0.0147	0.015	1.119	0.00	35.00	3.11
PA	Bucks	42017	420170026	100	1	30500201	1.9900	0.0000	0.010	44.0	26.4	0.00	2.2263	0.0108	0.011	1.119	0.00	35.00	1.45
PA	Bucks	42017	420170030	113	1	30500205	0.6050	0.0000	0.002	34.0	25.2	0.00	0.6769	0.0025	0.003	1.119	0.00	35.00	0.44
PA	Bucks	42017	420170030	401	1	30500201	1.2600	0.0000	0.005	34.0	26.4	0.00	1.4096	0.0053	0.005	1.119	0.00	35.00	0.92
PA	Bucks	42017	420170030	402	1	30500201	1.2600	0.0000	0.005	34.0	26.4	0.00	1.4096	0.0053	0.005	1.119	0.00	35.00	0.92
PA	Bucks	42017	420170052	107	1	30500201	1.6400	0.0000	0.006	31.0	26.4	0.00	1.8348	0.0063	0.006	1.119	0.00	35.00	1.19
PA	Bucks	42017	420170052	108	1	30500201	1.6400	0.0000	0.006	31.0	26.4	0.00	1.8348	0.0063	0.006	1.119	0.00	35.00	1.19
PA	Chester	42029	420290049	120	1	30500205	1.8700	0.0000	0.010	48.0	25.2	0.00	2.0921	0.0110	0.011	1.119	0.00	35.00	1.36
PA	Chester	42029	420290872	101	1	30500201	1.9100	0.0000	0.006	28.0	26.4	0.00	2.1368	0.0066	0.007	1.119	0.00	35.00	1.39
PA	Chester	42029	420290873	101	1	30500201	3.5300	0.0000	0.013	34.0	26.4	0.00	3.9493	0.0148	0.015	1.119	0.00	35.00	2.57
PA	Delaware	42045	420450028	127	1	30500201	6.0310	0.0000	0.022	33.0	26.4	0.00	6.7473	0.0245	0.024	1.119	0.00	35.00	4.39
PA	Delaware	42045	420450848	101	1	30500205	0.5400	0.0000	0.003	44.0	25.2	0.00	0.6041	0.0029	0.003	1.119	0.00	35.00	0.39
PA	Erie	42049	420490002	101A	1	30500201	0.0002	0.0000	0.000	22.0	26.4	0.00	0.0002	0.0000	0.000	1.119	0.00	35.00	0.00
PA	Lackawanna	42069	420690676	301	2	30500201	0.3283	0.0000	0.002	54.0	26.4	0.00	0.3673	0.0022	0.002	1.119	0.00	35.00	0.24
PA	Lawrence	42073	420730034	101	1	30500201	0.7380	0.0000	0.003	41.0	26.4	0.00	0.8257	0.0037	0.004	1.119	0.00	35.00	0.54
PA	Lawrence	42073	420730034	101	2	30500201	0.0820	0.0000	0.000	41.0	26.4	0.00	0.0917	0.0004	0.000	1.119	0.00	35.00	0.06

							2002 NOx Emissions						2009 NOx OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
PA	Mercer	42085	420850001	201	1	30500252	0.1950	0.0000	0.001	55.0	25.0	0.00	0.2182	0.0013	0.001	1.119	0.00	35.00	0.14
PA	Mercer	42085	420850001	201	2	30500252	0.1950	0.0000	0.001	55.0	25.0	0.00	0.2182	0.0013	0.001	1.119	0.00	35.00	0.14
PA	Mercer	42085	420850001	202	1	30500252	0.5550	0.0000	0.003	42.0	25.0	0.00	0.6209	0.0029	0.003	1.119	0.00	35.00	0.40
PA	Mercer	42085	420850001	202	2	30500252	0.5550	0.0000	0.003	42.0	25.0	0.00	0.6209	0.0029	0.003	1.119	0.00	35.00	0.40
PA	Monroe	42089	420890013	101	1	30500201	2.4500	0.0000	0.012	44.0	26.4	0.00	2.7410	0.0133	0.013	1.119	0.00	35.00	1.78
PA	Montgomery	42091	420910013	110	1	30500201	9.5700	0.0000	0.028	0.0	26.4	0.00	10.7066	0.0311	0.031	1.119	0.00	35.00	6.96
PA	Montgomery	42091	420910023	101	1	30500201	1.2300	0.0000	0.004	31.0	26.4	0.00	1.3761	0.0047	0.005	1.119	0.00	35.00	0.89
PA	Montgomery	42091	420910023	102	1	30500201	0.2100	0.0000	0.002	68.0	26.4	0.00	0.2349	0.0018	0.002	1.119	0.00	35.00	0.15
PA	Montgomery	42091	420910681	201	1	30500201	3.3700	0.0000	0.013	34.0	26.4	0.00	3.7702	0.0141	0.014	1.119	0.00	35.00	2.45
PA	Montgomery	42091	420910749	101	1	10300601	1.8400	0.0000	0.007	34.0	24.6	0.00	0.9297	0.0069	0.007	1.011	0.00	35.00	0.60
PA	Montgomery	42091	420910749	103	1	30500204	0.1350	0.0000	0.000	0.0	25.0	0.00	0.1510	0.0004	0.000	1.119	0.00	35.00	0.10
PA	Montgomery	42091	420910749	103	2	39000599	0.1350	0.0000	0.000	0.0	25.0	0.00	0.1364	0.0004	0.000	1.011	0.00	35.00	0.09
PA	Montgomery	42091	420910862	101	1	30500201	0.9460	0.0000	0.004	43.0	26.4	0.00	1.0584	0.0050	0.005	1.119	0.00	35.00	0.69
PA	Montgomery	42091	420910862	101	2	30500206	1.0240	0.0000	0.004	34.0	27.0	0.00	1.0936	0.0041	0.004	1.068	0.00	35.00	0.71
PA	Montgomery	42091	420910868	701	1	30500201	6.8700	0.0000	0.030	40.0	26.4	0.00	7.6859	0.0338	0.034	1.119	0.00	35.00	5.00
PA	Philadelphia	42101	4210101416	001	1	30500205	1.6800	0.0083	0.008		25.2	0.00	1.8795	0.0093	0.009	1.119	0.00	35.00	1.22
PA	Philadelphia	42101	4210101416	002	1	30500205	1.6800	0.0062	0.006		25.2	0.00	1.8795	0.0069	0.007	1.119	0.00	35.00	1.22
PA	Philadelphia	42101	4210101421	001	1	30500205	7.7900	0.0541	0.054		25.2	0.00	8.7152	0.0605	0.061	1.119	0.00	35.00	5.66
PA	Philadelphia	42101	4210101421	001	2	30505020	0.2376	0.0017	0.002		25.0	0.00	0.2538	0.0018	0.002	1.068	0.00	35.00	0.16
PA	Wyoming	42131	421310724	101	2	30500201	1.3000	0.0000	0.011	77.0	26.4	0.00	1.4544	0.0123	0.012	1.119	0.00	35.00	0.95
RI	Kent	44003	AIR223	1	1	30500255	3.2500	0.0000	0.009		25.0	0.00	2.4036	0.0066	0.007	0.740	0.00	35.00	1.56
RI	Kent	44003	AIR3248	1	1	30500252	1.0580	0.0000	0.003		25.0	0.00	0.7825	0.0021	0.002	0.740	0.00	35.00	0.51
RI	Kent	44003	AIR347	1	1	30500255	2.0365	0.0000	0.006		25.0	0.00	1.5061	0.0041	0.004	0.740	0.00	35.00	0.98
RI	Kent	44003	AIR347	2	2	30500258	0.0765	0.0000	0.000		25.0	0.00	0.0566	0.0002	0.000	0.740	0.00	35.00	0.04
RI	Providence	44007	AIR1033	1	1	30500247	9.4275	0.0460	0.046			0.00	6.9723	0.0340	0.034	0.740	0.00	35.00	4.53
RI	Providence	44007	AIR1033	2	2	30500298	0.3195	0.0000	0.001		25.0	0.00	0.2363	0.0006	0.001	0.740	0.00	35.00	0.15
RI	Providence	44007	AIR1524	1	1	30500261	5.7520	0.0000	0.016		25.0	0.00	4.2540	0.0117	0.012	0.740	0.00	35.00	2.77
RI	Providence	44007	AIR1524	2	2	30500298	0.3195	0.0000	0.001		25.0	0.00	0.2363	0.0006	0.001	0.740	0.00	35.00	0.15
RI	Providence	44007	AIR1531	1	1	30500252	1.6445	0.0000	0.005		25.0	0.00	1.2162	0.0033	0.003	0.740	0.00	35.00	0.79
RI	Providence	44007	AIR1531	2	2	30500298	0.0650	0.0000	0.000		25.0	0.00	0.0481	0.0001	0.000	0.740	0.00	35.00	0.03
RI	Providence	44007	AIR200	2	2	30500298	0.4105	0.0000	0.001		25.0	0.00	0.3036	0.0008	0.001	0.740	0.00	35.00	0.20
RI	Providence	44007	AIR759	1	1	30500255	1.5030	0.0000	0.004		25.0	0.00	1.1116	0.0031	0.003	0.740	0.00	35.00	0.72
RI	Providence	44007	AIR759	2	2	30500258	5.7225	0.0000	0.016		25.0	0.00	4.2322	0.0116	0.012	0.740	0.00	35.00	2.75
RI	Providence	44007	AIR759	3	3	30500298	0.6065	0.0000	0.002		25.0	0.00	0.4485	0.0012	0.001	0.740	0.00	35.00	0.29
RI	Washington	44009	AIR2903	1	1	30500252	6.3455	0.0415	0.042		25.0	0.00	4.6929	0.0307	0.031	0.740	0.00	35.00	3.05
RI	Washington	44009	AIR2903	2	2	30500298	0.2700	0.0000	0.001		25.0	0.00	0.1997	0.0005	0.001	0.740	0.00	35.00	0.13
VA	Fairfax	51059	00344	20	1	30500205	7.7500	0.0000	0.030	35.0	25.2	0.00	8.9900	0.0000	0.035		0.00	35.00	5.84
VA	Loudoun	51107	00056	1	1	30500205	7.8100	0.0000	0.034	40.0	25.2	0.00	7.6900	0.0000	0.034		0.00	35.00	5.00
VA	Loudoun	51107	00056	20	1	30500208	0.1900	0.0000	0.001	32.0	25.0	0.00	0.1900	0.0000	0.001		0.00	35.00	0.12
VA	Loudoun	51107	00139	20	1	30500205	7.4900	0.0000	0.038	46.0	25.2	0.00	8.6900	0.0000	0.044		0.00	35.00	5.65
VA	Loudoun	51107	00139	20	2	39000589	1.7600	0.0000	0.009	46.0	25.0	0.00	1.8800	0.0000	0.010		0.00	35.00	1.22
VA	Prince William	51153	00012	1	1	30500201	4.2600	0.0000	0.013	28.0	26.4	0.00	4.2000	0.0000	0.013		0.00	35.00	2.73
VA	Prince William	51153	00012	1	2	30500206	16.1000	0.0000	0.050	28.0	27.0	0.00	18.9800	0.0000	0.058		0.00	35.00	12.34
VA	Stafford	51179	00036	1	2	30500207	7.7700	0.0000	0.026	30.0	25.0	0.00	6.3600	0.0000	0.021		0.00	35.00	4.13
VA	Alexandria	51510	00001	20	1	30500205	15.3600	0.0000	0.061	36.0	25.2	0.00	17.8200	0.0000	0.070		0.00	35.00	11.58
VA	Alexandria	51510	00001	20	2	30500210	0.7500	0.0000	0.003	36.0	25.0	0.00	2.2726	0.0000	0.009		0.00	35.00	1.48
VA	Alexandria	51510	00001	21	1	30500205	2.5100	0.0000	0.004	13.0	25.2	0.00	2.9100	0.0000	0.004		0.00	35.00	1.89
VA	Alexandria	51510	00001	21	2	30500207	0.1200	0.0000	0.000	13.0	25.0	0.00	0.0982	0.0000	0.000		0.00	35.00	0.06
						MANEVU	1,128.60		5.68				1,550.14		8.27				1,007.59
						NOVA	71.87		0.27				80.08		0.30				52.05
						OTR	1,200.47		5.95				1,630.23		8.57				1,059.65

aseG Inventories

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ory (Column F)

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or/100)

/ Emissions **2009 BOTW Reductions**

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.000	0.00	0.000	FIRESTONE BUILDING PRODUCTS CO
0.018	1.53	0.010	TILCON DELAWARE - BAY ROAD
0.004	0.31	0.002	TILCON DELAWARE - BAY ROAD
0.000	0.00	0.000	TILCON DELAWARE - BAY ROAD
0.026	2.68	0.014	TILCON DELAWARE - BAY ROAD
0.000	0.00	0.000	TILCON DELAWARE - BAY ROAD
0.023	2.54	0.013	TILCON DELAWARE - HORSEPOND ROAD
0.002	0.20	0.001	TILCON DELAWARE - HORSEPOND ROAD
0.000	0.00	0.000	TILCON DELAWARE - HORSEPOND ROAD
0.000	0.00	0.000	TILCON DELAWARE - HORSEPOND ROAD
0.000	0.00	0.000	TILCON DELAWARE - HORSEPOND ROAD
0.000	0.00	0.000	TILCON DELAWARE - HORSEPOND ROAD
0.008	0.72	0.004	EDGEMOOR MATERIALS INC
0.000	0.00	0.000	EDGEMOOR MATERIALS INC
0.000	0.00	0.000	EDGEMOOR MATERIALS INC
0.012	1.20	0.006	TILCON DELAWARE - TERMINAL AVENUE
0.003	0.32	0.002	TILCON DELAWARE - TERMINAL AVENUE
0.009	0.66	0.005	CONTRACTORS MATERIALS LLC HOT MIX PLT
0.000	0.01	0.000	CHRISTIANA MATERIALS
0.007	0.67	0.004	CHRISTIANA MATERIALS
0.012	0.41	0.006	CHRISTIANA MATERIALS
0.011	1.13	0.006	DIAMOND MATERIALS LLC
0.000	0.00	0.000	DIAMOND MATERIALS LLC
0.001	0.21	0.001	DIAMOND MATERIALS LLC
0.000	0.00	0.000	DIAMOND MATERIALS LLC
0.000	0.00	0.000	DIAMOND MATERIALS LLC
0.000	0.00	0.000	DIAMOND MATERIALS LLC
0.001	0.17	0.001	PURE GREEN INDUSTRIES INC
0.000	0.00	0.000	PURE GREEN INDUSTRIES INC

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.024	0.09	0.013	PURE GREEN INDUSTRIES INC
0.000	0.00	0.000	PURE GREEN INDUSTRIES INC
0.010	1.14	0.005	TILCON DELAWARE GUMBORO
0.025	2.41	0.013	EDWARD J. KAYE CONSTRUCTION
0.195	0.14	0.105	EDWARD J. KAYE CONSTRUCTION
0.017	2.06	0.009	TILCON DELAWARE - GEORGETOWN
0.036	4.04	0.020	PIKE INDUSTRIES INC - LEWISTON
0.047	5.27	0.025	PIKE INDUSTRIES INC - POLAND
0.017	1.56	0.009	PIKE INDUSTRIES INC - POLAND
0.021	1.94	0.011	PIKE INDUSTRIES INC - POLAND
0.029	2.67	0.016	PIKE INDUSTRIES INC - POLAND
0.003	0.16	0.001	LANE CONSTRUCTION CORP (22)
0.003	0.16	0.002	LANE CONSTRUCTION CORP (22)
0.001	0.07	0.001	LANE CONSTRUCTION CORP (22)
0.000	0.00	0.000	LANE CONSTRUCTION CORP (22)
0.035	2.73	0.019	LANE CONSTRUCTION CORP (23)
0.000	0.00	0.000	LANE CONSTRUCTION CORP (23)
0.002	0.13	0.001	LANE CONSTRUCTION CORP (23)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - PI (43)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - PI (43)
0.002	0.45	0.001	TROMBLEY INDUSTRIES INC
0.063	6.98	0.034	PIKE INDUSTRIES INC - PORTLAND
0.004	0.49	0.002	COMMERCIAL PAVING CO INC
0.001	0.10	0.000	COMMERCIAL PAVING CO INC
0.068	8.13	0.037	COMMERCIAL PAVING CO INC
0.005	1.03	0.003	BRUCE A MANZER INC
0.023	4.44	0.012	BRUCE A MANZER INC
0.051	4.80	0.027	PIKE INDUSTRIES INC - FARMINGTON
0.001	0.09	0.001	PIKE INDUSTRIES INC - FARMINGTON
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HANCOCK (42)
0.000	0.02	0.000	LANE CONSTRUCTION CORP - HANCOCK (42)
0.060	5.05	0.032	PIKE INDUSTRIES INC - AUGUSTA 712
0.048	5.21	0.026	PIKE INDUSTRIES INC - AUGUSTA 712
0.032	2.63	0.017	PIKE INDUSTRIES INC - N WATERFORD
0.009	0.75	0.005	LANE CONSTRUCTION CORP - HERMON (32)
0.016	1.05	0.009	LANE CONSTRUCTION CORP - HERMON (32)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (32)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (32)
0.017	1.85	0.009	LANE CONST CORP DBA SUNRISE MATLS (35)
0.000	0.00	0.000	LANE CONST CORP DBA SUNRISE MATLS (35)
0.001	0.04	0.000	LANE CONST CORP DBA SUNRISE MATLS (35)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (12&26)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (12&26)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (12&26)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (12&26)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (12&26)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (12&26)
0.026	2.64	0.014	LANE CONSTRUCTION CORP - HERMON (38)
0.022	1.67	0.012	LANE CONSTRUCTION CORP - HERMON (38)
0.006	0.37	0.003	LANE CONSTRUCTION CORP - HERMON (38)
0.007	0.63	0.004	LANE CONST CORP DBA SUNRISE MATLS (47)
0.003	0.34	0.001	LANE CONST CORP DBA SUNRISE MATLS (47)

Emissions **2009 BOTW Reductions**

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.032	2.97	0.017	LANE CONST CORP DBA SUNRISE MATLS (47)
0.000	0.00	0.000	LANE CONST CORP DBA SUNRISE MATLS (47)
0.018	1.24	0.010	LANE CONSTRUCTION CORP - HERMON (37)
0.000	0.01	0.000	LANE CONSTRUCTION CORP - HERMON (37)
0.007	0.97	0.004	LANE CONSTRUCTION CORP - HERMON (37)
0.002	0.10	0.001	LANE CONSTRUCTION CORP - HERMON (37)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (41)
0.011	0.78	0.006	LANE CONSTRUCTION CORP - HERMON (41)
0.022	0.99	0.012	LANE CONSTRUCTION CORP - HERMON (41)
0.047	3.68	0.025	BARRETT PAVING MATERIALS INC
0.038	2.48	0.021	BARRETT PAVING MATERIALS INC
0.000	0.03	0.000	BARRETT PAVING MATERIALS INC
0.008	0.45	0.004	BARRETT PAVING MATERIALS INC
0.015	0.70	0.008	BARRETT PAVING MATERIALS INC
0.000	0.01	0.000	BARRETT PAVING MATERIALS INC
0.026	2.14	0.014	BARRETT PAVING MATERIALS INC
0.002	0.20	0.001	BARRETT PAVING MATERIALS INC
0.007	0.54	0.004	BARRETT PAVING MATERIALS INC
0.018	0.97	0.010	HARRY C CROOKER & SONS INC - TOPSHAM
0.000	0.02	0.000	HARRY C CROOKER & SONS INC - TOPSHAM
0.000	0.03	0.000	HARRY C CROOKER & SONS INC - TOPSHAM
0.057	6.20	0.031	PIKE INDUSTRIES INC - FAIRFIELD
0.002	0.28	0.001	PIKE INDUSTRIES INC - FAIRFIELD
0.038	3.54	0.020	PIKE INDUSTRIES INC - ANSON
0.003	0.65	0.002	MATTINGLY PRODUCTS CO INC
0.006	0.91	0.003	MATTINGLY PRODUCTS CO INC
0.000	0.00	0.000	LANE CONSTRUCTION CORP - PROSPECT (16)
0.006	0.50	0.003	LANE CONSTRUCTION CORP - PROSPECT (16)
0.003	0.23	0.002	LANE CONSTRUCTION CORP - PROSPECT (16)
0.030	3.77	0.016	LANE CONSTRUCTION CORP - PROSPECT (28)
0.003	0.26	0.002	LANE CONSTRUCTION CORP - PROSPECT (28)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - PROSPECT (28)
0.004	0.28	0.002	LANE CONST CORP - CALAIS (24)
0.005	0.39	0.003	LANE CONST CORP - CALAIS (24)
0.000	0.02	0.000	LANE CONST CORP - CALAIS (24)
0.001	0.03	0.000	LANE CONST CORP - CALAIS (24)
0.000	0.00	0.000	LANE CONST CORP - CALAIS (24)
0.040	6.46	0.021	PIKE INDUSTRIES INC - WELLS
0.042	4.37	0.023	F R CARROLL INC
0.000	0.06	0.000	F R CARROLL INC
0.054	5.11	0.029	F R CARROLL INC
0.039	4.64	0.021	DAYTON SAND AND GRAVEL CO INC
0.019	2.20	0.010	DAYTON SAND AND GRAVEL CO INC
0.005	0.69	0.003	DAYTON SAND AND GRAVEL CO INC
0.000	0.06	0.000	DAYTON SAND AND GRAVEL CO INC
0.006	0.55	0.003	PIKE INDUSTRIES INC -SOUTH BERWICK (IBM)
0.000	0.00	0.000	RELIABLE CONTRACTING
0.004	0.58	0.002	RELIABLE CONTRACTING
0.000	0.00	0.000	RELIABLE CONTRACTING
0.015	2.25	0.008	RELIABLE CONTRACTING
0.000	0.00	0.000	KLINE, RICHARD F., INCORPORATED
0.021	2.36	0.011	KLINE, RICHARD F., INCORPORATED

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.000	0.00	0.000	KLINE, RICHARD F., INCORPORATED
0.000	0.00	0.000	KLINE, RICHARD F., INCORPORATED
0.000	0.00	0.000	TAMKO ROOFING PRODUCTS
0.003	0.63	0.002	TAMKO ROOFING PRODUCTS
0.000	0.00	0.000	TAMKO ROOFING PRODUCTS
0.005	0.93	0.003	TAMKO ROOFING PRODUCTS
0.000	0.00	0.000	TAMKO ROOFING PRODUCTS
0.003	0.49	0.001	TAMKO ROOFING PRODUCTS
0.000	0.00	0.000	TAMKO ROOFING PRODUCTS
0.006	1.28	0.003	TAMKO ROOFING PRODUCTS
0.000	0.00	0.000	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.000	0.00	0.000	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.000	0.00	0.000	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.000	0.00	0.000	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.000	0.00	0.000	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.008	1.39	0.004	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.000	0.00	0.000	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.015	2.60	0.008	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.000	0.00	0.000	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.011	1.98	0.006	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.000	0.00	0.000	DAY, F.O. BITUMINOUS - PINEY MTG
0.028	3.61	0.015	DAY, F.O. BITUMINOUS - PINEY MTG
0.000	0.00	0.000	GAF BUILDING PRODUCTS
0.005	0.95	0.003	GAF BUILDING PRODUCTS
0.000	0.00	0.000	GAF BUILDING PRODUCTS
0.000	0.00	0.000	GAF BUILDING PRODUCTS
0.000	0.00	0.000	GAF BUILDING PRODUCTS
0.000	0.00	0.000	GAF BUILDING PRODUCTS
0.000	0.00	0.000	GAF BUILDING PRODUCTS
0.003	0.49	0.001	GAF BUILDING PRODUCTS
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	LAWRENCE LYNCH CORP
0.000	0.00	0.000	LAWRENCE LYNCH CORP
0.005	0.75	0.002	LAWRENCE LYNCH CORP
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.004	0.35	0.002	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.001	0.05	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.011	1.05	0.006	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CORPORATION

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.007	0.70	0.004	LANE CONSTRUCTION CORPORATION
0.000	0.00	0.000	LANE CONSTRUCTION CORPORATION
0.000	0.00	0.000	LANE CONSTRUCTION CORPORATION
0.000	0.00	0.000	LANE CONSTRUCTION CORPORATION
0.000	0.00	0.000	PJ KEATING CO
0.000	0.00	0.000	PJ KEATING CO
0.043	5.25	0.023	PJ KEATING CO
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.061	5.97	0.033	AGGREGATE INDUSTRIES
0.000	0.00	0.000	BORDEN & REMINGTON
0.000	0.00	0.000	WHITE BROS LYNCH
0.000	0.02	0.000	WHITE BROS LYNCH
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	BROX INDUSTRIES INC
0.000	0.00	0.000	BROX INDUSTRIES INC
0.002	0.35	0.001	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.007	1.40	0.004	AGGREGATE INDUSTRIES
0.061	11.95	0.033	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.004	0.70	0.002	AGGREGATE INDUSTRIES NORTHEAST REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST REGION
0.018	2.56	0.010	AGGREGATE INDUSTRIES NORTHEAST REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST REGION
0.000	0.00	0.000	BROX INDUSTRIES INC
0.003	0.37	0.001	BROX INDUSTRIES INC
0.000	0.00	0.000	BROX INDUSTRIES INC
0.000	0.00	0.000	LANE CONSTRUCTION COMPANY
0.008	0.70	0.004	LANE CONSTRUCTION COMPANY
0.001	0.09	0.001	LANE CONSTRUCTION COMPANY
0.000	0.00	0.000	LANE CONSTRUCTION COMPANY
0.000	0.00	0.000	LANE CONSTRUCTION COMPANY
0.000	0.00	0.000	LANE CONSTRUCTION COMPANY
0.000	0.00	0.000	TREW CORPORATION
0.007	0.70	0.004	TREW CORPORATION
0.000	0.00	0.000	TREW CORPORATION
0.025	2.45	0.013	TREW CORPORATION
0.000	0.01	0.000	TREW CORPORATION
0.000	0.00	0.000	TREW CORPORATION
0.000	0.00	0.000	TREW CORPORATION
0.000	0.00	0.000	TREW CORPORATION
0.000	0.00	0.000	TREW CORPORATION
0.000	0.00	0.000	TREW CORPORATION
0.000	0.00	0.000	WARNER BROTHERS INC

' Emissions	2009 BOTW Reductions		
Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.018	1.75	0.010	WARNER BROTHERS INC
0.000	0.00	0.000	WARNER BROTHERS INC
0.000	0.00	0.000	WARNER BROTHERS INC
0.000	0.00	0.000	WARNER BROTHERS INC
0.004	0.42	0.002	PALMER PAVING CORP
0.000	0.00	0.000	PALMER PAVING CORP
0.000	0.00	0.000	PALMER PAVING CORP
0.013	1.27	0.007	PALMER PAVING CORP
0.000	0.00	0.000	PALMER PAVING CORP
0.000	0.00	0.000	PALMER PAVING CORP
0.000	0.00	0.000	BERKSHIRE ASPHALT CO
0.004	0.35	0.002	BERKSHIRE ASPHALT CO
0.000	0.00	0.000	BERKSHIRE ASPHALT CO
0.000	0.00	0.000	BERKSHIRE ASPHALT CO
0.000	0.00	0.000	BERKSHIRE ASPHALT CO
0.021	2.10	0.012	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.001	0.10	0.001	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.005	1.27	0.003	TED ONDRICK COMPANY LLC
0.000	0.00	0.000	TED ONDRICK COMPANY LLC
0.000	0.00	0.000	TED ONDRICK COMPANY LLC
0.000	0.00	0.000	TED ONDRICK COMPANY LLC
0.000	0.00	0.000	TED ONDRICK COMPANY LLC
0.000	0.00	0.000	LANE CONSTRUCTION CORPORATION
0.007	0.70	0.004	LANE CONSTRUCTION CORPORATION
0.000	0.00	0.000	LANE CONSTRUCTION CORPORATION
0.000	0.00	0.000	LANE CONSTRUCTION CORPORATION
0.000	0.00	0.000	LANE CONSTRUCTION CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.005	0.70	0.003	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.02	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	BENEVENTO ASPHALT CORP

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.013	1.87	0.007	BENEVENTO ASPHALT CORP
0.000	0.00	0.000	BENEVENTO ASPHALT CORP
0.000	0.00	0.000	BENEVENTO ASPHALT CORP
0.000	0.00	0.000	BENEVENTO ASPHALT CORP
0.000	0.00	0.000	COLEMAN MANUFACTURING
0.002	0.35	0.001	TRIRAM CORPORATION
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST REGION
0.034	5.12	0.019	AGGREGATE INDUSTRIES NORTHEAST REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.026	2.56	0.014	AGGREGATE INDUSTRIES
0.004	0.35	0.002	AGGREGATE INDUSTRIES
0.000	0.00	0.000	BROX INDUSTRIES INC
0.003	0.37	0.001	BROX INDUSTRIES INC
0.000	0.00	0.000	BROX INDUSTRIES INC
0.000	0.00	0.000	BROX INDUSTRIES INC
0.000	0.00	0.000	ROWE CONTRACTING COMPANY
0.000	0.00	0.000	ROWE CONTRACTING COMPANY
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.008	1.12	0.004	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.01	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.101	14.51	0.054	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.07	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	PJ KEATING COMPANY
0.000	0.00	0.000	BROX INDUSTRIES INC
0.000	0.00	0.000	BROX INDUSTRIES INC
0.008	1.12	0.004	BROX INDUSTRIES INC
0.000	0.00	0.000	BROX INDUSTRIES INC
0.000	0.00	0.000	BROX INDUSTRIES INC
0.012	1.50	0.006	BROX INDUSTRIES INC
0.000	0.00	0.000	BROX INDUSTRIES INC
0.000	0.06	0.000	BROX INDUSTRIES INC
0.000	0.00	0.000	NANTUCKET ASPHALT IN
0.000	0.00	0.000	NANTUCKET ASPHALT IN
0.000	0.00	0.000	WJ GLOWACKI & SONS
0.000	0.00	0.000	WJ GLOWACKI & SONS
0.000	0.00	0.000	WJ GLOWACKI & SONS
0.000	0.00	0.000	ISLAND ROAD MATERIALS INC
0.000	0.00	0.000	ISLAND ROAD MATERIALS INC
0.001	0.10	0.000	ISLAND ROAD MATERIALS INC
0.000	0.00	0.000	BEVILACQUA PAVING COMPANY
0.000	0.00	0.000	BEVILACQUA PAVING COMPANY
0.000	0.00	0.000	BEVILACQUA PAVING COMPANY
0.000	0.00	0.000	NORFOLK ASPHALT COMPANY

Emissions	2009 BOTW Reductions		
Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.000	0.00	0.000	GAF MATERIALS CORP
0.000	0.00	0.000	GAF MATERIALS CORP
0.000	0.00	0.000	GAF MATERIALS CORP
0.000	0.00	0.000	GAF MATERIALS CORP
0.000	0.00	0.000	GAF MATERIALS CORP
0.000	0.00	0.000	GAF MATERIALS CORP
0.000	0.00	0.000	BIRD INCORPORATED ROOFING
0.000	0.00	0.000	BIRD INCORPORATED ROOFING
0.011	1.40	0.006	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.002	0.35	0.001	TL EDWARDS INC
0.005	0.75	0.003	TL EDWARDS INC
0.000	0.00	0.000	TL EDWARDS INC
0.000	0.00	0.000	TL EDWARDS INC
0.002	0.35	0.001	TL EDWARDS INC
0.005	0.75	0.003	TL EDWARDS INC
0.000	0.00	0.000	TL EDWARDS INC
0.000	0.00	0.000	TL EDWARDS INC
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.004	0.35	0.002	AGGREGATE INDUSTRIES
0.035	3.41	0.019	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.007	0.70	0.004	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.036	3.50	0.019	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES N.E. REGION
0.002	0.35	0.001	AGGREGATE INDUSTRIES N.E. REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES N.E. REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES N.E. REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES N.E. REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES N.E. REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES N.E. REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.039	7.68	0.021	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.011	1.05	0.006	AGGREGATE INDUSTRIES
0.192	18.77	0.103	AGGREGATE INDUSTRIES
0.000	0.00	0.000	ROCHESTER BITUMINOUS
0.010	1.40	0.005	ROCHESTER BITUMINOUS
0.000	0.00	0.000	ROCHESTER BITUMINOUS
0.000	0.00	0.000	ROCHESTER BITUMINOUS
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.004	0.35	0.002	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	PA LANDERS INC
0.037	5.12	0.020	PA LANDERS INC
0.000	0.00	0.000	PA LANDERS INC
0.000	0.00	0.000	PA LANDERS INC

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.000	0.00	0.000	PA LANDERS INC
0.008	1.50	0.004	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	BOND CONSTRUCTION CO
0.003	0.35	0.002	BOND CONSTRUCTION CO
0.000	0.00	0.000	GRANGER LYNCH CORP
0.006	0.70	0.003	GRANGER LYNCH CORP
0.000	0.00	0.000	GRANGER LYNCH CORP
0.000	0.00	0.000	GRANGER LYNCH CORP
0.004	0.70	0.002	GRANGER LYNCH CORP
0.002	0.37	0.001	GRANGER LYNCH CORP
0.000	0.00	0.000	GRANGER LYNCH CORP
0.000	0.00	0.000	GRANGER LYNCH CORP
0.000	0.00	0.000	GRANGER LYNCH CORP
0.000	0.00	0.000	GRANGER LYNCH CORP
0.001	0.09	0.000	GRANGER LYNCH CORP
0.000	0.00	0.000	AGGREGATE INDUSTRIES-NORTHEAST REGION
0.010	1.71	0.006	AGGREGATE INDUSTRIES-NORTHEAST REGION
0.000	0.00	0.000	OXFORD ASPHALT & PAVING
0.000	0.00	0.000	AMERICAN STONE MIX INCORPORATED
0.000	0.00	0.000	AMERICAN STONE MIX INCORPORATED
0.000	0.00	0.000	JOHN S LANE & SONS - ASPHALT
0.000	0.00	0.000	HOLDEN TRAP ROCK CO
0.009	1.05	0.005	HOLDEN TRAP ROCK CO
0.000	0.00	0.000	HOLDEN TRAP ROCK CO
0.007	0.85	0.004	HOLDEN TRAP ROCK CO
0.000	0.04	0.000	HOLDEN TRAP ROCK CO
0.001	0.08	0.000	HOLDEN TRAP ROCK CO
0.000	0.00	0.000	PJ KEATING COMPANY
0.000	0.00	0.000	PJ KEATING COMPANY
0.000	0.00	0.000	PJ KEATING COMPANY
0.125	15.36	0.068	PJ KEATING COMPANY
0.000	0.00	0.000	PJ KEATING COMPANY
0.000	0.00	0.000	PJ KEATING COMPANY
0.000	0.00	0.000	PJ KEATING COMPANY
0.026	2.12	0.014	PANDOLF PERKINS COMP
0.000	0.00	0.000	PANDOLF PERKINS COMP
0.005	0.74	0.003	A.E. Stone, Inc.
0.019	0.67	0.010	A.E. Stone, Inc.
0.001	0.10	0.000	A.E. Stone, Inc.
0.001	0.25	0.001	A.E. Stone, Inc.
0.015	1.25	0.008	A.E. Stone, Inc.
0.002	0.25	0.001	A.E. Stone, Inc.
0.000	0.05	0.000	BARRETT ASPHALT CO., INC.
0.006	0.25	0.003	BARRETT ASPHALT CO., INC.

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.003	0.08	0.001	BARRETT ASPHALT CO., INC.
0.058	6.26	0.031	BARRETT ASPHALT CO., INC.
0.001	0.09	0.000	BARRETT ASPHALT CO., INC.
0.026	0.28	0.014	BARRETT ASPHALT CO., INC.
0.002	0.19	0.001	National Paving Co., Inc.
0.001	0.12	0.001	National Paving Co., Inc.
0.035	0.85	0.019	National Paving Co., Inc.
0.000	0.05	0.000	National Paving Co., Inc.
0.103	7.78	0.055	National Paving Co., Inc.
0.001	0.11	0.000	KOCH MATERIALS COMPANY
0.001	0.15	0.000	KOCH MATERIALS COMPANY
0.004	0.59	0.002	KOCH MATERIALS COMPANY
0.000	0.04	0.000	KOCH MATERIALS COMPANY
0.004	0.59	0.002	KOCH MATERIALS COMPANY
0.016	0.86	0.009	Gerald A. Barrett, Inc. - Woodbine
0.016	0.49	0.009	Gerald A. Barrett, Inc. - Woodbine
0.000	0.04	0.000	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.000	0.10	0.000	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.027	2.41	0.015	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.075	6.69	0.041	R. E. Pierson Construction Company
0.001	0.08	0.000	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.028	4.08	0.015	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.000	0.04	0.000	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.000	0.02	0.000	Owens Corning Kearny Plant
0.000	0.19	0.000	Owens Corning Kearny Plant
0.000	0.02	0.000	Owens Corning Kearny Plant
0.000	0.02	0.000	Owens Corning Kearny Plant
0.000	0.02	0.000	Owens Corning Kearny Plant
0.000	0.19	0.000	Owens Corning Kearny Plant
0.000	0.02	0.000	Owens Corning Kearny Plant
0.000	0.02	0.000	Owens Corning Kearny Plant
0.000	0.02	0.000	Owens Corning Kearny Plant
0.001	0.16	0.000	Owens Corning Kearny Plant
0.001	0.16	0.000	Owens Corning Kearny Plant
0.001	0.16	0.000	Owens Corning Kearny Plant
0.001	0.14	0.000	Owens Corning Kearny Plant
0.001	0.16	0.000	Owens Corning Kearny Plant
0.001	0.14	0.000	Owens Corning Kearny Plant
0.001	0.14	0.000	Owens Corning Kearny Plant
0.001	0.14	0.000	Owens Corning Kearny Plant
0.001	0.23	0.001	Owens Corning Kearny Plant
0.033	3.18	0.018	TRAP ROCK INDUSTRIES INC
0.000	0.02	0.000	STA-SEAL INDUSTRIES INC- EDISON
0.019	1.76	0.010	STA-SEAL INDUSTRIES INC- EDISON
0.000	0.04	0.000	ZIEGLER CHEMICAL & MINERAL CORP
0.001	0.13	0.001	ZIEGLER CHEMICAL & MINERAL CORP
0.000	0.03	0.000	ZIEGLER CHEMICAL & MINERAL CORP
0.000	0.06	0.000	ZIEGLER CHEMICAL & MINERAL CORP
0.000	0.08	0.000	ZIEGLER CHEMICAL & MINERAL CORP
0.000	0.08	0.000	ZIEGLER CHEMICAL & MINERAL CORP
0.002	0.50	0.001	ZIEGLER CHEMICAL & MINERAL CORP
0.106	12.18	0.057	Stavola Asphalt - Howell

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.000	0.04	0.000	Rosano Asphalt LLC
0.015	0.94	0.008	Rosano Asphalt LLC
0.023	2.25	0.012	Rosano Asphalt LLC
0.001	0.06	0.000	STAVOLA ASPHALT CO INC
0.001	0.06	0.000	STAVOLA ASPHALT CO INC
0.032	3.69	0.017	STAVOLA ASPHALT CO INC
0.031	3.54	0.017	STAVOLA ASPHALT CO INC
0.000	0.01	0.000	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.000	0.05	0.000	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.028	1.88	0.015	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.012	1.81	0.007	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.021	2.20	0.011	Tilcon NY-Riverdale Quarry
0.039	2.30	0.021	Tilcon NY-Riverdale Quarry
0.039	2.27	0.021	Tilcon NY-Riverdale Quarry
0.000	0.01	0.000	Walter R. Earle Corp. - facility
0.000	0.03	0.000	Walter R. Earle Corp. - facility
0.000	0.03	0.000	Walter R. Earle Corp. - facility
0.052	4.87	0.028	Walter R. Earle Corp. - facility
0.004	0.14	0.002	Walter R. Earle Corp. - facility
0.028	1.19	0.015	Walter R. Earle Corp. - facility
0.010	1.16	0.005	Stavola Asphalt - Brick
0.000	0.02	0.000	Jackson Asphalt LP
0.029	2.41	0.016	Jackson Asphalt LP
0.023	2.36	0.012	Stone Industries Inc. - Asphalt Plants
0.072	3.93	0.039	Stone Industries Inc. - Asphalt Plants
0.072	2.86	0.039	Stone Industries Inc. - Asphalt Plants
0.000	0.04	0.000	Tilcon-Totowa HMA Plants
0.013	1.01	0.007	Tilcon-Totowa HMA Plants
0.008	0.33	0.004	Tilcon-Totowa HMA Plants
0.035	0.20	0.019	Tilcon-Totowa HMA Plants
0.035	2.65	0.019	Tilcon-Totowa HMA Plants
0.001	0.04	0.000	Tilcon-Totowa HMA Plants
0.219	8.77	0.118	Stavola Asphalt LLC - Bound Brook HMA Plants
0.137	8.93	0.074	Stavola Asphalt LLC - Bound Brook HMA Plants
0.006	0.62	0.003	US INTEC INC
0.002	0.24	0.001	Minnesota Mining & Manufacturing, IMP Div.
0.009	0.04	0.005	Minnesota Mining & Manufacturing, IMP Div.
0.029	3.37	0.015	Minnesota Mining & Manufacturing, IMP Div.
0.005	0.03	0.003	Minnesota Mining & Manufacturing, IMP Div.
0.005	0.75	0.003	Minnesota Mining & Manufacturing, IMP Div.
0.015	1.43	0.008	Minnesota Mining & Manufacturing, IMP Div.
0.016	1.53	0.008	Minnesota Mining & Manufacturing, IMP Div.
0.001	0.12	0.001	Minnesota Mining & Manufacturing, IMP Div.
0.000	0.00	0.000	Minnesota Mining & Manufacturing, IMP Div.
0.024	2.28	0.013	Weldon Watchung Title V
0.024	0.26	0.013	Weldon Watchung Title V
0.063	7.61	0.034	Weldon Watchung Title V
0.018	2.23	0.010	Weldon Watchung Title V
0.025	2.80	0.013	WELDON QUARRY CO., LLC & WELDON ASPHALT CO.
0.009	1.79	0.005	GRACE ASPHALT DIV OF GRACE INDUSTRIES
0.015	3.00	0.008	VANBRO CORPORATION
0.001	0.13	0.000	CANAL ASPHALT INC

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.008	1.47	0.004	CANAL ASPHALT INC
0.003	0.36	0.001	THE LANE CONSTRUCTION BRIDGEVILLE
0.001	8.08	0.000	THE LANE CONSTRUCTION BRIDGEVILLE
0.000	1.02	0.000	THE LANE CONSTRUCTION BRIDGEVILLE
0.003	0.26	0.001	CLAIRTON SLAG, INC.
0.001	0.06	0.000	CLAIRTON SLAG, INC.
0.054	5.20	0.029	CLAIRTON SLAG, INC.
0.019	1.76	0.010	ALLEGHENY ASPHALT MFG. INC.
0.008	1.14	0.004	ALLEGHENY ASPHALT MFG. INC.
0.000	0.01	0.000	ALLEGHENY ASPHALT MFG. INC.
0.003	0.23	0.002	MARSH ASPHALT, INC. - DRAVOSBURG PLANT
0.000	0.00	0.000	MARSH ASPHALT, INC. - DRAVOSBURG PLANT
0.009	0.61	0.005	MARSH ASPHALT, INC. - DRAVOSBURG PLANT
0.007	0.47	0.004	MARSH ASPHALT, INC. - DRAVOSBURG PLANT
0.000	0.41	0.000	IA CONSTRUCTION GIBSONIA
0.001	0.06	0.000	IA CONSTRUCTION GIBSONIA
0.001	0.04	0.000	IA CONSTRUCTION GIBSONIA
0.007	0.37	0.004	IA CONSTRUCTION GIBSONIA
0.006	0.43	0.003	THE LANE MCKEES ROCK ASPHALT PLANT
0.001	9.72	0.001	THE LANE MCKEES ROCK ASPHALT PLANT
0.000	0.00	0.000	THE LANE MCKEES ROCK ASPHALT PLANT
0.012	1.56	0.006	TRUMBULL CORPORATION
0.000	0.01	0.000	TRUMBULL CORPORATION
0.012	1.73	0.006	TRUMBULL CORPORATION
0.000	0.00	0.000	UNITED REFINING CO.SPRINGDALE ASPHALT TE
0.000	0.00	0.000	UNITED REFINING CO.SPRINGDALE ASPHALT TE
0.002	0.27	0.001	UNITED REFINING CO.SPRINGDALE ASPHALT TE
0.000	0.00	0.000	UNITED REFINING CO.SPRINGDALE ASPHALT TE
0.020	2.73	0.011	EJB PAVING & MATERIALS/ONTELAUNEE
0.008	0.83	0.005	EJB PAVING & MATERIALS/ONTELAUNEE
0.004	0.78	0.002	EJB PAVING & MATERIALS/ONTELAUNEE
0.004	0.75	0.002	EJB PAVING & MATERIALS/ONTELAUNEE
0.007	0.85	0.004	EJB PAVING & MATERIALS/ONTELAUNEE
0.043	6.61	0.023	H & K MATERIALS INC/CHALFONT
0.008	2.16	0.005	BETTER MATERIALS CORP/PENNS PARK
0.001	0.32	0.001	BETTER MATERIALS CORP/PENNS PARK
0.010	1.67	0.005	MILLER & SON PAVING /RUSHLAND
0.007	0.78	0.004	BETTER MATERIALS CORP/OTTSVILLE QUARRY ASPHALT PLTS
0.002	0.24	0.001	EUREKA STONE QUARRY /RUSH VALLEY 1
0.003	0.49	0.002	EUREKA STONE QUARRY /RUSH VALLEY 1
0.003	0.49	0.002	EUREKA STONE QUARRY /RUSH VALLEY 1
0.004	0.64	0.002	EUREKA STONE QUARRY /WARRINGTON ASPHALT & QUARRY PL
0.004	0.64	0.002	EUREKA STONE QUARRY /WARRINGTON ASPHALT & QUARRY PL
0.007	0.73	0.004	GLASGOW INC/CATANACH QUARRY
0.004	0.75	0.002	HIGHWAY MATERIALS INC/MALVERN PLANT 13
0.010	1.38	0.005	HIGHWAY MATERIALS INC/DOWNINGTOWN
0.016	2.36	0.009	HANSON AGGREGATES PA/GLEN MILLS HMA MIDDLETOWN PLT
0.002	0.21	0.001	GLASGOW INC/FREEBORN ASPHALT PLT
0.000	0.00	0.000	BLDG MATERIALS MFG CORP/ERIE
0.001	0.13	0.001	EUREKA STONE QUARRY /DALEVILLE PLT
0.002	0.29	0.001	DUNBAR ASPHALT PROD INC/MAHONING TWP
0.000	0.03	0.000	DUNBAR ASPHALT PROD INC/MAHONING TWP

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.001	0.08	0.000	DUNBAR ASPHALT PROD INC/WHEATLAND
0.001	0.08	0.000	DUNBAR ASPHALT PROD INC/WHEATLAND
0.002	0.22	0.001	DUNBAR ASPHALT PROD INC/WHEATLAND
0.002	0.22	0.001	DUNBAR ASPHALT PROD INC/WHEATLAND
0.009	0.96	0.005	HAINES & KIBBLEHOUSE/LOCUST RIDGE
0.020	3.75	0.011	READING MATERIALS/SANATOGA QUARRY
0.003	0.48	0.002	GLASGOW INC/IVY ROCK
0.001	0.08	0.001	GLASGOW INC/IVY ROCK
0.009	1.32	0.005	GLASGOW INC/MCCOY QUARRY ASPHALT PLTS
0.005	0.33	0.002	GLASGOW INC/SPRINGHOUSE ASPHALT PLANT/OLD
0.000	0.05	0.000	GLASGOW INC/SPRINGHOUSE ASPHALT PLANT/OLD
0.000	0.05	0.000	GLASGOW INC/SPRINGHOUSE ASPHALT PLANT/OLD
0.003	0.37	0.002	HIGHWAY MATERIALS INC/PLYMOUTH
0.003	0.38	0.001	HIGHWAY MATERIALS INC/PLYMOUTH
0.022	2.69	0.012	HIGHWAY MATERIALS INC/PERKIOMENVILLE
0.006	0.66	0.003	T.D.P.S. MATERIALS, INC.
0.005	0.66	0.002	T.D.P.S. MATERIALS, INC.
0.039	3.05	0.021	RIVERSIDE MATERIALS, INC.
0.001	0.09	0.001	RIVERSIDE MATERIALS, INC.
0.008	0.51	0.004	AMER ASPHALT PAVING CO/EAST FALLS PLT
0.004	0.84	0.002	CARDI CORPORATION
0.001	0.27	0.001	CLIFFORD ASPHALT
0.003	0.53	0.001	D'AMBRA CONSTRUCTION
0.000	0.02	0.000	D'AMBRA CONSTRUCTION
0.022	2.44	0.012	NARRAGANSETT IMPROVEMENT CO.
0.000	0.08	0.000	NARRAGANSETT IMPROVEMENT CO.
0.008	1.49	0.004	P.J. KEATING CO.
0.000	0.08	0.000	P.J. KEATING CO.
0.002	0.43	0.001	JOHNSTON ASPHALT, LLC
0.000	0.02	0.000	JOHNSTON ASPHALT, LLC
0.001	0.11	0.000	C J FOX COMPANY
0.002	0.39	0.001	J.H. LYNCH & SONS, INC. (CUMBERLAND)
0.008	1.48	0.004	J.H. LYNCH & SONS, INC. (CUMBERLAND)
0.001	0.16	0.000	J.H. LYNCH & SONS, INC. (CUMBERLAND)
0.020	1.64	0.011	J.H. LYNCH & SONS, INC.
0.000	0.07	0.000	J.H. LYNCH & SONS, INC.
0.022	3.15	0.012	SUPERIOR PAVING CORP - CENTREVILLE PLT
0.022	2.69	0.012	SUPERIOR PAVING CORP - LEESBURG PLANT
0.000	0.07	0.000	SUPERIOR PAVING CORP - LEESBURG PLANT
0.029	3.04	0.015	LOUDOUN CO ASPHALT -NEWTON ASPHALT
0.006	0.66	0.003	LOUDOUN CO ASPHALT -NEWTON ASPHALT
0.008	1.47	0.005	APAC VIRGINIA INCORPORATED- MANASSAS PLA
0.038	6.64	0.020	APAC VIRGINIA INCORPORATED- MANASSAS PLA
0.014	2.23	0.007	VIRGINIA PAVING COMPANY STAFFORD PLANT
0.046	6.24	0.025	VIRGINIA PAVING COMPANY ALEXANDRIA PLANT
0.006	0.80	0.003	VIRGINIA PAVING COMPANY ALEXANDRIA PLANT
0.003	1.02	0.001	VIRGINIA PAVING COMPANY ALEXANDRIA PLANT
0.000	0.03	0.000	VIRGINIA PAVING COMPANY ALEXANDRIA PLANT
5.38	542.55	2.89	
0.19	28.03	0.10	
5.57	570.58	3.00	

COLUMN	COLUMN DESCRIPTIONS
A-F	State abbreviation, County Name, FIPS state/county code, Site ID, Emission Unit ID, Process ID
G	SCC-Source Classification Code
H	NOx 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
I	NOx 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
J	NOx 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
K	Summer season percentage from NIF Emission Process (EP) file
L	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
M	Total capture/control efficiency from NIF 2002 CE file
N	Blank

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Kiln Type	2002 Clinker Production	2002 lbs/ton Clinker	OTC Rule lbs/ton Clinker	2009 Percent Reduction	Assume no Growth 2009 Emissions Annual (tpy)	Summer Day (tpd)
ME	Knox	23013	2301300028	001	1	30500706	1727.0000	0.0000	4.745	25.0	35.4	0.00	Dry	603,748	4.37	3.4	21.3	1727.0	4.7
MD	Carroll	24013	013-0012	39	01S39	30500606	2663.0400	0.0000	7.316	25.0	25.4	0.00	Dry				100.0	0.0	0.0
MD	Frederick	24021	021-0013	21	01S21	30500706	824.3055	0.0000	2.265	25.0	35.4	0.00	Wet	155,330	10.61	3.88	63.4	301.3	0.8
MD	Frederick	24021	021-0013	22	01S22	30500706	809.7630	0.0000	2.225	25.0	35.4	0.00	Wet	152,815	10.60	3.88	63.4	296.5	0.8
MD	Washington	24043	043-0008	24	01S24	30500606	1973.8530	0.0000	5.423	25.0	25.4	0.00	Dry	517,357	7.63	3.44	54.9	889.9	2.4
NY	Albany	36001	4012400001	041000	K12FP	30500706	5346.1000	0.0000	20.797		35.4	0.00	Wet	1,727,241	6.19	3.88	37.3	3350.8	13.0
NY	Greene	36039	4192600021	U00K18	00CEP	30500706	3151.6860	0.0000	12.260		35.4	0.00	Wet	622,091	10.13	3.88	61.7	1206.9	4.7
NY	Warren	36113	5520500013	0UKILN	G02FP	30500606	744.5860	0.0000	2.078		25.4	0.00	Dry	563,618	2.64	3.44	0.0	744.6	2.1
PA	Berks	42011	420110039	121	3	30500606	1333.8000	0.0000	3.811	26.0	25.4	0.00	Dry	426317.0	6.3	3.44	45.0	733.3	2.1
PA	Berks	42011	420110039	122	3	30500606	1257.3982	0.0000	3.454	25.0	25.4	0.00	Dry	413074.0	6.1	3.44	43.5	710.5	2.0
PA	Butler	42019	420190024	101	4	30500706	371.4200	0.0000	1.102	27.0	35.4	0.00	Wet	161108.0	4.6	3.88	15.9	312.5	0.9
PA	Butler	42019	420190024	121	4	30500706	322.3100	0.0000	1.098	31.0	35.4	0.00	Wet	139828.0	4.6	3.88	15.8	271.3	0.9
PA	Lawrence	42073	420730024	226	1	30500606	1058.2000	0.0000	2.954		25.4	0.00	Dry	679711.0	3.1	3.44	0.0	1058.2	3.0
PA	Lawrence	42073	420730024	227	1	30500606	0.0000	0.0000	0.000		25.4	0.00	Dry	0.0	0.0	3.44	0.0	0.0	0.0
PA	Lawrence	42073	420730024	228	1	30500606	0.0000	0.0000	0.000		25.4	0.00	Dry	0.0	0.0	3.44	0.0	0.0	0.0
PA	Lawrence	42073	420730026	501	1	30500706	650.0000	0.0000	2.529		35.4	0.00	Wet	259428.0	5.0	3.88	22.6	503.3	2.0
PA	Lawrence	42073	420730026	502	1	30500706	1604.5000	0.0000	6.242		35.4	0.00	Wet	363238.0	8.8	3.88	56.1	704.7	2.7
PA	Lehigh	42077	420770019	101	2	30500606	690.7526	0.0000	2.201	29.0	25.4	0.00	Preheater	410,750	3.36	2.36	29.8	484.7	1.5
PA	Lehigh	42077	420770019	114	2	30500606	409.9636	0.0000	1.306	29.0	25.4	0.00	Preheater	297,552	2.76	2.36	14.4	351.1	1.1
PA	Northampton	42095	420950006	102	1	30500606	1830.7000	0.0000	5.633	28.0	25.4	0.00	Preheater	1,010,862	3.62	2.36	34.8	1192.8	3.7
PA	Northampton	42095	420950006	122	1	30500606	0.0000	0.0000	0.000	27.0	25.4	0.00	Preheater	0	0.00	2.36	0.0	0.0	0.0
PA	Northampton	42095	420950012	101	2	30500706	370.5000	0.0000	0.896	22.0	35.4	0.00	Wet	106,040	6.99	3.88	44.5	205.7	0.5
PA	Northampton	42095	420950012	102	2	30500706	1315.6000	0.0000	3.759	26.0	35.4	0.00	Wet	510,054	5.16	3.88	24.8	989.5	2.8
PA	Northampton	42095	420950045	142	1	30500606	1548.3700	0.0000	4.322		25.4	0.00	Preheater	1262661.0	2.45	2.36	3.8	1489.9	4.2
PA	Northampton	42095	420950127	101	1	30500606	341.1396	0.0000	0.952		25.4	0.00	Dry	108670.0	6.28	3.44	45.2	186.9	0.5
PA	Northampton	42095	420950127	102	1	30500606	342.0489	0.0000	0.955		25.4	0.00	Dry	108927.0	6.28	3.44	45.2	187.4	0.5
PA	Northampton	42095	420950127	103	1	30500606	448.5699	0.0000	1.252		25.4	0.00	Dry	188529.0	4.76	3.44	27.7	324.3	0.9
PA	Northampton	42095	420950127	104	1	30500606	405.0997	0.0000	1.131		25.4	0.00	Dry	170399.0	4.75	3.44	27.7	293.1	0.8
PA	York	42133	421330060	200	4	39000602	419.6600	0.0000	1.153		25.0	0.00	Wet	123963.0	6.77	3.44	49.2	213.2	0.6
						MANEVU	31,960.37		101.86									18,729.30	59.36

							2002 NOx Emissions											2009 Emissions	
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Kiln Type	2002 Clinker Production	2002 lbs/ton Clinker	OTC Rule lbs/ton Clinker	2009 Percent Reduction	Annual (tpy)	Summer Day (tpd)
						NOVA	0.00		0.00									0.00	0.00
						OTR	31,960.37		101.86									18,729.30	59.36

2009 Reductions

Annual (tpy)	Summer Day (tpd)	Plant Name
0.0	0.00	DRAGON PRODUCTS CO INC - THOMASTON
2663.0	7.32	LEHIGH PORTLAND CEMENT Shutdown and relocate to WV in 2008
523.0	1.44	ESSROC CEMENT
513.3	1.41	ESSROC CEMENT
1084.0	2.98	INDEPENDENT CEMENT/ST. LAWERENCE
1995.3	7.76	LAFARGE BUILDING MATERIALS INC
1944.8	7.57	ST LAWRENCE CEMENT CORP-CATSKILL QUARRY
0.0	0.00	GLENS FALLS LEHIGH CEMENT COMPANY
600.5	1.72	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
546.9	1.50	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
58.9	0.17	ARMSTRONG CEMENT & SUPPLY/WINFIELD
51.0	0.17	ARMSTRONG CEMENT & SUPPLY/WINFIELD
0.0	0.00	CEMEX INC/WAMPUM CEMENT PLT
0.0	0.00	CEMEX INC/WAMPUM CEMENT PLT
0.0	0.00	CEMEX INC/WAMPUM CEMENT PLT
146.7	0.57	ESSROC/BESSEMER
899.8	3.50	ESSROC/BESSEMER
206.1	0.66	LAFARGE CORP/WHITEHALL PLT
58.9	0.19	LAFARGE CORP/WHITEHALL PLT
637.9	1.96	HERCULES CEMENT CO LP/STOCKERTOWN
0.0	0.00	HERCULES CEMENT CO LP/STOCKERTOWN
164.8	0.40	KEYSTONE PORTLAND CEMENT/EAST ALLEN
326.1	0.93	KEYSTONE PORTLAND CEMENT/EAST ALLEN
58.4	0.16	ESSROC/NAZARETH LOWER CEMENT PLT 1
154.2	0.43	ESSROC/NAZARETH CEMENT PLT 3
154.7	0.43	ESSROC/NAZARETH CEMENT PLT 3
124.3	0.35	ESSROC/NAZARETH CEMENT PLT 3
112.0	0.31	ESSROC/NAZARETH CEMENT PLT 3
206.4	0.57	LEHIGH CEMENT CO/YORK OPERATIONS
13,231.06	42.50	

2009 Reductions

Annual (tpy)	Summer Day (tpd)	Plant Name
0.00	0.00	
13,231.06	42.50	

COLUMN	COLUMN DESCRIPTIONS
A-F	State abbreviation, County Name, FIPS state/county code, Site ID, Emission Unit ID, Process ID
G	SCC-Source Classification Code
H	NOx 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
I	NOx 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
J	NOx 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP
K	Summer season percentage from NIF Emission Process (EP) file
L	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
M	Total capture/control efficiency from NIF 2002 CE file
N	Blank

COLUMN	COLUMN DESCRIPTIONS
O	NOx 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS B
P	NOx 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS
Q	NOx 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in invento 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 day b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
R	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
S	Total capture/control efficiency from NIF 2009 CE file
T	Incremental BOTW Control Factor (85% if uncontrolled or 0 according to state specificatior
U, V	NOx 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW incremental control facto
W, X	NOx 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)
Y	Plant Name

							2002 NOx Emissions						2009 NOx OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Control Factor	Annual (tpy)
MD	Baltimore City	24510	510-0285	10	01S10	30501402	103.7530	0.2826	0.2826	25.0	25.0	0.00	124.9430	0.3403	0.340	1.204	0.00	85.00	18.74
MA	Worcester	25027	1200856	04	0304	30501402	246.0000	0.0000	0.6758	25.0	25.0	0.00	319.2470	0.8771	0.877	1.298	0.00	85.00	47.89
MA	Worcester	25027	1200856	05	0304	30501402	258.0000	0.0000	0.7088	25.0	25.0	0.00	334.8200	0.9198	0.920	1.298	0.00	85.00	50.22
NJ	Burlington	34005	45982	U6	OS0	39999991	569.4000	1.5600	1.5600	25.0	25.0	0.00	569.4000	1.5600	1.560	1.000	0.00	85.00	85.41
NJ	Cumberland	34011	75475	U1	OS1	30501401	125.7100	0.3444	0.3444	25.0	24.9	0.00	125.7100	0.3444	0.344	1.000	0.00	85.00	18.86
NJ	Cumberland	34011	75475	U3	OS1	30501401	7.9800	0.0219	0.0219	25.0	24.9	0.00	7.9800	0.0219	0.022	1.000	0.00	85.00	1.20
NJ	Cumberland	34011	75475	U35	OS1	30501401	101.8400	0.2790	0.2790	25.0	24.9	0.00	101.8400	0.2790	0.279	1.000	0.00	85.00	15.28
NJ	Cumberland	34011	75475	U37	OS1	30501401	3.1900	0.0087	0.0087	26.0	24.9	0.00	3.1900	0.0087	0.009	1.000	0.00	85.00	0.48
NJ	Cumberland	34011	75503	U3	OS1	30501401	43.3800	0.1216	0.1216		24.9	0.00	43.3800	0.1216	0.122	1.000	0.00	0.00	43.38
NJ	Cumberland	34011	75503	U4	OS1	30501401	30.0900	0.0845	0.0845	25.0	24.9	0.00	30.0900	0.0845	0.085	1.000	0.00	0.00	30.09
NJ	Cumberland	34011	75503	U5	OS1	30501401	477.6400	1.4989	1.4989	29.0	24.9	0.00	477.6400	1.4989	1.499	1.000	0.00	85.00	71.65
NJ	Cumberland	34011	75505	U12	OS1	30599999	40.0000	0.1100	0.1100	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	0.00	0.00
NJ	Cumberland	34011	75505	U143	OS1	30599999	1.5000	0.0053	0.0053	47.0	25.0	0.00	1.5000	0.0053	0.005	1.000	0.00	0.00	1.50
NJ	Cumberland	34011	75505	U144	OS1	30599999	7.4000	0.0203	0.0203	26.0	25.0	0.00	7.4000	0.0203	0.020	1.000	0.00	0.00	7.40
NJ	Cumberland	34011	75505	U146	OS1	30599999	98.2000	0.2823	0.2823	26.0	25.0	0.00	98.2000	0.2823	0.282	1.000	0.00	85.00	14.73
NJ	Cumberland	34011	75505	U150	OS1	30599999	8.2000	0.0231	0.0231	26.0	25.0	0.00	8.2000	0.0231	0.023	1.000	0.00	0.00	8.20
NJ	Cumberland	34011	75505	U151	OS1	30599999	8.2000	0.0221	0.0221	25.0	25.0	0.00	8.2000	0.0221	0.022	1.000	0.00	0.00	8.20
NJ	Cumberland	34011	75505	U6	OS1	30599999	169.5000	0.4756	0.4756	23.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	0.00	0.00
NJ	Cumberland	34011	75506	U1	OS1	30501401	28.1700	0.0828	0.0828		24.9	0.00	28.1700	0.0828	0.083	1.000	0.00	0.00	28.17
NJ	Cumberland	34011	75506	U1	OS3	30501401	40.1900	0.1027	0.1027	24.0	24.9	0.00	40.1900	0.1027	0.103	1.000	0.00	0.00	40.19
NJ	Middlesex	34023	18070	U1	OS1	30501401	275.1600	0.8650	0.8650	28.0	24.9	0.00	275.1600	0.8650	0.865	1.000	0.00	0.00	275.16
NJ	Salem	34033	65499	U1	OS1	30501401	170.8900	0.4224	0.4224	25.0	24.9	0.00	170.8900	0.4224	0.422	1.000	0.00	85.00	25.63
NJ	Salem	34033	65499	U2	OS1	30501401	235.9000	0.6688	0.6688	25.0	24.9	0.00	235.9000	0.6688	0.669	1.000	0.00	85.00	35.39
NJ	Salem	34033	65499	U3	OS1	30501401	246.6000	0.7114	0.7114	25.0	24.9	0.00	246.6000	0.7114	0.711	1.000	0.00	85.00	36.99
NY	Albany	36001	4012200004	EI0001	E20EI	39000689	48.6140	0.0000	0.1336		25.0	0.00	51.2680	0.1408	0.141	1.055	0.00	85.00	7.69
NY	Albany	36001	4012200004	U00002	OX1FP	30501202	31.8291	0.0000	0.0874		25.0	0.00	31.3090	0.0860	0.086	0.984	0.00	85.00	4.70
NY	Albany	36001	4012200004	U00003	FZ1FP	30501204	24.7171	0.0000	0.0665		24.5	0.00	24.3130	0.0655	0.065	0.984	0.00	85.00	3.65
NY	Albany	36001	4012200004	U00003	FZ2FP	30501204	3.0896	0.0000	0.0083		24.5	0.00	3.0390	0.0082	0.008	0.984	0.00	85.00	0.46
NY	Albany	36001	4012200004	U00003	SS1FP	30501206	2.6262	0.0000	0.0072		25.0	0.00	2.5830	0.0071	0.007	0.984	0.00	85.00	0.39
NY	Albany	36001	4012200004	U00012	OX2FP	30501202	28.1758	0.0000	0.0774		25.0	0.00	27.7150	0.0761	0.076	0.984	0.00	85.00	4.16
NY	Albany	36001	4012200004	U00013	FC2FP	30501204	40.1792	0.0000	0.1082		24.5	0.00	39.5230	0.1064	0.106	0.984	0.00	85.00	5.93

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions Annual (tpy)	2009 NOx OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 NOx OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Control Factor	2009 BOTW Annual (tpy)
NY	Cayuga	36011	7055200004	AFURNC	FRNFP	30501402	588.9110	0.0000	1.6179		25.0	0.00	661.7840	1.8181	1.818	1.124	0.00	85.00	99.27
NY	Chemung	36015	8070400036	000001	O1AFP	30501402	545.9445	0.0000	1.4998		25.0	0.00	613.5010	1.6854	1.685	1.124	0.00	85.00	92.03
NY	Ontario	36069	8320500041	UFURNC	FURFP	30501403	773.7660	0.0000	2.1257		25.0	0.00	869.5130	2.3888	2.389	1.124	0.00	85.00	130.43
NY	St. Lawrence	36089	6403000002	U00001	101FP	30501401	88.6495	0.0000	0.2426		24.9	0.00	99.6190	0.2726	0.273	1.124	0.00	85.00	14.94
NY	St. Lawrence	36089	6403000002	U00003	300FP	30501416	2.1060	0.0000	0.0058		25.0	0.00	2.3670	0.0065	0.007	1.124	0.00	85.00	0.36
NY	Steuben	36101	8460300008	PCCTNK	GL2FP	30501416	55.2347	0.0000	0.1517		25.0	0.00	62.0700	0.1705	0.171	1.124	0.00	85.00	9.31
PA	Allegheny	42003	4200300164	003	1	30501404	86.3300	0.2534	0.2534	27.0	24.9	0.00	105.5340	0.3098	0.310	1.222	0.00	46.48	56.48
PA	Allegheny	42003	4200300164	008	1	30501404	70.9380	0.2365	0.2365	27.0	24.9	0.00	86.7180	0.2891	0.289	1.222	0.00	34.87	56.48
PA	Allegheny	42003	4200300165	P01	1	30501402	75.1350	0.2042	0.2042	25.0	25.0	0.00	91.8490	0.2496	0.250	1.222	0.00	100.00	0.00
PA	Allegheny	42003	4200300165	P02	1	30501402	90.2488	0.2354	0.2354	24.0	25.0	0.00	110.3250	0.2878	0.288	1.222	0.00	100.00	0.00
PA	Allegheny	42003	4200300165	P04	1	30501402	62.1138	0.1620	0.1620	24.0	25.0	0.00	75.9310	0.1980	0.198	1.222	0.00	100.00	0.00
PA	Allegheny	42003	4200300227	003	1	30590003	1.9640	0.0049	0.0049	23.0	25.0	0.00	2.1480	0.0054	0.005	1.094	0.00	0.00	2.15
PA	Allegheny	42003	4200300227	003	2	30590003	1.9640	0.0049	0.0049	23.0	25.0	0.00	2.1480	0.0054	0.005	1.094	0.00	0.00	2.15
PA	Allegheny	42003	4200300342	002	1	30501403	234.8600	0.6382	0.6382	25.0	25.0	0.00	287.1060	0.7802	0.780	1.222	0.00	53.18	134.41
PA	Allegheny	42003	4200300342	002	3	30501403	818.2000	2.2234	2.2234	25.0	25.0	0.00	1000.2120	2.7180	2.718	1.222	0.00	51.88	481.34
PA	Beaver	42007	420070012	103	1	30501402	90.7000	0.0000	0.2093	21.0	25.0	0.00	110.8770	0.2559	0.256	1.222	0.00	0.00	110.88
PA	Centre	42027	420270021	P101	1	30501404	101.5000	0.0000	0.2777		24.9	0.00	124.0790	0.3395	0.340	1.222	0.00	100.00	0.00
PA	Centre	42027	420270021	P102	1	30501404	125.7500	0.0000	0.3441		24.9	0.00	153.7240	0.4206	0.421	1.222	0.00	100.00	0.00
PA	Centre	42027	420270021	P102	3	30501404	125.7500	0.0000	0.3441		24.9	0.00	153.7240	0.4206	0.421	1.222	0.00	100.00	0.00
PA	Centre	42027	420270021	P103	1	30501404	430.9000	0.0000	1.1791		24.9	0.00	526.7550	1.4413	1.441	1.222	0.00	100.00	0.00
PA	Clarion	42031	420310009	102	1	30501402	212.4000	0.0000	0.6069	26.0	25.0	0.00	259.6490	0.7419	0.742	1.222	0.00	0.00	259.65
PA	Clarion	42031	420310009	S105A	1	30501402	167.2000	0.0000	0.4593	25.0	25.0	0.00	204.3940	0.5615	0.562	1.222	0.00	0.00	204.39
PA	Crawford	42039	420390012	101	1	30501403	702.1000	0.0000	1.9288		25.0	0.00	858.2850	2.3579	2.358	1.222	0.00	22.84	662.22
PA	Crawford	42039	420390012	102	1	30501403	2161.6001	0.0000	5.9385		25.0	0.00	2642.4570	7.2595	7.259	1.222	0.00	63.20	972.43
PA	Cumberland	42041	420410013	101	1	30501403	1399.0000	0.0000	3.8434		25.0	0.00	1710.2130	4.6984	4.698	1.222	0.00	30.81	1183.33
PA	Cumberland	42041	420410013	102	1	30501403	2765.0000	0.0000	7.5962		25.0	0.00	3380.0850	9.2859	9.286	1.222	0.00	64.07	1214.58
PA	Fayette	42051	420510020	101	1	30501402	162.6000	0.0000	0.4467	25.0	25.0	0.00	198.7710	0.5461	0.546	1.222	0.00	27.26	144.58
PA	Fayette	42051	420510020	102	1	30501402	266.0000	0.0000	0.7600	26.0	25.0	0.00	325.1730	0.9291	0.929	1.222	0.00	30.02	227.56
PA	Jefferson	42065	420650003	110	1	30501402	126.4000	0.0000	0.5000	36.0	25.0	0.00	154.5180	0.6113	0.611	1.222	0.00	2.45	150.74
PA	Jefferson	42065	420650007	103	1	30501402	107.4000	0.0000	0.3305	28.0	25.0	0.00	131.2920	0.4040	0.404	1.222	0.00	0.00	131.29
PA	Jefferson	42065	420650007	104	1	30501402	149.9000	0.0000	0.4118	25.0	25.0	0.00	183.2460	0.5034	0.503	1.222	0.00	0.00	183.25
PA	Luzerne	42079	420790013	101	1	30501201	23.6000	0.0000	0.0648		25.0	0.00	25.2550	0.0694	0.069	1.070	0.00	0.00	25.26
PA	Luzerne	42079	420790013	102	1	30501201	36.9000	0.0000	0.1014		25.0	0.00	39.4880	0.1085	0.108	1.070	0.00	0.00	39.49
PA	Luzerne	42079	420790013	103	1	30501204	1.0000	0.0000	0.0027		24.5	0.00	1.0700	0.0029	0.003	1.070	0.00	0.00	1.07
PA	Luzerne	42079	420790013	104	1	30501204	5.7000	0.0000	0.0153		24.5	0.00	6.1000	0.0164	0.016	1.070	0.00	0.00	6.10
PA	Luzerne	42079	420790018	101	1	30501402	136.1700	0.0000	0.3741		25.0	0.00	166.4620	0.4573	0.457	1.222	0.00	100.00	0.00
PA	Luzerne	42079	420790018	101	2	30501402	24.0300	0.0000	0.0660		25.0	0.00	29.3760	0.0807	0.081	1.222	0.00	100.00	0.00
PA	Luzerne	42079	420790018	102	1	30501402	111.5200	0.0000	0.3064		25.0	0.00	136.3280	0.3745	0.375	1.222	0.00	100.00	0.00
PA	Luzerne	42079	420790018	102	2	30501402	19.6800	0.0000	0.0541		25.0	0.00	24.0580	0.0661	0.066	1.222	0.00	100.00	0.00
PA	Luzerne	42079	420790018	103	1	30501402	455.7000	0.0000	1.2519		25.0	0.00	557.0720	1.5304	1.530	1.222	0.00	100.00	0.00
PA	McKean	42083	420830002	101	1	30501402	195.0000	0.0000	0.5143	24.0	25.0	0.00	238.3790	0.6287	0.629	1.222	0.00	67.49	77.51
PA	McKean	42083	420830002	201	1	30501402	213.0000	0.0000	0.7256	31.0	25.0	0.00	260.3830	0.8870	0.887	1.222	0.00	70.36	77.18
PA	McKean	42083	420830006	101	1	30501402	200.3000	0.0000	0.5503	25.0	25.0	0.00	244.8570	0.6727	0.673	1.222	0.00	37.02	154.21
PA	McKean	42083	420830006	102	1	30501402	26.0000	0.0000	0.0771	27.0	25.0	0.00	31.7840	0.0943	0.094	1.222	0.00	0.00	31.78
PA	McKean	42083	420830006	103	1	30501402	221.6000	0.0000	0.6331	26.0	25.0	0.00	270.8960	0.7740	0.774	1.222	0.00	29.45	191.11
PA	Tioga	42117	421170020	P109	1	30501402	210.2000	0.0000	0.5775		25.0	0.00	256.9600	0.7059	0.706	1.222	0.00	7.45	237.81
PA	Washington	42125	421250001	107	1	30501404	52.5360	0.0000	0.1559	27.0	24.9	0.00	64.2230	0.1906	0.191	1.222	0.00	0.00	64.22
PA	Washington	42125	421250001	107	3	30501404	27.0640	0.0000	0.0803	27.0	24.9	0.00	33.0840	0.0982	0.098	1.222	0.00	0.00	33.08
PA	Westmoreland	42129	421290233	101	2	30501404	372.2798	0.0000	1.0227	25.0	24.9	0.00	455.0950	1.2503	1.250	1.222	0.00	100.00	0.00
PA	Westmoreland	42129	421290233	102	2	30501404	159.8320	0.0000	0.4391	25.0	24.9	0.00	195.3870	0.5368	0.537	1.222	0.00	100.00	0.00
PA	Westmoreland	42129	421290553	101	1	30501402	20.9000	0.0000	0.0643	28.0	25.0	0.00	25.5490	0.0786	0.079	1.222	0.00	0.00	25.55
PA	York	42133	421330066	104	3	30501414	21.3010	0.0000	0.0468	20.0	24.9	0.00	26.0400	0.0572	0.057	1.222	0.00	52.94	12.25

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Control Factor	2009 BOTW Annual (tpy)
RI	Providence	44007	AIR572	3	3	30501401	231.3035	0.7010	0.7010		24.9	0.00	171.0650	0.5184	0.518	0.740	0.00	85.00	25.66
RI	Providence	44007	AIR572	5	5	39000689	7.9035	0.0000	0.0217		25.0	0.00	7.9000	0.0217	0.022	1.000	0.00	85.00	1.19
						MANEVU	18,840.2		52.5				21,893.3		60.9				8,419.4
						NOVA	0.0		0.0				0.0		0.0				0.0
						OTR	18,840.2		52.5				21,893.3		60.9				8,419.4

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/ Emissions **2009 BOTW Reductions**

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name		Glass Type	2002 Throughput	2002 lbs/ton	OTC Rule lbs/ton glass pulled	2009 Percent Reduction
0.05	106.20	0.29	CARR-LOWREY GLASS						
0.13	271.36	0.75	ST GOBAIN CONTAINERS						
0.14	284.60	0.78	ST GOBAIN CONTAINERS						
0.23	483.99	1.33	AFG Industries Inc.; Cinnaminso	Closed 2006, facility requested Banking of Emissions					
0.05	106.85	0.29	Durand Glass Manufacturing Cor	Apply 85% control, per NJDEP					
0.00	6.78	0.02	Durand Glass Manufacturing Cor	Apply 85% control, per NJDEP					
0.04	86.56	0.24	Durand Glass Manufacturing Cor	Apply 85% control, per NJDEP					
0.00	2.71	0.01	Durand Glass Manufacturing Cor	Apply 85% control, per NJDEP					
0.12	0.00	0.00	Kimble Glass Inc.	Apply 0% control, per NJDEP					
0.08	0.00	0.00	Kimble Glass Inc.	Apply 0% control, per NJDEP					
0.22	405.99	1.27	Kimble Glass Inc.	Apply 85% control, per NJDEP					
0.00	0.00	0.00	Wheaton, Inc.	Shutdown, set 2009 emissions to 0 per NJDEP					
0.01	0.00	0.00	Wheaton, Inc.	Apply 0% control, per NJDEP					
0.02	0.00	0.00	Wheaton, Inc.	Apply 0% control, per NJDEP					
0.04	83.47	0.24	Wheaton, Inc.	Apply 85% control, per NJDEP					
0.02	0.00	0.00	Wheaton, Inc.	Apply 0% control, per NJDEP					
0.02	0.00	0.00	Wheaton, Inc.	Apply 0% control, per NJDEP					
0.00	0.00	0.00	Wheaton, Inc.	Shutdown, set 2009 emissions to 0 per NJDEP					
0.08	0.00	0.00	Leone Industries, Inc.	Already has Oxyfuel, apply 0% control, per NJDEP					
0.10	0.00	0.00	Leone Industries, Inc.	Already has Oxyfuel, apply 0% control, per NJDEP					
0.87	0.00	0.00	Saint-Gobain Containers, Inc.	Shutdown, leave 2009 emissions alone per per NJDEP					
0.06	145.26	0.36	Anchor Glass Container Corpora	Apply 85% control, per NJDEP					
0.10	200.52	0.57	Anchor Glass Container Corpora	Apply 85% control, per NJDEP					
0.11	209.61	0.60	Anchor Glass Container Corpora	Apply 85% control, per NJDEP					
0.02	43.58	0.12	OWENS-CORNING DELMAR PLANT						
0.01	26.61	0.07	OWENS-CORNING DELMAR PLANT						
0.01	20.67	0.06	OWENS-CORNING DELMAR PLANT						
0.00	2.58	0.01	OWENS-CORNING DELMAR PLANT						
0.00	2.20	0.01	OWENS-CORNING DELMAR PLANT						
0.01	23.56	0.06	OWENS-CORNING DELMAR PLANT						
0.02	33.59	0.09	OWENS-CORNING DELMAR PLANT						

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name		Glass Type	2002 Throughput	2002 lbs/ton	OTC Rule lbs/ton glass pulled	2009 Percent Reduction
0.27	562.52	1.55	OWENS-BROCKWAY AUBURN PLANT 35						
0.25	521.48	1.43	ANCHOR GLASS CONTAINER CORP						
0.36	739.09	2.03	GUARDIAN GENEVA FLOAT GLASS FACILITY						
0.04	84.68	0.23	CORNING INC CANTON PLANT						
0.00	2.01	0.01	CORNING INC CANTON PLANT						
0.03	52.76	0.14	CORNING INC - FALLBROOK PLANT						
0.17	49.05	0.14	GE CONSUMER PRODUCTS, LIGHTING		Pressed	23,102	7.474	4.0	46.5
0.19	30.24	0.10	GE CONSUMER PRODUCTS, LIGHTING		Pressed	23,102	6.141	4.0	34.9
0.00	91.85	0.25	GLENSHAW GLASS COMPANY	Shutdown in 2002-2004 timeframe					100.0
0.00	110.33	0.29	GLENSHAW GLASS COMPANY	Shutdown in 2002-2004 timeframe					100.0
0.00	75.93	0.20	GLENSHAW GLASS COMPANY	Shutdown in 2002-2004 timeframe					100.0
0.01	0.00	0.00	KOPP GLASS, INCORPORATEI	Not Lkely to be covered by requirements					0.0
0.01	0.00	0.00	KOPP GLASS, INCORPORATEI	Not Lkely to be covered by requirements					0.0
0.37	152.69	0.41	GUARDIAN INDUSTRIES CORP. FLOREFFE		Flat	23,903	19.651	9.2	53.2
1.31	518.87	1.41	GUARDIAN INDUSTRIES CORP. FLOREFFE		Flat	85,598	19.117	9.2	51.9
0.26	0.00	0.00	ANCHOR HOCKING CORP/PHOENIX GLASS		Container	55,127	3.291	4.0	0.0
0.00	124.08	0.34	CORNING ASAHI VIDEO PROD	Shutdown in 2002-2004 timeframe					100.0
0.00	153.72	0.42	CORNING ASAHI VIDEO PROD	Shutdown in 2002-2004 timeframe					100.0
0.00	153.72	0.42	CORNING ASAHI VIDEO PROD	Shutdown in 2002-2004 timeframe					100.0
0.00	526.76	1.44	CORNING ASAHI VIDEO PROD	Shutdown in 2002-2004 timeframe					100.0
0.74	0.00	0.00	OWENS-BROCKWAY GLASS/CLARION		Container	137,044	3.100	4.0	0.0
0.56	0.00	0.00	OWENS-BROCKWAY GLASS/CLARION		Container	90,625	3.690	4.0	0.0
1.82	196.07	0.54	PPG IND INC/WORKS 8		Flat	117,763	11.924	9.2	22.8
2.67	1670.03	4.59	PPG IND INC/WORKS 8		Flat	172,929	25.000	9.2	63.2
3.25	526.89	1.45	PPG IND INC/WORKS NO 6		Flat	210,433	13.296	9.2	30.8
3.34	2165.51	5.95	PPG IND INC/WORKS NO 6		Flat	215,991	25.603	9.2	64.1
0.40	54.19	0.15	ANCHOR GLASS CONTAINER/PLT 5		Container	59,135	5.499	4.0	27.3
0.65	97.61	0.28	ANCHOR GLASS CONTAINER/PLT 5		Container	93,076	5.716	4.0	30.0
0.60	3.78	0.01	OWENS-BROCKWAY GLASS/BROCKWAY		Container	61,654	4.100	4.0	2.4
0.40	0.00	0.00	OWENS BROCKWAY GLASS/CRENSHAW		Container	97,163	2.211	4.0	0.0
0.50	0.00	0.00	OWENS BROCKWAY GLASS/CRENSHAW		Container	131,450	2.281	4.0	0.0
0.07	0.00	0.00	CERTAIN TEED PROD CO/MOU	Not Lkely to be covered by requirements					0.0
0.11	0.00	0.00	CERTAIN TEED PROD CO/MOU	Not Lkely to be covered by requirements					0.0
0.00	0.00	0.00	CERTAIN TEED PROD CO/MOU	Not Lkely to be covered by requirements					0.0
0.02	0.00	0.00	CERTAIN TEED PROD CO/MOU	Not Lkely to be covered by requirements					0.0
0.00	166.46	0.46	TECHNEGLAS INC/PITTSTON	Shutdown in 2002-2004 timeframe					100.0
0.00	29.38	0.08	TECHNEGLAS INC/PITTSTON	Shutdown in 2002-2004 timeframe					100.0
0.00	136.33	0.37	TECHNEGLAS INC/PITTSTON	Shutdown in 2002-2004 timeframe					100.0
0.00	24.06	0.07	TECHNEGLAS INC/PITTSTON	Shutdown in 2002-2004 timeframe					100.0
0.00	557.07	1.53	TECHNEGLAS INC/PITTSTON	Shutdown in 2002-2004 timeframe					100.0
0.20	160.87	0.42	PGH CORNING CORP/PORT ALLEGANY		Pressed	31,701	12.302	4.0	67.5
0.26	183.21	0.62	PGH CORNING CORP/PORT ALLEGANY		Pressed	31,566	13.496	4.0	70.4
0.42	90.64	0.25	SAINT GOBAIN CONTAINERS/PORT ALLEGANY BORO		Container	63,076	6.351	4.0	37.0
0.09	0.00	0.00	SAINT GOBAIN CONTAINERS/PORT ALLEGANY BORO		Container	26,097	1.993	4.0	0.0
0.55	79.78	0.23	SAINT GOBAIN CONTAINERS/PORT ALLEGANY BORO		Container	78,167	5.670	4.0	29.5
0.65	19.15	0.05	OSRAM SYLVANIA PROD /WELLSBORO PLT		Pressed	97,266	4.322	4.0	7.5
0.19	0.00	0.00	WORLD KITCHEN INC/CHARLEROI		Pressed	37,142	2.829	4.0	0.0
0.10	0.00	0.00	WORLD KITCHEN INC/CHARLEROI		Pressed	19,134	2.829	4.0	0.0
0.00	455.10	1.25	AMERICAN VIDEO GLASS CO I	Shutdown in 2002-2004 timeframe					100.0
0.00	195.39	0.54	AMERICAN VIDEO GLASS CO I	Shutdown in 2002-2004 timeframe					100.0
0.08	0.00	0.00	ST GEORGE CRYSTAL LTD/JE	Not Lkely to be covered by requirements					0.0
0.03	13.79	0.03	OSRAM SYLVANIA PROD /YORK BASE PROD PLT		Pressed	5,012.00	8.500	4.0	52.9

' Emissions	2009 BOTW Reductions							
Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name	Glass Type	2002 Throughput	2002 lbs/ton	OTC Rule lbs/ton glass pulled	2009 Percent Reduction
0.08	145.41	0.44	OSRAM SYLVANIA PRODUCTS INC.					#DIV/0!
0.00	6.72	0.02	OSRAM SYLVANIA PRODUCTS INC.					#DIV/0!
23.6	13,473.9	37.3						
0.0	0.0	0.0						
23.6	13,473.9	37.3						

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	NOx 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
F	NOx 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
G	NOx 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

SCC: 21-02-xxx-xxx, 21-03-xxx-xxx

COLUMN	COLUMN DESCRIPTIONS
K	NOx 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
L	NOx 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
M	NOx 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
N	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
O	Incremental Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Incremental BOTW Control Factor (see tab Area Percent Reduction)
Q, R	NOx 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW control factor/100)
S, T	NOx 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

ICI Boilers Area Source

				2002 NOx Emissions					2009 NOx OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description

COLUMN	COLUMN DESCRIPTIONS
A-F	State abbreviation, County Name, FIPS state/county code, Site ID, Emission Unit ID, Process ID
G	SCC-Source Classification Code
H	Boiler Capacity (mmBtu/hr)
I	Source of Boiler Size Data (i.e., MANEVU Design Capacity field, EP/EU Description, Title V Permit, State provided data, SCC desc)
J	NOx 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
K	NOx 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
L	NOx 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP
M	Summer season percentage from NIF Emission Process (EP) file - 999 indicated missing thruput; 0 indicates 0 summer thruput
N	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
O	Total capture/control efficiency from NIF 2002 CE file

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
CT	Fairfield	09001	0258	R0457	01	10300504	11.00	MANEVU2002	0.7600	0.0025	0.0025	BRIDGEPORT MUTUAL MGMT CORP
CT	Fairfield	09001	0258	R0458	01	10300504	11.00	MANEVU2002	0.4000	0.0000	0.0000	BRIDGEPORT MUTUAL MGMT CORP
CT	Fairfield	09001	0258	R0459	01	10300504	11.00	MANEVU2002	0.4700	0.0000	0.0000	BRIDGEPORT MUTUAL MGMT CORP
CT	Fairfield	09001	0742	P0120	01	10300501	10.00	MANEVU2002	1.8920	0.0056	0.0056	PEOPLE'S BANK
CT	Fairfield	09001	0742	P0120	02	10300602	10.00	MANEVU2002	0.4500	0.0013	0.0013	PEOPLE'S BANK
CT	Fairfield	09001	0742	P0121	01	10300501	10.00	MANEVU2002	1.8920	0.0056	0.0056	PEOPLE'S BANK
CT	Fairfield	09001	0742	P0121	02	10300602	10.00	MANEVU2002	0.4500	0.0013	0.0013	PEOPLE'S BANK
CT	Fairfield	09001	0875	R0813	01	10300501	15.00	MANEVU2002	0.8880	0.0024	0.0024	INTERCHURCH RESIDENCES
CT	Fairfield	09001	0881	P0031	02	10200603	5.00	MANEVU2002	0.2600	0.0035	0.0035	CASCO PRODUCTS CORPORATION
CT	Fairfield	09001	2259	R0011	01	10200603	8.00	MANEVU2002	0.3700	0.0002	0.0002	RISDON-AMS COSMETIC CONT DIV
CT	Fairfield	09001	2259	R0012	01	10200603	4.00	MANEVU2002	0.1850	0.0007	0.0007	RISDON-AMS COSMETIC CONT DIV
CT	Fairfield	09001	2259	R0013	01	10200603	4.00	MANEVU2002	0.1850	0.0007	0.0007	RISDON-AMS COSMETIC CONT DIV
CT	Fairfield	09001	2277	P0028	02	10200602	10.00	MANEVU2002	0.7810	0.0017	0.0017	BARDEN CORP
CT	Fairfield	09001	2277	R0050	02	10200602	10.00	MANEVU2002	0.7810	0.0017	0.0017	BARDEN CORP
CT	Fairfield	09001	2408	E0001	01	10300603	2.00	MANEVU2002	0.2200	0.0000	0.0000	DANBURY /DPW (LANDFILL)
CT	Fairfield	09001	2408	E0002	01	10300603	7.00	MANEVU2002	0.7200	0.0017	0.0017	DANBURY /DPW (LANDFILL)
CT	Fairfield	09001	2408	E0005	01	10300501	2.00	MANEVU2002	0.0460	0.0000	0.0000	DANBURY /DPW (LANDFILL)
CT	Fairfield	09001	2408	E0010	01	10300603	4.00	MANEVU2002	0.1800	0.0000	0.0000	DANBURY /DPW (LANDFILL)
CT	Fairfield	09001	2408	E0011	01	10300603	1.00	MANEVU2002	0.0330	0.0000	0.0000	DANBURY /DPW (LANDFILL)
CT	Fairfield	09001	2504	P0059	02	10300602	13.00	MANEVU2002	4.2450	0.0027	0.0027	DANBURY HIGH SCHOOL
CT	Fairfield	09001	2504	P0059	01	10300501	13.00	MANEVU2002	0.0280	0.0015	0.0015	DANBURY HIGH SCHOOL
CT	Fairfield	09001	2504	P0060	02	10300602	13.00	MANEVU2002	4.2450	0.0027	0.0027	DANBURY HIGH SCHOOL
CT	Fairfield	09001	2504	P0060	01	10300501	13.00	MANEVU2002	0.0280	0.0015	0.0015	DANBURY HIGH SCHOOL
CT	Fairfield	09001	2504	P0061	02	10300602	13.00	MANEVU2002	4.2450	0.0027	0.0027	DANBURY HIGH SCHOOL
CT	Fairfield	09001	2504	P0061	01	10300501	13.00	MANEVU2002	0.0280	0.0015	0.0015	DANBURY HIGH SCHOOL
CT	Fairfield	09001	3408	P0056	01	10300602	31.00	MANEVU2002	0.7330	0.0022	0.0022	ARNOLD FOODS COMPANY
CT	Fairfield	09001	3408	P0069	01	10300602	17.00	MANEVU2002	0.7100	0.0016	0.0016	ARNOLD FOODS COMPANY
CT	Fairfield	09001	4203	P0053	02	10300602	38.00	MANEVU2002	1.3840	0.0025	0.0025	NORWALK HOSPITAL ASSOCIATION

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
CT	Fairfield	09001	4203	P0053	01	10300501	38.00	MANEVU2002	0.0170	0.0000	0.0000	NORWALK HOSPITAL ASSOCIATION
CT	Fairfield	09001	4203	P0054	02	10300602	38.00	MANEVU2002	1.3840	0.0025	0.0025	NORWALK HOSPITAL ASSOCIATION
CT	Fairfield	09001	4203	P0054	01	10300501	38.00	MANEVU2002	0.0170	0.0000	0.0000	NORWALK HOSPITAL ASSOCIATION
CT	Fairfield	09001	4214	R0033	01	10300501	14.00	MANEVU2002	1.0000	0.0011	0.0011	NRG NORWALK HARBOR OPERATIONS
CT	Fairfield	09001	4225	R0078	01	10300501	7.00	MANEVU2002	4.5000	0.0146	0.0146	PEPPERIDGE FARM INC
CT	Fairfield	09001	4225	R0079	01	10300501	7.00	MANEVU2002	4.5000	0.0144	0.0144	PEPPERIDGE FARM INC
CT	Fairfield	09001	4225	R0220	01	10300603	5.00	MANEVU2002	0.0360	0.0001	0.0001	PEPPERIDGE FARM INC
CT	Fairfield	09001	5486	P0086	01	10200501	21.00	MANEVU2002	0.2040	0.0000	0.0006	SPONGEX CORPORATION
CT	Fairfield	09001	5486	P0086	02	10200602	21.00	MANEVU2002	2.9500	0.0080	0.0080	SPONGEX CORPORATION
CT	Fairfield	09001	5994	P0081	01	10300603	3.00	MANEVU2002	0.9660	0.0029	0.0029	GENERAL ELECTRIC CAPITAL CORP
CT	Fairfield	09001	5994	P0082	01	10300603	3.00	MANEVU2002	0.9660	0.0029	0.0029	GENERAL ELECTRIC CAPITAL CORP
CT	Fairfield	09001	5994	P0083	01	10300603	3.00	MANEVU2002	0.9660	0.0029	0.0029	GENERAL ELECTRIC CAPITAL CORP
CT	Fairfield	09001	5994	P0084	01	10300603	1.00	MANEVU2002	0.9660	0.0029	0.0029	GENERAL ELECTRIC CAPITAL CORP
CT	Fairfield	09001	5994	P0085	01	10300603	3.00	MANEVU2002	0.9660	0.0029	0.0029	GENERAL ELECTRIC CAPITAL CORP
CT	Fairfield	09001	6001	P0018	01	10200504	29.00	MANEVU2002	2.3350	0.0000	0.0000	PITNEY BOWES INC
CT	Fairfield	09001	6001	P0018	02	10200602	29.00	MANEVU2002	0.3750	0.0000	0.0000	PITNEY BOWES INC
CT	Fairfield	09001	6001	P0026	01	10200602	13.00	MANEVU2002	0.5600	0.0033	0.0033	PITNEY BOWES INC
CT	Fairfield	09001	6001	P0035	01	10200504	29.00	MANEVU2002	1.2530	0.0000	0.0000	PITNEY BOWES INC
CT	Fairfield	09001	6001	P0035	02	10200602	29.00	MANEVU2002	0.3750	0.0000	0.0000	PITNEY BOWES INC
CT	Fairfield	09001	6009	P0089	02	10300602	15.00	MANEVU2002	0.1770	0.0012	0.0012	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0089	01	10300501	15.00	MANEVU2002	1.0960	0.0005	0.0005	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0090	02	10300602	15.00	MANEVU2002	0.1700	0.0011	0.0011	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0090	01	10300501	15.00	MANEVU2002	0.9290	0.0003	0.0003	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0091	01	10300501	15.00	MANEVU2002	1.3680	0.0025	0.0025	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0091	02	10300602	15.00	MANEVU2002	0.0790	0.0023	0.0023	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0092	01	10300501	15.00	MANEVU2002	1.3150	0.0025	0.0025	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0092	02	10300602	15.00	MANEVU2002	0.0880	0.0003	0.0003	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0197	01	10200501	15.00	MANEVU2002	0.4640	0.0015	0.0015	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0197	02	10200602	15.00	MANEVU2002	0.0850	0.0013	0.0013	STAMFORD HOSPITAL
CT	Fairfield	09001	6041	E0003	01	10200603	16.00	MANEVU2002	1.4300	0.0032	0.0032	SPARTECH POLYCAST, INC
CT	Fairfield	09001	6041	E0004	01	10200603	16.00	MANEVU2002	1.4800	0.0043	0.0043	SPARTECH POLYCAST, INC
CT	Fairfield	09001	6375	R0333	02	10300602	15.00	MANEVU2002	0.2480	0.0020	0.0020	HAYES HOUSE % CONSOLIDATED MGT
CT	Fairfield	09001	6375	R0333	01	10300501	15.00	MANEVU2002	0.5590	0.0000	0.0018	HAYES HOUSE % CONSOLIDATED MGT
CT	Fairfield	09001	6375	R0334	02	10300602	15.00	MANEVU2002	0.2480	0.0020	0.0020	HAYES HOUSE % CONSOLIDATED MGT
CT	Fairfield	09001	6375	R0334	01	10300501	15.00	MANEVU2002	0.5590	0.0000	0.0018	HAYES HOUSE % CONSOLIDATED MGT
CT	Fairfield	09001	6617	P0002	01	10200504	11.00	MANEVU2002	0.4980	0.0009	0.0009	PITNEY BOWES INC
CT	Fairfield	09001	6617	P0002	02	10200602	11.00	MANEVU2002	0.6300	0.0014	0.0014	PITNEY BOWES INC
CT	Fairfield	09001	6617	R0174	02	10200602	17.00	MANEVU2002	0.1160	0.0008	0.0008	PITNEY BOWES INC
CT	Fairfield	09001	7955	P0039	01	10200401	50.00	MANEVU2002	0.0080	0.0000	0.0000	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	P0039	02	10200602	50.00	MANEVU2002	13.9140	0.0474	0.0474	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0016	02	10200401	48.00	MANEVU2002	0.0120	0.0000	0.0001	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0016	03	10200602	48.00	MANEVU2002	13.1480	0.0779	0.0779	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0017	02	10200401	48.00	MANEVU2002	0.0130	0.0000	0.0000	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0017	03	10200602	48.00	MANEVU2002	8.0080	0.0436	0.0436	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0017	01	10200401	48.00	MANEVU2002	3.0400	0.1120	0.1120	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0018	02	10200401	48.00	MANEVU2002	3.3580	0.0000	0.0092	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0018	03	10200602	48.00	MANEVU2002	6.1900	0.0733	0.0733	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0019	02	10200401	48.00	MANEVU2002	4.0130	0.0000	0.0123	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0019	03	10200602	48.00	MANEVU2002	3.8880	0.0536	0.0536	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7958	R0039	01	10200401	32.00	MANEVU2002	2.1290	0.0000	0.0058	ROSS & ROBERTS INC
CT	Fairfield	09001	7958	R0039	02	10200602	32.00	MANEVU2002	2.3450	0.0105	0.0105	ROSS & ROBERTS INC
CT	Fairfield	09001	8117	E0001	01	10200603	3.00	MANEVU2002	0.3500	0.0007	0.0007	SARTOMER CO INC

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
CT	Fairfield	09001	8173	P0089	01	10200501	4.00	MANEVU2002	0.2900	0.0006	0.0006	HAMPFORD RESEARCH INC
CT	Fairfield	09001	8173	P0121	01	10300501	4.00	MANEVU2002	0.2900	0.0006	0.0006	HAMPFORD RESEARCH INC
CT	Fairfield	09001	8455	P0010	01	10300501	6.00	MANEVU2002	0.1200	0.0000	0.0003	ST JOSEPHS MANOR
CT	Fairfield	09001	8455	P0010	02	10300603	6.00	MANEVU2002	0.2300	0.0002	0.0002	ST JOSEPHS MANOR
CT	Fairfield	09001	8455	P0011	02	10300603	6.00	MANEVU2002	0.2300	0.0004	0.0004	ST JOSEPHS MANOR
CT	Fairfield	09001	8455	P0011	01	10300501	6.00	MANEVU2002	0.1190	0.0000	0.0003	ST JOSEPHS MANOR
CT	Fairfield	09001	8455	P0012	01	10300501	6.00	MANEVU2002	0.1260	0.0000	0.0003	ST JOSEPHS MANOR
CT	Fairfield	09001	8455	P0012	02	10300603	6.00	MANEVU2002	0.2400	0.0001	0.0001	ST JOSEPHS MANOR
CT	Fairfield	09001	8820	P0013	01	10200501	11.00	MANEVU2002	0.2830	0.0000	0.0008	ASML, US INCORPORATED
CT	Fairfield	09001	8820	P0013	02	10200603	11.00	MANEVU2002	1.7080	0.0044	0.0044	ASML, US INCORPORATED
CT	Fairfield	09001	8820	P0016	01	10200501	17.00	MANEVU2002	0.2830	0.0000	0.0008	ASML, US INCORPORATED
CT	Fairfield	09001	8820	P0016	02	10200603	17.00	MANEVU2002	1.7080	0.0044	0.0044	ASML, US INCORPORATED
CT	Fairfield	09001	8820	R0004	01	10200501	9.00	MANEVU2002	0.0710	0.0000	0.0002	ASML, US INCORPORATED
CT	Fairfield	09001	8820	R0004	02	10200603	9.00	MANEVU2002	0.4250	0.0011	0.0011	ASML, US INCORPORATED
CT	Fairfield	09001	8820	R0005	01	10200504	9.00	MANEVU2002	0.1390	0.0000	0.0004	ASML, US INCORPORATED
CT	Fairfield	09001	8820	R0005	02	10200603	9.00	MANEVU2002	0.4250	0.1005	0.1005	ASML, US INCORPORATED
CT	Hartford	09003	0406	E0002	02	10200602	16.00	MANEVU2002	1.2600	0.0020	0.0020	JACOBS VEHICLE SYSTEMS, INC
CT	Hartford	09003	0406	R0008	01	10200401	32.00	MANEVU2002	0.0090	0.0000	0.0000	JACOBS VEHICLE SYSTEMS, INC
CT	Hartford	09003	1509	R0019	01	10200602	210.00	MANEVU2002	0.0100	0.0012	0.0012	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1509	R0020	01	10200602	210.00	MANEVU2002	0.0050	0.0000	0.0000	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1509	R0039	01	10200401	159.00	MANEVU2002	18.2840	0.0000	0.0100	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1509	R0039	02	10200601	159.00	MANEVU2002	5.3200	0.0727	0.0727	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1509	R0041	01	10200401	185.00	MANEVU2002	2.2710	0.0000	0.0000	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1509	R0041	02	10200601	185.00	MANEVU2002	1.8150	0.0000	0.0000	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1509	R0042	01	10200401	185.00	MANEVU2002	1.0370	0.0000	0.0000	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1509	R0042	02	10200601	185.00	MANEVU2002	39.4200	0.0000	0.0000	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1510	R0133	01	10300601	178.00	MANEVU2002	0.0510	0.0000	0.0000	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1510	R0149	01	10300601	210.00	MANEVU2002	0.0140	0.0000	0.0000	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1510	R0164	01	10200501	266.00	MANEVU2002	21.9900	0.0000	0.0000	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1510	R0166	01	10200501	266.00	MANEVU2002	5.9690	0.1457	0.1457	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1510	R0167	01	10200501	408.00	MANEVU2002	5.1400	0.1409	0.1409	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1510	R0168	01	10200501	408.00	MANEVU2002	2.5220	0.0745	0.0745	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	2064	P0007	02	10200602	11.00	MANEVU2002	0.2220	0.0015	0.0015	HAMILTON STANDARD DIV UTC
CT	Hartford	09003	2064	P0008	02	10200602	11.00	MANEVU2002	0.2220	0.0015	0.0015	HAMILTON STANDARD DIV UTC
CT	Hartford	09003	3043	R0228	02	10300602	100.00	MANEVU2002	3.8780	0.0225	0.0225	HARTFORD STEAM COMPANY
CT	Hartford	09003	3043	R0229	01	10200501	100.00	MANEVU2002	0.0200	0.0000	0.0001	HARTFORD STEAM COMPANY
CT	Hartford	09003	3043	R0229	02	10300602	100.00	MANEVU2002	5.8020	0.0344	0.0344	HARTFORD STEAM COMPANY
CT	Hartford	09003	3043	R0230	02	10300602	100.00	MANEVU2002	22.9060	0.0776	0.0776	HARTFORD STEAM COMPANY
CT	Hartford	09003	3043	R0231	02	10300602	100.00	MANEVU2002	17.6940	0.0581	0.0581	HARTFORD STEAM COMPANY
CT	Hartford	09003	3043	R0232	01	10200501	122.00	MANEVU2002	0.0030	0.0000	0.0000	HARTFORD STEAM COMPANY
CT	Hartford	09003	3043	R0232	02	10300601	122.00	MANEVU2002	6.5000	0.0265	0.0265	HARTFORD STEAM COMPANY
CT	Hartford	09003	3094	R0349	01	10200603	6.00	MANEVU2002	0.0010	0.0000	0.0000	M. SWIFT & SONS INC
CT	Hartford	09003	3094	R0350	01	10200504	6.00	MANEVU2002	0.4230	0.0000	0.0000	M. SWIFT & SONS INC
CT	Hartford	09003	3094	R0351	01	10200504	6.00	MANEVU2002	0.4230	0.0000	0.0000	M. SWIFT & SONS INC
CT	Hartford	09003	3405	E0005	01	10300603	1.00	MANEVU2002	0.0430	0.0000	0.0000	M D C /HARTFORD WPCF
CT	Hartford	09003	3405	E0006	01	10300603	7.00	MANEVU2002	0.4150	0.0000	0.0000	M D C /HARTFORD WPCF
CT	Hartford	09003	3405	E0007	01	10300603	1.00	MANEVU2002	0.0280	0.0000	0.0000	M D C /HARTFORD WPCF
CT	Hartford	09003	3471	P0251	02	10300601	76.00	MANEVU2002	1.9740	0.0011	0.0011	THE HARTFORD STEAM CO
CT	Hartford	09003	3666	P0065	01	10300501	189.00	MANEVU2002	0.2140	0.0000	0.0004	CAPITOL DISTRICT ENERGY CENTER
CT	Hartford	09003	3666	P0065	02	10300601	189.00	MANEVU2002	24.1810	0.0392	0.0392	CAPITOL DISTRICT ENERGY CENTER
CT	Hartford	09003	3678	P0205	02	10300603	6.00	MANEVU2002	0.3250	0.0009	0.0009	CONN DEPT CORR / HARTFORD CCC
CT	Hartford	09003	3678	P0206	02	10300603	6.00	MANEVU2002	0.3250	0.0009	0.0009	CONN DEPT CORR / HARTFORD CCC

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CT	Hartford	09003	3678	P0211	02	10300603	6.00	MANEVU2002	0.3250	0.0009	0.0009	CONN DEPT CORR / HARTFORD CCC
CT	Hartford	09003	3694	P0280	02	10300603	9.00	MANEVU2002	0.0900	0.0000	0.0000	HARTFORD COURANT CO
CT	Hartford	09003	3694	P0281	02	10300603	9.00	MANEVU2002	0.0900	0.0000	0.0000	HARTFORD COURANT CO
CT	Hartford	09003	5009	R0015	02	10200602	21.00	MANEVU2002	0.4300	0.0000	0.0000	VYNCOLIT NORTH AMERICA, INC
CT	Hartford	09003	5009	R0016	02	10200602	13.00	MANEVU2002	0.7750	0.1555	0.1555	VYNCOLIT NORTH AMERICA, INC
CT	Hartford	09003	5009	R0016	01	10200401	13.00	MANEVU2002	1.4550	0.2914	0.2914	VYNCOLIT NORTH AMERICA, INC
CT	Hartford	09003	5632	E0001	02	10200603	8.00	MANEVU2002	0.7400	0.0000	0.0000	STANLEY HARDWARE DIV
CT	Hartford	09003	5632	E0002	02	10200603	8.00	MANEVU2002	0.7400	0.0000	0.0000	STANLEY HARDWARE DIV
CT	Hartford	09003	5882	E0001	02	10200602	15.00	MANEVU2002	1.3490	0.0000	0.0000	STANLEY TOOLS DIV
CT	Hartford	09003	5882	E0002	02	10200602	15.00	MANEVU2002	0.9770	0.0000	0.0000	STANLEY TOOLS DIV
CT	Hartford	09003	6103	R0006	02	10300603	9.00	MANEVU2002	0.7500	0.0021	0.0021	HARTFORD HOSPITAL/NEWINGTON
CT	Hartford	09003	8601	P0031	02	10200601	172.00	MANEVU2002	5.2860	0.0379	0.0379	ALGONQUIN WINDSOR LOCKS LLC
CT	Hartford	09003	8601	P0032	01	10200501	172.00	MANEVU2002	0.0510	0.0000	0.0001	ALGONQUIN WINDSOR LOCKS LLC
CT	Hartford	09003	8601	P0032	02	10200601	172.00	MANEVU2002	6.1550	0.0458	0.0458	ALGONQUIN WINDSOR LOCKS LLC
CT	Hartford	09003	8602	R0052	01	10200401	62.00	MANEVU2002	2.2060	0.0000	0.0061	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0052	02	10200602	62.00	MANEVU2002	4.1310	0.0227	0.0227	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0053	01	10200401	62.00	MANEVU2002	1.7210	0.0068	0.0068	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0053	02	10200602	62.00	MANEVU2002	2.7470	0.0168	0.0168	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0054	01	10200401	62.00	MANEVU2002	2.8030	0.0000	0.0059	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0054	02	10200602	62.00	MANEVU2002	4.8450	0.0279	0.0279	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0055	01	10200401	73.00	MANEVU2002	0.1270	0.0025	0.0025	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0059	01	10200501	21.00	MANEVU2002	0.0010	0.0000	0.0000	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0059	02	10200602	21.00	MANEVU2002	0.0980	0.0000	0.0000	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0060	01	10200501	22.00	MANEVU2002	0.0010	0.0000	0.0000	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0060	02	10200602	22.00	MANEVU2002	0.1980	0.0000	0.0000	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8609	E0001	01	10300603	6.00	MANEVU2002	0.3240	0.0000	0.0000	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	E0002	01	10300603	6.00	MANEVU2002	0.3240	0.0000	0.0000	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	E0003	01	10300603	6.00	MANEVU2002	0.4310	0.0000	0.0002	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	E0004	01	10300603	6.00	MANEVU2002	0.0990	0.0002	0.0002	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	E0005	01	10300603	1.00	MANEVU2002	0.0570	0.0002	0.0002	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	E0006	01	10300603	2.00	MANEVU2002	0.0260	0.0000	0.0000	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	E0007	01	10300603	3.00	MANEVU2002	0.1110	0.0002	0.0002	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	P0097	01	10300602	3.00	MANEVU2002	0.5350	0.0000	0.0000	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	P0098	01	10300602	3.00	MANEVU2002	0.5350	0.0000	0.0000	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	R0112	01	10300602	6.00	MANEVU2002	0.3970	0.0000	0.0000	CONN DEPT OF TRANSPORTATION
CT	Litchfield	09005	0606	R0017	02	10200501	86.00	MANEVU2002	0.0230	0.0000	0.0001	KIMBERLY-CLARK CORP
CT	Litchfield	09005	0606	R0017	03	10200602	86.00	MANEVU2002	11.3010	0.0265	0.0265	KIMBERLY-CLARK CORP
CT	Litchfield	09005	0606	R0018	01	10200501	59.00	MANEVU2002	0.1820	0.0005	0.0005	KIMBERLY-CLARK CORP
CT	Litchfield	09005	0606	R0019	03	10200602	79.00	MANEVU2002	11.9860	0.0162	0.0162	KIMBERLY-CLARK CORP
CT	Litchfield	09005	1202	P0019	01	10200602	13.00	MANEVU2002	0.0100	0.0003	0.0003	G L C ASSOCIATES
CT	Litchfield	09005	1202	R0002	01	10200402	17.00	MANEVU2002	3.9410	0.0098	0.0098	G L C ASSOCIATES
CT	Litchfield	09005	1202	R0003	01	10200402	17.00	MANEVU2002	4.5680	0.0107	0.0107	G L C ASSOCIATES
CT	Litchfield	09005	1202	R0004	01	10200402	8.00	MANEVU2002	1.0810	0.0037	0.0037	G L C ASSOCIATES
CT	Litchfield	09005	1205	P0002	02	10200602	13.00	MANEVU2002	1.4200	0.0035	0.0035	WHYCO FINISHING TECH,INC.
CT	Litchfield	09005	1205	R0076	01	10200603	8.00	MANEVU2002	0.6850	0.0017	0.0017	WHYCO FINISHING TECH,INC.
CT	Litchfield	09005	1407	P0017	01	10200504	15.00	MANEVU2002	0.6860	0.0008	0.0008	FM PRECISION GOLF MFG CORP
CT	Litchfield	09005	1407	P0017	02	10200602	15.00	MANEVU2002	2.8500	0.0031	0.0031	FM PRECISION GOLF MFG CORP
CT	Litchfield	09005	1407	R0011	01	10200504	16.00	MANEVU2002	0.0750	0.0000	0.0002	FM PRECISION GOLF MFG CORP
CT	Litchfield	09005	1826	E0001	01	10200603	3.00	MANEVU2002	0.3600	0.0010	0.0010	EYELEMATIC MFG CO
CT	Middlesex	09007	0857	P0024	01	10200401	167.00	MANEVU2002	21.2260	0.0214	0.0214	PRATT & WHITNEY DIV UTC
CT	Middlesex	09007	0857	P0036	01	10200401	60.00	MANEVU2002	12.5450	0.1021	0.1021	PRATT & WHITNEY DIV UTC
CT	Middlesex	09007	0857	R0015	01	10200401	156.00	MANEVU2002	15.8840	0.0021	0.0021	PRATT & WHITNEY DIV UTC

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CT	Middlesex	09007	0857	R0016	01	10200401	156.00	MANEVU2002	14.3570	0.0038	0.0038	PRATT & WHITNEY DIV UTC
CT	Middlesex	09007	0866	E0007	01	10200603	9.00	MANEVU2002	1.4470	0.0087	0.0087	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0866	R0113	03	10200602	38.00	MANEVU2002	4.5030	0.0053	0.0053	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0866	R0113	01	10200401	38.00	MANEVU2002	0.2810	0.0002	0.0002	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0866	R0114	03	10200602	38.00	MANEVU2002	2.6270	0.0038	0.0038	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0866	R0114	01	10200401	38.00	MANEVU2002	0.3800	0.0016	0.0016	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0866	R0115	01	10200401	38.00	MANEVU2002	0.0020	0.0000	0.0000	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0866	R0115	03	10200602	38.00	MANEVU2002	1.3150	0.0000	0.0000	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0866	R0116	01	10200401	38.00	MANEVU2002	0.0070	0.0000	0.0000	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0866	R0116	03	10200602	38.00	MANEVU2002	0.2520	0.0000	0.0000	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0874	E0001	01	10200603	8.00	MANEVU2002	0.0820	0.0017	0.0017	NRG MIDDLETOWN OPERATIONS, INC
CT	Middlesex	09007	0874	E0002	01	10200603	3.00	MANEVU2002	0.0400	0.0009	0.0009	NRG MIDDLETOWN OPERATIONS, INC
CT	Middlesex	09007	0874	P0002	01	10200401	168.00	MANEVU2002	41.8440	0.0885	0.0885	NRG MIDDLETOWN OPERATIONS, INC
CT	Middlesex	09007	1030	P0015	01	10200501	6.00	MANEVU2002	0.4290	0.0006	0.0006	HABASIT ABT, INC
CT	Middlesex	09007	1030	P0035	01	10200501	6.00	MANEVU2002	0.6600	0.0024	0.0024	HABASIT ABT, INC
CT	Middlesex	09007	1355	R0006	01	10200602	12.00	MANEVU2002	0.3450	0.0000	0.0000	DONNELLEY & SONS CO, R R
CT	New Haven	09009	0420	R0021	01	10300504	22.00	MANEVU2002	0.0200	0.0000	0.0000	BLAKESLEE PRESTRESS INC
CT	New Haven	09009	0775	P0019	01	10300501	8.00	MANEVU2002	0.0020	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0019	02	10300603	8.00	MANEVU2002	0.4970	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0020	01	10300501	8.00	MANEVU2002	0.0010	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0020	02	10300603	8.00	MANEVU2002	0.4970	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0025	01	10300501	8.00	MANEVU2002	0.0010	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0025	02	10300603	8.00	MANEVU2002	0.4970	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0072	01	10300501	8.00	MANEVU2002	1.2000	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0072	02	10300603	8.00	MANEVU2002	0.0050	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0073	01	10300501	8.00	MANEVU2002	1.2000	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0073	02	10300603	8.00	MANEVU2002	0.0050	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	1920	P0020	01	10300602	15.00	MANEVU2002	0.6000	0.0095	0.0095	J.E.M. INC.
CT	New Haven	09009	1958	P0006	01	10200603	3.00	MANEVU2002	0.7000	0.0019	0.0019	CUNO INC
CT	New Haven	09009	2235	E0001	02	10300603	5.00	MANEVU2002	1.1800	0.0065	0.0065	MID STATE MEDICAL CENTER
CT	New Haven	09009	2235	P0053	02	10300602	20.00	MANEVU2002	0.2680	0.0004	0.0004	MID STATE MEDICAL CENTER
CT	New Haven	09009	2235	P0053	01	10300501	20.00	MANEVU2002	0.1990	0.0000	0.0003	MID STATE MEDICAL CENTER
CT	New Haven	09009	2235	P0054	02	10300602	20.00	MANEVU2002	0.2680	0.0004	0.0004	MID STATE MEDICAL CENTER
CT	New Haven	09009	2235	P0054	01	10300501	20.00	MANEVU2002	0.1990	0.0000	0.0003	MID STATE MEDICAL CENTER
CT	New Haven	09009	2514	E0001	01	10200603	4.00	MANEVU2002	0.0790	0.0003	0.0003	DEVON POWER, LLC
CT	New Haven	09009	2514	E0002	01	10200603	4.00	MANEVU2002	0.1140	0.0005	0.0005	DEVON POWER, LLC
CT	New Haven	09009	2520	P0018	01	10200504	7.00	MANEVU2002	1.9220	0.0000	0.0000	BIC CONSUMER PROD. MANU. CO.
CT	New Haven	09009	2520	P0024	02	10200603	7.00	MANEVU2002	0.0200	0.0000	0.0000	BIC CONSUMER PROD. MANU. CO.
CT	New Haven	09009	2520	R0080	01	10200504	16.00	MANEVU2002	1.0690	0.0000	0.0000	BIC CONSUMER PROD. MANU. CO.
CT	New Haven	09009	3006	R0240	01	10200401	185.00	MANEVU2002	28.8590	0.0000	0.0222	CROMPTON MANUFACTURING CO INC
CT	New Haven	09009	3006	R0240	02	10200601	185.00	MANEVU2002	1.4260	0.0085	0.0085	CROMPTON MANUFACTURING CO INC
CT	New Haven	09009	3006	R0241	02	10200602	83.00	MANEVU2002	1.9130	0.0669	0.0669	CROMPTON MANUFACTURING CO INC
CT	New Haven	09009	3006	R0241	01	10200401	83.00	MANEVU2002	5.8650	0.0000	0.0496	CROMPTON MANUFACTURING CO INC
CT	New Haven	09009	3006	R0243	01	10200401	83.00	MANEVU2002	0.0380	0.0000	0.0001	CROMPTON MANUFACTURING CO INC
CT	New Haven	09009	3349	P0105	02	10300602	81.00	MANEVU2002	7.0450	0.0384	0.0384	YALE UNIV /STERLING POWER PLT
CT	New Haven	09009	3349	P0105	01	10300401	81.00	MANEVU2002	7.8230	0.0000	0.0232	YALE UNIV /STERLING POWER PLT
CT	New Haven	09009	3349	P0326	01	10300401	76.00	MANEVU2002	1.8930	0.0199	0.0199	YALE UNIV /STERLING POWER PLT
CT	New Haven	09009	3349	R0170	01	10300401	90.00	MANEVU2002	21.4000	0.0951	0.0951	YALE UNIV /STERLING POWER PLT
CT	New Haven	09009	3349	R0170	02	10300602	90.00	MANEVU2002	1.8930	0.0308	0.0308	YALE UNIV /STERLING POWER PLT
CT	New Haven	09009	3349	R0171	01	10300401	120.00	MANEVU2002	18.9750	0.0723	0.0723	YALE UNIV /STERLING POWER PLT
CT	New Haven	09009	3349	R0171	02	10300601	120.00	MANEVU2002	0.9910	0.0093	0.0093	YALE UNIV /STERLING POWER PLT
CT	New Haven	09009	3349	R0995	01	10300401	113.00	MANEVU2002	47.6400	0.0917	0.0917	YALE UNIV /STERLING POWER PLT

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CT	New Haven	09009	3349	R0995	02	10300602	113.00	MANEVU2002	6.2570	0.0477	0.0477	YALE UNIV /STERLING POWER PLT
CT	New Haven	09009	3371	R0256	01	10200501	7.00	MANEVU2002	0.2340	0.0000	0.0000	SAINT-GOBAIN PPL CORP
CT	New Haven	09009	3371	R0256	02	10200603	7.00	MANEVU2002	0.3850	0.0000	0.0000	SAINT-GOBAIN PPL CORP
CT	New Haven	09009	3420	E0001	01	10200603	5.00	MANEVU2002	0.0620	0.0000	0.0000	NEW HAVEN TERMINAL, INC
CT	New Haven	09009	3420	E0002	01	10200603	3.00	MANEVU2002	0.2250	0.0000	0.0000	NEW HAVEN TERMINAL, INC
CT	New Haven	09009	3764	R0673	02	10200601	163.00	MANEVU2002	1.2390	0.0000	0.0034	SIMKINS INDUSTRIES INC
CT	New Haven	09009	3764	R0673	01	10200401	163.00	MANEVU2002	85.2320	0.2791	0.2791	SIMKINS INDUSTRIES INC
CT	New Haven	09009	3811	P0006	02	10300602	99.00	MANEVU2002	0.5070	0.0155	0.0155	ST RAPHAEL, HOSPITAL OF
CT	New Haven	09009	3811	P0006	01	10300401	99.00	MANEVU2002	4.1500	0.0000	0.0114	ST RAPHAEL, HOSPITAL OF
CT	New Haven	09009	3811	P0191	02	10300602	99.00	MANEVU2002	0.5070	0.0155	0.0155	ST RAPHAEL, HOSPITAL OF
CT	New Haven	09009	3811	P0191	01	10300401	99.00	MANEVU2002	4.1500	0.0000	0.0114	ST RAPHAEL, HOSPITAL OF
CT	New Haven	09009	3811	P0192	02	10300602	99.00	MANEVU2002	0.5070	0.0155	0.0155	ST RAPHAEL, HOSPITAL OF
CT	New Haven	09009	3811	P0192	01	10300401	99.00	MANEVU2002	4.1500	0.0000	0.0114	ST RAPHAEL, HOSPITAL OF
CT	New Haven	09009	3819	E0011	01	10200501	2.00	MANEVU2002	0.0780	0.0000	0.0000	WILLIAMS ENERGY VENTURES, INC
CT	New Haven	09009	5403	P0064	01	10200504	16.00	MANEVU2002	0.9400	0.0013	0.0013	CONN CONTAINER CORP
CT	New Haven	09009	5403	P0064	02	10200602	16.00	MANEVU2002	2.1500	0.0022	0.0022	CONN CONTAINER CORP
CT	New Haven	09009	6505	P0036	02	10200501	25.00	MANEVU2002	0.4270	0.0000	0.0000	ALLEGHENY LUDLUM CORP
CT	New Haven	09009	6505	P0036	03	10200602	25.00	MANEVU2002	0.9550	0.0000	0.0000	ALLEGHENY LUDLUM CORP
CT	New Haven	09009	6505	P0037	02	10200501	25.00	MANEVU2002	2.1400	0.0000	0.0000	ALLEGHENY LUDLUM CORP
CT	New Haven	09009	6505	P0037	03	10200602	25.00	MANEVU2002	1.4050	0.0000	0.0000	ALLEGHENY LUDLUM CORP
CT	New Haven	09009	6505	P0038	02	10200501	25.00	MANEVU2002	0.5510	0.0000	0.0000	ALLEGHENY LUDLUM CORP
CT	New Haven	09009	6505	P0038	03	10200602	25.00	MANEVU2002	1.4700	0.0000	0.0000	ALLEGHENY LUDLUM CORP
CT	New Haven	09009	6527	E0002	02	10200603	4.00	MANEVU2002	0.2500	0.0007	0.0007	CYTEC INDUSTRIES INC
CT	New Haven	09009	6527	R0108	02	10200602	82.00	MANEVU2002	7.2240	0.0264	0.0264	CYTEC INDUSTRIES INC
CT	New Haven	09009	6527	R0108	01	10200401	82.00	MANEVU2002	0.2990	0.0000	0.0007	CYTEC INDUSTRIES INC
CT	New Haven	09009	6527	R0110	02	10200602	89.00	MANEVU2002	38.9990	0.1425	0.1425	CYTEC INDUSTRIES INC
CT	New Haven	09009	6527	R0110	01	10200401	89.00	MANEVU2002	0.1620	0.0000	0.0004	CYTEC INDUSTRIES INC
CT	New Haven	09009	7053	E0003	02	10200603	5.00	SCC Descriptio	0.0300	0.0004	0.0004	SOMERS THIN STRIP
CT	New Haven	09009	7053	E0004	02	10200603	5.00	SCC Descriptio	0.9400	0.0029	0.0029	SOMERS THIN STRIP
CT	New Haven	09009	7053	R0638	02	10200603	4.00	MANEVU2002	0.1100	0.0000	0.0000	SOMERS THIN STRIP
CT	New Haven	09009	7053	R0639	02	10200603	4.00	MANEVU2002	0.5050	0.0017	0.0017	SOMERS THIN STRIP
CT	New Haven	09009	7053	R0640	02	10200603	7.00	MANEVU2002	0.5850	0.0015	0.0015	SOMERS THIN STRIP
CT	New Haven	09009	7053	R0641	02	10200603	7.00	MANEVU2002	1.0100	0.0026	0.0026	SOMERS THIN STRIP
CT	New London	09011	0604	E0009	01	10201002	0.00	MANEVU2002	0.0060	0.0004	0.0004	PFIZER INC
CT	New London	09011	0604	P0001	02	10200601	267.00	MANEVU2002	39.8860	0.1938	0.1938	PFIZER INC
CT	New London	09011	0604	P0082	01	10200602	3.00	MANEVU2002	0.1200	0.0032	0.0032	PFIZER INC
CT	New London	09011	0604	R0007	01	10200401	153.00	MANEVU2002	35.9680	0.0000	0.0000	PFIZER INC
CT	New London	09011	0604	R0007	02	10200601	153.00	MANEVU2002	8.5250	0.0000	0.0000	PFIZER INC
CT	New London	09011	0604	R0008	01	10200401	153.00	MANEVU2002	25.6030	0.1253	0.1253	PFIZER INC
CT	New London	09011	0604	R0008	02	10200601	153.00	MANEVU2002	15.3250	0.0751	0.0751	PFIZER INC
CT	New London	09011	0604	R0009	02	10200601	153.00	MANEVU2002	18.0560	0.1218	0.1218	PFIZER INC
CT	New London	09011	0604	R0010	02	10200601	220.00	MANEVU2002	20.5750	0.1059	0.1059	PFIZER INC
CT	New London	09011	0604	R0010	01	10200401	220.00	MANEVU2002	6.9460	0.0357	0.0357	PFIZER INC
CT	New London	09011	0604	R0012	01	10200401	399.00	MANEVU2002	83.6150	0.3505	0.3505	PFIZER INC
CT	New London	09011	0604	R0012	02	10200601	399.00	MANEVU2002	22.2050	0.0931	0.0931	PFIZER INC
CT	New London	09011	0605	P0008	01	10200504	14.00	MANEVU2002	0.2410	0.0000	0.0004	ELECTRIC BOAT CORP
CT	New London	09011	0605	P0008	02	10200602	14.00	MANEVU2002	1.6430	0.0082	0.0082	ELECTRIC BOAT CORP
CT	New London	09011	0605	P0032	01	10200504	60.00	MANEVU2002	0.0610	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0605	P0032	02	10200602	60.00	MANEVU2002	0.3100	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0605	P0055	01	10200504	7.00	MANEVU2002	0.7390	0.0000	0.0004	ELECTRIC BOAT CORP
CT	New London	09011	0605	P0055	02	10200603	7.00	MANEVU2002	0.6660	0.0026	0.0026	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0057	01	10200504	8.00	MANEVU2002	0.0660	0.0000	0.0001	ELECTRIC BOAT CORP

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CT	New London	09011	0605	R0057	02	10200603	8.00	MANEVU2002	1.3100	0.0068	0.0068	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0066	01	10200504	91.00	MANEVU2002	0.0440	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0066	02	10200602	91.00	MANEVU2002	0.2380	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0067	01	10200504	90.00	MANEVU2002	0.0790	0.0000	0.0002	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0067	02	10200602	90.00	MANEVU2002	1.2620	0.0000	0.0035	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0068	01	10200504	14.00	MANEVU2002	0.0070	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0068	02	10200602	14.00	MANEVU2002	0.5550	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0069	01	10200501	7.00	MANEVU2002	0.1620	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0074	01	10200504	11.00	MANEVU2002	0.0490	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0074	02	10200602	11.00	MANEVU2002	1.2930	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0628	P0074	02	10300602	98.00	MANEVU2002	0.0110	0.0000	0.0000	U S NAVAL SUBMARINE BASE/PWR P
CT	New London	09011	0628	P0075	01	10300501	8.00	MANEVU2002	0.3560	0.0000	0.0000	U S NAVAL SUBMARINE BASE/PWR P
CT	New London	09011	0628	R0196	02	10300602	101.00	MANEVU2002	9.1240	0.0438	0.0438	U S NAVAL SUBMARINE BASE/PWR P
CT	New London	09011	0628	R0196	01	10300501	101.00	MANEVU2002	0.0410	0.0003	0.0003	U S NAVAL SUBMARINE BASE/PWR P
CT	New London	09011	0628	R0197	02	10300602	101.00	MANEVU2002	3.0790	0.0200	0.0200	U S NAVAL SUBMARINE BASE/PWR P
CT	New London	09011	0628	R0197	01	10300501	101.00	MANEVU2002	2.0110	0.0022	0.0022	U S NAVAL SUBMARINE BASE/PWR P
CT	New London	09011	0628	R0198	01	10300501	101.00	MANEVU2002	0.5730	0.0000	0.0000	U S NAVAL SUBMARINE BASE/PWR P
CT	New London	09011	0628	R0198	02	10300602	101.00	MANEVU2002	2.4710	0.0000	0.0000	U S NAVAL SUBMARINE BASE/PWR P
CT	New London	09011	0635	P0115	01	10300602	16.00	MANEVU2002	0.6300	0.0000	0.0000	UNIV OF CT / AVERY POINT
CT	New London	09011	0635	P0116	01	10300602	16.00	MANEVU2002	1.1800	0.0002	0.0002	UNIV OF CT / AVERY POINT
CT	New London	09011	0635	P0117	01	10300602	16.00	MANEVU2002	1.4850	0.0000	0.0000	UNIV OF CT / AVERY POINT
CT	New London	09011	1202	P0006	02	10200501	9.00	MANEVU2002	2.8490	0.0078	0.0078	DOW CHEMICAL CO
CT	New London	09011	1202	P0007	01	10200501	9.00	MANEVU2002	0.2080	0.0001	0.0001	DOW CHEMICAL CO
CT	New London	09011	1202	P0015	02	10200602	56.00	MANEVU2002	4.8240	0.0116	0.0116	DOW CHEMICAL CO
CT	New London	09011	1202	P0020	02	10200602	47.00	MANEVU2002	2.0670	0.0052	0.0052	DOW CHEMICAL CO
CT	New London	09011	1304	P0003	01	10200504	5.00	MANEVU2002	0.1690	0.0001	0.0001	LISBON TEXTILE PRINTS INC
CT	New London	09011	1503	P0019	02	10200601	183.00	MANEVU2002	16.2870	0.0446	0.0446	RAND-WHITNEY CONTAINERBOARD LP
CT	New London	09011	1504	P0008	01	10200401	99.00	MANEVU2002	0.0120	0.0000	0.0000	SMURFIT-STONE CONTAINER CORP
CT	New London	09011	1830	P0040	01	10300501	21.00	MANEVU2002	0.0130	0.0007	0.0007	PFIZER INC CRD
CT	New London	09011	1830	P0040	02	10300602	21.00	MANEVU2002	0.6480	0.0030	0.0030	PFIZER INC CRD
CT	New London	09011	1830	P0041	01	10300501	21.00	MANEVU2002	0.0090	0.0006	0.0006	PFIZER INC CRD
CT	New London	09011	1830	P0041	02	10300602	21.00	MANEVU2002	0.3410	0.0015	0.0015	PFIZER INC CRD
CT	New London	09011	1830	P0042	01	10300501	21.00	MANEVU2002	0.0090	0.0005	0.0005	PFIZER INC CRD
CT	New London	09011	1830	P0042	02	10300602	21.00	MANEVU2002	0.5000	0.0010	0.0010	PFIZER INC CRD
CT	New London	09011	2432	P0024	01	10200602	11.00	MANEVU2002	1.3050	0.0080	0.0080	PHELPS DODGE COPPER PROD CO
CT	New London	09011	3102	P0001	02	10200602	67.00	MANEVU2002	0.1370	0.0000	0.0000	SPRAGUE PAPERBOARD INC
CT	New London	09011	3102	R0003	02	10200601	275.00	MANEVU2002	215.2620	0.5776	0.5776	SPRAGUE PAPERBOARD INC
CT	New London	09011	3803	P0007	01	10300504	70.00	MANEVU2002	1.7090	0.0002	0.0002	DOMINION NUCLEAR CT., INC.
CT	New London	09011	3803	P0008	01	10300504	70.00	MANEVU2002	2.4340	0.0002	0.0002	DOMINION NUCLEAR CT., INC.
CT	New London	09011	3803	P0043	02	10301002	0.00	MANEVU2002	0.0310	0.0000	0.0000	DOMINION NUCLEAR CT., INC.
CT	Tolland	09013	0615	R0014	02	10300602	99.00	MANEVU2002	1.0750	0.0019	0.0019	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0014	01	10300501	99.00	MANEVU2002	0.1040	0.0000	0.0002	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0015	02	10300602	99.00	MANEVU2002	0.5890	0.0054	0.0054	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0015	01	10300501	99.00	MANEVU2002	0.0920	0.0000	0.0003	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0016	01	10300501	99.00	MANEVU2002	0.0130	0.0000	0.0000	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0016	02	10300602	99.00	MANEVU2002	21.3440	0.0000	0.0000	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0017	02	10300602	50.00	MANEVU2002	6.9500	0.0500	0.0500	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0017	01	10300501	50.00	MANEVU2002	0.1810	0.0000	0.0010	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0018	02	10300602	50.00	MANEVU2002	14.1740	0.0712	0.0712	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0018	01	10300501	50.00	MANEVU2002	2.5500	0.0194	0.0194	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0019	02	10300602	50.00	MANEVU2002	9.0590	0.0403	0.0403	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0019	01	10300501	50.00	MANEVU2002	2.4960	0.0000	0.0038	UNIV OF CT / STORRS

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CT	Tolland	09013	0615	R0020	02	10300601	152.00	MANEVU2002	7.2100	0.0300	0.0300	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0020	01	10300501	152.00	MANEVU2002	0.0220	0.0000	0.0001	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0021	01	10300501	152.00	MANEVU2002	0.0180	0.0000	0.0000	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0021	02	10300601	152.00	MANEVU2002	22.5400	0.0000	0.0000	UNIV OF CT / STORRS
CT	Tolland	09013	1205	R0008	01	10300504	21.00	MANEVU2002	0.8740	0.0036	0.0036	ROCKVILLE GENERAL HOSPITAL
CT	Tolland	09013	1205	R0009	01	10300504	21.00	MANEVU2002	0.8710	0.0031	0.0031	ROCKVILLE GENERAL HOSPITAL
CT	Tolland	09013	1215	P0009	02	10200602	50.00	MANEVU2002	0.0010	0.0004	0.0004	AMERBELLE CORP
CT	Tolland	09013	1215	P0010	02	10200602	33.00	MANEVU2002	0.1200	0.0002	0.0002	AMERBELLE CORP
CT	Windham	09015	0665	P0025	01	10200401	52.00	MANEVU2002	6.0500	0.0000	0.0166	FRITO-LAY INC
CT	Windham	09015	0665	P0025	03	10200602	52.00	MANEVU2002	6.2780	0.0250	0.0250	FRITO-LAY INC
CT	Windham	09015	0665	P0026	01	10200401	52.00	MANEVU2002	6.4000	0.0000	0.0176	FRITO-LAY INC
CT	Windham	09015	0665	P0026	03	10200602	52.00	MANEVU2002	6.4460	0.0271	0.0271	FRITO-LAY INC
CT	Windham	09015	0665	P0027	01	10200401	52.00	MANEVU2002	6.3330	0.0000	0.0174	FRITO-LAY INC
CT	Windham	09015	0665	P0027	03	10200602	52.00	MANEVU2002	5.1370	0.0195	0.0195	FRITO-LAY INC
CT	Windham	09015	1708	P0010	02	10200603	9.00	MANEVU2002	1.6400	0.0074	0.0074	TUSCARORA INCORPORATED
CT	Windham	09015	1708	P0015	02	10200603	8.00	MANEVU2002	1.1200	0.0444	0.0444	TUSCARORA INCORPORATED
CT	Windham	09015	1708	P0026	02	10200603	6.00	MANEVU2002	0.5800	0.0380	0.0380	TUSCARORA INCORPORATED
CT	Windham	09015	2906	P0017	01	10200602	11.00	MANEVU2002	0.4900	0.0012	0.0012	B I C C BRAND - REX CO
DE	Kent	10001	1000100001	001	2	10300602	49.90	MANEVU2002	4.4517	0.0057	0.0057	DOVER AIR FORCE BASE
DE	Kent	10001	1000100001	003	2	10300602	64.10	MANEVU2002	5.6169	0.0000	0.0000	DOVER AIR FORCE BASE
DE	Kent	10001	1000100001	004	2	10300602	50.00	MANEVU2002	3.6926	0.0134	0.0134	DOVER AIR FORCE BASE
DE	Kent	10001	1000100001	008	3	10300603	1.00	MANEVU2002	5.4450	0.0060	0.0060	DOVER AIR FORCE BASE
DE	Kent	10001	1000100001	203	1	10201002	0.00		0.2066	0.0002	0.0002	DOVER AIR FORCE BASE
DE	Kent	10001	1000100001	467	3	10300602	10.00	MANEVU2002	0.5864	0.0006	0.0006	DOVER AIR FORCE BASE
DE	Kent	10001	1000100002	004	2	10200602	13.40	MANEVU2002	1.5403	0.0161	0.0161	CITY OF DOVER - MCKEE RUN GENERATING STA
DE	Kent	10001	1000100002	005	1	10200602	13.40	MANEVU2002	1.5403	0.0164	0.0164	CITY OF DOVER - MCKEE RUN GENERATING STA
DE	Kent	10001	1000100004	001	1	10200401	36.70	MANEVU2002	13.7982	0.0750	0.0750	PROCTOR AND GAMBLE DOVER WIPES COMPANY
DE	Kent	10001	1000100004	002	2	10200401	38.00	MANEVU2002	2.2025	0.0359	0.0359	PROCTOR AND GAMBLE DOVER WIPES COMPANY
DE	Kent	10001	1000100004	004	2	10200501	1.00	MANEVU2002	0.0060	0.0000	0.0000	PROCTOR AND GAMBLE DOVER WIPES COMPANY
DE	Kent	10001	1000100004	006	3	10200602	25.00	MANEVU2002	2.6500	0.0072	0.0072	PROCTOR AND GAMBLE DOVER WIPES COMPANY
DE	Kent	10001	1000100007	002	2	10200602	75.00	MANEVU2002	2.1007	0.0000	0.0000	KRAFT FOODS NORTH AMERICA
DE	Kent	10001	1000100016	001	1	10200402	49.00	MANEVU2002	1.2131	0.0000	0.0000	DOW REICHHOLD SPECIALTY LATEX LLC
DE	Kent	10001	1000100016	024	1	10200603	1.60	MANEVU2002	0.0742	0.0002	0.0002	DOW REICHHOLD SPECIALTY LATEX LLC
DE	Kent	10001	1000100016	025	1	10200602	73.00	MANEVU2002	8.9578	0.0167	0.0167	DOW REICHHOLD SPECIALTY LATEX LLC
DE	Kent	10001	1000100024	001	1	10200401	33.50	MANEVU2002	8.6593	0.0029	0.0029	HANOVER FOODS CORPORATION
DE	Kent	10001	1000100024	001	2	10200602	33.50	MANEVU2002	0.5566	0.0002	0.0002	HANOVER FOODS CORPORATION
DE	Kent	10001	1000100026	001	1	10300501	10.50	MANEVU2002	1.0375	0.0007	0.0007	BAYHEALTH MED CENTER KENT GENERAL HOSP
DE	Kent	10001	1000100026	001	2	10300602	10.50	MANEVU2002	0.2112	0.0001	0.0001	BAYHEALTH MED CENTER KENT GENERAL HOSP
DE	Kent	10001	1000100066	001	3	10300602	18.00	MANEVU2002	2.9498	0.0026	0.0026	DELAWARE STATE UNIVERSITY
DE	Kent	10001	1000100066	001	1	10300501	18.00	MANEVU2002	0.8525	0.0007	0.0007	DELAWARE STATE UNIVERSITY
DE	Kent	10001	1000100075	001	1	10200404	15.00	MANEVU2002	15.3389	0.0566	0.0566	PERDUE FARMS INC - MILFORD
DE	Kent	10001	1000100121	002	1	10200603	5.00	SCC Descriptio	0.2422	0.0009	0.0009	COLOR-BOX LLC
DE	Kent	10001	1000100121	003	1	10200603	5.00	SCC Descriptio	0.2265	0.0009	0.0009	COLOR-BOX LLC
DE	New Castle	10003	1000300003	001	2	10200601	123.00	MANEVU2002	1.4682	0.0030	0.0030	CIBA SPECIALTY CHEMICALS CORP
DE	New Castle	10003	1000300003	002	2	10200602	123.00	MANEVU2002	1.4682	0.0030	0.0030	CIBA SPECIALTY CHEMICALS CORP
DE	New Castle	10003	1000300003	097	2	10200603	5.00	SCC Descriptio	2.9621	0.0080	0.0080	CIBA SPECIALTY CHEMICALS CORP
DE	New Castle	10003	1000300004	001	1	10200602	71.30	MANEVU2002	2.4632	0.0112	0.0112	WILMINGTON PIECE DYE CO
DE	New Castle	10003	1000300010	007	1	10200401	45.00	MANEVU2002	10.0435	0.0309	0.0309	DUPONT EDGEMOOR
DE	New Castle	10003	1000300010	007	2	10200602	45.00	MANEVU2002	7.6217	0.0235	0.0235	DUPONT EDGEMOOR
DE	New Castle	10003	1000300010	013	2	10200602	10.00	MANEVU2002	3.5560	0.0109	0.0109	DUPONT EDGEMOOR
DE	New Castle	10003	1000300010	023	1	10200602	30.00	MANEVU2002	6.3090	0.1983	0.1983	DUPONT EDGEMOOR
DE	New Castle	10003	1000300010	025	1	10200602	20.00	MANEVU2002	6.5640	0.0202	0.0202	DUPONT EDGEMOOR

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DE	New Castle	10003	1000300011	001	1	10200401	96.00	MANEVU2002	51.1583	0.2107	0.2107	DUPONT EXPERIMENTAL STATION
DE	New Castle	10003	1000300011	002	1	10200401	96.00	MANEVU2002	45.1423	0.1946	0.1946	DUPONT EXPERIMENTAL STATION
DE	New Castle	10003	1000300011	003	1	10200401	96.00	MANEVU2002	68.2381	0.2196	0.2196	DUPONT EXPERIMENTAL STATION
DE	New Castle	10003	1000300011	004	1	10200401	96.00	MANEVU2002	28.8528	0.0000	0.0000	DUPONT EXPERIMENTAL STATION
DE	New Castle	10003	1000300015	001	1	10200401	75.00	MANEVU2002	1.1074	0.0040	0.0040	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	001	2	10200602	75.00	MANEVU2002	5.3725	0.0192	0.0192	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	002	1	10200401	75.00	MANEVU2002	9.8705	0.0000	0.0000	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	003	1	10200401	75.00	MANEVU2002	18.2731	0.0000	0.0000	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	005	2	10200602	86.00	MANEVU2002	5.0636	0.0142	0.0142	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	005	1	10200401	86.00	MANEVU2002	0.0347	0.0001	0.0001	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	015	3	10200603	5.00	SCC Descriptio	1.2104	0.0055	0.0055	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	023	1	10300602	15.00	MANEVU2002	3.1871	0.0145	0.0145	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	024	1	10300602	15.00	MANEVU2002	2.0073	0.0091	0.0091	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	025	1	10200603	16.00	MANEVU2002	0.1820	0.0008	0.0008	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	026	1	10200602	30.00	MANEVU2002	0.0690	0.0003	0.0003	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	027	1	10200602	30.00	MANEVU2002	0.0965	0.0004	0.0004	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300016	003	1	10200701	15.00	MANEVU2002	7.2100	0.0212	0.0212	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	007	1	10200701	180.00	MANEVU2002	87.6000	0.2380	0.2380	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	013	1	10200701	100.00	MANEVU2002	15.2000	0.0479	0.0479	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	027	2	10200701	0.00		4.5000	0.0127	0.0127	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	028	2	10200701	0.00		4.8000	0.0136	0.0136	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	030	1	10200701	44.50	TITLE V PERM	18.4100	0.0540	0.0540	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	031	1	10200701	44.50	TITLE V PERM	10.2900	0.0302	0.0302	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	032	1	10200701	15.10	TITLE V PERM	6.6500	0.0195	0.0195	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	034	2	10200701	337.00	TITLE V PERM	79.3000	0.2413	0.2413	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	072	1	10200601	461.00	MANEVU2002	1.5000	0.0000	0.0000	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	074	1	10200701	352.00	TITLE V PERM	82.2000	0.2144	0.2144	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	075	1	10200701	352.00	TITLE V PERM	79.2000	0.2066	0.2066	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	076	1	10200701	352.00	TITLE V PERM	34.3000	0.0895	0.0895	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	077	1	10200701	50.00	MANEVU2002	25.6000	0.0668	0.0668	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	084	1	10200602	66.00	MANEVU2002	23.5000	0.0562	0.0562	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	085	1	10200602	50.00	MANEVU2002	24.5000	0.0586	0.0586	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	090	1	10200701	14.80	MANEVU2002	21.2100	0.0599	0.0599	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	091	1	10200701	21.00	MANEVU2002	3.6400	0.0123	0.0123	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	092	1	10200701	30.00	MANEVU2002	11.0600	0.0373	0.0373	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	095	1	10200701	33.00	MANEVU2002	11.8000	0.0385	0.0385	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	096	1	10200701	34.00	MANEVU2002	10.0100	0.0326	0.0326	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	098	1	10200701	44.00	MANEVU2002	22.1000	0.0673	0.0673	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	099	1	10200701	50.00	MANEVU2002	10.7000	0.0326	0.0326	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	105	1	10200701	349.00	MANEVU2002	70.9000	0.2004	0.2004	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	105	2	10200701	349.00	MANEVU2002	2.2000	0.0062	0.0062	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	106	1	10200701	38.00	TITLE V PERM	23.0300	0.0751	0.0751	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	125	1	10200701	107.00	MANEVU2002	1.9700	0.0054	0.0054	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	126	2	10200701	0.00		3.2400	0.0106	0.0106	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300017	001	2	10200502	13.00	MANEVU2002	0.0061	0.0003	0.0003	HERCULES INCORPORATED RESEARCH CENTER
DE	New Castle	10003	1000300017	002	1	10200402	72.00	MANEVU2002	3.3698	0.0193	0.0193	HERCULES INCORPORATED RESEARCH CENTER
DE	New Castle	10003	1000300017	004	1	10200402	49.00	MANEVU2002	21.5050	0.0555	0.0555	HERCULES INCORPORATED RESEARCH CENTER
DE	New Castle	10003	1000300017	005	1	10200402	32.50	MANEVU2002	5.3739	0.0459	0.0459	HERCULES INCORPORATED RESEARCH CENTER
DE	New Castle	10003	1000300018	001	2	10200602	96.20	MANEVU2002	15.6060	0.0557	0.0557	NVF COMPANY INC - YORKLYN FACILITY
DE	New Castle	10003	1000300021	001	2	10200601	165.00	MANEVU2002	189.5300	0.5356	0.5356	SUNCO INC R M
DE	New Castle	10003	1000300021	002	2	10200701	165.00	MANEVU2002	95.5400	0.3372	0.3372	SUNCO INC R M
DE	New Castle	10003	1000300021	003	2	10200601	165.00	MANEVU2002	186.5200	0.6082	0.6082	SUNCO INC R M

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DE	New Castle	10003	1000300021	004	1	10300602	69.00	MANEVU2002	4.1600	0.0121	0.0121	SUNCO INC R M
DE	New Castle	10003	1000300021	014	1	10200602	25.00	MANEVU2002	15.2755	0.0382	0.0382	SUNCO INC R M
DE	New Castle	10003	1000300021	018	1	10200701	165.00	MANEVU2002	0.5501	0.0015	0.0015	SUNCO INC R M
DE	New Castle	10003	1000300021	019	1	10200601	43.00	MANEVU2002	14.7434	0.0983	0.0983	SUNCO INC R M
DE	New Castle	10003	1000300021	020	1	10200701	43.00	MANEVU2002	9.4276	0.0051	0.0051	SUNCO INC R M
DE	New Castle	10003	1000300021	021	1	10200701	43.00	MANEVU2002	17.9725	0.0625	0.0625	SUNCO INC R M
DE	New Castle	10003	1000300021	022	1	10200701	43.00	MANEVU2002	6.3189	0.0013	0.0013	SUNCO INC R M
DE	New Castle	10003	1000300021	023	1	10200701	7.10	MANEVU2002	5.5544	0.0192	0.0192	SUNCO INC R M
DE	New Castle	10003	1000300021	024	1	10200701	3.50	MANEVU2002	2.2217	0.0116	0.0116	SUNCO INC R M
DE	New Castle	10003	1000300022	001	2	10300603	5.20	MANEVU2002	0.3285	0.0000	0.0000	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	003	2	10300603	3.30	MANEVU2002	0.3470	0.0005	0.0005	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	005	2	10300602	12.00	MANEVU2002	0.8640	0.0004	0.0004	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	007	2	10300602	76.00	MANEVU2002	2.6085	0.0360	0.0360	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	007	1	10300501	76.00	MANEVU2002	0.0246	0.0003	0.0003	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	008	1	10300501	41.00	MANEVU2002	1.2822	0.0000	0.0000	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	008	2	10300602	41.00	MANEVU2002	4.4890	0.0000	0.0000	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	009	1	10300501	30.00	MANEVU2002	0.2569	0.0026	0.0026	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	009	2	10300602	30.00	MANEVU2002	0.2620	0.0026	0.0026	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	011	2	10300602	40.00	MANEVU2002	0.1990	0.0000	0.0000	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	025	1	10300602	0.70	MANEVU2002	0.0690	0.0005	0.0005	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	030	2	10300603	0.30	MANEVU2002	1.8600	0.0172	0.0172	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	030	3	10300503	0.30	MANEVU2002	0.2711	0.0025	0.0025	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	043	1	10300603	6.40	MANEVU2002	0.6026	0.0014	0.0014	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	050	1	10200603	8.40	MANEVU2002	1.2592	0.0022	0.0022	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	051	1	10200602	23.40	MANEVU2002	1.0800	0.0013	0.0013	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	053	1	10200602	5.20	MANEVU2002	0.7155	0.0009	0.0009	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300023	001	1	10200602	25.00	MANEVU2002	1.1300	0.0000	0.0000	AMTRAK WILMINGTON MAINTENANCE FACILITY
DE	New Castle	10003	1000300023	002	1	10200602	25.00	MANEVU2002	1.1000	0.0000	0.0000	AMTRAK WILMINGTON MAINTENANCE FACILITY
DE	New Castle	10003	1000300023	003	1	10200602	12.00	MANEVU2002	0.6350	0.0050	0.0050	AMTRAK WILMINGTON MAINTENANCE FACILITY
DE	New Castle	10003	1000300024	001	1	10200602	55.00	SCC Descriptio	5.4212	0.0101	0.0101	CHRISTIANA CARE - WILMINGTON HOSPITAL
DE	New Castle	10003	1000300027	002	2	10200602	25.40	MANEVU2002	3.1562	0.0124	0.0124	FORMOSA PLASTICS CORPORATION
DE	New Castle	10003	1000300027	005	2	10200602	33.80	MANEVU2002	6.1774	0.0007	0.0007	FORMOSA PLASTICS CORPORATION
DE	New Castle	10003	1000300029	001	1	10200602	21.00	MANEVU2002	0.9089	0.0041	0.0041	AMETEK INC CHEMICAL PRODUCTS DIVISION
DE	New Castle	10003	1000300029	002	1	10200602	25.00	MANEVU2002	1.1749	0.0000	0.0000	AMETEK INC CHEMICAL PRODUCTS DIVISION
DE	New Castle	10003	1000300029	002	2	10200401	25.00	MANEVU2002	0.0870	0.0000	0.0000	AMETEK INC CHEMICAL PRODUCTS DIVISION
DE	New Castle	10003	1000300030	001	3	10200799	49.00	MANEVU2002	15.7905	0.0574	0.0574	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	001	2	10200602	49.00	MANEVU2002	3.0500	0.0111	0.0111	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	001	1	10200501	49.00	MANEVU2002	0.0926	0.0003	0.0003	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	002	2	10200602	17.00	MANEVU2002	1.0088	0.0572	0.0572	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	002	1	10200501	17.00	MANEVU2002	0.0002	0.0000	0.0000	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	003	2	10200602	17.00	MANEVU2002	0.7761	0.0310	0.0310	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	004	3	10200799	49.00	MANEVU2002	9.7847	0.0367	0.0367	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	004	1	10200501	49.00	MANEVU2002	0.2029	0.0008	0.0008	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	004	2	10200602	49.00	MANEVU2002	2.4044	0.0090	0.0090	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	013	2	10200603	5.00	SCC Descriptio	0.6000	0.0017	0.0017	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	014	2	10200602	28.00	MANEVU2002	0.5598	0.0016	0.0016	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300032	007	1	10200401	100.00	MANEVU2002	14.0530	0.0321	0.0321	GENERAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300032	007	2	10300602	100.00	MANEVU2002	18.6305	0.0425	0.0425	GENERAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300032	012	1	10200601	144.00	MANEVU2002	14.4200	0.0439	0.0439	GENERAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300032	012	2	10200501	144.00	MANEVU2002	0.0492	0.0001	0.0001	GENERAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300032	014	1	10200501	6.00	MANEVU2002	0.5156	0.0002	0.0002	GENERAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300032	016	1	10200501	17.50	MANEVU2002	0.5156	0.0000	0.0002	GENERAL CHEMICAL CORPORATION

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DE	New Castle	10003	1000300032	017	1	10200501	17.50	MANEVU2002	0.5156	0.0002	0.0002	GENERAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300033	006	6	10200603	5.00	SCC Descriptio	0.3107	0.0017	0.0017	ROHM & HAAS ELECTRONIC MATERIALS CMP TE
DE	New Castle	10003	1000300033	023	1	10200602	20.90	MANEVU2002	0.4972	0.0018	0.0018	ROHM & HAAS ELECTRONIC MATERIALS CMP TE
DE	New Castle	10003	1000300033	030	1	10200602	0.40	MANEVU2002	0.0277	0.0001	0.0001	ROHM & HAAS ELECTRONIC MATERIALS CMP TE
DE	New Castle	10003	1000300037	004	1	10200603	5.20	MANEVU2002	0.8677	0.0028	0.0028	FP INTERNATIONAL INC
DE	New Castle	10003	1000300049	001	1	10200401	25.00	MANEVU2002	4.1144	0.0274	0.0274	DUPONT WILMINGTON OFFICE BUILDING
DE	New Castle	10003	1000300049	002	1	10200401	25.00	MANEVU2002	3.4632	0.0000	0.0000	DUPONT WILMINGTON OFFICE BUILDING
DE	New Castle	10003	1000300049	003	1	10200401	25.00	MANEVU2002	3.5219	0.0000	0.0000	DUPONT WILMINGTON OFFICE BUILDING
DE	New Castle	10003	1000300049	004	1	10200401	25.00	MANEVU2002	5.8327	0.0000	0.0000	DUPONT WILMINGTON OFFICE BUILDING
DE	New Castle	10003	1000300049	005	1	10200401	25.00	MANEVU2002	7.4708	0.0441	0.0441	DUPONT WILMINGTON OFFICE BUILDING
DE	New Castle	10003	1000300051	201	1	10200602	25.00	MANEVU2002	0.0003	0.0000	0.0000	FMC BIOPOLYMER
DE	New Castle	10003	1000300051	202	1	10200602	25.00	MANEVU2002	0.0005	0.0000	0.0000	FMC BIOPOLYMER
DE	New Castle	10003	1000300051	302	1	10200602	55.00	SCC Descriptio	0.0005	0.0000	0.0000	FMC BIOPOLYMER
DE	New Castle	10003	1000300051	303	1	10200602	55.00	SCC Descriptio	0.0005	0.0000	0.0000	FMC BIOPOLYMER
DE	New Castle	10003	1000300051	305	2	10200602	55.00	SCC Descriptio	0.0023	0.0001	0.0001	FMC BIOPOLYMER
DE	New Castle	10003	1000300051	308	1	10200602	55.00	SCC Descriptio	0.0006	0.0000	0.0000	FMC BIOPOLYMER
DE	New Castle	10003	1000300051	309	1	10200602	55.00	SCC Descriptio	0.0005	0.0000	0.0000	FMC BIOPOLYMER
DE	New Castle	10003	1000300051	310	1	10200602	55.00	SCC Descriptio	0.0007	0.0000	0.0000	FMC BIOPOLYMER
DE	New Castle	10003	1000300058	007	1	10200501	2.00	MANEVU2002	0.4920	0.0018	0.0018	UNIQEMA
DE	New Castle	10003	1000300058	009	1	10200501	8.00	MANEVU2002	2.0704	0.0072	0.0072	UNIQEMA
DE	New Castle	10003	1000300063	018	1	10300501	2.00	MANEVU2002	0.0272	0.0000	0.0000	CITISTEEL USA
DE	New Castle	10003	1000300067	007	1	10200603	3.90	MANEVU2002	0.7200	0.0016	0.0016	UNISOURCE WORLDWIDE INC
DE	New Castle	10003	1000300077	001	2	10200501	18.00	MANEVU2002	0.1602	0.0000	0.0003	VETERANS ADMINISTRATION HOSPSITAL
DE	New Castle	10003	1000300077	002	3	10300602	18.00	MANEVU2002	2.9635	0.0052	0.0052	VETERANS ADMINISTRATION HOSPSITAL
DE	New Castle	10003	1000300080	001	1	10200401	49.00	TITLE V PERM	30.4974	0.0536	0.0536	CHRISTIANA CARE - CHRISTIANA HOSPITAL
DE	New Castle	10003	1000300090	001	2	10300602	26.80	MANEVU2002	7.9367	0.0140	0.0140	DELAWARE CORRECTIONAL CENTER - SMYRNA
DE	New Castle	10003	1000300092	001	1	10200603	8.00	MANEVU2002	1.5650	0.0073	0.0073	THE CROWELL CORPORATION
DE	New Castle	10003	1000300093	001	1	10200603	5.00	SCC Descriptio	4.3300	0.0095	0.0095	PRINTPACK INC
DE	New Castle	10003	1000300106	001	1	10200501	3.80	MANEVU2002	1.6260	0.0034	0.0034	ASTRAZENECA PHARMACEUTICALS LP-FAIRFAX
DE	New Castle	10003	1000300106	004	2	10200501	23.00	MANEVU2002	0.3666	0.0008	0.0008	ASTRAZENECA PHARMACEUTICALS LP-FAIRFAX
DE	New Castle	10003	1000300106	004	1	10200602	23.00	MANEVU2002	0.6950	0.0016	0.0016	ASTRAZENECA PHARMACEUTICALS LP-FAIRFAX
DE	New Castle	10003	1000300106	006	1	10200501	33.00	MANEVU2002	0.4080	0.0000	0.0000	ASTRAZENECA PHARMACEUTICALS LP-FAIRFAX
DE	New Castle	10003	1000300106	021	1	10200602	55.00	SCC Descriptio	9.2000	0.0172	0.0172	ASTRAZENECA PHARMACEUTICALS LP-FAIRFAX
DE	New Castle	10003	1000300121	002	2	10200603	8.00	MANEVU2002	0.4255	0.0000	0.0000	WESTVACO CORPORATION
DE	New Castle	10003	1000300126	001	1	10200401	48.00	MANEVU2002	10.1520	0.0709	0.0709	DUPONT CHESTNUT RUN
DE	New Castle	10003	1000300126	002	1	10200401	96.00	MANEVU2002	41.2303	0.1124	0.1124	DUPONT CHESTNUT RUN
DE	New Castle	10003	1000300128	001	2	10200602	72.00	MANEVU2002	4.7786	0.0000	0.0000	DAIMLERCHRYSLER CORPORATION
DE	New Castle	10003	1000300128	002	2	10200602	72.00	MANEVU2002	3.5839	0.0000	0.0000	DAIMLERCHRYSLER CORPORATION
DE	New Castle	10003	1000300128	003	2	10200602	72.00	MANEVU2002	4.8388	0.0000	0.0000	DAIMLERCHRYSLER CORPORATION
DE	New Castle	10003	1000300128	004	2	10200602	72.00	MANEVU2002	0.9974	0.0000	0.0000	DAIMLERCHRYSLER CORPORATION
DE	New Castle	10003	1000300128	054	2	10200602	32.70	MANEVU2002	0.9249	0.0034	0.0034	DAIMLERCHRYSLER CORPORATION
DE	New Castle	10003	1000300128	056	2	10200602	50.00	MANEVU2002	1.4161	0.0000	0.0000	DAIMLERCHRYSLER CORPORATION
DE	New Castle	10003	1000300128	078	2	10200602	32.70	MANEVU2002	0.9249	0.0037	0.0037	DAIMLERCHRYSLER CORPORATION
DE	New Castle	10003	1000300129	001	1	10300501	1.90	MANEVU2002	0.0708	0.0000	0.0000	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	002	1	10300501	1.90	MANEVU2002	0.0708	0.0000	0.0000	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	003	1	10300501	1.90	MANEVU2002	0.0708	0.0000	0.0000	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	004	1	10300501	1.90	MANEVU2002	0.0708	0.0000	0.0000	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	005	1	10300501	1.30	MANEVU2002	0.0708	0.0000	0.0000	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	050	1	10200602	95.00	MANEVU2002	55.9800	0.2525	0.2525	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	051	1	10200602	10.00	MANEVU2002	1.0000	0.0053	0.0053	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	052	1	10200602	10.00	MANEVU2002	0.7177	0.0034	0.0034	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	053	1	10200602	10.00	MANEVU2002	1.0114	0.0054	0.0054	LAFARGE NORTH AMERICA INC

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DE	New Castle	10003	1000300129	054	1	10300602	7.00	MANEVU2002	6.6967	0.0381	0.0381	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	055	1	10300603	5.00	MANEVU2002	0.5441	0.0027	0.0027	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	056	1	10300603	5.00	MANEVU2002	2.5194	0.0123	0.0123	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	057	1	10300603	7.50	MANEVU2002	0.3808	0.0018	0.0018	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300131	001	1	10300401	36.00	MANEVU2002	27.8799	0.0551	0.0551	ALFRED I DUPONT HOSPITAL FOR CHILDREN
DE	New Castle	10003	1000300133	001	2	10300602	31.00	MANEVU2002	3.4987	0.0058	0.0058	ST. FRANCIS HOSPITAL
DE	New Castle	10003	1000300279	003	1	10200401	46.00	MANEVU2002	13.0110	0.0976	0.0976	DUPONT STINE - HASKELL LABORATORY
DE	New Castle	10003	1000300279	004	2	10200401	46.00	MANEVU2002	26.3863	0.1012	0.1012	DUPONT STINE - HASKELL LABORATORY
DE	New Castle	10003	1000300279	005	2	10200401	47.60	MANEVU2002	0.3762	0.0941	0.0941	DUPONT STINE - HASKELL LABORATORY
DE	New Castle	10003	1000300279	032	1	10200602	49.00	MANEVU2002	2.4000	0.0233	0.0233	DUPONT STINE - HASKELL LABORATORY
DE	New Castle	10003	1000300279	044	1	10200602	47.60	MANEVU2002	2.2894	0.0000	0.0000	DUPONT STINE - HASKELL LABORATORY
DE	New Castle	10003	1000300279	044	2	10200501	47.60	MANEVU2002	0.0001	0.0000	0.0000	DUPONT STINE - HASKELL LABORATORY
DE	New Castle	10003	1000300291	003	1	10200501	12.00	MANEVU2002	0.5826	0.0000	0.0000	DELAWARE TERMINAL COMPANY
DE	New Castle	10003	1000300291	014	1	10200501	8.20	MANEVU2002	1.3230	0.0049	0.0049	DELAWARE TERMINAL COMPANY
DE	New Castle	10003	1000300291	022	1	10200501	8.00	MANEVU2002	2.5059	0.0086	0.0086	DELAWARE TERMINAL COMPANY
DE	New Castle	10003	1000300324	011	2	10200602	20.00	MANEVU2002	1.1700	0.0000	0.0000	NORAMCO INC
DE	New Castle	10003	1000300324	012	1	10200602	10.00	MANEVU2002	0.9780	0.0105	0.0105	NORAMCO INC
DE	New Castle	10003	1000300365	004	1	10200603	5.00	SCC Descriptio	0.8329	0.0000	0.0000	DASSAULT FALCON JET-WILMINGTON CORP
DE	New Castle	10003	1000300367	002	1	10200501	25.20	MANEVU2002	2.4578	0.0138	0.0138	INTERNATIONAL PETROLEUM CORP OF DELAWARE
DE	New Castle	10003	1000300367	002	3	10200501	25.20	MANEVU2002	1.3800	0.0078	0.0078	INTERNATIONAL PETROLEUM CORP OF DELAWARE
DE	New Castle	10003	1000300367	003	1	10200501	25.20	MANEVU2002	1.2000	0.0160	0.0160	INTERNATIONAL PETROLEUM CORP OF DELAWARE
DE	New Castle	10003	1000300367	003	3	10200501	25.20	MANEVU2002	0.4163	0.0056	0.0056	INTERNATIONAL PETROLEUM CORP OF DELAWARE
DE	New Castle	10003	1000300389	005	1	10300701	0.00		0.9120	0.0025	0.0025	WILMINGTON WASTEWATER TREATMENT PLANT
DE	New Castle	10003	1000300389	005	2	10200501	0.00		0.2660	0.0007	0.0007	WILMINGTON WASTEWATER TREATMENT PLANT
DE	New Castle	10003	1000300426	001	1	10200401	37.50	MANEVU2002	12.8274	0.0160	0.0160	SPI POLYOLS INC
DE	New Castle	10003	1000300426	001	2	10200602	37.50	MANEVU2002	2.3754	0.0030	0.0030	SPI POLYOLS INC
DE	New Castle	10003	1000300426	003	1	10200401	75.00	MANEVU2002	34.5090	0.1177	0.1177	SPI POLYOLS INC
DE	New Castle	10003	1000300426	003	2	10200602	75.00	MANEVU2002	0.0300	0.0001	0.0001	SPI POLYOLS INC
DE	New Castle	10003	1000300426	004	1	10200401	115.00	MANEVU2002	78.8800	0.1801	0.1801	SPI POLYOLS INC
DE	New Castle	10003	1000300426	004	2	10200601	115.00	MANEVU2002	7.5950	0.0173	0.0173	SPI POLYOLS INC
DE	New Castle	10003	1000300426	005	1	10200602	96.80	MANEVU2002	1.5311	0.0000	0.0000	SPI POLYOLS INC
DE	New Castle	10003	1000300426	010	2	10200603	2.10	MANEVU2002	0.3466	0.0012	0.0012	SPI POLYOLS INC
DE	New Castle	10003	1000300426	080	3	10200603	1.00	MANEVU2002	0.1733	0.0006	0.0006	SPI POLYOLS INC
DE	New Castle	10003	1000300426	110	1	10300602	55.00	SCC Descriptio	10.8475	0.0308	0.0308	SPI POLYOLS INC
DE	Sussex	10005	1000500002	004	2	10200501	94.00	MANEVU2002	1.5774	0.0000	0.0000	INVISTA
DE	Sussex	10005	1000500002	004	3	10200602	94.00	MANEVU2002	8.7500	0.0000	0.0000	INVISTA
DE	Sussex	10005	1000500002	011	1	10200401	18.00	MANEVU2002	5.3680	0.0000	0.0000	INVISTA
DE	Sussex	10005	1000500002	013	1	10200401	18.00	MANEVU2002	9.6587	0.0398	0.0398	INVISTA
DE	Sussex	10005	1000500002	015	1	10200401	18.00	MANEVU2002	12.0339	0.0410	0.0410	INVISTA
DE	Sussex	10005	1000500002	016	1	10200401	24.00	MANEVU2002	12.5179	0.0401	0.0401	INVISTA
DE	Sussex	10005	1000500002	017	1	10200401	46.60	MANEVU2002	16.0958	0.0902	0.0902	INVISTA
DE	Sussex	10005	1000500002	018	1	10200401	46.40	MANEVU2002	4.6060	0.0000	0.0000	INVISTA
DE	Sussex	10005	1000500003	001	1	10200501	14.60	MANEVU2002	1.1216	0.0031	0.0031	PERDUE FARMS - BRIDGEVILLE
DE	Sussex	10005	1000500003	002	1	10200401	14.60	MANEVU2002	6.9730	0.0192	0.0192	PERDUE FARMS - BRIDGEVILLE
DE	Sussex	10005	1000500003	021	1	10200602	35.00	MANEVU2002	0.3734	0.0014	0.0014	PERDUE FARMS - BRIDGEVILLE
DE	Sussex	10005	1000500004	002	1	10200401	61.70	MANEVU2002	22.1840	0.0536	0.0536	MOUNTAIRE FARMS OF DELAWARE INC-MILLSBOR
DE	Sussex	10005	1000500004	003	1	10200401	69.00	MANEVU2002	3.3630	0.0081	0.0081	MOUNTAIRE FARMS OF DELAWARE INC-MILLSBOR
DE	Sussex	10005	1000500006	001	1	10200603	6.30	MANEVU2002	0.1406	0.0004	0.0004	JOHNSON POLYMER INC
DE	Sussex	10005	1000500009	001	2	10300601	25.00	MANEVU2002	10.1338	0.0456	0.0456	SEA WATCH INTERNATIONAL LTD
DE	Sussex	10005	1000500009	001	1	10300404	25.00	MANEVU2002	4.8263	0.0217	0.0217	SEA WATCH INTERNATIONAL LTD
DE	Sussex	10005	1000500012	001	1	10200401	8.40	MANEVU2002	9.5556	0.0231	0.0231	MOUNTAIRE FARMS OF DELMARVA FRANKFORD
DE	Sussex	10005	1000500013	001	1	10200401	21.00	MANEVU2002	7.0425	0.0163	0.0163	ALLEN FAMILY FOODS INC

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DE	Sussex	10005	1000500016	001	1	10200401	12.00	MANEVU2002	7.3198	0.0201	0.0201	ALLEN'S HATCHERY INC ALLEN'S MILLING
DE	Sussex	10005	1000500016	001	2	10200602	12.00	MANEVU2002	2.7234	0.0075	0.0075	ALLEN'S HATCHERY INC ALLEN'S MILLING
DE	Sussex	10005	1000500036	001	1	10300504	11.70	CONVERSION	2.7303	0.0057	0.0057	BAYHEALTH MEDICAL CTR - MILFORD MEMORIAL
DE	Sussex	10005	1000500066	001	2	10200501	0.20	CONVERSION	0.2582	0.0000	0.0000	JUSTIN TANKS LLC
DE	Sussex	10005	1000500071	001	1	10200401	16.70	MANEVU2002	4.6093	0.0185	0.0185	PINNACLE FOODS CORPORATION - VLASIC PLNT
DE	Sussex	10005	1000500071	002	1	10200401	16.70	MANEVU2002	4.6093	0.0185	0.0185	PINNACLE FOODS CORPORATION - VLASIC PLNT
DE	Sussex	10005	1000500073	001	1	10200401	12.00	MANEVU2002	13.3811	0.0368	0.0368	MOUNTAIRE FARMS OF DELMARVA - SELBYVILLE
DE	Sussex	10005	1000500075	001	1	10200401	20.80	MANEVU2002	7.7097	0.0297	0.0297	PERDUE FARMS INC - GEORGETOWN
DE	Sussex	10005	1000500075	002	1	10200401	20.00	MANEVU2002	11.5646	0.0445	0.0445	PERDUE FARMS INC - GEORGETOWN
DC	Washington	11001	00008	CU-1	1	10300501	59.00	Deirdre Elvis	6.1940	0.0000	0.0165	D.C. GENERAL HOSPITAL
DC	Washington	11001	00008	CU-2	1	10300501	59.00	Deirdre Elvis	6.1940	0.0000	0.0165	D.C. GENERAL HOSPITAL
DC	Washington	11001	00008	CU-4	1	10300501	59.00	Deirdre Elvis	6.1940	0.0000	0.0165	D.C. GENERAL HOSPITAL
DC	Washington	11001	0006	003	1	10301002	160.00	Deirdre Elvis	35.1799	0.0000	0.0966	CAPITOL POWER PLANT
DC	Washington	11001	0006	004	1	10300503	50.00	Deirdre Elvis	11.4414	0.0000	0.0314	CAPITOL POWER PLANT
DC	Washington	11001	0009	001	1	10300504	62.50	Deirdre Elvis	0.0093	0.0000	0.0000	ST. ELIZABETH HOSPITAL
DC	Washington	11001	0009	002	1	10300504	68.75	Deirdre Elvis	0.0209	0.0000	0.0001	ST. ELIZABETH HOSPITAL
DC	Washington	11001	0009	003	1	10300601	68.75	Deirdre Elvis	29.5942	0.0000	0.0800	ST. ELIZABETH HOSPITAL
DC	Washington	11001	0011	001	1-602	10200602	54.38	Deirdre Elvis	3.5137	0.0000	0.0097	U.S. SOLDIERS AND AIRMAN'S HOM
DC	Washington	11001	0011	001	1-502	10200502	54.38	Deirdre Elvis	0.0307	0.0000	0.0001	U.S. SOLDIERS AND AIRMAN'S HOM
DC	Washington	11001	0011	002	41-602	10200602	54.38	Deirdre Elvis	4.3338	0.0000	0.0119	U.S. SOLDIERS AND AIRMAN'S HOM
DC	Washington	11001	0011	002	41-502	10200502	54.38	Deirdre Elvis	0.0038	0.0000	0.0000	U.S. SOLDIERS AND AIRMAN'S HOM
DC	Washington	11001	0011	003	1-602	10300602	36.26	Deirdre Elvis	2.8349	0.0000	0.0078	U.S. SOLDIERS AND AIRMAN'S HOM
DC	Washington	11001	0011	003	1-502	10200502	36.26	Deirdre Elvis	0.0081	0.0000	0.0000	U.S. SOLDIERS AND AIRMAN'S HOM
DC	Washington	11001	0022	001	1	10300601	148.20	Deirdre Elvis	3.3220	0.0000	0.0090	HOWARD UNIVERSITY
DC	Washington	11001	0022	002	1-601	10300601	152.00	Deirdre Elvis	28.1649	0.0000	0.0752	HOWARD UNIVERSITY
DC	Washington	11001	0022	002	1-501	10300501	152.00	Deirdre Elvis	0.2422	0.0000	0.0007	HOWARD UNIVERSITY
DC	Washington	11001	0022	003	1	10300601	152.00	Deirdre Elvis	0.4284	0.0000	0.0012	HOWARD UNIVERSITY
DC	Washington	11001	0022	004	1	10300601	8.20	Deirdre Elvis	0.4575	0.0000	0.0012	HOWARD UNIVERSITY
DC	Washington	11001	0022	005	1	10300601	8.20	Deirdre Elvis	0.1440	0.0000	0.0004	HOWARD UNIVERSITY
DC	Washington	11001	0022	006	1	10300601	8.20	Deirdre Elvis	0.4122	0.0000	0.0011	HOWARD UNIVERSITY
DC	Washington	11001	0022	007	1	10300601	8.20	Deirdre Elvis	0.3717	0.0000	0.0010	HOWARD UNIVERSITY
DC	Washington	11001	0022	008	1	10300601	8.00	Deirdre Elvis	0.1839	0.0000	0.0005	HOWARD UNIVERSITY
DC	Washington	11001	0025	001	1	10300601	250.00	Deirdre Elvis	47.3255	0.0000	0.1279	U.S. GSA CENTRAL HEATING PLANT
DC	Washington	11001	0025	002	2	10300601	250.00	Deirdre Elvis	28.0323	0.0000	0.0758	U.S. GSA CENTRAL HEATING PLANT
DC	Washington	11001	0025	003	2	10300601	500.00	Deirdre Elvis	48.7006	0.0000	0.1300	U.S. GSA CENTRAL HEATING PLANT
DC	Washington	11001	0025	003	1	10300501	500.00	Deirdre Elvis	0.9414	0.0000	0.0025	U.S. GSA CENTRAL HEATING PLANT
DC	Washington	11001	0025	004	2	10300601	500.00	Deirdre Elvis	76.7119	0.0000	0.2048	U.S. GSA CENTRAL HEATING PLANT
DC	Washington	11001	0025	004	1	10300501	500.00	Deirdre Elvis	0.6466	0.0000	0.0017	U.S. GSA CENTRAL HEATING PLANT
DC	Washington	11001	0025	006	1-601	10300601	250.00	Deirdre Elvis	14.9864	0.0000	0.0405	U.S. GSA CENTRAL HEATING PLANT
DC	Washington	11001	0033	001	51	10300602	84.80	Deirdre Elvis	0.6904	0.0000	0.0018	NAVAL RESEARCH LABORATORY
DC	Washington	11001	0033	001	1	10300501	84.80	Deirdre Elvis	0.2023	0.0000	0.0005	NAVAL RESEARCH LABORATORY
DC	Washington	11001	0033	002	1-602	10300602	84.80	Deirdre Elvis	0.9396	0.0000	0.0025	NAVAL RESEARCH LABORATORY
DC	Washington	11001	0033	002	1-501	10300501	84.80	Deirdre Elvis	0.3562	0.0000	0.0009	NAVAL RESEARCH LABORATORY
DC	Washington	11001	0033	003	51	10300602	56.70	Deirdre Elvis	0.8215	0.0000	0.0022	NAVAL RESEARCH LABORATORY
DC	Washington	11001	0033	003	1	10300501	56.70	Deirdre Elvis	0.5920	0.0000	0.0015	NAVAL RESEARCH LABORATORY
ME	Androscoggin	23001	2300100004	001	2	10300602	49.00	MANEVU2002	14.6950	0.0210	0.0210	SAINT MARYS REGIONAL MEDICAL CENTER
ME	Androscoggin	23001	2300100004	001	1	10300501	49.00	MANEVU2002	1.2252	0.0018	0.0018	SAINT MARYS REGIONAL MEDICAL CENTER
ME	Androscoggin	23001	2300100004	002	3	10300603	5.00	SCC Descriptio	3.0100	0.0082	0.0082	SAINT MARYS REGIONAL MEDICAL CENTER
ME	Androscoggin	23001	2300100004	002	2	10300603	5.00	SCC Descriptio	1.7750	0.0048	0.0048	SAINT MARYS REGIONAL MEDICAL CENTER
ME	Androscoggin	23001	2300100004	002	1	10300501	5.00	SCC Descriptio	0.2328	0.0006	0.0006	SAINT MARYS REGIONAL MEDICAL CENTER
ME	Androscoggin	23001	2300100016	001	1	10300502	29.40	MANEVU2002	1.6903	0.0034	0.0034	BATES COLLEGE
ME	Androscoggin	23001	2300100016	001	2	10300602	29.40	MANEVU2002	0.2996	0.0006	0.0006	BATES COLLEGE

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ME	Androscoggin	23001	2300100016	002	1	10300502	29.40	MANEVU2002	1.6903	0.0034	0.0034	BATES COLLEGE
ME	Androscoggin	23001	2300100016	002	2	10300602	29.40	MANEVU2002	0.2996	0.0006	0.0006	BATES COLLEGE
ME	Androscoggin	23001	2300100016	003	1	10300502	29.40	MANEVU2002	1.6903	0.0034	0.0034	BATES COLLEGE
ME	Androscoggin	23001	2300100016	003	2	10300602	29.40	MANEVU2002	0.2996	0.0006	0.0006	BATES COLLEGE
ME	Androscoggin	23001	2300100016	004	1	10300503	32.80	MANEVU2002	1.9500	0.0054	0.0054	BATES COLLEGE
ME	Androscoggin	23001	2300100016	004	2	10300603	32.80	MANEVU2002	2.3500	0.0065	0.0065	BATES COLLEGE
ME	Androscoggin	23001	2300100021	001	3	10300501	3.60	MANEVU2002	0.5991	0.0000	0.0000	PHILIPS ELMET
ME	Androscoggin	23001	2300100021	002	3	10300501	4.50	MANEVU2002	0.2028	0.0000	0.0000	PHILIPS ELMET
ME	Androscoggin	23001	2300100021	003	1	10300603	4.00	MANEVU2002	0.4046	0.0000	0.0007	PHILIPS ELMET
ME	Androscoggin	23001	2300100021	005	1	10300603	5.00	SCC Descriptio	2.8200	0.0000	0.0077	PHILIPS ELMET
ME	Androscoggin	23001	2300100027	001	1	10200401	55.50	MANEVU2002	2.2466	0.0150	0.0150	PIONEER PLASTICS CORPORATION
ME	Androscoggin	23001	2300100027	002	1	10200603	5.00	MANEVU2002	0.5500	0.0015	0.0015	PIONEER PLASTICS CORPORATION
ME	Androscoggin	23001	2300100027	003	1	10200401	39.50	MANEVU2002	27.5453	0.0696	0.0696	PIONEER PLASTICS CORPORATION
ME	Androscoggin	23001	2300100027	004	1	10200401	96.00	MANEVU2002	7.2146	0.0182	0.0182	PIONEER PLASTICS CORPORATION
ME	Androscoggin	23001	2300100027	004	2	10200602	96.00	MANEVU2002	7.9165	0.0200	0.0200	PIONEER PLASTICS CORPORATION
ME	Androscoggin	23001	2300100035	004	3	10201002	55.00	SCC Descriptio	0.1957	0.0005	0.0005	MASONITE CORP
ME	Androscoggin	23001	2300100035	005	1	10301002	6.70	MANEVU2002	0.5684	0.0018	0.0018	MASONITE CORP
ME	Androscoggin	23001	2300100035	006	1	10301002	6.70	MANEVU2002	0.2632	0.0007	0.0007	MASONITE CORP
ME	Androscoggin	23001	2300100070	001	1	10300401	27.00	MANEVU2002	7.8840	0.0000	0.0087	CENTRAL MAINE MEDICAL CENTER
ME	Androscoggin	23001	2300100070	002	1	10300401	27.00	MANEVU2002	9.5175	0.0000	0.0000	CENTRAL MAINE MEDICAL CENTER
ME	Androscoggin	23001	2300100070	003	1	10300401	12.20	MANEVU2002	4.2120	0.0292	0.0292	CENTRAL MAINE MEDICAL CENTER
ME	Androscoggin	23001	2300100070	003	2	10300602	12.20	MANEVU2002	0.0001	0.0000	0.0000	CENTRAL MAINE MEDICAL CENTER
ME	Androscoggin	23001	2300100072	001	1	10301002	0.00		0.3672	0.0010	0.0010	DINGLEY PRESS
ME	Androscoggin	23001	2300100072	002	1	10300603	5.00	SCC Descriptio	2.8400	0.0078	0.0078	DINGLEY PRESS
ME	Androscoggin	23001	2300100076	001	1	10200401	10.50	MANEVU2002	4.0450	0.0111	0.0111	INTERNATIONAL PAPER - AUBURN
ME	Androscoggin	23001	2300100076	002	1	10200401	16.70	MANEVU2002	4.0450	0.0111	0.0111	INTERNATIONAL PAPER - AUBURN
ME	Androscoggin	23001	2300100076	002	2	10200602	16.70	MANEVU2002	1.2700	0.0035	0.0035	INTERNATIONAL PAPER - AUBURN
ME	Androscoggin	23001	2300100081	003	1	10201002	4.70	MANEVU2002	0.8123	0.0021	0.0021	MPAC (MAINE POLY ACQUISTION CORP)
ME	Androscoggin	23001	2300100084	001	1	10200504	6.00	MANEVU2002	0.0705	0.0010	0.0010	TAMBRANDS INC
ME	Androscoggin	23001	2300100084	002	1	10200504	6.00	MANEVU2002	0.6110	0.0012	0.0012	TAMBRANDS INC
ME	Androscoggin	23001	2300100084	003	1	10200504	6.00	MANEVU2002	1.2455	0.0011	0.0011	TAMBRANDS INC
ME	Androscoggin	23001	2300100084	004	1	10200504	6.00	MANEVU2002	0.7990	0.0719	0.0719	TAMBRANDS INC
ME	Androscoggin	23001	2300100084	005	1	10200504	6.00	MANEVU2002	0.3525	0.0000	0.0000	TAMBRANDS INC
ME	Androscoggin	23001	2300100092	001	1	10300503	5.00	SCC Descriptio	0.9037	0.0025	0.0025	QUALITY EGG OF NEW ENGLAND, LLC-DECOSTER
ME	Androscoggin	23001	2300100104	002	1	10201002	0.00		0.6634	0.0000	0.0007	PERFORMANCE PRODUCT PAINTING
ME	Androscoggin	23001	2300100105	001	2	10200603	5.00	SCC Descriptio	2.2890	0.0063	0.0063	FORMED FIBER TECHNOLOGIES
ME	Androscoggin	23001	2300100105	002	4	10200603	5.00	SCC Descriptio	1.4560	0.0040	0.0040	FORMED FIBER TECHNOLOGIES
ME	Androscoggin	23001	2300100105	003	5	10200603	5.00	SCC Descriptio	0.4160	0.0011	0.0011	FORMED FIBER TECHNOLOGIES
ME	Aroostook	23003	2300300004	001	1	10300501	10.40	MANEVU2002	1.2000	0.0000	0.0017	CARY MEDICAL CENTER
ME	Aroostook	23003	2300300004	002	1	10300501	10.40	MANEVU2002	1.2000	0.0000	0.0017	CARY MEDICAL CENTER
ME	Aroostook	23003	2300300004	003	1	10300501	1.30	MANEVU2002	0.6660	0.0000	0.0018	CARY MEDICAL CENTER
ME	Aroostook	23003	2300300010	001	1	10300404	21.00	MANEVU2002	1.4603	0.0000	0.0035	HOULTON REGIONAL HOSPITAL
ME	Aroostook	23003	2300300010	002	1	10300404	49.00	MANEVU2002	1.4300	0.0000	0.0014	HOULTON REGIONAL HOSPITAL
ME	Aroostook	23003	2300300011	002	1	10200401	29.00	MANEVU2002	25.5916	0.0000	0.0591	A E STALEY MANUFACTURING COMPANY
ME	Aroostook	23003	2300300011	002	3	10200401	29.00	MANEVU2002	0.0253	0.0000	0.0001	A E STALEY MANUFACTURING COMPANY
ME	Aroostook	23003	2300300011	002	2	10201002	29.00	MANEVU2002	0.0010	0.0000	0.0000	A E STALEY MANUFACTURING COMPANY
ME	Aroostook	23003	2300300017	001	1	10200905	0.00		5.3780	0.0000	0.0118	COLUMBIA FOREST PRODUCTS VENEER DIV2002
ME	Aroostook	23003	2300300017	002	1	10200902	0.00		5.3780	0.0000	0.0118	COLUMBIA FOREST PRODUCTS VENEER DIV2002
ME	Aroostook	23003	2300300017	006	2	10200905	0.00		2.7809	0.0000	0.0064	COLUMBIA FOREST PRODUCTS VENEER DIV2002
ME	Aroostook	23003	2300300024	001	1	10300501	0.00		5.3292	0.0000	0.0146	LORING COMMERCE CENTRE
ME	Aroostook	23003	2300300026	003	1	10200501	0.00		0.0267	0.0000	0.0000	ATLANTIC CUSTOM PROCESSORS LLC
ME	Aroostook	23003	2300300027	001	1	10200401	240.00	MANEVU2002	38.1640	0.0000	0.1468	NEXFOR FRASER PAPERS INC

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
ME	Aroostook	23003	2300300032	001	1	10300402	22.50	MANEVU2002	8.5138	0.0000	0.0103	MCCAIN FOODS USA INC - EASTON
ME	Aroostook	23003	2300300032	002	1	10300402	22.50	MANEVU2002	9.8200	0.0000	0.0194	MCCAIN FOODS USA INC - EASTON
ME	Aroostook	23003	2300300032	003	1	10300402	60.00	MANEVU2002	55.9886	0.0000	0.1354	MCCAIN FOODS USA INC - EASTON
ME	Aroostook	23003	2300300032	004	1	10300402	60.00	MANEVU2002	43.7198	0.0000	0.1057	MCCAIN FOODS USA INC - EASTON
ME	Aroostook	23003	2300300032	004	2	10301002	60.00	MANEVU2002	0.0021	0.0000	0.0000	MCCAIN FOODS USA INC - EASTON
ME	Aroostook	23003	2300300032	005	1	10300402	98.50	MANEVU2002	17.6018	0.0000	0.0445	MCCAIN FOODS USA INC - EASTON
ME	Aroostook	23003	2300300033	001	1	10200906	10.00	MANEVU2002	1.3182	0.0000	0.0087	IRVING FOREST PRODUCTS - PINKHAM SAWMIL
ME	Aroostook	23003	2300300033	003	1	10200501	68.00	MANEVU2002	0.0144	0.0000	0.0000	IRVING FOREST PRODUCTS - PINKHAM SAWMIL
ME	Aroostook	23003	2300300033	003	2	10200905	68.00	MANEVU2002	6.5348	0.0000	0.0000	IRVING FOREST PRODUCTS - PINKHAM SAWMIL
ME	Aroostook	23003	2300300040	002	4	10200503	5.00	SCC Descriptio	0.0084	0.0000	0.0000	LANE CONSTRUCTION CORP (23)
ME	Aroostook	23003	2300300048	001	2	10200902	84.00	MANEVU2002	79.6000	0.0000	0.2099	J M HUBER CORPORATION
ME	Aroostook	23003	2300300048	001	1	10200501	84.00	MANEVU2002	0.0496	0.0000	0.0001	J M HUBER CORPORATION
ME	Aroostook	23003	2300300050	001	1	10200902	27.00	PART 70 LICEI	18.7545	0.0000	0.0392	J PAUL LEVESQUE & SONS INC - MASARDIS
ME	Aroostook	23003	2300300050	002	1	10200902	12.20	PART 70 LICEI	2.1788	0.0000	0.0000	J PAUL LEVESQUE & SONS INC - MASARDIS
ME	Aroostook	23003	2300300062	001	1	10200904	27.10	MANEVU2002	12.1000	0.0000	0.0213	LOUISIANA-PACIFIC CORP - NEW LIMERICK
ME	Aroostook	23003	2300300062	001	2	10200501	27.10	MANEVU2002	0.0064	0.0000	0.0000	LOUISIANA-PACIFIC CORP - NEW LIMERICK
ME	Aroostook	23003	2300300062	002	2	10200904	27.10	MANEVU2002	9.8630	0.0000	0.0217	LOUISIANA-PACIFIC CORP - NEW LIMERICK
ME	Aroostook	23003	2300300062	002	1	10200501	27.10	MANEVU2002	0.0044	0.0000	0.0000	LOUISIANA-PACIFIC CORP - NEW LIMERICK
ME	Aroostook	23003	2300300063	001	2	10200401	20.40	MANEVU2002	11.9967	0.0000	0.0330	NATIONAL STARCH & CHEMICAL CO
ME	Aroostook	23003	2300300063	001	1	10200906	20.40	MANEVU2002	7.8700	0.0000	0.0216	NATIONAL STARCH & CHEMICAL CO
ME	Aroostook	23003	2300300063	001	3	10200501	20.40	MANEVU2002	0.4450	0.0000	0.0012	NATIONAL STARCH & CHEMICAL CO
ME	Aroostook	23003	2300300070	001	1	10200902	39.00	MANEVU2002	45.1486	0.0000	0.0992	J PAUL LEVESQUE & SONS INC - ASHLAND
ME	Aroostook	23003	2300300076	001	1	10200905	20.10	CONVERSION	2.5670	0.0000	0.0056	MAINE WOODS CO
ME	Cumberland	23005	2300500004	001	1	10300401	11.20	MANEVU2002	1.7480	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	002	1	10300401	11.20	MANEVU2002	1.7480	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	003	1	10300401	16.80	MANEVU2002	1.7480	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	004	1	10300501	1.00	MANEVU2002	0.0841	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	005	1	10300501	4.80	MANEVU2002	0.2632	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	006	1	10300501	1.10	MANEVU2002	0.2390	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	007	1	10300603	4.20	MANEVU2002	0.2411	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	008	1	10300603	1.00	MANEVU2002	0.0311	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	009	1	10300603	1.00	MANEVU2002	0.0311	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	010	1	10300603	1.00	MANEVU2002	0.0311	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500009	001	1	10200402	55.00	SCC Descriptio	8.6900	0.0238	0.0238	BURNHAM AND MORRILL CO
ME	Cumberland	23005	2300500009	001	2	10200602	55.00	SCC Descriptio	2.4500	0.0067	0.0067	BURNHAM AND MORRILL CO
ME	Cumberland	23005	2300500029	001	2	10300602	55.00	SCC Descriptio	1.9400	0.0041	0.0041	MAINE MEDICAL CENTER
ME	Cumberland	23005	2300500029	002	4	10300602	55.00	SCC Descriptio	1.9400	0.0041	0.0041	MAINE MEDICAL CENTER
ME	Cumberland	23005	2300500029	003	6	10300602	55.00	SCC Descriptio	1.9400	0.0041	0.0041	MAINE MEDICAL CENTER
ME	Cumberland	23005	2300500029	004	8	10300602	55.00	SCC Descriptio	1.9400	0.0041	0.0041	MAINE MEDICAL CENTER
ME	Cumberland	23005	2300500046	002	2	10300501	14.00	MANEVU2002	1.4520	0.0042	0.0042	LONG CREEK YOUTH DEVELOPMENT CENTER
ME	Cumberland	23005	2300500053	001	2	10200502	12.50	MANEVU2002	0.0140	0.0118	0.0118	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500053	001	3	10200603	12.50	MANEVU2002	1.8840	0.0075	0.0075	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500053	002	2	10200501	20.70	MANEVU2002	0.0897	0.0000	0.0000	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500053	002	3	10200603	20.70	MANEVU2002	0.4580	0.0000	0.0000	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500053	003	2	10200501	22.00	MANEVU2002	0.0012	0.0000	0.0000	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500053	003	3	10200603	22.00	MANEVU2002	1.2255	0.0138	0.0138	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500053	004	3	10200603	22.00	MANEVU2002	2.1140	0.0127	0.0127	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500053	097	1	10200603	0.70	MANEVU2002	0.2270	0.0006	0.0006	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500053	099	1	10200603	3.00	MANEVU2002	0.7500	0.0021	0.0021	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500057	001	1	10200905	0.00		0.8015	0.0022	0.0022	SAUNDERS BROTHERS
ME	Cumberland	23005	2300500057	002	1	10200905	0.00		0.8015	0.0022	0.0022	SAUNDERS BROTHERS
ME	Cumberland	23005	2300500067	001	1	10300401	20.90	MANEVU2002	0.6159	0.0017	0.0017	UNIV OF SOUTHERN MAINE AT GORHAM

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
ME	Cumberland	23005	2300500067	001	2	10300602	20.90	MANEVU2002	1.2302	0.0034	0.0034	UNIV OF SOUTHERN MAINE AT GORHAM
ME	Cumberland	23005	2300500067	003	1	10300401	6.30	MANEVU2002	0.6159	0.0017	0.0017	UNIV OF SOUTHERN MAINE AT GORHAM
ME	Cumberland	23005	2300500067	003	2	10300602	6.30	MANEVU2002	1.2302	0.0034	0.0034	UNIV OF SOUTHERN MAINE AT GORHAM
ME	Cumberland	23005	2300500087	001	1	10300402	45.10	MANEVU2002	9.3852	0.0000	0.0000	BOWDOIN COLLEGE
ME	Cumberland	23005	2300500087	002	1	10300402	29.30	MANEVU2002	10.5452	0.0264	0.0264	BOWDOIN COLLEGE
ME	Cumberland	23005	2300500087	003	1	10300402	48.60	MANEVU2002	8.3876	0.0000	0.0000	BOWDOIN COLLEGE
ME	Cumberland	23005	2300500087	004	1	10300503	12.30	MANEVU2002	2.9998	0.0010	0.0010	BOWDOIN COLLEGE
ME	Cumberland	23005	2300500087	005	1	10301002	15.40	MANEVU2002	0.9825	0.0036	0.0036	BOWDOIN COLLEGE
ME	Cumberland	23005	2300500089	001	1	10200404	9.00	MANEVU2002	0.0564	0.0000	0.0000	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	002	1	10200404	9.00	MANEVU2002	0.0564	0.0000	0.0000	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	003	1	10200404	25.10	MANEVU2002	5.5272	0.0000	0.0000	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	003	2	10200602	25.10	MANEVU2002	0.2695	0.0000	0.0000	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	006	2	10200601	5.50	MANEVU2002	0.0102	0.0000	0.0000	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	006	1	10201002	5.50	MANEVU2002	0.2727	0.0000	0.0003	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	009	2	10200601	2.50	MANEVU2002	0.0076	0.0000	0.0000	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	009	1	10201002	2.50	MANEVU2002	0.2043	0.0000	0.0002	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	010	2	10200601	3.00	MANEVU2002	0.0076	0.0000	0.0000	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	010	1	10201002	3.00	MANEVU2002	0.2043	0.0003	0.0003	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500098	001	1	10200401	10.00	MANEVU2002	4.5331	0.0125	0.0125	GULF OIL LIMITED PARTNERSHIP
ME	Cumberland	23005	2300500098	001	2	10200502	10.00	MANEVU2002	0.1425	0.0004	0.0004	GULF OIL LIMITED PARTNERSHIP
ME	Cumberland	23005	2300500101	001	2	10301002	0.00		0.0448	0.0000	0.0000	SABRE CORPORATION
ME	Cumberland	23005	2300500103	001	3	10300603	5.50	MANEVU2002	0.3195	0.0001	0.0001	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	001	1	10300501	5.50	MANEVU2002	0.0800	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	002	2	10300603	1.30	MANEVU2002	0.1410	0.0002	0.0002	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	003	2	10300603	1.50	MANEVU2002	0.1150	0.0003	0.0003	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	004	2	10300603	1.60	MANEVU2002	0.0725	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	005	2	10300603	2.20	MANEVU2002	0.0560	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	006	2	10300603	1.70	MANEVU2002	0.0408	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	007	2	10300603	4.30	MANEVU2002	0.6720	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	009	2	10300603	5.50	MANEVU2002	0.5065	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	010	3	10300603	5.30	MANEVU2002	0.4758	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	011	2	10300603	3.00	MANEVU2002	0.1387	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	012	2	10300603	6.00	MANEVU2002	0.6711	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	013	2	10300603	6.20	MANEVU2002	0.6393	0.0002	0.0002	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	013	1	10300501	6.20	MANEVU2002	0.1600	0.0001	0.0001	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	098	2	10300603	5.00	SCC Descriptio	3.9340	0.0337	0.0337	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	098	1	10300501	5.00	SCC Descriptio	2.4600	0.0211	0.0211	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	098	3	10301002	5.00	SCC Descriptio	0.0057	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500120	026	1	10200501	5.00	MANEVU2002	1.2120	0.0033	0.0033	SPRAGUE ENERGY
ME	Cumberland	23005	2300500120	027	1	10200501	8.00	MANEVU2002	1.7760	0.0049	0.0049	SPRAGUE ENERGY
ME	Cumberland	23005	2300500120	028	1	10200501	0.80	MANEVU2002	0.1200	0.0003	0.0003	SPRAGUE ENERGY
ME	Cumberland	23005	2300500129	001	1	10200603	5.00	SCC Descriptio	0.4461	0.0005	0.0005	SANMINA CORP
ME	Cumberland	23005	2300500138	002	1	10200401	232.70	MANEVU2002	9.3000	0.0000	0.0000	S D WARREN CO - WESTBROOK
ME	Cumberland	23005	2300500138	003	1	10200401	232.70	MANEVU2002	7.7000	0.0000	0.0000	S D WARREN CO - WESTBROOK
ME	Cumberland	23005	2300500138	004	1	10200401	247.80	MANEVU2002	6.4000	0.0000	0.0000	S D WARREN CO - WESTBROOK
ME	Cumberland	23005	2300500145	001	1	10300401	16.80	MANEVU2002	4.0226	0.0080	0.0080	GLOBAL COMPANIES LLC
ME	Cumberland	23005	2300500145	001	2	10300401	16.80	MANEVU2002	4.0226	0.0080	0.0080	GLOBAL COMPANIES LLC
ME	Cumberland	23005	2300500176	001	1	10300603	6.30	MANEVU2002	1.4306	0.0039	0.0039	MAINE RUBBER INTERNATIONAL
ME	Cumberland	23005	2300500191	001	1	10200501	29.30	MANEVU2002	3.4544	0.0070	0.0070	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	001	2	10200602	29.30	MANEVU2002	0.0338	0.0001	0.0001	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	002	1	10200501	29.30	MANEVU2002	3.8675	0.0104	0.0104	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	002	2	10200601	29.30	MANEVU2002	0.0654	0.0002	0.0002	NATIONAL SEMICONDUCTOR CORP

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ME	Cumberland	23005	2300500191	003	1	10200501	29.30	MANEVU2002	2.9202	0.0081	0.0081	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	003	2	10200601	29.30	MANEVU2002	0.0430	0.0001	0.0001	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	004	1	10200501	29.30	MANEVU2002	2.4375	0.0066	0.0066	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	004	2	10200602	29.30	MANEVU2002	0.0267	0.0001	0.0001	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	005	1	10200501	29.30	MANEVU2002	0.0015	0.0000	0.0000	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	005	2	10200602	29.30	MANEVU2002	0.0103	0.0000	0.0000	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	007	1	10200602	1.80	MANEVU2002	0.8337	0.0023	0.0023	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	008	1	10200602	2.00	MANEVU2002	4.1323	0.0114	0.0114	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500193	002	1	10200602	55.00	SCC Descriptio	0.7000	0.0000	0.0000	WESTBROOK ENERGY CENTER
ME	Cumberland	23005	2300500198	002	1	10300503	5.00	SCC Descriptio	0.0914	0.0003	0.0003	SEBAGO INC - BRIDGTON
ME	Cumberland	23005	2300500201	001	1	10300502	55.00	SCC Descriptio	0.5333	0.0015	0.0015	MID COAST HOSPITAL
ME	Cumberland	23005	2300500201	002	1	10300502	55.00	SCC Descriptio	0.5333	0.0015	0.0015	MID COAST HOSPITAL
ME	Cumberland	23005	2300500201	003	1	10300502	55.00	SCC Descriptio	0.5333	0.0015	0.0015	MID COAST HOSPITAL
ME	Cumberland	23005	2300500201	004	1	10301002	0.00		0.0747	0.0002	0.0002	MID COAST HOSPITAL
ME	Cumberland	23005	2300500201	005	1	10301002	0.00		0.0747	0.0002	0.0002	MID COAST HOSPITAL
ME	Cumberland	23005	2300500201	007	1	10301002	0.00		0.0259	0.0001	0.0001	MID COAST HOSPITAL
ME	Cumberland	23005	2300500201	008	1	10301002	0.00		0.0179	0.0000	0.0000	MID COAST HOSPITAL
ME	Cumberland	23005	2300500201	009	1	10301002	0.00		0.0747	0.0002	0.0002	MID COAST HOSPITAL
ME	Cumberland	23005	2300500202	001	1	10200906	0.00		3.2674	0.0090	0.0090	MEGQUIER HILL FARMS
ME	Cumberland	23005	2300500203	001	1	10200603	1.20	MANEVU2002	0.1101	0.0003	0.0003	SEBAGO INC - GORHAM
ME	Cumberland	23005	2300500203	002	1	10200603	1.80	MANEVU2002	0.0601	0.0002	0.0002	SEBAGO INC - GORHAM
ME	Cumberland	23005	2300500204	001	1	10200603	2.30	MANEVU2002	0.0749	0.0002	0.0002	WOLVERINE (SEBAGO MECHANIC ST WESTBROOK)
ME	Franklin	23007	2300700007	001	1	10200401	147.00	PART 70 LICEI	113.6975	0.0000	0.2624	WAUSAU-MOSINEE PAPER CO - OTIS MILL
ME	Franklin	23007	2300700007	003	1	10200401	73.00	PART 70 LICEI	48.0665	0.0000	0.1690	WAUSAU-MOSINEE PAPER CO - OTIS MILL
ME	Franklin	23007	2300700007	004	1	10200401	73.00	PART 70 LICEI	42.3120	0.0000	0.0465	WAUSAU-MOSINEE PAPER CO - OTIS MILL
ME	Franklin	23007	2300700021	003	2	10200901	480.00	MANEVU2002	570.0000	0.0000	1.0022	INTERNATIONAL PAPER - ANDROSCOGGIN
ME	Franklin	23007	2300700021	017	1	10201002	0.00		2.0000	0.0000	0.0053	INTERNATIONAL PAPER - ANDROSCOGGIN
ME	Franklin	23007	2300700022	001	1	10200907	7.90	MANEVU2002	7.6800	0.0000	0.0000	KINGFIELD WOOD PRODUCTS
ME	Franklin	23007	2300700026	001	1	10200903	0.00		14.9569	0.0000	0.0411	STRATTON LUMBER INCORPORATED
ME	Hancock	23009	2300900001	001	1	10200502	10.50	MANEVU2002	0.0780	0.0002	0.0002	JACKSON LABORATORY
ME	Hancock	23009	2300900001	002	1	10200502	10.50	MANEVU2002	0.2080	0.0006	0.0006	JACKSON LABORATORY
ME	Hancock	23009	2300900001	003	1	10200502	20.90	MANEVU2002	0.5670	0.0013	0.0013	JACKSON LABORATORY
ME	Hancock	23009	2300900001	004	1	10200502	33.50	MANEVU2002	8.4230	0.0241	0.0241	JACKSON LABORATORY
ME	Hancock	23009	2300900001	005	1	10200502	33.50	MANEVU2002	5.7980	0.1988	0.1988	JACKSON LABORATORY
ME	Hancock	23009	2300900001	006	1	10300501	0.00		0.2124	0.0055	0.0055	JACKSON LABORATORY
ME	Hancock	23009	2300900001	007	1	10300501	0.00		0.4668	0.0045	0.0045	JACKSON LABORATORY
ME	Hancock	23009	2300900003	001	1	10300404	0.00		2.0350	0.0000	0.0036	BLUE HILL MEMORIAL HOSPITAL
ME	Hancock	23009	2300900015	001	4	10200503	5.00	SCC Descriptio	0.0535	0.0000	0.0003	LANE CONSTRUCTION CORP - HANCOCK (42)
ME	Hancock	23009	2300900029	001	1	10200503	5.00	SCC Descriptio	0.0700	0.0000	0.0000	HINCKLEY COMPANY - SOUTHWEST HARBOR
ME	Kennebec	23011	2301100003	001	1	10300401	29.00	MANEVU2002	6.8379	0.0075	0.0075	AUGUSTA MENTAL HEALTH INSTITUTE
ME	Kennebec	23011	2301100003	002	1	10300401	29.00	MANEVU2002	6.8379	0.0075	0.0075	AUGUSTA MENTAL HEALTH INSTITUTE
ME	Kennebec	23011	2301100003	003	1	10300401	8.00	MANEVU2002	6.8379	0.0075	0.0075	AUGUSTA MENTAL HEALTH INSTITUTE
ME	Kennebec	23011	2301100004	001	3	10300402	55.00	SCC Descriptio	6.9300	0.0116	0.0116	VA MEDICAL CENTER
ME	Kennebec	23011	2301100004	001	1	10300402	55.00	SCC Descriptio	5.4588	0.0091	0.0091	VA MEDICAL CENTER
ME	Kennebec	23011	2301100004	001	2	10300402	55.00	SCC Descriptio	4.7025	0.0078	0.0078	VA MEDICAL CENTER
ME	Kennebec	23011	2301100033	001	1	10300401	10.80	MANEVU2002	2.4675	0.0191	0.0191	MAINE GENERAL MEDICAL CENTER - THAYER
ME	Kennebec	23011	2301100033	002	1	10300401	10.80	MANEVU2002	2.7448	0.0157	0.0157	MAINE GENERAL MEDICAL CENTER - THAYER
ME	Kennebec	23011	2301100033	003	1	10300401	10.80	MANEVU2002	1.5745	0.0181	0.0181	MAINE GENERAL MEDICAL CENTER - THAYER
ME	Kennebec	23011	2301100033	004	1	10300401	8.40	MANEVU2002	2.9622	0.0170	0.0170	MAINE GENERAL MEDICAL CENTER - THAYER
ME	Kennebec	23011	2301100034	001	1	10300401	12.60	MANEVU2002	4.6601	0.0127	0.0127	MAINE GENERAL MEDICAL CENTER - SETON
ME	Kennebec	23011	2301100034	002	1	10300401	12.60	MANEVU2002	3.4381	0.0227	0.0227	MAINE GENERAL MEDICAL CENTER - SETON
ME	Kennebec	23011	2301100036	002	1	10200401	29.30	PART 70 LICEI	50.7119	0.1115	0.1115	HUHTAMAKI FOODSERVICE INC

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ME	Kennebec	23011	2301100036	003	1	10200401	29.30	PART 70 LICEI	33.8558	0.0744	0.0744	HUHTAMAKI FOODSERVICE INC
ME	Kennebec	23011	2301100036	005	1	10200401	64.80	PART 70 LICEI	103.1266	0.2267	0.2267	HUHTAMAKI FOODSERVICE INC
ME	Kennebec	23011	2301100039	001	1	10300401	37.00	MANEVU2002	12.1147	0.0093	0.0093	COLBY COLLEGE
ME	Kennebec	23011	2301100039	001	3	10300401	37.00	MANEVU2002	6.6420	0.0051	0.0051	COLBY COLLEGE
ME	Kennebec	23011	2301100039	001	2	10300401	37.00	MANEVU2002	6.5254	0.0050	0.0050	COLBY COLLEGE
ME	Kennebec	23011	2301100039	002	1	10300501	1.00	MANEVU2002	0.1851	0.0005	0.0005	COLBY COLLEGE
ME	Kennebec	23011	2301100039	003	1	10301002	1.00	MANEVU2002	0.1856	0.0005	0.0005	COLBY COLLEGE
ME	Kennebec	23011	2301100075	001	1	10200401	10.50	MANEVU2002	2.3030	0.0036	0.0036	TEX TECH INDUSTRIES INC
ME	Kennebec	23011	2301100075	002	1	10200401	14.60	MANEVU2002	3.2900	0.0051	0.0051	TEX TECH INDUSTRIES INC
ME	Knox	23013	2301300009	001	1	10200401	85.60	MANEVU2002	64.9305	0.2277	0.2277	FMC BIOPOLYMER
ME	Knox	23013	2301300009	002	1	10200401	48.60	MANEVU2002	19.5755	0.0000	0.0559	FMC BIOPOLYMER
ME	Knox	23013	2301300009	003	1	10200401	48.40	MANEVU2002	20.3980	0.0583	0.0583	FMC BIOPOLYMER
ME	Knox	23013	2301300038	001	1	10300502	20.90	MANEVU2002	2.1030	0.0000	0.0012	MAINE STATE PRISON AT WARREN
ME	Knox	23013	2301300038	002	1	10300502	20.90	MANEVU2002	2.3017	0.0000	0.0013	MAINE STATE PRISON AT WARREN
ME	Knox	23013	2301300038	003	1	10300502	20.90	MANEVU2002	1.5452	0.0000	0.0008	MAINE STATE PRISON AT WARREN
ME	Knox	23013	2301300038	004	1	10300503	8.40	MANEVU2002	0.2198	0.0000	0.0001	MAINE STATE PRISON AT WARREN
ME	Oxford	23017	2301700001	001	1	10200905	0.00		1.2524	0.0000	0.0017	FOREST INDUSTRIES
ME	Oxford	23017	2301700004	001	1	10200502	14.60	MANEVU2002	0.0593	0.0000	0.0002	ANDOVER WOOD PRODUCTS INC
ME	Oxford	23017	2301700004	002	1	10200906	14.60	MANEVU2002	1.8986	0.0000	0.0052	ANDOVER WOOD PRODUCTS INC
ME	Oxford	23017	2301700008	002	1	10200905	13.00	MANEVU2002	0.8935	0.0000	0.0016	BETHEL FURNITURE STOCK INC
ME	Oxford	23017	2301700013	001	1	10300401	0.00		9.2590	0.0000	0.0163	ROBINSON MANUFACTURING COMPANY
ME	Oxford	23017	2301700022	001	1	10200907	6.20	MANEVU2002	1.4226	0.0000	0.0019	PENLEY CORPORATION
ME	Oxford	23017	2301700038	001	1	10200502	25.10	MANEVU2002	5.5100	0.0000	0.0151	HANCOCK LUMBER CO INC
ME	Oxford	23017	2301700038	002	1	10200906	13.30	MANEVU2002	1.5864	0.0000	0.0044	HANCOCK LUMBER CO INC
ME	Oxford	23017	2301700045	011	1	10200601	150.00	SCC Descriptio	4.6300	0.0000	0.0102	MEADWESTVACO OXFORD CORP
ME	Oxford	23017	2301700046	001	1	10300902	12.00	MANEVU2002	3.6200	0.0000	0.0048	IRVING FOREST PRODUCTS - DIXFIELD
ME	Oxford	23017	2301700046	002	1	10300902	12.00	MANEVU2002	4.8400	0.0000	0.0064	IRVING FOREST PRODUCTS - DIXFIELD
ME	Oxford	23017	2301700046	003	1	10300402	16.80	MANEVU2002	0.7050	0.0000	0.0024	IRVING FOREST PRODUCTS - DIXFIELD
ME	Oxford	23017	2301700046	004	1	10300902	46.20	MANEVU2002	34.0500	0.0000	0.0636	IRVING FOREST PRODUCTS - DIXFIELD
ME	Oxford	23017	2301700058	004	1	10200905	0.00		2.0592	0.0000	0.0048	LOVELL LUMBER CO INC
ME	Oxford	23017	2301700058	005	1	10200503	5.00	SCC Descriptio	0.1869	0.0000	0.0003	LOVELL LUMBER CO INC
ME	Oxford	23017	2301700060	001	1	10201002	0.00		0.3962	0.0000	0.0011	NATIONAL WOOD PRODUCTS
ME	Penobscot	23019	2301900002	001	1	10300502	13.00	MANEVU2002	1.5839	0.0000	0.0044	BANGOR MENTAL HEALTH INSTITUTE
ME	Penobscot	23019	2301900002	002	1	10300502	25.00	MANEVU2002	1.5839	0.0000	0.0044	BANGOR MENTAL HEALTH INSTITUTE
ME	Penobscot	23019	2301900002	003	1	10300502	55.00	SCC Descriptio	1.5839	0.0000	0.0044	BANGOR MENTAL HEALTH INSTITUTE
ME	Penobscot	23019	2301900003	001	1	10300401	21.00	MANEVU2002	4.6295	0.0000	0.0076	EASTERN MAINE MEDICAL CENTER
ME	Penobscot	23019	2301900003	002	1	10300401	21.00	MANEVU2002	4.6295	0.0000	0.0076	EASTERN MAINE MEDICAL CENTER
ME	Penobscot	23019	2301900003	003	1	10300401	21.00	MANEVU2002	4.6295	0.0000	0.0076	EASTERN MAINE MEDICAL CENTER
ME	Penobscot	23019	2301900003	004	1	10300401	14.00	MANEVU2002	3.0080	0.0000	0.0050	EASTERN MAINE MEDICAL CENTER
ME	Penobscot	23019	2301900003	005	1	10300401	14.00	MANEVU2002	3.0080	0.0000	0.0050	EASTERN MAINE MEDICAL CENTER
ME	Penobscot	23019	2301900003	006	1	10300401	14.00	MANEVU2002	3.0080	0.0000	0.0050	EASTERN MAINE MEDICAL CENTER
ME	Penobscot	23019	2301900018	001	1	10300503	5.00	MANEVU2002	0.4460	0.0000	0.0000	OSRAM SYLVANIA INC
ME	Penobscot	23019	2301900020	001	1	10200401	170.00	MANEVU2002	102.5600	0.0000	0.2818	EASTERN FINE PAPER INC
ME	Penobscot	23019	2301900020	002	1	10200401	170.00	MANEVU2002	83.3800	0.0000	0.2199	EASTERN FINE PAPER INC
ME	Penobscot	23019	2301900023	001	1	10200402	242.00	MANEVU2002	6.1630	0.0000	0.0169	LINCOLN PULP AND PAPER CO INC
ME	Penobscot	23019	2301900023	005	1	10200401	127.00	MANEVU2002	7.7400	0.0000	0.0476	LINCOLN PULP AND PAPER CO INC
ME	Penobscot	23019	2301900023	006	1	10200401	100.00	MANEVU2002	25.1100	0.0000	0.0248	LINCOLN PULP AND PAPER CO INC
ME	Penobscot	23019	2301900023	013	1	10200902	433.00	MANEVU2002	197.9400	0.0000	0.4568	LINCOLN PULP AND PAPER CO INC
ME	Penobscot	23019	2301900023	013	2	10200501	433.00	MANEVU2002	0.8897	0.0000	0.0021	LINCOLN PULP AND PAPER CO INC
ME	Penobscot	23019	2301900028	001	1	10200402	34.50	MANEVU2002	6.1325	0.0000	0.0546	UNIVERSITY OF MAINE ORONO
ME	Penobscot	23019	2301900028	002	1	10200402	34.50	MANEVU2002	6.6000	0.0000	0.0000	UNIVERSITY OF MAINE ORONO
ME	Penobscot	23019	2301900028	003	1	10200402	73.60	MANEVU2002	27.4725	0.0000	0.0000	UNIVERSITY OF MAINE ORONO

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ME	Penobscot	23019	2301900028	004	1	10200402	73.60	MANEVU2002	8.0850	0.0000	0.0000	UNIVERSITY OF MAINE ORONO
ME	Penobscot	23019	2301900028	005	1	10200402	73.60	MANEVU2002	27.6925	0.0000	0.0243	UNIVERSITY OF MAINE ORONO
ME	Penobscot	23019	2301900028	005	2	10200602	73.60	MANEVU2002	0.4665	0.0000	0.0004	UNIVERSITY OF MAINE ORONO
ME	Penobscot	23019	2301900028	007	1	10300503	5.00	SCC Descriptio	2.2600	0.0000	0.0107	UNIVERSITY OF MAINE ORONO
ME	Penobscot	23019	2301900030	001	1	10300902	0.00		0.0279	0.0000	0.0000	OLD TOWN CANOE
ME	Penobscot	23019	2301900030	002	1	10200401	0.00		3.8305	0.0000	0.0000	OLD TOWN CANOE
ME	Penobscot	23019	2301900030	003	2	10200501	0.00		1.7040	0.0000	0.0047	OLD TOWN CANOE
ME	Penobscot	23019	2301900030	003	1	10201002	0.00		1.6815	0.0000	0.0046	OLD TOWN CANOE
ME	Penobscot	23019	2301900034	001	2	10200501	250.00	MANEVU2002	0.1849	0.0000	0.0005	GEORGIA-PACIFIC CORPORATION
ME	Penobscot	23019	2301900034	002	1	10200401	521.00	MANEVU2002	1.3530	0.0000	0.0037	GEORGIA-PACIFIC CORPORATION
ME	Penobscot	23019	2301900034	015	1	10200403	249.00	MANEVU2002	6.6530	0.0000	0.0139	GEORGIA-PACIFIC CORPORATION
ME	Penobscot	23019	2301900052	001	1	10200905	0.00		1.0689	0.0000	0.0021	PERMA TREAT CORP
ME	Penobscot	23019	2301900052	002	1	10200905	0.00		1.1435	0.0000	0.0023	PERMA TREAT CORP
ME	Penobscot	23019	2301900052	003	1	10200905	0.00		1.0646	0.0000	0.0032	PERMA TREAT CORP
ME	Penobscot	23019	2301900052	004	1	10200905	0.00		1.1687	0.0000	0.0030	PERMA TREAT CORP
ME	Penobscot	23019	2301900056	001	1	10200401	370.00	MANEVU2002	218.6000	0.0000	0.4804	GREAT NORTHERN PAPER INC MILL WEST
ME	Penobscot	23019	2301900056	001	2	10200501	370.00	MANEVU2002	0.1464	0.0000	0.0003	GREAT NORTHERN PAPER INC MILL WEST
ME	Penobscot	23019	2301900056	001	3	10201002	370.00	MANEVU2002	0.0694	0.0000	0.0002	GREAT NORTHERN PAPER INC MILL WEST
ME	Penobscot	23019	2301900056	002	1	10200401	370.00	MANEVU2002	189.1000	0.0000	0.7273	GREAT NORTHERN PAPER INC MILL WEST
ME	Penobscot	23019	2301900056	003	1	10200401	370.00	MANEVU2002	32.9799	0.0000	0.0000	GREAT NORTHERN PAPER INC MILL WEST
ME	Penobscot	23019	2301900056	004	1	10200401	740.00	MANEVU2002	291.0000	0.0000	0.4797	GREAT NORTHERN PAPER INC MILL WEST
ME	Penobscot	23019	2301900056	005	1	10200401	592.00	MANEVU2002	141.3173	0.0000	0.2951	GREAT NORTHERN PAPER INC MILL WEST
ME	Penobscot	23019	2301900056	010	1	10301002	27.30	MANEVU2002	0.7875	0.0000	0.0000	GREAT NORTHERN PAPER INC MILL WEST
ME	Penobscot	23019	2301900058	001	1	10200401	370.00	MANEVU2002	142.3000	0.0000	0.2346	GREAT NORTHERN PAPER INC MILL EAST
ME	Penobscot	23019	2301900058	001	2	10200501	370.00	MANEVU2002	0.0621	0.0000	0.0001	GREAT NORTHERN PAPER INC MILL EAST
ME	Penobscot	23019	2301900058	001	3	10301002	370.00	MANEVU2002	0.0140	0.0000	0.0000	GREAT NORTHERN PAPER INC MILL EAST
ME	Penobscot	23019	2301900058	002	1	10200401	370.00	MANEVU2002	119.9000	0.0000	0.3030	GREAT NORTHERN PAPER INC MILL EAST
ME	Penobscot	23019	2301900058	002	2	10200501	370.00	MANEVU2002	0.0621	0.0000	0.0002	GREAT NORTHERN PAPER INC MILL EAST
ME	Penobscot	23019	2301900058	003	1	10200401	498.00	MANEVU2002	15.7000	0.0000	0.0328	GREAT NORTHERN PAPER INC MILL EAST
ME	Penobscot	23019	2301900058	003	2	10200902	498.00	MANEVU2002	0.3000	0.0000	0.0006	GREAT NORTHERN PAPER INC MILL EAST
ME	Penobscot	23019	2301900058	003	3	10200501	498.00	MANEVU2002	0.0828	0.0000	0.0002	GREAT NORTHERN PAPER INC MILL EAST
ME	Penobscot	23019	2301900092	001	1	10300903	4.40	MANEVU2002	0.0241	0.0000	0.0001	CHARLESTON CORRECTIONAL FACILITY
ME	Penobscot	23019	2301900092	002	1	10300903	4.40	MANEVU2002	0.0241	0.0000	0.0001	CHARLESTON CORRECTIONAL FACILITY
ME	Penobscot	23019	2301900092	003	1	10300404	4.40	MANEVU2002	1.5461	0.0000	0.0042	CHARLESTON CORRECTIONAL FACILITY
ME	Penobscot	23019	2301900092	004	1	10300404	4.40	MANEVU2002	0.9548	0.0000	0.0026	CHARLESTON CORRECTIONAL FACILITY
ME	Penobscot	23019	2301900092	005	1	10300503	6.70	MANEVU2002	0.7690	0.0000	0.0021	CHARLESTON CORRECTIONAL FACILITY
ME	Penobscot	23019	2301900092	006	1	10300503	6.70	MANEVU2002	0.7010	0.0000	0.0019	CHARLESTON CORRECTIONAL FACILITY
ME	Penobscot	23019	2301900092	010	1	10300503	5.00	SCC Descriptio	0.0430	0.0000	0.0001	CHARLESTON CORRECTIONAL FACILITY
ME	Penobscot	23019	2301900115	003	1	10200602	21.00	MANEVU2002	0.1870	0.0000	0.0005	MAINE INDEPENDENCE STATION
ME	Penobscot	23019	2301900117	001	1	10300501	0.00		2.4000	0.0000	0.0066	MAINE AIR NATIONAL GUARD 101ST AIR
ME	Penobscot	23019	2301900117	002	1	10300501	0.00		0.4500	0.0000	0.0012	MAINE AIR NATIONAL GUARD 101ST AIR
ME	Penobscot	23019	2301900118	001	1	10200902	23.00	MANEVU2002	0.5119	0.0000	0.0014	CALLEY & CURRIER CO
ME	Penobscot	23019	2301900123	001	1	10200503	1.20	MANEVU2002	0.2499	0.0000	0.0004	OLD TOWN LUMBER
ME	Penobscot	23019	2301900123	002	1	10200503	1.20	MANEVU2002	0.2499	0.0000	0.0004	OLD TOWN LUMBER
ME	Penobscot	23019	2301900126	001	1	10200403	8.40	MANEVU2002	1.4660	0.0000	0.0032	NORTHEASTERN LOG HOMES
ME	Penobscot	23019	2301900126	002	1	10200403	8.40	MANEVU2002	1.4660	0.0000	0.0032	NORTHEASTERN LOG HOMES
ME	Piscataquis	23021	2302100001	001	1	10200902	11.70	MANEVU2002	1.9418	0.0000	0.0053	MOOSEHEAD MFG CO - MONSON
ME	Piscataquis	23021	2302100005	001	1	10200905	17.00	MANEVU2002	3.9938	0.0000	0.0066	INTERFACE FABRICS GROUP NORTH INC
ME	Piscataquis	23021	2302100005	002	1	10200502	13.00	MANEVU2002	0.6174	0.0000	0.0012	INTERFACE FABRICS GROUP NORTH INC
ME	Piscataquis	23021	2302100005	003	1	10200906	17.00	MANEVU2002	3.9938	0.0000	0.0066	INTERFACE FABRICS GROUP NORTH INC
ME	Piscataquis	23021	2302100005	004	1	10200503	2.50	MANEVU2002	0.3553	0.0000	0.0001	INTERFACE FABRICS GROUP NORTH INC
ME	Piscataquis	23021	2302100006	001	1	10300903	28.00	MANEVU2002	5.6352	0.0000	0.0118	HARDWOOD PRODUCTS COMPANY

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ME	Piscataquis	23021	2302100006	001	2	10300501	28.00	MANEVU2002	0.0309	0.0000	0.0001	HARDWOOD PRODUCTS COMPANY
ME	Piscataquis	23021	2302100012	001	1	10200902	0.00		2.0445	0.0000	0.0056	MOOSEHEAD MFG CO - DOV-FOX
ME	Piscataquis	23021	2302100013	001	1	10200401	20.00	MANEVU2002	3.3110	0.0000	0.0091	MONTREAL MAINE & ATLANTIC RAILWAY
ME	Piscataquis	23021	2302100019	001	1	10200502	20.90	MANEVU2002	10.1136	0.0000	0.0278	PLEASANT RIVER LUMBER CO
ME	Sagadahoc	23023	2302300004	001	1	10200401	29.30	MANEVU2002	14.7886	0.0000	0.0390	BATH IRON WORKS - BATH FACILITY
ME	Sagadahoc	23023	2302300004	002	1	10200401	29.30	MANEVU2002	10.0181	0.0000	0.0000	BATH IRON WORKS - BATH FACILITY
ME	Sagadahoc	23023	2302300004	003	1	10200401	29.30	MANEVU2002	10.1943	0.0000	0.0022	BATH IRON WORKS - BATH FACILITY
ME	Sagadahoc	23023	2302300004	005	1	10200401	25.10	MANEVU2002	1.5487	0.0000	0.0000	BATH IRON WORKS - BATH FACILITY
ME	Sagadahoc	23023	2302300004	006	1	10200401	25.10	MANEVU2002	6.8503	0.0000	0.0000	BATH IRON WORKS - BATH FACILITY
ME	Sagadahoc	23023	2302300004	007	1	10200401	29.30	MANEVU2002	3.9339	0.0000	0.0000	BATH IRON WORKS - BATH FACILITY
ME	Sagadahoc	23023	2302300004	008	1	10200401	25.10	MANEVU2002	0.1269	0.0000	0.0004	BATH IRON WORKS - BATH FACILITY
ME	Sagadahoc	23023	2302300011	004	1	10200404	0.00		0.0798	0.0000	0.0000	HARRY C CROOKER & SONS INC - TOPSHAM
ME	Sagadahoc	23023	2302300011	005	1	10200404	0.00		0.0260	0.0000	0.0000	HARRY C CROOKER & SONS INC - TOPSHAM
ME	Sagadahoc	23023	2302300011	005	2	10200501	0.00		0.0832	0.0000	0.0001	HARRY C CROOKER & SONS INC - TOPSHAM
ME	Sagadahoc	23023	2302300011	005	3	10200501	0.00		0.0534	0.0000	0.0001	HARRY C CROOKER & SONS INC - TOPSHAM
ME	Somerset	23025	2302500002	001	1	10200401	33.00	MANEVU2002	19.5000	0.0000	0.0386	IRVING TANNING COMPANY
ME	Somerset	23025	2302500002	002	1	10200401	20.00	MANEVU2002	2.7375	0.0000	0.0054	IRVING TANNING COMPANY
ME	Somerset	23025	2302500002	003	1	10200401	22.00	MANEVU2002	10.7250	0.0000	0.0212	IRVING TANNING COMPANY
ME	Somerset	23025	2302500002	004	1	10200401	21.00	MANEVU2002	4.3500	0.0000	0.0067	IRVING TANNING COMPANY
ME	Somerset	23025	2302500002	005	1	10200401	20.00	MANEVU2002	4.3500	0.0000	0.0067	IRVING TANNING COMPANY
ME	Somerset	23025	2302500002	006	1	10200401	8.00	MANEVU2002	4.3500	0.0000	0.0067	IRVING TANNING COMPANY
ME	Somerset	23025	2302500002	010	1	10200501	6.00	MANEVU2002	0.2450	0.0000	0.0000	IRVING TANNING COMPANY
ME	Somerset	23025	2302500004	001	1	10200902	0.00		0.0653	0.0000	0.0002	DIRIGO DOWELS INC
ME	Somerset	23025	2302500007	001	1	10200404	0.00		1.7475	0.0000	0.0096	EDWARDS SYSTEMS TECHNOLOGY
ME	Somerset	23025	2302500007	002	1	10200404	0.00		1.4399	0.0000	0.0000	EDWARDS SYSTEMS TECHNOLOGY
ME	Somerset	23025	2302500011	001	1	10200905	6.40	MANEVU2002	0.5522	0.0000	0.0008	SOLON MANUFACTURING CO INC
ME	Somerset	23025	2302500011	002	1	10200905	8.90	MANEVU2002	1.5312	0.0000	0.0040	SOLON MANUFACTURING CO INC
ME	Somerset	23025	2302500020	003	1	10200401	119.00	MANEVU2002	74.5693	0.0000	0.2049	MADISON PAPER INDUSTRIES
ME	Somerset	23025	2302500020	004	1	10200401	100.00	MANEVU2002	67.6408	0.0000	0.1784	MADISON PAPER INDUSTRIES
ME	Somerset	23025	2302500020	005	1	10200401	117.00	MANEVU2002	26.1301	0.0000	0.0144	MADISON PAPER INDUSTRIES
ME	Somerset	23025	2302500027	003	1	10200401	175.00	Title V	26.8900	0.0000	0.0768	SAPPI - SOMERSET
ME	Somerset	23025	2302500027	009	1	10200501	70.60	MANEVU2002	0.9400	0.0000	0.0000	SAPPI - SOMERSET
ME	Somerset	23025	2302500037	001	1	10200905	0.00		1.2444	0.0000	0.0021	COUSINEAU WOOD PRODUCTS
ME	Somerset	23025	2302500043	001	1	10300903	9.80	MANEVU2002	7.7004	0.0000	0.0135	MOOSE RIVER LUMBER COMPANY INC
ME	Somerset	23025	2302500043	002	1	10300902	4.50	MANEVU2002	1.4375	0.0000	0.0000	MOOSE RIVER LUMBER COMPANY INC
ME	Somerset	23025	2302500043	003	1	10300502	25.10	MANEVU2002	6.3292	0.0000	0.0167	MOOSE RIVER LUMBER COMPANY INC
ME	Somerset	23025	2302500044	001	1	10200503	1.20	MANEVU2002	0.1341	0.0000	0.0001	CIANBRO FABRICATION AND COATING CORP
ME	Somerset	23025	2302500044	002	1	10201002	5.00	MANEVU2002	0.3753	0.0000	0.0002	CIANBRO FABRICATION AND COATING CORP
ME	Somerset	23025	2302500044	003	1	10201002	1.50	MANEVU2002	0.1126	0.0000	0.0001	CIANBRO FABRICATION AND COATING CORP
ME	Somerset	23025	2302500045	001	2	10200503	5.00	SCC Descriptio	0.0150	0.0000	0.0000	CARRIER CHIPPING INC
ME	Waldo	23027	2302700005	001	1	10200903	21.00	MANEVU2002	0.1344	0.0004	0.0004	ROBBINS LUMBER INC
ME	Waldo	23027	2302700005	002	1	10200903	49.00	MANEVU2002	49.8700	0.1096	0.1096	ROBBINS LUMBER INC
ME	Waldo	23027	2302700020	001	1	10200401	4.00	MANEVU2002	0.9900	0.0000	0.0000	IRVING OIL CORP
ME	Waldo	23027	2302700035	001	1	10200502	20.90	MANEVU2002	0.0590	0.0000	0.0002	PRIDE MANUFACTURING CO
ME	Waldo	23027	2302700035	002	1	10200906	20.90	MANEVU2002	1.5470	0.0000	0.0043	PRIDE MANUFACTURING CO
ME	Waldo	23027	2302700037	001	1	10300501	4.50	MANEVU2002	0.0876	0.0000	0.0000	MBNA BRACEBRIDGE CORP
ME	Waldo	23027	2302700037	002	1	10300501	4.50	MANEVU2002	0.0876	0.0000	0.0000	MBNA BRACEBRIDGE CORP
ME	Waldo	23027	2302700037	003	1	10300501	8.00	MANEVU2002	0.2340	0.0000	0.0000	MBNA BRACEBRIDGE CORP
ME	Waldo	23027	2302700037	004	1	10300501	8.00	MANEVU2002	0.2340	0.0000	0.0000	MBNA BRACEBRIDGE CORP
ME	Waldo	23027	2302700037	005	1	10300501	2.40	MANEVU2002	0.0653	0.0000	0.0000	MBNA BRACEBRIDGE CORP
ME	Waldo	23027	2302700037	006	1	10300501	2.40	MANEVU2002	0.0653	0.0000	0.0000	MBNA BRACEBRIDGE CORP
ME	Waldo	23027	2302700037	007	1	10300501	1.20	MANEVU2002	0.3986	0.0000	0.0000	MBNA BRACEBRIDGE CORP

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ME	Waldo	23027	2302700037	008	1	10300501	1.20	MANEVU2002	0.3986	0.0000	0.0000	MBNA BRACEBRIDGE CORP
ME	Washington	23029	2302900003	001	1	10200501	4.00	MANEVU2002	0.4440	0.0000	0.0000	NAVAL COMPUTER & TELECOMM DET - CUTLER
ME	Washington	23029	2302900003	004	1	10200501	2.20	MANEVU2002	0.1920	0.0000	0.0000	NAVAL COMPUTER & TELECOMM DET - CUTLER
ME	Washington	23029	2302900003	005	1	10300503	6.40	MANEVU2002	0.3600	0.0000	0.0000	NAVAL COMPUTER & TELECOMM DET - CUTLER
ME	Washington	23029	2302900003	006	1	10300503	1.20	MANEVU2002	0.1200	0.0000	0.0000	NAVAL COMPUTER & TELECOMM DET - CUTLER
ME	Washington	23029	2302900020	003	2	10300401	1207.00	PART 70 LICEI	39.9970	0.0000	0.1231	DOMTAR MAINE CORP
ME	Washington	23029	2302900021	001	1	10200907	190.00	MANEVU2002	124.8672	0.0000	0.5214	LOUISIANA-PACIFIC CORP - WOODLAND OSB
ME	Washington	23029	2302900021	002	2	10201002	0.00		0.4160	0.0000	0.0023	LOUISIANA-PACIFIC CORP - WOODLAND OSB
ME	Washington	23029	2302900021	003	2	10201002	0.00		0.4160	0.0000	0.0023	LOUISIANA-PACIFIC CORP - WOODLAND OSB
ME	York	23031	2303100001	001	3	10300502	12.60	MANEVU2002	0.5672	0.0014	0.0014	SOUTHERN MAINE MEDICAL CENTER
ME	York	23031	2303100001	001	2	10300602	12.60	MANEVU2002	0.3625	0.0009	0.0009	SOUTHERN MAINE MEDICAL CENTER
ME	York	23031	2303100001	002	3	10300502	12.60	MANEVU2002	0.5672	0.0014	0.0014	SOUTHERN MAINE MEDICAL CENTER
ME	York	23031	2303100001	002	2	10300602	12.60	MANEVU2002	0.3625	0.0009	0.0009	SOUTHERN MAINE MEDICAL CENTER
ME	York	23031	2303100001	003	3	10300503	6.30	MANEVU2002	0.2836	0.0007	0.0007	SOUTHERN MAINE MEDICAL CENTER
ME	York	23031	2303100001	003	2	10300603	6.30	MANEVU2002	0.1295	0.0003	0.0003	SOUTHERN MAINE MEDICAL CENTER
ME	York	23031	2303100004	001	1	10200601	110.00	MANEVU2002	9.3100	0.0181	0.0181	WESTPOINT STEVENS INC
ME	York	23031	2303100013	001	1	10200401	0.00		3.9083	0.0107	0.0107	GENERAL DYNAMICS ARMAMENT SYSTEMS
ME	York	23031	2303100013	002	1	10200401	0.00		3.9083	0.0107	0.0107	GENERAL DYNAMICS ARMAMENT SYSTEMS
ME	York	23031	2303100013	003	1	10200401	0.00		3.9083	0.0107	0.0107	GENERAL DYNAMICS ARMAMENT SYSTEMS
ME	York	23031	2303100013	004	1	10200501	0.00		0.6216	0.0018	0.0018	GENERAL DYNAMICS ARMAMENT SYSTEMS
ME	York	23031	2303100020	001	1	10200401	0.00		24.7925	0.0463	0.0463	CYRO INDUSTRIES
ME	York	23031	2303100020	003	1	10200501	0.00		1.6920	0.0046	0.0046	CYRO INDUSTRIES
ME	York	23031	2303100025	002	1	10200501	14.60	MANEVU2002	0.0638	0.0000	0.0000	LAVALLEY LUMBER CO LLC
ME	York	23031	2303100028	001	1	10200401	34.00	MANEVU2002	9.0005	0.0257	0.0257	PRIME TANNING COMPANY INC
ME	York	23031	2303100028	002	1	10200401	21.00	MANEVU2002	4.6060	0.0154	0.0154	PRIME TANNING COMPANY INC
ME	York	23031	2303100028	003	1	10200401	21.00	MANEVU2002	4.6060	0.0154	0.0154	PRIME TANNING COMPANY INC
ME	York	23031	2303100028	004	1	10201002	15.00	MANEVU2002	0.0950	0.0000	0.0000	PRIME TANNING COMPANY INC
ME	York	23031	2303100029	001	1	10200401	30.00	MANEVU2002	5.8292	0.0041	0.0041	PRATT & WHITNEY - NO BERWICK
ME	York	23031	2303100029	001	2	10200602	30.00	MANEVU2002	1.6062	0.0011	0.0011	PRATT & WHITNEY - NO BERWICK
ME	York	23031	2303100029	002	1	10200401	24.00	MANEVU2002	3.5801	0.0126	0.0126	PRATT & WHITNEY - NO BERWICK
ME	York	23031	2303100029	002	2	10200602	24.00	MANEVU2002	1.4222	0.0050	0.0050	PRATT & WHITNEY - NO BERWICK
ME	York	23031	2303100029	003	2	10200602	50.00	MANEVU2002	0.0961	0.0006	0.0006	PRATT & WHITNEY - NO BERWICK
ME	York	23031	2303100041	004	1	10200503	5.00	SCC Descriptio	0.1551	0.0000	0.0000	F R CARROLL INC
ME	York	23031	2303100046	001	2	10200503	110.00	MANEVU2002	5.9010	0.0269	0.0269	DAYTON SAND AND GRAVEL CO INC
ME	York	23031	2303100046	004	1	10200501	0.00		0.1560	0.0000	0.0000	DAYTON SAND AND GRAVEL CO INC
ME	York	23031	2303100047	001	1	10200603	8.30	MANEVU2002	0.5250	0.0016	0.0016	HUSSEY SEATING CO
ME	York	23031	2303100047	002	1	10200603	11.60	MANEVU2002	0.7250	0.0000	0.0000	HUSSEY SEATING CO
ME	York	23031	2303100053	001	2	10200601	180.00	MANEVU2002	2.9260	0.0000	0.0000	PORTSMOUTH NAVAL SHIPYARD
ME	York	23031	2303100053	002	1	10200501	160.00	MANEVU2002	13.0956	0.0327	0.0327	PORTSMOUTH NAVAL SHIPYARD
ME	York	23031	2303100053	002	2	10200601	160.00	MANEVU2002	11.0040	0.0275	0.0275	PORTSMOUTH NAVAL SHIPYARD
ME	York	23031	2303100053	003	2	10200501	160.00	MANEVU2002	4.3272	0.0000	0.0000	PORTSMOUTH NAVAL SHIPYARD
ME	York	23031	2303100053	003	3	10200601	160.00	MANEVU2002	34.4260	0.0000	0.0000	PORTSMOUTH NAVAL SHIPYARD
ME	York	23031	2303100067	001	2	10200602	11.00	MANEVU2002	5.0295	0.0143	0.0143	SPENCER PRESS OF MAINE INC
ME	York	23031	2303100078	002	2	10300601	150.00	SCC Descriptio	0.8260	0.0000	0.0024	MAINE ENERGY RECOVERY COMPANY
ME	York	23031	2303100081	004	1	10200603	5.00	SCC Descriptio	9.0024	0.0247	0.0247	INTERSTATE BRANDS CORPORATION
MD	Allegany	24001	001-0011	1	01S1	10200203	500.00	Roger Thunell I	2039.1000	5.2866	5.2866	WESTVACO FINE PAPERS
MD	Allegany	24001	001-0011	2	01S2	10200212	500.00	Roger Thunell I	1717.3125	4.4523	4.4523	WESTVACO FINE PAPERS
MD	Allegany	24001	001-0011	33	01S33	10200503	1.00	Roger Thunell I	0.0900	0.0001	0.0001	WESTVACO FINE PAPERS
MD	Allegany	24001	001-0011	34	01S34	10200503	1.00	Roger Thunell I	0.0900	0.0001	0.0001	WESTVACO FINE PAPERS
MD	Allegany	24001	001-0011	41	01S41	10200601	338.00	Roger Thunell I	37.5075	0.1021	0.1021	WESTVACO FINE PAPERS
MD	Allegany	24001	001-0173	1	01S1	10200603	5.00	Roger Thunell I	0.1825	0.0001	0.0001	US MARINE - CUMBERLAND I
MD	Allegany	24001	001-0184	2	01S2	10200603	3.00	Roger Thunell I	0.1825	0.0001	0.0001	US MARINE - CUMBERLAND II

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MD	Anne Arundel	24003	003-0021	1	01S1	10200602	57.00	Roger Thunell F	2.9133	0.0079	0.0079	NEVAMAR COMPANY
MD	Anne Arundel	24003	003-0021	14	01S14	10200602	74.00	Roger Thunell F	0.6425	0.0017	0.0017	NEVAMAR COMPANY
MD	Anne Arundel	24003	003-0021	17	01S17	10200602	60.00	Roger Thunell F	24.0737	0.0656	0.0656	NEVAMAR COMPANY
MD	Anne Arundel	24003	003-0046	1	01S1	10300504	4.00	Roger Thunell F	0.0600	0.0002	0.0002	RAINBOW CLEANERS & UNIFORM RENTAL
MD	Anne Arundel	24003	003-0046	2	01S2	10300603	5.00	Roger Thunell F	0.6600	0.0018	0.0018	RAINBOW CLEANERS & UNIFORM RENTAL
MD	Anne Arundel	24003	003-0118	7	01S7	10200603	1.00	Roger Thunell F	1.6100	0.0014	0.0014	BURNETT, WM. T. COMPANY
MD	Anne Arundel	24003	003-0250	134	01S134	10200602	42.00	Roger Thunell F	11.5700	0.0126	0.0126	NORTHROP-GRUMMAN - BWI
MD	Anne Arundel	24003	003-0310	16	01S16	10300602	95.00	Roger Thunell F	4.7320	0.0047	0.0047	US NAVAL ACADEMY
MD	Anne Arundel	24003	003-0310	17	01S17	10300602	95.00	Roger Thunell F	11.1020	0.0140	0.0140	US NAVAL ACADEMY
MD	Anne Arundel	24003	003-0310	18	01S18	10300602	95.00	Roger Thunell F	4.8230	0.0142	0.0142	US NAVAL ACADEMY
MD	Anne Arundel	24003	003-0310	23	01S23	10300503	8.00	Roger Thunell F	0.1825	0.0003	0.0003	US NAVAL ACADEMY
MD	Anne Arundel	24003	003-0310	24	01S24	10300503	8.00	Roger Thunell F	0.1825	0.0002	0.0002	US NAVAL ACADEMY
MD	Anne Arundel	24003	003-0310	38	01S38	10300502	12.00	Roger Thunell F	0.1650	0.0004	0.0004	US NAVAL ACADEMY
MD	Anne Arundel	24003	003-0316	17	01S17	10300602	32.00	Roger Thunell F	8.2900	0.0470	0.0470	U.S. COAST GUARD YARD - CURTIS BAY
MD	Anne Arundel	24003	003-0317	102	01S102	10300602	85.00	Roger Thunell F	9.7010	0.0380	0.0380	NATIONAL SECURITY AGENCY
MD	Anne Arundel	24003	003-0317	103	01S103	10300602	85.00	Roger Thunell F	6.0950	0.0166	0.0166	NATIONAL SECURITY AGENCY
MD	Anne Arundel	24003	003-0317	104	01S104	10300602	85.00	Roger Thunell F	9.7110	0.0138	0.0138	NATIONAL SECURITY AGENCY
MD	Anne Arundel	24003	003-0317	105	01S105	10300602	90.00	Roger Thunell F	9.3375	0.0254	0.0254	NATIONAL SECURITY AGENCY
MD	Anne Arundel	24003	003-0317	77	01S77	10300602	20.00	Roger Thunell F	0.1825	0.0005	0.0005	NATIONAL SECURITY AGENCY
MD	Anne Arundel	24003	003-0317	79	01S79	10300603	4.00	Roger Thunell F	0.1825	0.0002	0.0002	NATIONAL SECURITY AGENCY
MD	Anne Arundel	24003	003-0317	80	01S80	10300603	4.00	Roger Thunell F	0.1825	0.0002	0.0002	NATIONAL SECURITY AGENCY
MD	Anne Arundel	24003	003-0322	133	01S133	10300603	4.00	Roger Thunell F	14.1800	0.0124	0.0124	FORT GEORGE MEADE
MD	Baltimore	24005	005-0097	4	01S4	10200603	11.00	Roger Thunell F	1.8000	0.0049	0.0049	SIGNODE EASTERN OPERATIONS
MD	Baltimore	24005	005-0146	3	01S3	10200602	15.00	Roger Thunell F	0.8580	0.0038	0.0038	DIAGEO NORTH AMERICA, INC.
MD	Baltimore	24005	005-0146	4	01S4	10200602	28.00	Roger Thunell F	1.1430	0.0007	0.0007	DIAGEO NORTH AMERICA, INC.
MD	Baltimore	24005	005-0147	11	01S11	10200503	2.00	Roger Thunell F	4.1100	0.0036	0.0036	BETHLEHEM STEEL
MD	Baltimore	24005	005-0147	16	01S16	10200401	812.00	Roger Thunell F	42.0000	0.1144	0.1144	BETHLEHEM STEEL
MD	Baltimore	24005	005-0147	17	01S17	10200401	1085.00	Roger Thunell F	42.0000	0.1144	0.1144	BETHLEHEM STEEL
MD	Baltimore	24005	005-0147	18	01S18	10200401	725.00	Roger Thunell F	42.0000	0.1144	0.1144	BETHLEHEM STEEL
MD	Baltimore	24005	005-0147	19	01S19	10200401	725.00	Roger Thunell F	42.0000	0.1144	0.1144	BETHLEHEM STEEL
MD	Baltimore	24005	005-0147	21	01S21	10200603	2.00	Roger Thunell F	41.0000	0.0357	0.0357	BETHLEHEM STEEL
MD	Baltimore	24005	005-0240	1	01S1	10200501	2.00	Roger Thunell F	0.2650	0.0007	0.0007	THOMAS MANUFACTURING CORPORATION
MD	Baltimore	24005	005-0290	11	01S11	10200603	5.00	Roger Thunell F	0.1300	0.0001	0.0001	MAIL-WELL LABEL
MD	Baltimore	24005	005-0306	67	01S67	10200602	31.00	Roger Thunell F	1.8798	0.0051	0.0051	SWEETHEART HOLDINGS
MD	Baltimore	24005	005-0306	68	01S68	10200602	31.00	Roger Thunell F	1.8798	0.0051	0.0051	SWEETHEART HOLDINGS
MD	Baltimore	24005	005-0306	69	01S69	10200602	62.00	Roger Thunell F	3.7778	0.0103	0.0103	SWEETHEART HOLDINGS
MD	Baltimore	24005	005-0306	75	01S75	10200603	4.00	Roger Thunell F	0.3577	0.0004	0.0004	SWEETHEART HOLDINGS
MD	Baltimore	24005	005-0384	1	01S1	10200503	2.00	Roger Thunell F	0.1900	0.0005	0.0005	SCHLUMBERGER MALCO
MD	Baltimore	24005	005-0384	2	01S2	10200503	2.00	Roger Thunell F	0.1900	0.0005	0.0005	SCHLUMBERGER MALCO
MD	Baltimore	24005	005-0384	3	01S3	10200503	3.00	Roger Thunell F	0.3200	0.0009	0.0009	SCHLUMBERGER MALCO
MD	Baltimore	24005	005-0812	2	01S2	10300603	9.00	Roger Thunell F	2.5550	0.0070	0.0070	BACK RIVER WASTE WATER TRTMNT PLANT
MD	Baltimore	24005	005-0812	27	01S27	10300799	33.00	Roger Thunell F	4.0150	0.0109	0.0109	BACK RIVER WASTE WATER TRTMNT PLANT
MD	Baltimore	24005	005-0812	29	01S29	10300799	33.00	Roger Thunell F	4.0150	0.0109	0.0109	BACK RIVER WASTE WATER TRTMNT PLANT
MD	Baltimore	24005	005-0812	4	01S4	10300602	14.00	Roger Thunell F	20.4400	0.0557	0.0557	BACK RIVER WASTE WATER TRTMNT PLANT
MD	Baltimore	24005	005-0979	1	01S1	10200501	5.00	Roger Thunell F	1.1500	0.0031	0.0031	AMERICAN YEAST
MD	Baltimore	24005	005-0979	4	01S4	10200501	8.00	Roger Thunell F	3.4640	0.0094	0.0094	AMERICAN YEAST
MD	Baltimore	24005	005-0979	5	01S5	10200501	5.00	Roger Thunell F	1.1500	0.0031	0.0031	AMERICAN YEAST
MD	Baltimore	24005	005-1956	1	01S1	10200501	3.00	Roger Thunell F	0.1400	0.0004	0.0004	POLYSTYRENE PRODUCTS
MD	Baltimore	24005	005-2305	7	01S7	10200501	3.00	Roger Thunell F	0.6100	0.0017	0.0017	POLYSTYRENE PRODUCTS
MD	Baltimore	24005	005-2407	1	01S1	10200602	4.00	Roger Thunell F	2.0000	0.0017	0.0017	MIDDLE RIVER AIRCRAFT SYSTEMS
MD	Caroline	24011	011-0006	5	01S5	10200602	12.00	Roger Thunell F	0.1720	0.0001	0.0001	GENERAL MILLS BAKERIES
MD	Caroline	24011	011-0006	6	01S6	10200603	2.00	Roger Thunell F	0.0860	0.0001	0.0001	GENERAL MILLS BAKERIES

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
MD	Caroline	24011	011-0044	2	01S2	10200602	14.00	Roger Thunell I	0.5000	0.0014	0.0014	SOLO CUP - RT. 313
MD	Cecil	24015	015-0079	1	01S1	10200503	1.00	Roger Thunell I	1.4600	0.0016	0.0016	GORE, W.L. - CHERRY HILL PLANT
MD	Charles	24017	017-0040	102	01S102	10300503	1.00	Roger Thunell I	1.5912	0.0007	0.0007	NAVAL SURFACE WARFARE CNTR-INDIAN HD
MD	Charles	24017	017-0040	9	01S9	10300402	43.00	Roger Thunell I	0.0527	0.0000	0.0000	NAVAL SURFACE WARFARE CNTR-INDIAN HD
MD	Charles	24017	017-0040	93	01S93	10300226	180.00	Roger Thunell I	29.0727	0.0443	0.0443	NAVAL SURFACE WARFARE CNTR-INDIAN HD
MD	Charles	24017	017-0040	94	01S94	10300226	180.00	Roger Thunell I	4.3510	0.0118	0.0118	NAVAL SURFACE WARFARE CNTR-INDIAN HD
MD	Charles	24017	017-0040	95	01S95	10300226	180.00	Roger Thunell I	134.3222	0.2048	0.2048	NAVAL SURFACE WARFARE CNTR-INDIAN HD
MD	Dorchester	24019	019-0029	19	01S19	10200602	100.00	Roger Thunell I	10.5456	0.0287	0.0287	JCR ENTERPRISES
MD	Dorchester	24019	019-0029	21	01S21	10200602	50.00	Roger Thunell I	6.7860	0.0185	0.0185	JCR ENTERPRISES
MD	Dorchester	24019	019-0029	22	01S22	10200602	50.00	Roger Thunell I	1.5132	0.0041	0.0041	JCR ENTERPRISES
MD	Dorchester	24019	019-0083	18	01S18	10200603	2.00	Roger Thunell I	1.0100	0.0037	0.0037	WESTERN PUBLISHING/MAIL-WELL GRAPHIC
MD	Frederick	24021	021-0005	16	01S16	10200603	7.00	Roger Thunell I	2.1563	0.0033	0.0033	EASTALCO ALUMINUM
MD	Frederick	24021	021-0005	17	01S17	10200603	2.00	Roger Thunell I	1.0328	0.0016	0.0016	EASTALCO ALUMINUM
MD	Frederick	24021	021-0005	19	01S19	10200603	1.00	Roger Thunell I	0.3495	0.0005	0.0005	EASTALCO ALUMINUM
MD	Frederick	24021	021-0010	2	01S2	10200503	6.00	Roger Thunell I	0.2700	0.0003	0.0003	MOORE COMMUNICATIONS SERVICES
MD	Frederick	24021	021-0010	3	01S3	10200503	3.00	Roger Thunell I	0.2250	0.0002	0.0002	MOORE COMMUNICATIONS SERVICES
MD	Frederick	24021	021-0131	16	01S16	10300503	3.00	Roger Thunell I	0.4723	0.0004	0.0004	FORT DETRICK
MD	Frederick	24021	021-0131	17	01S17	10300503	3.00	Roger Thunell I	0.4263	0.0004	0.0004	FORT DETRICK
MD	Frederick	24021	021-0131	18	01S18	10300503	3.00	Roger Thunell I	0.3899	0.0003	0.0003	FORT DETRICK
MD	Frederick	24021	021-0131	19	01S19	10300602	77.00	Roger Thunell I	6.9521	0.0189	0.0189	FORT DETRICK
MD	Frederick	24021	021-0131	20	01S20	10300602	77.00	Roger Thunell I	7.9771	0.0217	0.0217	FORT DETRICK
MD	Frederick	24021	021-0131	23	01S23	10300503	4.00	Roger Thunell I	0.5478	0.0005	0.0005	FORT DETRICK
MD	Frederick	24021	021-0131	26	01S26	10300603	2.00	Roger Thunell I	0.0723	0.0002	0.0002	FORT DETRICK
MD	Frederick	24021	021-0131	27	01S27	10300603	3.00	Roger Thunell I	0.1502	0.0002	0.0002	FORT DETRICK
MD	Frederick	24021	021-0131	31	01S31	10300603	2.00	Roger Thunell I	0.0505	0.0001	0.0001	FORT DETRICK
MD	Frederick	24021	021-0131	32	01S32	10300603	2.00	Roger Thunell I	0.0423	0.0000	0.0000	FORT DETRICK
MD	Frederick	24021	021-0131	33	01S33	10300603	3.00	Roger Thunell I	0.0870	0.0001	0.0001	FORT DETRICK
MD	Frederick	24021	021-0131	34	01S34	10300603	3.00	Roger Thunell I	0.0870	0.0001	0.0001	FORT DETRICK
MD	Frederick	24021	021-0131	35	01S35	10300603	2.00	Roger Thunell I	0.2430	0.0002	0.0002	FORT DETRICK
MD	Frederick	24021	021-0131	38	01S38	10300603	1.00	Roger Thunell I	0.1140	0.0003	0.0003	FORT DETRICK
MD	Frederick	24021	021-0131	5	01S5	10300601	165.00	Roger Thunell I	49.9855	0.0436	0.0436	FORT DETRICK
MD	Frederick	24021	021-0131	6	01S6	10300602	98.00	Roger Thunell I	7.3010	0.0159	0.0159	FORT DETRICK
MD	Frederick	24021	021-0131	9	01S9	10300602	98.00	Roger Thunell I	5.5994	0.0049	0.0049	FORT DETRICK
MD	Frederick	24021	021-0172	2	01S2	10200603	8.00	Roger Thunell I	0.4550	0.0012	0.0012	TAMKO ROOFING PRODUCTS
MD	Frederick	24021	021-0172	7	01S7	10200603	8.00	Roger Thunell I	0.4575	0.0012	0.0012	TAMKO ROOFING PRODUCTS
MD	Harford	24025	025-0002	10	01S10	10200503	4.00	Roger Thunell I	0.1250	0.0002	0.0002	MCCORQUODALE COLOR CARD
MD	Harford	24025	025-0002	9	01S9	10200503	3.00	Roger Thunell I	0.1250	0.0002	0.0002	MCCORQUODALE COLOR CARD
MD	Harford	24025	025-0005	3	01S3	10200602	47.00	Roger Thunell I	6.7980	0.0185	0.0185	J.M. HUBER CORPORATION
MD	Harford	24025	025-0005	4	01S4	10200602	88.00	Roger Thunell I	1.3570	0.0037	0.0037	J.M. HUBER CORPORATION
MD	Harford	24025	025-0006	41	01S41	10200602	17.00	Roger Thunell I	2.1240	0.0028	0.0028	CYTEC ENGINEERED MATERIALS
MD	Harford	24025	025-0006	42	01S42	10200603	8.00	Roger Thunell I	0.6875	0.0030	0.0030	CYTEC ENGINEERED MATERIALS
MD	Harford	24025	025-0006	58	01S58	10200603	2.00	Roger Thunell I	0.1725	0.0002	0.0002	CYTEC ENGINEERED MATERIALS
MD	Harford	24025	025-0006	59	01S59	10200603	2.00	Roger Thunell I	0.3650	0.0003	0.0003	CYTEC ENGINEERED MATERIALS
MD	Harford	24025	025-0145	14	01S14	10200602	10.00	Roger Thunell I	0.7200	0.0012	0.0012	SHERWIN WILLIAMS CLEANING SOLUTIONS
MD	Harford	24025	025-0423	3	01S3	10200603	4.00	Roger Thunell I	0.8120	0.0022	0.0022	ALCORE - QUARRY DRIVE
MD	Howard	24027	027-0005	1	01S1	10200401	150.00	Roger Thunell I	67.2039	0.1757	0.1757	SIMKINS INDUSTRIES
MD	Kent	24029	029-0001	25	01S25	10200402	11.00	Roger Thunell I	5.1000	0.0139	0.0139	VELSICOL CHEMICAL
MD	Kent	24029	029-0001	26	01S26	10200402	29.00	Roger Thunell I	9.6400	0.0263	0.0263	VELSICOL CHEMICAL
MD	Montgomery	24031	031-0220	1	01S1	10200602	10.00	Roger Thunell I	0.3650	0.0006	0.0006	DOW JONES & COMPANY
MD	Montgomery	24031	031-0323	1	01S1	10300602	55.00	Roger Thunell I	4.8585	0.0042	0.0042	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
MD	Montgomery	24031	031-0323	2	01S2	10300602	55.00	Roger Thunell I	5.8855	0.0051	0.0051	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
MD	Montgomery	24031	031-0323	3	01S3	10300602	55.00	Roger Thunell I	6.0435	0.0053	0.0053	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

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MD	Montgomery	24031	031-0323	4	01S4	10300602	55.00	Roger Thunell F	4.9375	0.0043	0.0043	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
MD	Montgomery	24031	031-0323	6	01S6	10300602	100.00	Roger Thunell F	4.9770	0.0043	0.0043	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
MD	Montgomery	24031	031-0323	7	01S7	10300602	100.00	Roger Thunell F	1.9600	0.0017	0.0017	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
MD	Montgomery	24031	031-0324	25	01S25	10300601	200.00	Roger Thunell F	3.3811	0.0069	0.0069	NATIONAL INSTITUTE OF HEALTH
MD	Montgomery	24031	031-0324	26	01S26	10300601	200.00	Roger Thunell F	7.6958	0.0158	0.0158	NATIONAL INSTITUTE OF HEALTH
MD	Montgomery	24031	031-0324	27	01S27	10300601	200.00	Roger Thunell F	4.5543	0.0093	0.0093	NATIONAL INSTITUTE OF HEALTH
MD	Montgomery	24031	031-0324	28	01S28	10300601	311.00	Roger Thunell F	11.4749	0.0235	0.0235	NATIONAL INSTITUTE OF HEALTH
MD	Montgomery	24031	031-0324	8	01S8	10300601	245.00	Roger Thunell F	32.9820	0.0323	0.0323	NATIONAL INSTITUTE OF HEALTH
MD	Montgomery	24031	031-1124	17	01S17	10300602	68.00	Roger Thunell F	2.1947	0.0031	0.0031	NATIONAL NAVAL MEDICAL CENTER
MD	Montgomery	24031	031-1124	20	01S20	10300602	68.00	Roger Thunell F	2.0491	0.0063	0.0063	NATIONAL NAVAL MEDICAL CENTER
MD	Montgomery	24031	031-1124	22	01S22	10300602	37.00	Roger Thunell F	3.8269	0.0017	0.0017	NATIONAL NAVAL MEDICAL CENTER
MD	Montgomery	24031	031-1124	23	01S23	10300602	67.00	Roger Thunell F	3.7182	0.0032	0.0032	NATIONAL NAVAL MEDICAL CENTER
MD	Montgomery	24031	031-1124	24	01S24	10300602	67.00	Roger Thunell F	1.0281	0.0009	0.0009	NATIONAL NAVAL MEDICAL CENTER
MD	Prince Georges	24033	033-0010	14	01S14	10300603	2.00	Roger Thunell F	0.6844	0.0010	0.0010	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	19	01S19	10300603	2.00	Roger Thunell F	0.0799	0.0001	0.0001	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	20	01S20	10300603	2.00	Roger Thunell F	0.0799	0.0001	0.0001	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	24	01S24	10300603	1.00	Roger Thunell F	0.0012	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	25	01S25	10300603	1.00	Roger Thunell F	0.0012	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	26	01S26	10300603	1.00	Roger Thunell F	0.0010	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	3	01S3	10300601	132.00	Roger Thunell F	38.4300	0.0795	0.0795	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	33	01S33	10300603	2.00	Roger Thunell F	0.1712	0.0002	0.0002	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	34	01S34	10300603	1.00	Roger Thunell F	0.0064	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	35	01S35	10300603	1.00	Roger Thunell F	0.0064	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	36	01S36	10300603	1.00	Roger Thunell F	0.0039	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	37	01S37	10300603	1.00	Roger Thunell F	0.0039	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	4	01S4	10300601	117.00	Roger Thunell F	18.1545	0.0277	0.0277	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	42	01S42	10300603	1.00	Roger Thunell F	0.0118	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	43	01S43	10300603	1.00	Roger Thunell F	0.0118	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	44	01S44	10300603	3.00	Roger Thunell F	0.0783	0.0001	0.0001	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	45	01S45	10300603	4.00	Roger Thunell F	0.0783	0.0001	0.0001	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	46	01S46	10300603	1.00	Roger Thunell F	0.0045	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	47	01S47	10300603	1.00	Roger Thunell F	0.0045	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	48	01S48	10300603	1.00	Roger Thunell F	0.0403	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	49	01S49	10300603	2.00	Roger Thunell F	0.0538	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	50	01S50	10300603	2.00	Roger Thunell F	0.0672	0.0001	0.0001	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	53	01S53	10300602	60.00	Roger Thunell F	1.5795	0.0028	0.0028	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	54	01S54	10300602	80.00	Roger Thunell F	5.2013	0.0091	0.0091	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	6	01S6	10300601	157.00	Roger Thunell F	32.0400	0.0663	0.0663	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0655	115	01S115	10300503	5.00	Roger Thunell F	0.9125	0.0014	0.0014	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	116	01S116	10300603	1.00	Roger Thunell F	6.3875	0.0056	0.0056	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	121	01S121	10300602	24.00	Roger Thunell F	0.5610	0.0009	0.0009	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	122	01S122	10300602	24.00	Roger Thunell F	0.7565	0.0012	0.0012	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	123	01S123	10300602	21.00	Roger Thunell F	0.9295	0.0014	0.0014	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	124	01S124	10300602	21.00	Roger Thunell F	0.9450	0.0014	0.0014	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	125	01S125	10300602	20.00	Roger Thunell F	1.0275	0.0016	0.0016	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	75	01S75	10300602	85.00	Roger Thunell F	3.4380	0.0056	0.0056	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	76	01S76	10300602	85.00	Roger Thunell F	3.4410	0.0056	0.0056	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	77	01S77	10300602	85.00	Roger Thunell F	4.1125	0.0067	0.0067	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0675	19	01S19	10300811	50.00	Roger Thunell F	4.7450	0.0105	0.0105	GODDARD SPACE FLIGHT CENTER
MD	Prince Georges	24033	033-0675	20	01S20	10300811	50.00	Roger Thunell F	4.7450	0.0105	0.0105	GODDARD SPACE FLIGHT CENTER
MD	Prince Georges	24033	033-0675	21	01S21	10300811	50.00	Roger Thunell F	4.7450	0.0105	0.0105	GODDARD SPACE FLIGHT CENTER
MD	Prince Georges	24033	033-0675	22	01S22	10300811	50.00	Roger Thunell F	4.7450	0.0105	0.0105	GODDARD SPACE FLIGHT CENTER

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MD	Prince Georges	24033	033-0675	23	01S23	10300811	50.00	Roger Thunell F	4.7450	0.0105	0.0105	GODDARD SPACE FLIGHT CENTER
MD	Prince Georges	24033	033-0675	27	01S27	10300603	1.00	Roger Thunell F	0.1825	0.0003	0.0003	GODDARD SPACE FLIGHT CENTER
MD	Prince Georges	24033	033-1737	2	01S2	10200603	8.00	Roger Thunell F	1.0950	0.0030	0.0030	WASHINGTON POST, THE
MD	Prince Georges	24033	033-1737	3	01S3	10200603	8.00	Roger Thunell F	1.0950	0.0030	0.0030	WASHINGTON POST, THE
MD	Prince Georges	24033	033-2234	2	01S2	10200603	5.00	Roger Thunell F	0.3600	0.0002	0.0002	CRAFTSMAN PRESS - CRAFTSMAN CIRCLE
MD	Prince Georges	24033	033-2234	3	01S3	10200603	5.00	Roger Thunell F	0.3600	0.0002	0.0002	CRAFTSMAN PRESS - CRAFTSMAN CIRCLE
MD	St. Marys	24037	037-0001	13	01S13	10300402	26.00	Roger Thunell F	3.8600	0.0105	0.0105	S.T. SERVICES TERMINAL
MD	St. Marys	24037	037-0001	14	01S14	10300402	26.00	Roger Thunell F	7.2600	0.0198	0.0198	S.T. SERVICES TERMINAL
MD	St. Marys	24037	037-0001	15	01S15	10300402	17.00	Roger Thunell F	3.3600	0.0092	0.0092	S.T. SERVICES TERMINAL
MD	St. Marys	24037	037-0001	16	01S16	10300402	17.00	Roger Thunell F	2.4800	0.0068	0.0068	S.T. SERVICES TERMINAL
MD	St. Marys	24037	037-0001	17	01S17	10300402	25.00	Roger Thunell F	13.2000	0.0359	0.0359	S.T. SERVICES TERMINAL
MD	St. Marys	24037	037-0001	18	01S18	10300502	15.00	Roger Thunell F	4.4000	0.0120	0.0120	S.T. SERVICES TERMINAL
MD	St. Marys	24037	037-0001	19	01S19	10300502	15.00	Roger Thunell F	2.6400	0.0072	0.0072	S.T. SERVICES TERMINAL
MD	St. Marys	24037	037-0017	118	01S118	10300602	10.00	Roger Thunell F	0.2100	0.0002	0.0002	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	119	01S119	10300602	10.00	Roger Thunell F	0.2100	0.0002	0.0002	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	193	01S193	10300503	3.00	Roger Thunell F	0.3650	0.0010	0.0010	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	194	01S194	10300503	3.00	Roger Thunell F	0.7350	0.0008	0.0008	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	195	01S195	10300603	4.00	Roger Thunell F	5.0400	0.0055	0.0055	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	196	01S196	10300603	2.00	Roger Thunell F	3.1025	0.0084	0.0084	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	66	01S66	10300502	29.00	Roger Thunell F	0.1825	0.0002	0.0002	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	67	01S67	10300502	29.00	Roger Thunell F	0.1825	0.0002	0.0002	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	68	01S68	10300502	12.00	Roger Thunell F	0.1825	0.0002	0.0002	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	88	01S88	10300602	13.00	Roger Thunell F	1.0500	0.0014	0.0014	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	89	01S89	10300602	13.00	Roger Thunell F	1.0500	0.0014	0.0014	PATUXENT RIVER NAVAL AIR STATION
MD	Somerset	24039	039-0055	1	01S1	10300902	40.00	Roger Thunell F	20.4750	0.0558	0.0558	EASTERN CORRECTIONAL INSTITUTION
MD	Somerset	24039	039-0055	3	01S3	10300902	40.00	Roger Thunell F	20.8120	0.0567	0.0567	EASTERN CORRECTIONAL INSTITUTION
MD	Talbot	24041	041-0027	6	01S6	10200504	3.00	Roger Thunell F	0.3540	0.0004	0.0004	CADMUS COMMUNICATIONS
MD	Talbot	24041	041-0027	7	01S7	10200603	4.00	Roger Thunell F	0.3540	0.0004	0.0004	CADMUS COMMUNICATIONS
MD	Washington	24043	043-0006	1	01S1	10200601	140.00	Roger Thunell F	13.6300	0.0241	0.0241	MACK TRUCKS
MD	Washington	24043	043-0006	2	01S2	10200601	140.00	Roger Thunell F	24.7000	0.0436	0.0436	MACK TRUCKS
MD	Washington	24043	043-0006	3	01S3	10200601	140.00	Roger Thunell F	17.9900	0.0317	0.0317	MACK TRUCKS
MD	Washington	24043	043-0075	10	01S10	10200603	7.00	Roger Thunell F	0.0800	0.0002	0.0002	GARDEN STATE TANNING/BYRON PLANT
MD	Washington	24043	043-0075	11	01S11	10200602	25.00	Roger Thunell F	0.0800	0.0001	0.0001	GARDEN STATE TANNING/BYRON PLANT
MD	Washington	24043	043-0075	13	01S13	10200603	2.00	Roger Thunell F	0.0800	0.0002	0.0002	GARDEN STATE TANNING/BYRON PLANT
MD	Washington	24043	043-0075	14	01S14	10200502	25.00	Roger Thunell F	3.3000	0.0090	0.0090	GARDEN STATE TANNING/BYRON PLANT
MD	Washington	24043	043-0075	15	01S15	10200502	25.00	Roger Thunell F	3.3000	0.0090	0.0090	GARDEN STATE TANNING/BYRON PLANT
MD	Washington	24043	043-0095	3	01S3	10200903	12.00	Roger Thunell F	0.0950	0.0003	0.0003	STATTON FURNITURE
MD	Washington	24043	043-0095	9	01S9	10200603	8.00	Roger Thunell F	0.1800	0.0002	0.0002	STATTON FURNITURE
MD	Washington	24043	043-0206	8	01S8	10201003	3.00	Roger Thunell F	0.4075	0.0004	0.0004	FIL-TEC
MD	Washington	24043	043-0305	5	01S5	10201002	0.00		1.6735	0.0046	0.0046	ENGINEERED POLYMER SOLUTIONS
MD	Washington	24043	043-0305	6	01S6	10201002	0.00		1.6735	0.0046	0.0046	ENGINEERED POLYMER SOLUTIONS
MD	Wicomico	24045	045-0042	2	01S2	10200402	25.00	Roger Thunell F	13.1400	0.0358	0.0358	PERDUE FARMS
MD	Wicomico	24045	045-0042	24	01S24	10200402	52.00	Roger Thunell F	45.8075	0.1247	0.1247	PERDUE FARMS
MD	Wicomico	24045	045-0042	3	01S3	10200402	29.00	Roger Thunell F	17.3375	0.0472	0.0472	PERDUE FARMS
MD	Wicomico	24045	045-0042	4	01S4	10200603	8.00	Roger Thunell F	3.6500	0.0099	0.0099	PERDUE FARMS
MD	Wicomico	24045	045-0042	57	01S57	10200402	24.00	Roger Thunell F	19.7100	0.0537	0.0537	PERDUE FARMS
MD	Wicomico	24045	045-0082	15	01S15	10200402	19.00	Roger Thunell F	6.8200	0.0119	0.0119	VPI MIRREX
MD	Wicomico	24045	045-0082	16	01S16	10200402	15.00	Roger Thunell F	7.8300	0.0136	0.0136	VPI MIRREX
MD	Wicomico	24045	045-0129	1	01S1	10200902	32.00	Roger Thunell F	10.9500	0.0298	0.0298	WELLS, J.V., INC - SHARPTOWN
MD	Wicomico	24045	045-0129	2	01S2	10200902	32.00	Roger Thunell F	10.9500	0.0298	0.0298	WELLS, J.V., INC - SHARPTOWN
MD	Wicomico	24045	045-0134	2	01S2	10200603	6.00	Roger Thunell F	0.2070	0.0002	0.0002	U.S. MARINE
MD	Wicomico	24045	045-0134	3	01S3	10200603	6.00	Roger Thunell F	0.2070	0.0002	0.0002	U.S. MARINE

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
MD	Wicomico	24045	045-0134	9	01S9	10200603	4.00	Roger Thunell F	0.0470	0.0000	0.0000	U.S. MARINE
MD	Baltimore City	24510	510-0001	2	01S2	10300601	103.00	Roger Thunell F	29.3830	0.0704	0.0704	JOHNS HOPKINS HOSPITAL
MD	Baltimore City	24510	510-0001	3	01S3	10300601	103.00	Roger Thunell F	29.3830	0.0704	0.0704	JOHNS HOPKINS HOSPITAL
MD	Baltimore City	24510	510-0001	4	01S4	10300601	103.00	Roger Thunell F	29.3830	0.0704	0.0704	JOHNS HOPKINS HOSPITAL
MD	Baltimore City	24510	510-0001	5	01S5	10300601	103.00	Roger Thunell F	29.3830	0.0704	0.0704	JOHNS HOPKINS HOSPITAL
MD	Baltimore City	24510	510-0001	6	01S6	10300602	92.00	Roger Thunell F	29.3830	0.0704	0.0704	JOHNS HOPKINS HOSPITAL
MD	Baltimore City	24510	510-0071	18	01S18	10200603	8.00	Roger Thunell F	1.4000	0.0038	0.0038	GAF BUILDING PRODUCTS
MD	Baltimore City	24510	510-0071	19	01S19	10200602	12.00	Roger Thunell F	0.0600	0.0002	0.0002	GAF BUILDING PRODUCTS
MD	Baltimore City	24510	510-0073	29	01S29	10200603	8.00	Roger Thunell F	2.7720	0.0075	0.0075	FMC CORP. ORGANIC CHEMICALS DIVISION
MD	Baltimore City	24510	510-0073	3	01S3	10200602	44.00	Roger Thunell F	2.3625	0.0026	0.0026	FMC CORP. ORGANIC CHEMICALS DIVISION
MD	Baltimore City	24510	510-0073	4	01S4	10200602	44.00	Roger Thunell F	10.3740	0.0158	0.0158	FMC CORP. ORGANIC CHEMICALS DIVISION
MD	Baltimore City	24510	510-0073	5	01S5	10200602	95.00	Roger Thunell F	8.3055	0.0130	0.0130	FMC CORP. ORGANIC CHEMICALS DIVISION
MD	Baltimore City	24510	510-0073	6	01S6	10200602	90.00	Roger Thunell F	10.2370	0.0279	0.0279	FMC CORP. ORGANIC CHEMICALS DIVISION
MD	Baltimore City	24510	510-0076	1	01S1	10200602	60.00	Roger Thunell F	0.5900	0.0016	0.0016	GRACE - DAVISON CHEMICAL
MD	Baltimore City	24510	510-0076	5	01S5	10200601	125.00	Roger Thunell F	10.7500	0.0293	0.0293	GRACE - DAVISON CHEMICAL
MD	Baltimore City	24510	510-0077	10	01S10	10300602	93.00	Roger Thunell F	4.9275	0.0075	0.0075	JOHNS HOPKINS - HOMEWOOD CAMPUS
MD	Baltimore City	24510	510-0077	11	01S11	10300603	2.00	Roger Thunell F	0.0900	0.0001	0.0001	JOHNS HOPKINS - HOMEWOOD CAMPUS
MD	Baltimore City	24510	510-0077	12	01S12	10300603	2.00	Roger Thunell F	0.0900	0.0001	0.0001	JOHNS HOPKINS - HOMEWOOD CAMPUS
MD	Baltimore City	24510	510-0077	5	01S5	10300602	59.00	Roger Thunell F	5.1100	0.0078	0.0078	JOHNS HOPKINS - HOMEWOOD CAMPUS
MD	Baltimore City	24510	510-0077	6	01S6	10300602	59.00	Roger Thunell F	4.9275	0.0075	0.0075	JOHNS HOPKINS - HOMEWOOD CAMPUS
MD	Baltimore City	24510	510-0077	7	01S7	10300602	59.00	Roger Thunell F	4.9275	0.0075	0.0075	JOHNS HOPKINS - HOMEWOOD CAMPUS
MD	Baltimore City	24510	510-0100	1	01S1	10200402	62.00	Roger Thunell F	34.2000	0.0931	0.0931	SASOL NORTH AMERICA, INC.
MD	Baltimore City	24510	510-0100	2	01S2	10200402	60.00	Roger Thunell F	38.3000	0.1043	0.1043	SASOL NORTH AMERICA, INC.
MD	Baltimore City	24510	510-0106	1	01S1	10200603	2.00	Roger Thunell F	0.3900	0.0003	0.0003	UNITED STATES GYPSUM COMPANY
MD	Baltimore City	24510	510-0109	3	01S3	10200601	130.00	Roger Thunell F	8.9972	0.0245	0.0245	MILLENIUM INORGANIC CHEMICALS
MD	Baltimore City	24510	510-0109	4	01S4	10200601	130.00	Roger Thunell F	39.9675	0.1088	0.1088	MILLENIUM INORGANIC CHEMICALS
MD	Baltimore City	24510	510-0109	53	01S53	10200602	56.00	Roger Thunell F	3.8635	0.0105	0.0105	MILLENIUM INORGANIC CHEMICALS
MD	Baltimore City	24510	510-0109	54	01S54	10200602	56.00	Roger Thunell F	3.8635	0.0105	0.0105	MILLENIUM INORGANIC CHEMICALS
MD	Baltimore City	24510	510-0109	55	01S55	10200602	56.00	Roger Thunell F	3.8635	0.0105	0.0105	MILLENIUM INORGANIC CHEMICALS
MD	Baltimore City	24510	510-0109	6	01S6	10200602	13.00	Roger Thunell F	2.0988	0.0057	0.0057	MILLENIUM INORGANIC CHEMICALS
MD	Baltimore City	24510	510-0111	31	01S31	10300603	2.00	Roger Thunell F	0.1825	0.0002	0.0002	PEMCO CORPORATION
MD	Baltimore City	24510	510-0111	32	01S32	10300603	2.00	Roger Thunell F	0.1825	0.0003	0.0003	PEMCO CORPORATION
MD	Baltimore City	24510	510-0111	33	01S33	10300603	1.00	Roger Thunell F	0.1825	0.0003	0.0003	PEMCO CORPORATION
MD	Baltimore City	24510	510-0111	34	01S34	10300603	2.00	Roger Thunell F	0.1250	0.0001	0.0001	PEMCO CORPORATION
MD	Baltimore City	24510	510-0121	4	01S4	10200602	100.00	Roger Thunell F	21.5400	0.0587	0.0587	UNILEVER HOME & PERSONAL CARE
MD	Baltimore City	24510	510-0191	1	01S1	10200602	43.00	Roger Thunell F	1.3323	0.0036	0.0036	RED STAR YEAST
MD	Baltimore City	24510	510-0191	2	01S2	10200602	41.00	Roger Thunell F	1.2410	0.0034	0.0034	RED STAR YEAST
MD	Baltimore City	24510	510-0286	25	01S25	10200603	7.00	Roger Thunell F	1.2640	0.0031	0.0031	SHERWIN-WILLIAMS COMPANY
MD	Baltimore City	24510	510-0286	26	01S26	10200603	4.00	Roger Thunell F	1.0500	0.0026	0.0026	SHERWIN-WILLIAMS COMPANY
MD	Baltimore City	24510	510-0286	28	01S28	10200603	5.00	Roger Thunell F	1.2250	0.0030	0.0030	SHERWIN-WILLIAMS COMPANY
MD	Baltimore City	24510	510-0286	29	01S29	10200602	11.00	Roger Thunell F	0.4000	0.0010	0.0010	SHERWIN-WILLIAMS COMPANY
MD	Baltimore City	24510	510-0286	30	01S30	10200602	11.00	Roger Thunell F	0.4000	0.0010	0.0010	SHERWIN-WILLIAMS COMPANY
MD	Baltimore City	24510	510-0286	34	01S34	10200603	1.00	Roger Thunell F	0.0750	0.0001	0.0001	SHERWIN-WILLIAMS COMPANY
MD	Baltimore City	24510	510-0286	35	01S35	10200603	1.00	Roger Thunell F	0.0750	0.0001	0.0001	SHERWIN-WILLIAMS COMPANY
MD	Baltimore City	24510	510-0314	50	01S50	10200601	130.00	Roger Thunell F	52.3240	0.1425	0.1425	TATE & LYLE NORTH AMERICAN SUGARS
MD	Baltimore City	24510	510-0314	51	01S51	10200601	130.00	Roger Thunell F	5.1500	0.0140	0.0140	TATE & LYLE NORTH AMERICAN SUGARS
MD	Baltimore City	24510	510-0314	52	01S52	10200601	130.00	Roger Thunell F	44.1910	0.1203	0.1203	TATE & LYLE NORTH AMERICAN SUGARS
MD	Baltimore City	24510	510-0314	53	01S53	10200601	130.00	Roger Thunell F	5.1500	0.0140	0.0140	TATE & LYLE NORTH AMERICAN SUGARS
MD	Baltimore City	24510	510-0314	54	01S54	10200601	250.00	Roger Thunell F	62.5695	0.1704	0.1704	TATE & LYLE NORTH AMERICAN SUGARS
MD	Baltimore City	24510	510-0337	44	01S44	10200502	30.00	Roger Thunell F	1.2420	0.0014	0.0014	KAYDON RING & SEAL INC.
MD	Baltimore City	24510	510-0337	45	01S45	10200502	30.00	Roger Thunell F	1.2420	0.0014	0.0014	KAYDON RING & SEAL INC.
MD	Baltimore City	24510	510-0337	47	01S47	10200603	6.00	Roger Thunell F	1.3203	0.0058	0.0058	KAYDON RING & SEAL INC.

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
MD	Baltimore City	24510	510-0354	3	01S3	10200502	93.00	Roger Thunell F	0.8000	0.0013	0.0013	GENERAL MOTORS TRUCK & BUS GROUP
MD	Baltimore City	24510	510-0354	4	01S4	10200602	93.00	Roger Thunell F	6.7000	0.0035	0.0035	GENERAL MOTORS TRUCK & BUS GROUP
MD	Baltimore City	24510	510-0354	5	01S5	10200602	93.00	Roger Thunell F	4.7000	0.0079	0.0079	GENERAL MOTORS TRUCK & BUS GROUP
MD	Baltimore City	24510	510-0354	7	01S7	10200601	200.00	Roger Thunell F	8.1000	0.0088	0.0088	GENERAL MOTORS TRUCK & BUS GROUP
MD	Baltimore City	24510	510-0354	7	01F7	10200601	200.00	Roger Thunell F	3.5000	0.0038	0.0038	GENERAL MOTORS TRUCK & BUS GROUP
MD	Baltimore City	24510	510-0582	3	01S3	10200603	4.00	Roger Thunell F	0.9900	0.0031	0.0031	HAUSWALD BAKERY/DIV OF SCHMIDT'S
MD	Baltimore City	24510	510-0651	3	01S3	10300601	150.00	Roger Thunell F	31.8010	0.0312	0.0312	TRIGEN - NORTH CENTRAL AVENUE
MD	Baltimore City	24510	510-0651	4	01S4	10300601	150.00	Roger Thunell F	0.2230	0.0003	0.0003	TRIGEN - NORTH CENTRAL AVENUE
MD	Baltimore City	24510	510-0651	7	01S7	10300602	91.00	Roger Thunell F	8.4460	0.0294	0.0294	TRIGEN - NORTH CENTRAL AVENUE
MD	Baltimore City	24510	510-0651	8	01S8	10300602	91.00	Roger Thunell F	4.9400	0.0108	0.0108	TRIGEN - NORTH CENTRAL AVENUE
MD	Baltimore City	24510	510-0677	2	01S2	10200402	4.00	Roger Thunell F	0.1370	0.0004	0.0004	PETROLEUM FUEL & TERMINAL COMPANY
MD	Baltimore City	24510	510-0677	5	01S5	10200402	2.00	Roger Thunell F	0.0640	0.0002	0.0002	PETROLEUM FUEL & TERMINAL COMPANY
MD	Baltimore City	24510	510-0703	3	01S3	10200501	1.00	Roger Thunell F	0.0470	0.0000	0.0000	CONOCOPHILLIPS BALTIMORE TERMINAL
MD	Baltimore City	24510	510-0918	1	01S1	10300402	21.00	Roger Thunell F	1.5100	0.0041	0.0041	AMERADA HESS TERMINAL
MD	Baltimore City	24510	510-0918	2	01S2	10300503	2.00	Roger Thunell F	0.0500	0.0000	0.0000	AMERADA HESS TERMINAL
MD	Baltimore City	24510	510-0918	3	01S3	10300402	25.00	Roger Thunell F	3.4900	0.0095	0.0095	AMERADA HESS TERMINAL
MD	Baltimore City	24510	510-0918	4	01S4	10300402	29.00	Roger Thunell F	6.9400	0.0189	0.0189	AMERADA HESS TERMINAL
MD	Baltimore City	24510	510-0918	4	02S4	10300402	29.00	Roger Thunell F	3.7900	0.0103	0.0103	AMERADA HESS TERMINAL
MD	Baltimore City	24510	510-0918	4	03S4	10300402	29.00	Roger Thunell F	1.5500	0.0042	0.0042	AMERADA HESS TERMINAL
MD	Baltimore City	24510	510-1043	3	01S3	10300602	25.00	Roger Thunell F	1.5622	0.0024	0.0024	SINAI HOSPITAL OF BALTIMORE
MD	Baltimore City	24510	510-1043	4	01S4	10300602	38.00	Roger Thunell F	2.3743	0.0036	0.0036	SINAI HOSPITAL OF BALTIMORE
MD	Baltimore City	24510	510-1043	5	01S5	10300602	29.00	Roger Thunell F	1.8122	0.0028	0.0028	SINAI HOSPITAL OF BALTIMORE
MD	Baltimore City	24510	510-1043	6	01S6	10300602	47.00	Roger Thunell F	2.9364	0.0045	0.0045	SINAI HOSPITAL OF BALTIMORE
MD	Baltimore City	24510	510-1400	1	01S1	10200603	1.00	Roger Thunell F	0.1600	0.0004	0.0004	AUTOMATIC ROLLS
MD	Baltimore City	24510	510-1400	2	01S2	10200603	1.00	Roger Thunell F	0.1600	0.0004	0.0004	AUTOMATIC ROLLS
MD	Baltimore City	24510	510-1923	4	01S4	10300502	10.00	Roger Thunell F	3.1600	0.0086	0.0086	PETROLEUM FUEL & TERMINAL COMPANY
MD	Baltimore City	24510	510-1923	5	01S5	10300603	8.00	Roger Thunell F	1.0704	0.0029	0.0029	PETROLEUM FUEL & TERMINAL COMPANY
MD	Baltimore City	24510	510-1986	3	01S3	10200503	4.00	Roger Thunell F	0.0750	0.0000	0.0000	TNEMEC COMPANY
MD	Baltimore City	24510	510-2260	4	01S4	10300503	4.00	Roger Thunell F	0.1825	0.0005	0.0005	CLEAN HARBORS OF BALTIMORE
MD	Baltimore City	24510	510-2796	2	01S2	10300601	129.00	Roger Thunell F	3.2760	0.0046	0.0046	TRIGEN - LEADENHALL STREET
MD	Baltimore City	24510	510-2796	3	01S3	10300601	129.00	Roger Thunell F	21.1120	0.0299	0.0299	TRIGEN - LEADENHALL STREET
MD	Baltimore City	24510	510-2796	6	01S6	10300601	129.00	Roger Thunell F	2.0020	0.0028	0.0028	TRIGEN - LEADENHALL STREET
MD	Baltimore City	24510	510-2796	7	01S7	10300601	188.00	Roger Thunell F	23.6600	0.0335	0.0335	TRIGEN - LEADENHALL STREET
MD	Baltimore City	24510	510-2796	8	01S8	10300602	99.00	Roger Thunell F	10.1920	0.0144	0.0144	TRIGEN - LEADENHALL STREET
MD	Baltimore City	24510	510-3071	1	01S1	10200602	21.00	Roger Thunell F	2.0560	0.0043	0.0043	LIFE LIKE PRODUCTS - CHESAPEAKE AVE.
MA	Barnstable	25001	1200055	01	0101	10300603	1.00	MANEVU2002	0.0265	0.0000	0.0000	102FW/SPTG-ESO MASS ANG BASE
MA	Barnstable	25001	1200055	15	0115	10300603	12.00	MANEVU2002	1.0000	0.0000	0.0011	102FW/SPTG-ESO MASS ANG BASE
MA	Barnstable	25001	1200055	54	0254	10300603	2.00	MANEVU2002	3.8120	0.0000	0.0042	102FW/SPTG-ESO MASS ANG BASE
MA	Barnstable	25001	1200056	06	0106	10300501	3.00	MANEVU2002	0.2200	0.0000	0.0002	US AIR FORCE CAPE COD
MA	Barnstable	25001	1200056	07	0107	10300501	3.00	MANEVU2002	0.2200	0.0000	0.0002	US AIR FORCE CAPE COD
MA	Barnstable	25001	1200056	09	0109	10300501	55.00	MANEVU2002	0.0700	0.0000	0.0001	US AIR FORCE CAPE COD
MA	Barnstable	25001	1200056	09	0209	10300602	55.00	MANEVU2002	0.0030	0.0000	0.0000	US AIR FORCE CAPE COD
MA	Barnstable	25001	1200057	17	0108	10200603	2.00	MANEVU2002	0.0090	0.0000	0.0000	ACCURATE PLASTICS IN
MA	Barnstable	25001	1200078	01	0101	10200603	75.00	MANEVU2002	3.0000	0.0000	0.0000	MA ARMY NATIONAL GUARD
MA	Barnstable	25001	1200090	02	0101	10300504	28.00	MANEVU2002	2.0000	0.0000	0.0000	MASS MARITIME ACADEMY
MA	Barnstable	25001	1200090	12	0110	10200603	1.00	MANEVU2002	0.0980	0.0000	0.0003	MASS MARITIME ACADEMY
MA	Barnstable	25001	1200090	13	0111	10300603	1.00	MANEVU2002	0.0285	0.0000	0.0000	MASS MARITIME ACADEMY
MA	Barnstable	25001	1200090	16	0114	10200603	1.00	MANEVU2002	0.0140	0.0000	0.0000	MASS MARITIME ACADEMY
MA	Barnstable	25001	1200090	17	0115	10200603	1.00	MANEVU2002	0.0100	0.0000	0.0000	MASS MARITIME ACADEMY
MA	Barnstable	25001	1200090	18	0116	10200603	1.00	MANEVU2002	0.0140	0.0000	0.0000	MASS MARITIME ACADEMY
MA	Barnstable	25001	1200090	19	0117	10300603	1.00	MANEVU2002	0.0140	0.0000	0.0000	MASS MARITIME ACADEMY
MA	Barnstable	25001	1200090	20	0118	10200603	1.00	MANEVU2002	0.0275	0.0000	0.0001	MASS MARITIME ACADEMY

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
MA	Barnstable	25001	1200090	21	0119	10200603	1.00	MANEVU2002	0.0275	0.0000	0.0001	MASS MARITIME ACADEMY
MA	Barnstable	25001	1200130	09	0109	10300603	21.00	MANEVU2002	2.0000	0.0000	0.0055	CAPE COD HOSPITAL
MA	Barnstable	25001	1200130	10	0110	10300603	21.00	MANEVU2002	1.0000	0.0000	0.0027	CAPE COD HOSPITAL
MA	Barnstable	25001	1200212	04	0104	10200602	15.00	MANEVU2002	0.0135	0.0000	0.0000	KEYSPAN ENERGY DELIVERY NEW ENGLAND
MA	Barnstable	25001	1200212	05	0105	10300603	1.00	MANEVU2002	0.0790	0.0000	0.0002	KEYSPAN ENERGY DELIVERY NEW ENGLAND
MA	Barnstable	25001	1200249	04	0101	10200603	2.00	MANEVU2002	0.1600	0.0000	0.0005	LAWRENCE LYNCH CORP
MA	Barnstable	25001	1200447	01	0101	10300501	25.00	MANEVU2002	1.0000	0.0000	0.0000	BOURNE HIGH SCHOOL
MA	Barnstable	25001	1200460	01	0101	10300603	5.00	MANEVU2002	4.0000	0.0000	0.0000	CHATHAM JUNIOR SENIOR HIGH SCHOOL
MA	Barnstable	25001	1200460	02	0102	10300603	5.00	MANEVU2002	4.0000	0.0000	0.0000	CHATHAM JUNIOR SENIOR HIGH SCHOOL
MA	Barnstable	25001	1200460	03	0102	10300603	5.00	MANEVU2002	4.0000	0.0000	0.0000	CHATHAM JUNIOR SENIOR HIGH SCHOOL
MA	Barnstable	25001	1200548	01	0101	10300602	15.00	MANEVU2002	1.0000	0.0000	0.0000	FALMOUTH HIGH SCHOOL
MA	Barnstable	25001	1200555	01	0101	10300501	13.00	MANEVU2002	1.0000	0.0000	0.0018	WOODS HOLE OCEAN INSTITUTE
MA	Barnstable	25001	1200795	01	0101	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0027	YARMOUTH WWTP
MA	Barnstable	25001	1200795	02	0101	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0027	YARMOUTH WWTP
MA	Barnstable	25001	1200923	03	0103	10300603	1.00	MANEVU2002	0.1765	0.0000	0.0005	SENCORP SYSTEMS INCORPORATED
MA	Barnstable	25001	1200924	03	0103	10300603	1.00	MANEVU2002	0.0500	0.0000	0.0001	CAPE COD POTATO CHIPS
MA	Barnstable	25001	1200924	07	0107	10200603	11.00	MANEVU2002	0.4000	0.0000	0.0011	CAPE COD POTATO CHIPS
MA	Berkshire	25003	1170003	01	0101	10200401	49.00	MANEVU2002	21.0000	0.0000	0.0462	CURTIS FINE PAPERS
MA	Berkshire	25003	1170003	02	0102	10200401	49.00	MANEVU2002	14.0000	0.0000	0.0308	CURTIS FINE PAPERS
MA	Berkshire	25003	1170003	06	0103	10301002	0.00	MANEVU2002	0.0435	0.0000	0.0001	CURTIS FINE PAPERS
MA	Berkshire	25003	1170006	17	0117	10200603	5.00	MANEVU2002	0.2250	0.0000	0.0006	PITTSFIELD GENERATING
MA	Berkshire	25003	1170008	01	0101	10300603	4.00	MANEVU2002	0.0070	0.0000	0.0000	WILLIAMS ELEMENTARY SCH - PITTSFIELD
MA	Berkshire	25003	1170008	03	0103	10300603	1.00	MANEVU2002	0.0030	0.0000	0.0000	WILLIAMS ELEMENTARY SCH - PITTSFIELD
MA	Berkshire	25003	1170009	01	0101	10200401	34.00	MANEVU2002	11.0000	0.0000	0.0302	FOX RIVER PAPER COMPANY
MA	Berkshire	25003	1170009	02	0102	10200401	47.00	MANEVU2002	29.0000	0.0000	0.0797	FOX RIVER PAPER COMPANY
MA	Berkshire	25003	1170009	02	0202	10200501	47.00	MANEVU2002	5.0000	0.0000	0.0137	FOX RIVER PAPER COMPANY
MA	Berkshire	25003	1170014	01	0101	10200401	38.00	MANEVU2002	1.0000	0.0000	0.0000	MW CUSTOM PAPERS, LLC - LAUREL MILL
MA	Berkshire	25003	1170014	02	0101	10200401	48.00	MANEVU2002	37.0000	0.0000	0.0895	MW CUSTOM PAPERS, LLC - LAUREL MILL
MA	Berkshire	25003	1170015	01	0101	10200401	38.00	MANEVU2002	4.0000	0.0000	0.0000	MW CUSTOM PAPERS, LLC - WILLOW MILL
MA	Berkshire	25003	1170015	02	0101	10200401	48.00	MANEVU2002	30.0000	0.0000	0.0692	MW CUSTOM PAPERS, LLC - WILLOW MILL
MA	Berkshire	25003	1170016	01	0101	10200401	105.00	MANEVU2002	15.0000	0.0000	0.0132	SCHWEITZER MAUDUIT
MA	Berkshire	25003	1170016	01	0201	10200601	105.00	MANEVU2002	21.0000	0.0000	0.0185	SCHWEITZER MAUDUIT
MA	Berkshire	25003	1170016	02	0102	10200401	105.00	MANEVU2002	25.0000	0.0000	0.0220	SCHWEITZER MAUDUIT
MA	Berkshire	25003	1170016	02	0202	10200601	105.00	MANEVU2002	30.0000	0.0000	0.0264	SCHWEITZER MAUDUIT
MA	Berkshire	25003	1170018	01	0201	10200602	21.00	MANEVU2002	4.0000	0.0000	0.0105	SCHWEITZER MAUDUIT
MA	Berkshire	25003	1170026	01	0101	10300401	21.00	MANEVU2002	1.0000	0.0000	0.0011	BERKSHIRE MEDICAL CENTER
MA	Berkshire	25003	1170026	01	0201	10300602	21.00	MANEVU2002	0.0065	0.0000	0.0000	BERKSHIRE MEDICAL CENTER
MA	Berkshire	25003	1170026	02	0101	10300401	21.00	MANEVU2002	4.0000	0.0000	0.0132	BERKSHIRE MEDICAL CENTER
MA	Berkshire	25003	1170026	02	0201	10300602	21.00	MANEVU2002	0.0065	0.0000	0.0000	BERKSHIRE MEDICAL CENTER
MA	Berkshire	25003	1170026	03	0102	10300401	21.00	MANEVU2002	2.0000	0.0000	0.0066	BERKSHIRE MEDICAL CENTER
MA	Berkshire	25003	1170026	03	0202	10300602	21.00	MANEVU2002	0.0065	0.0000	0.0000	BERKSHIRE MEDICAL CENTER
MA	Berkshire	25003	1170036	01	0101	10300401	75.00	MANEVU2002	27.0000	0.0000	0.0000	WILLIAMS COLLEGE
MA	Berkshire	25003	1170036	01	0201	10300602	75.00	MANEVU2002	3.0000	0.0000	0.0000	WILLIAMS COLLEGE
MA	Berkshire	25003	1170036	02	0101	10300401	75.00	MANEVU2002	2.0000	0.0000	0.0000	WILLIAMS COLLEGE
MA	Berkshire	25003	1170036	02	0201	10300602	75.00	MANEVU2002	0.0100	0.0000	0.0000	WILLIAMS COLLEGE
MA	Berkshire	25003	1170036	06	0103	10300603	5.00	MANEVU2002	0.0690	0.0000	0.0006	WILLIAMS COLLEGE
MA	Berkshire	25003	1170036	07	0104	10300603	3.00	MANEVU2002	0.0570	0.0000	0.0000	WILLIAMS COLLEGE
MA	Berkshire	25003	1170038	01	0101	10200401	50.00	MANEVU2002	9.0000	0.0000	0.0247	CRANE & COMPANY INC
MA	Berkshire	25003	1170038	01	0201	10200602	50.00	MANEVU2002	2.0000	0.0000	0.0055	CRANE & COMPANY INC
MA	Berkshire	25003	1170038	02	0101	10200401	59.00	MANEVU2002	9.0000	0.0000	0.0247	CRANE & COMPANY INC
MA	Berkshire	25003	1170038	02	0201	10200602	59.00	MANEVU2002	4.0000	0.0000	0.0110	CRANE & COMPANY INC
MA	Berkshire	25003	1170039	01	0101	10200401	71.00	MANEVU2002	3.0000	0.0000	0.0082	CRANE & COMPANY INC

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MA	Berkshire	25003	1170039	01	0201	10200602	71.00	MANEVU2002	1.0000	0.0000	0.0027	CRANE & COMPANY INC
MA	Berkshire	25003	1170042	02	0102	10200501	16.00	MANEVU2002	1.0000	0.0000	0.0027	SPECIALTY MINERALS
MA	Berkshire	25003	1170042	02	0202	10200603	16.00	MANEVU2002	2.0000	0.0000	0.0055	SPECIALTY MINERALS
MA	Berkshire	25003	1170046	01	0101	10300602	16.00	MANEVU2002	1.0000	0.0000	0.0027	KIMBALL FARMS
MA	Berkshire	25003	1170047	01	0101	10200601	5.00	MANEVU2002	7.0000	0.0000	0.0192	BERKSHIRE MILL APARTMENTS
MA	Berkshire	25003	1170052	01	0101	10301002	2.00	MANEVU2002	1.0000	0.0000	0.0027	BERKSHIRE GAS NORTH ADAMS
MA	Berkshire	25003	1170052	04	0104	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	BERKSHIRE GAS NORTH ADAMS
MA	Berkshire	25003	1170055	01	0101	10301002	5.00	MANEVU2002	3.0000	0.0000	0.0082	BERKSHIRE GAS PITTSFIELD
MA	Berkshire	25003	1170055	02	0102	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0000	BERKSHIRE GAS PITTSFIELD
MA	Berkshire	25003	1170066	01	0101	10200602	9.00	MANEVU2002	5.0000	0.0000	0.0137	RUS OF PITTSFIELD
MA	Berkshire	25003	1170068	01	0101	10300501	6.00	MANEVU2002	0.1260	0.0000	0.0001	HOOSAC WATER QUALITY DISTRICT
MA	Berkshire	25003	1170081	01	0201	10300602	10.00	MANEVU2002	0.3000	0.0000	0.0008	HILLCREST HOSPITAL
MA	Berkshire	25003	1170081	02	0101	10300401	10.00	MANEVU2002	1.0000	0.0000	0.0027	HILLCREST HOSPITAL
MA	Berkshire	25003	1170081	02	0201	10300602	10.00	MANEVU2002	0.3000	0.0000	0.0008	HILLCREST HOSPITAL
MA	Berkshire	25003	1170081	03	0101	10300603	3.00	MANEVU2002	0.0500	0.0000	0.0001	HILLCREST HOSPITAL
MA	Berkshire	25003	1170081	04	0102	10300603	2.00	MANEVU2002	0.2000	0.0000	0.0005	HILLCREST HOSPITAL
MA	Berkshire	25003	1170082	01	0101	10200602	10.00	MANEVU2002	2.0000	0.0000	0.0055	HOLLAND COMPANY INC
MA	Berkshire	25003	1170101	01	0101	10300501	4.00	MANEVU2002	1.2000	0.0000	0.0033	MODERN ALUMINUM ANOD
MA	Berkshire	25003	1170101	02	0102	10300501	15.00	MANEVU2002	0.0800	0.0000	0.0000	MODERN ALUMINUM ANOD
MA	Berkshire	25003	1170103	01	0101	10300504	15.00	MANEVU2002	1.0000	0.0000	0.0000	MT GREYLOCK SCHOOL DISTRICT
MA	Berkshire	25003	1170105	01	0201	10300603	4.00	MANEVU2002	0.1615	0.0000	0.0004	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	01	0101	10300501	4.00	MANEVU2002	0.0870	0.0000	0.0002	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	02	0201	10300603	4.00	MANEVU2002	0.1615	0.0000	0.0004	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	02	0101	10300501	4.00	MANEVU2002	0.0155	0.0000	0.0000	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	03	0201	10300603	6.00	MANEVU2002	0.4840	0.0000	0.0013	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	03	0101	10300501	6.00	MANEVU2002	0.2860	0.0000	0.0008	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	04	0101	10300501	6.00	MANEVU2002	0.2860	0.0000	0.0008	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	04	0201	10300603	6.00	MANEVU2002	0.1615	0.0000	0.0004	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	05	0201	10300603	1.00	MANEVU2002	0.0485	0.0000	0.0001	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	05	0101	10300501	1.00	MANEVU2002	0.0155	0.0000	0.0000	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170112	01	0201	10300602	36.00	MANEVU2002	3.0000	0.0000	0.0000	MASS COLLEGE OF LIBERAL ARTS
MA	Berkshire	25003	1170112	02	0202	10300602	38.00	MANEVU2002	3.0000	0.0000	0.0000	MASS COLLEGE OF LIBERAL ARTS
MA	Berkshire	25003	1170127	02	0201	10300602	11.00	MANEVU2002	0.1800	0.0000	0.0000	CROSBY ELEMENTARY SCHOOL
MA	Berkshire	25003	1170131	01	0201	10300603	11.00	MANEVU2002	0.2300	0.0000	0.0000	PITTSFIELD HIGH SCHOOL
MA	Berkshire	25003	1170131	02	0201	10300603	11.00	MANEVU2002	0.2300	0.0000	0.0000	PITTSFIELD HIGH SCHOOL
MA	Berkshire	25003	1170131	03	0201	10300603	11.00	MANEVU2002	0.2300	0.0000	0.0000	PITTSFIELD HIGH SCHOOL
MA	Berkshire	25003	1170134	01	0201	10300602	11.00	MANEVU2002	0.0650	0.0000	0.0000	REID MIDDLE SCHOOL
MA	Berkshire	25003	1170134	02	0201	10300602	11.00	MANEVU2002	0.0650	0.0000	0.0000	REID MIDDLE SCHOOL
MA	Berkshire	25003	1170134	04	0103	10300603	1.00	MANEVU2002	0.0045	0.0000	0.0000	REID MIDDLE SCHOOL
MA	Berkshire	25003	1170140	01	0201	10300603	11.00	MANEVU2002	0.0675	0.0000	0.0000	HERBERG MIDDLE SCHOOL
MA	Berkshire	25003	1170140	02	0201	10300603	10.00	MANEVU2002	0.0675	0.0000	0.0000	HERBERG MIDDLE SCHOOL
MA	Berkshire	25003	1170142	01	0201	10300602	12.00	MANEVU2002	0.2350	0.0000	0.0000	TACONIC HIGH SCHOOL
MA	Berkshire	25003	1170142	02	0201	10300602	11.00	MANEVU2002	0.2350	0.0000	0.0000	TACONIC HIGH SCHOOL
MA	Berkshire	25003	1170142	03	0201	10300602	11.00	MANEVU2002	0.2350	0.0000	0.0000	TACONIC HIGH SCHOOL
MA	Berkshire	25003	1170142	04	0201	10300602	11.00	MANEVU2002	0.2350	0.0000	0.0000	TACONIC HIGH SCHOOL
MA	Berkshire	25003	1170142	05	0201	10300602	11.00	MANEVU2002	0.2350	0.0000	0.0000	TACONIC HIGH SCHOOL
MA	Berkshire	25003	1170143	01	0201	10300603	6.00	MANEVU2002	0.1075	0.0000	0.0000	MORNINGSIDE SCHOOL
MA	Berkshire	25003	1170143	02	0201	10300603	6.00	MANEVU2002	0.1075	0.0000	0.0000	MORNINGSIDE SCHOOL
MA	Berkshire	25003	1170145	01	0101	10200603	9.00	MANEVU2002	1.0000	0.0000	0.0027	AH RICE CORPORATION
MA	Berkshire	25003	1170152	03	0102	10200603	2.00	MANEVU2002	0.0530	0.0000	0.0000	ELECTRONIC CONCEPTS INC
MA	Berkshire	25003	1170173	01	0201	10200602	13.00	MANEVU2002	1.0000	0.0000	0.0027	ADAMS LAUNDRY & DRY
MA	Berkshire	25003	1170179	01	0101	10200501	7.00	MANEVU2002	1.0000	0.0000	0.0012	COMMONWEALTH SPRAGUE

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MA	Bristol	25005	1192312	01	0101	10300603	2.00	MANEVU2002	0.1475	0.0000	0.0004	PHARMASOL CORPORATION
MA	Bristol	25005	1192312	02	0102	10300603	2.00	MANEVU2002	0.1475	0.0000	0.0004	PHARMASOL CORPORATION
MA	Bristol	25005	1192312	04	0104	10300603	1.00	MANEVU2002	0.0405	0.0000	0.0001	PHARMASOL CORPORATION
MA	Bristol	25005	1192312	05	0105	10300603	1.00	MANEVU2002	0.0415	0.0000	0.0001	PHARMASOL CORPORATION
MA	Bristol	25005	1192312	06	0106	10200602	1.00	MANEVU2002	0.0230	0.0000	0.0001	PHARMASOL CORPORATION
MA	Bristol	25005	1192318	01	0101	10300603	5.00	MANEVU2002	2.0000	0.0000	0.0002	EASTON JUNIOR HIGH SCHOOL
MA	Bristol	25005	1192318	02	0101	10300603	5.00	MANEVU2002	2.0000	0.0000	0.0002	EASTON JUNIOR HIGH SCHOOL
MA	Bristol	25005	1192319	01	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0001	EASTON MIDDLE SCHOOL
MA	Bristol	25005	1192319	02	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0001	EASTON MIDDLE SCHOOL
MA	Bristol	25005	1192324	03	0102	10300501	4.00	MANEVU2002	1.0000	0.0000	0.0001	STONEHILL COLLEGE
MA	Bristol	25005	1200002	02	0101	10200401	28.00	MANEVU2002	5.0000	0.0000	0.0060	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	03	0102	10200401	59.00	MANEVU2002	20.0000	0.0000	0.0615	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	03	0302	10200602	59.00	MANEVU2002	3.0000	0.0000	0.0092	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	04	0102	10200401	75.00	MANEVU2002	25.0000	0.0000	0.0330	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	05	0103	10200401	25.00	MANEVU2002	2.0000	0.0000	0.0018	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	06	0103	10200401	12.00	MANEVU2002	6.0000	0.0000	0.0073	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	07	0104	10200401	25.00	MANEVU2002	0.2650	0.0000	0.0008	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	07	0204	10200602	25.00	MANEVU2002	0.0225	0.0000	0.0001	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	08	0104	10200401	13.00	MANEVU2002	3.0000	0.0000	0.0030	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	08	0204	10200602	13.00	MANEVU2002	0.1770	0.0000	0.0002	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200007	02	0102	10200603	3.00	MANEVU2002	0.0125	0.0000	0.0000	KILMARTIN INDUSTRIES
MA	Bristol	25005	1200007	03	0103	10200603	3.00	MANEVU2002	0.0125	0.0000	0.0000	KILMARTIN INDUSTRIES
MA	Bristol	25005	1200012	01	0101	10200401	7.00	MANEVU2002	1.0000	0.0000	0.0000	COMPOSITE MODULES INCORPORATED
MA	Bristol	25005	1200013	02	0101	10200501	25.00	MANEVU2002	2.0000	0.0000	0.0002	DIGHTON INDUSTRIES
MA	Bristol	25005	1200013	03	0101	10200501	29.00	MANEVU2002	2.0000	0.0000	0.0002	DIGHTON INDUSTRIES
MA	Bristol	25005	1200014	01	0101	10200501	9.00	MANEVU2002	1.0000	0.0000	0.0014	AT&T FAIRHAVEN
MA	Bristol	25005	1200015	01	0101	10200603	5.00	MANEVU2002	0.0715	0.0000	0.0001	TITLEIST & FOOT JOY
MA	Bristol	25005	1200015	02	0102	10200603	2.00	MANEVU2002	0.6015	0.0000	0.0007	TITLEIST & FOOT JOY
MA	Bristol	25005	1200015	03	0102	10200603	2.00	MANEVU2002	0.0600	0.0000	0.0001	TITLEIST & FOOT JOY
MA	Bristol	25005	1200015	04	0103	10200603	1.00	MANEVU2002	0.0510	0.0000	0.0001	TITLEIST & FOOT JOY
MA	Bristol	25005	1200018	01	0101	10200401	11.00	MANEVU2002	1.0000	0.0000	0.0000	DURO FINISHING INC
MA	Bristol	25005	1200018	02	0101	10200401	30.00	MANEVU2002	15.0000	0.0000	0.0412	DURO FINISHING INC
MA	Bristol	25005	1200018	02	0201	10200602	30.00	MANEVU2002	0.0255	0.0000	0.0001	DURO FINISHING INC
MA	Bristol	25005	1200018	03	0101	10200401	21.00	MANEVU2002	13.0000	0.0000	0.0357	DURO FINISHING INC
MA	Bristol	25005	1200018	04	0101	10200401	25.00	MANEVU2002	15.0000	0.0000	0.0412	DURO FINISHING INC
MA	Bristol	25005	1200018	04	0201	10200602	25.00	MANEVU2002	0.0015	0.0000	0.0000	DURO FINISHING INC
MA	Bristol	25005	1200022	01	0101	10300502	12.00	MANEVU2002	1.7395	0.0000	0.0000	STEVENS SERVICE CORP
MA	Bristol	25005	1200032	02	0101	10200602	13.00	MANEVU2002	3.0000	0.0000	0.0056	ADM COCOA
MA	Bristol	25005	1200038	01	0101	10200401	33.00	MANEVU2002	5.0000	0.0000	0.0137	ACUSHNET COMPANY-PLANT I
MA	Bristol	25005	1200038	02	0101	10200401	33.00	MANEVU2002	5.0000	0.0000	0.0137	ACUSHNET COMPANY-PLANT I
MA	Bristol	25005	1200039	01	0101	10200401	33.00	MANEVU2002	5.0000	0.0000	0.0000	HATHAWAY MILLS LLC
MA	Bristol	25005	1200045	01	0101	10300401	37.00	MANEVU2002	8.0000	0.0000	0.0220	WHEATON COLLEGE
MA	Bristol	25005	1200045	02	0101	10300401	22.00	MANEVU2002	2.0000	0.0000	0.0002	WHEATON COLLEGE
MA	Bristol	25005	1200045	03	0101	10300401	17.00	MANEVU2002	4.0000	0.0000	0.0004	WHEATON COLLEGE
MA	Bristol	25005	1200045	05	0101	10300603	8.00	MANEVU2002	0.4100	0.0000	0.0000	WHEATON COLLEGE
MA	Bristol	25005	1200045	06	0102	10300603	3.00	MANEVU2002	0.0850	0.0000	0.0000	WHEATON COLLEGE
MA	Bristol	25005	1200048	01	0101	10200501	15.00	MANEVU2002	2.0000	0.0000	0.0037	GLOBAL COMPANIES LLC
MA	Bristol	25005	1200059	01	0101	10200501	13.00	MANEVU2002	1.0000	0.0000	0.0027	MY BREAD BAKING CO
MA	Bristol	25005	1200059	02	0102	10200501	13.00	MANEVU2002	1.0000	0.0000	0.0027	MY BREAD BAKING CO
MA	Bristol	25005	1200063	01	0101	10200401	27.00	MANEVU2002	4.0000	0.0000	0.0110	INFINITY HOLDING LLC
MA	Bristol	25005	1200063	02	0101	10200401	27.00	MANEVU2002	4.0000	0.0000	0.0110	INFINITY HOLDING LLC
MA	Bristol	25005	1200063	04	0101	10200401	27.00	MANEVU2002	2.0000	0.0000	0.0055	INFINITY HOLDING LLC

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MA	Bristol	25005	1200064	01	0101	10200401	59.00	MANEVU2002	7.0000	0.0000	0.0138	HARODITE INDUSTRIES INC
MA	Bristol	25005	1200064	01	0201	10200602	59.00	MANEVU2002	3.0000	0.0000	0.0059	HARODITE INDUSTRIES INC
MA	Bristol	25005	1200065	01	0101	10200603	6.00	MANEVU2002	0.8500	0.0000	0.0023	ROSEMAR SILVER COMPANY
MA	Bristol	25005	1200066	01	0101	10200401	29.00	MANEVU2002	2.0000	0.0000	0.0055	REED & BARTON SILVER
MA	Bristol	25005	1200066	01	0201	10200602	29.00	MANEVU2002	0.9700	0.0000	0.0027	REED & BARTON SILVER
MA	Bristol	25005	1200066	02	0101	10200401	15.00	MANEVU2002	2.0000	0.0000	0.0055	REED & BARTON SILVER
MA	Bristol	25005	1200066	02	0201	10200603	15.00	MANEVU2002	0.9700	0.0000	0.0027	REED & BARTON SILVER
MA	Bristol	25005	1200075	01	0101	10200401	29.00	MANEVU2002	8.0000	0.0000	0.0000	ISP FREETOWN FINE CHEMICALS
MA	Bristol	25005	1200075	01	0201	10200501	29.00	MANEVU2002	0.0640	0.0000	0.0000	ISP FREETOWN FINE CHEMICALS
MA	Bristol	25005	1200075	02	0102	10200401	12.00	MANEVU2002	12.0000	0.0000	0.0330	ISP FREETOWN FINE CHEMICALS
MA	Bristol	25005	1200075	02	0202	10200501	12.00	MANEVU2002	0.2855	0.0000	0.0008	ISP FREETOWN FINE CHEMICALS
MA	Bristol	25005	1200075	20	0120	10200501	6.00	MANEVU2002	0.0475	0.0000	0.0001	ISP FREETOWN FINE CHEMICALS
MA	Bristol	25005	1200075	22	0122	10200501	16.00	MANEVU2002	1.0000	0.0000	0.0027	ISP FREETOWN FINE CHEMICALS
MA	Bristol	25005	1200086	01	0101	10300401	13.00	MANEVU2002	0.5270	0.0000	0.0009	STURDY MEMORIAL HOSP
MA	Bristol	25005	1200086	01	0201	10300602	13.00	MANEVU2002	0.0985	0.0000	0.0002	STURDY MEMORIAL HOSP
MA	Bristol	25005	1200086	02	0101	10300401	13.00	MANEVU2002	0.5270	0.0000	0.0009	STURDY MEMORIAL HOSP
MA	Bristol	25005	1200086	02	0201	10300602	13.00	MANEVU2002	0.0985	0.0000	0.0002	STURDY MEMORIAL HOSP
MA	Bristol	25005	1200086	03	0101	10300401	16.00	MANEVU2002	4.9785	0.0000	0.0109	STURDY MEMORIAL HOSP
MA	Bristol	25005	1200086	03	0201	10300602	16.00	MANEVU2002	0.4435	0.0000	0.0010	STURDY MEMORIAL HOSP
MA	Bristol	25005	1200087	01	0101	10200401	15.00	MANEVU2002	3.0000	0.0000	0.0033	SWANK INCORPORATED
MA	Bristol	25005	1200087	02	0101	10200401	22.00	MANEVU2002	0.3410	0.0000	0.0000	SWANK INCORPORATED
MA	Bristol	25005	1200088	01	0101	10200401	21.00	MANEVU2002	11.0000	0.0000	0.0302	TEKNOR APEX COMPANY
MA	Bristol	25005	1200088	02	0102	10200401	18.00	MANEVU2002	20.0000	0.0000	0.0549	TEKNOR APEX COMPANY
MA	Bristol	25005	1200089	01	0101	10200603	1.00	MANEVU2002	0.0030	0.0000	0.0000	ROBBINS CO
MA	Bristol	25005	1200091	02	0101	10300401	36.00	MANEVU2002	14.0000	0.0000	0.0354	UMASS DARTMOUTH
MA	Bristol	25005	1200091	03	0101	10300401	36.00	MANEVU2002	15.0000	0.0000	0.0379	UMASS DARTMOUTH
MA	Bristol	25005	1200091	04	0101	10300401	36.00	MANEVU2002	0.1000	0.0000	0.0003	UMASS DARTMOUTH
MA	Bristol	25005	1200091	05	0102	10300602	13.00	MANEVU2002	0.3000	0.0000	0.0003	UMASS DARTMOUTH
MA	Bristol	25005	1200091	08	0104	10300603	1.00	MANEVU2002	0.0300	0.0000	0.0000	UMASS DARTMOUTH
MA	Bristol	25005	1200091	09	0105	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0002	UMASS DARTMOUTH
MA	Bristol	25005	1200094	02	0101	10300504	10.00	MANEVU2002	0.7700	0.0000	0.0000	BRISTOL COMMUNITY CO
MA	Bristol	25005	1200097	01	0101	10200504	5.00	MANEVU2002	2.0000	0.0000	0.0055	ARGUS REALITY
MA	Bristol	25005	1200097	02	0101	10200504	5.00	MANEVU2002	2.0000	0.0000	0.0055	ARGUS REALITY
MA	Bristol	25005	1200097	03	0101	10200504	15.00	MANEVU2002	2.0000	0.0000	0.0000	ARGUS REALITY
MA	Bristol	25005	1200100	01	0101	10200401	3.00	MANEVU2002	2.0000	0.0000	0.0055	PRECIX
MA	Bristol	25005	1200100	02	0101	10200401	6.00	MANEVU2002	3.0000	0.0000	0.0082	PRECIX
MA	Bristol	25005	1200100	03	0101	10200401	8.00	MANEVU2002	5.0000	0.0000	0.0137	PRECIX
MA	Bristol	25005	1200101	01	0101	10200401	24.00	MANEVU2002	7.0000	0.0000	0.0192	PRECIX
MA	Bristol	25005	1200101	02	0102	10300602	24.00	MANEVU2002	2.0000	0.0000	0.0110	PRECIX
MA	Bristol	25005	1200102	01	0101	10300401	29.00	MANEVU2002	2.0000	0.0000	0.0000	DURFEE UNION MILLS
MA	Bristol	25005	1200102	01	0201	10300602	29.00	MANEVU2002	2.0000	0.0000	0.0000	DURFEE UNION MILLS
MA	Bristol	25005	1200102	02	0101	10300401	29.00	MANEVU2002	2.0000	0.0000	0.0000	DURFEE UNION MILLS
MA	Bristol	25005	1200102	02	0201	10300602	29.00	MANEVU2002	2.0000	0.0000	0.0000	DURFEE UNION MILLS
MA	Bristol	25005	1200104	03	0101	10200603	5.00	MANEVU2002	0.9915	0.0000	0.0000	GOLD MEDAL BAKERY
MA	Bristol	25005	1200104	03	0201	10200501	5.00	MANEVU2002	1.0000	0.0000	0.0000	GOLD MEDAL BAKERY
MA	Bristol	25005	1200104	04	0102	10200603	5.00	MANEVU2002	2.0000	0.0000	0.0055	GOLD MEDAL BAKERY
MA	Bristol	25005	1200110	01	0101	10200401	11.00	MANEVU2002	1.0000	0.0000	0.0000	GRIFFIN STREET CORPORATION
MA	Bristol	25005	1200111	02	0101	10200401	17.00	MANEVU2002	1.0000	0.0000	0.0027	MANUFACTURERS REALTY
MA	Bristol	25005	1200115	01	0101	10200501	17.00	MANEVU2002	5.0000	0.0000	0.0060	QUAKER FABRIC CORPORATION
MA	Bristol	25005	1200115	02	0101	10200501	17.00	MANEVU2002	5.0000	0.0000	0.0060	QUAKER FABRIC CORPORATION
MA	Bristol	25005	1200117	02	0101	10300401	13.00	MANEVU2002	3.0000	0.0000	0.0082	ST ANNES HOSPITAL
MA	Bristol	25005	1200117	03	0101	10300401	17.00	MANEVU2002	2.0000	0.0000	0.0055	ST ANNES HOSPITAL

									2002 NOx Emissions			
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MA	Bristol	25005	1200118	01	0101	10200401	5.00	MANEVU2002	8.0000	0.0000	0.0220	DURO INDUSTRIES PLANT 2
MA	Bristol	25005	1200118	02	0101	10200401	7.00	MANEVU2002	4.0000	0.0000	0.0110	DURO INDUSTRIES PLANT 2
MA	Bristol	25005	1200118	03	0101	10200401	25.00	MANEVU2002	1.0000	0.0000	0.0000	DURO INDUSTRIES PLANT 2
MA	Bristol	25005	1200118	04	0101	10200401	25.00	MANEVU2002	2.0000	0.0000	0.0055	DURO INDUSTRIES PLANT 2
MA	Bristol	25005	1200119	01	0101	10300504	17.00	MANEVU2002	2.0000	0.0000	0.0000	TIMBACC REALTY INC
MA	Bristol	25005	1200123	01	0101	10300401	18.00	MANEVU2002	5.0000	0.0000	0.0082	CHARLTON MEMORIAL HO
MA	Bristol	25005	1200123	01	0201	10300602	18.00	MANEVU2002	0.0400	0.0000	0.0001	CHARLTON MEMORIAL HO
MA	Bristol	25005	1200123	02	0101	10300401	18.00	MANEVU2002	5.0000	0.0000	0.0082	CHARLTON MEMORIAL HO
MA	Bristol	25005	1200123	02	0201	10300602	18.00	MANEVU2002	0.1900	0.0000	0.0003	CHARLTON MEMORIAL HO
MA	Bristol	25005	1200123	03	0101	10300401	18.00	MANEVU2002	5.0000	0.0000	0.0082	CHARLTON MEMORIAL HO
MA	Bristol	25005	1200123	03	0201	10300602	18.00	MANEVU2002	0.1300	0.0000	0.0002	CHARLTON MEMORIAL HO
MA	Bristol	25005	1200136	01	0101	10200504	15.00	MANEVU2002	2.0000	0.0000	0.0002	NASHAWENA MILLS
MA	Bristol	25005	1200140	01	0101	10200504	16.00	MANEVU2002	0.5220	0.0000	0.0000	COATERS INC
MA	Bristol	25005	1200149	01	0201	10200401	120.00	MANEVU2002	25.0000	0.0000	0.0824	POLAROID HOLDING CORPORTION
MA	Bristol	25005	1200149	01	0301	10200601	120.00	MANEVU2002	9.0000	0.0000	0.0297	POLAROID HOLDING CORPORTION
MA	Bristol	25005	1200149	02	0201	10200401	119.00	MANEVU2002	23.0000	0.0000	0.0758	POLAROID HOLDING CORPORTION
MA	Bristol	25005	1200149	02	0301	10200601	119.00	MANEVU2002	13.0000	0.0000	0.0429	POLAROID HOLDING CORPORTION
MA	Bristol	25005	1200151	01	0101	10200401	25.00	MANEVU2002	4.0000	0.0000	0.0048	REVERE COPPER PRODUCTS
MA	Bristol	25005	1200151	02	0101	10200401	25.00	MANEVU2002	4.0000	0.0000	0.0000	REVERE COPPER PRODUCTS
MA	Bristol	25005	1200154	01	0101	10300401	21.00	MANEVU2002	2.0000	0.0000	0.0055	ST LUKES HOSPITAL
MA	Bristol	25005	1200154	01	0201	10300602	21.00	MANEVU2002	1.0000	0.0000	0.0027	ST LUKES HOSPITAL
MA	Bristol	25005	1200154	02	0101	10300401	21.00	MANEVU2002	1.0000	0.0000	0.0027	ST LUKES HOSPITAL
MA	Bristol	25005	1200154	02	0201	10300602	21.00	MANEVU2002	1.0000	0.0000	0.0027	ST LUKES HOSPITAL
MA	Bristol	25005	1200154	03	0101	10300401	21.00	MANEVU2002	1.0000	0.0000	0.0027	ST LUKES HOSPITAL
MA	Bristol	25005	1200154	03	0201	10300602	21.00	MANEVU2002	0.7800	0.0000	0.0021	ST LUKES HOSPITAL
MA	Bristol	25005	1200155	02	0101	10200603	8.00	MANEVU2002	1.8000	0.0000	0.0049	ALLEGHENY RODNEY
MA	Bristol	25005	1200155	07	0106	10200603	8.00	MANEVU2002	2.0000	0.0000	0.0055	ALLEGHENY RODNEY
MA	Bristol	25005	1200159	09	0109	10300603	5.00	MANEVU2002	0.0030	0.0000	0.0000	NEW ENGLAND GAS COMPANY
MA	Bristol	25005	1200159	11	0111	10300603	2.00	MANEVU2002	0.0655	0.0000	0.0000	NEW ENGLAND GAS COMPANY
MA	Bristol	25005	1200171	01	0101	10300502	11.00	MANEVU2002	1.0000	0.0000	0.0014	MORTON HOSPITAL CORP
MA	Bristol	25005	1200171	02	0101	10300503	10.00	MANEVU2002	1.0000	0.0000	0.0015	MORTON HOSPITAL CORP
MA	Bristol	25005	1200171	03	0101	10300401	11.00	MANEVU2002	1.0000	0.0000	0.0015	MORTON HOSPITAL CORP
MA	Bristol	25005	1200171	04	0101	10300603	2.00	MANEVU2002	0.2220	0.0000	0.0006	MORTON HOSPITAL CORP
MA	Bristol	25005	1200173	01	0101	10200504	8.00	MANEVU2002	0.1800	0.0000	0.0000	SWANK INCORPORATED
MA	Bristol	25005	1200173	02	0101	10200504	8.00	MANEVU2002	0.1800	0.0000	0.0000	SWANK INCORPORATED
MA	Bristol	25005	1200174	01	0201	10300602	50.00	MANEVU2002	1.0000	0.0000	0.0001	TAUNTON STATE HOSPIT
MA	Bristol	25005	1200174	03	0201	10300602	50.00	MANEVU2002	16.0000	0.0000	0.0018	TAUNTON STATE HOSPIT
MA	Bristol	25005	1200175	01	0101	10200603	6.00	MANEVU2002	0.4120	0.0000	0.0011	METALOR TECHNOLOGIES USA
MA	Bristol	25005	1200185	01	0101	10200501	8.00	MANEVU2002	1.0000	0.0000	0.0027	MANTROSE HAEUSER CO
MA	Bristol	25005	1200185	02	0101	10200401	24.00	MANEVU2002	4.0000	0.0000	0.0110	MANTROSE HAEUSER CO
MA	Bristol	25005	1200185	02	0201	10200602	24.00	MANEVU2002	2.0000	0.0000	0.0055	MANTROSE HAEUSER CO
MA	Bristol	25005	1200191	01	0101	10200603	3.00	MANEVU2002	0.8300	0.0000	0.0023	BACON FELT COMPANY INC
MA	Bristol	25005	1200191	12	0108	10200603	3.00	MANEVU2002	0.1100	0.0000	0.0003	BACON FELT COMPANY INC
MA	Bristol	25005	1200191	13	0108	10200603	3.00	MANEVU2002	0.1100	0.0000	0.0003	BACON FELT COMPANY INC
MA	Bristol	25005	1200194	01	0101	10200603	2.00	MANEVU2002	0.1750	0.0000	0.0010	STERN LEACH COMPANY
MA	Bristol	25005	1200194	02	0101	10200603	4.00	MANEVU2002	0.9250	0.0000	0.0000	STERN LEACH COMPANY
MA	Bristol	25005	1200199	01	0101	10200501	5.00	MANEVU2002	1.0000	0.0000	0.0000	FORTIFIBER CORP
MA	Bristol	25005	1200199	02	0101	10200501	5.00	MANEVU2002	1.0000	0.0000	0.0000	FORTIFIBER CORP
MA	Bristol	25005	1200216	01	0101	10300603	8.00	MANEVU2002	1.0000	0.0000	0.0027	BRISTOL COUNTY JAIL
MA	Bristol	25005	1200219	02	0101	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0027	LIGHTOLIER FALL RIVER
MA	Bristol	25005	1200224	02	0101	10200401	6.00	MANEVU2002	3.0000	0.0000	0.0003	DURO TEXTILE PRINTER
MA	Bristol	25005	1200224	03	0102	10200401	8.00	MANEVU2002	3.0000	0.0000	0.0082	DURO TEXTILE PRINTER

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MA	Bristol	25005	1200224	04	0103	10200401	11.00	MANEVU2002	3.0000	0.0000	0.0082	DURO TEXTILE PRINTER
MA	Bristol	25005	1200224	07	0103	10200401	13.00	MANEVU2002	3.0000	0.0000	0.0082	DURO TEXTILE PRINTER
MA	Bristol	25005	1200224	21	0105	10200401	10.00	MANEVU2002	3.0000	0.0000	0.0082	DURO TEXTILE PRINTER
MA	Bristol	25005	1200224	22	0106	10200602	25.00	MANEVU2002	3.0000	0.0000	0.0082	DURO TEXTILE PRINTER
MA	Bristol	25005	1200229	01	0101	10300504	9.00	MANEVU2002	0.4150	0.0000	0.0000	MAIN STREET TEXTILES
MA	Bristol	25005	1200235	01	0101	10300602	25.00	MANEVU2002	1.0000	0.0000	0.0027	SEA WATCH INTERNATIO
MA	Bristol	25005	1200239	01	0101	10200603	8.00	MANEVU2002	0.5060	0.0000	0.0013	ROMA COLOR INC
MA	Bristol	25005	1200243	01	0101	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0011	WAKEFIELD ENGINEERING
MA	Bristol	25005	1200254	01	0101	10200402	16.00	MANEVU2002	7.0000	0.0000	0.0192	ACUSHNET COMPANY PLANT #2
MA	Bristol	25005	1200254	01	0201	10200602	16.00	MANEVU2002	1.0000	0.0000	0.0027	ACUSHNET COMPANY PLANT #2
MA	Bristol	25005	1200254	02	0101	10200402	16.00	MANEVU2002	7.0000	0.0000	0.0192	ACUSHNET COMPANY PLANT #2
MA	Bristol	25005	1200254	02	0201	10200602	16.00	MANEVU2002	1.0000	0.0000	0.0027	ACUSHNET COMPANY PLANT #2
MA	Bristol	25005	1200254	18	0114	10300603	5.00	MANEVU2002	0.0115	0.0000	0.0000	ACUSHNET COMPANY PLANT #2
MA	Bristol	25005	1200254	19	0115	10300603	5.00	MANEVU2002	0.0015	0.0000	0.0000	ACUSHNET COMPANY PLANT #2
MA	Bristol	25005	1200268	01	0101	10200603	5.00	MANEVU2002	0.1970	0.0000	0.0002	MOTOROLA INCORPORATED
MA	Bristol	25005	1200268	02	0102	10200603	4.00	MANEVU2002	0.0930	0.0000	0.0001	MOTOROLA INCORPORATED
MA	Bristol	25005	1200268	03	0103	10200603	4.00	MANEVU2002	0.1285	0.0000	0.0001	MOTOROLA INCORPORATED
MA	Bristol	25005	1200276	02	0102	10200603	2.00	MANEVU2002	0.0105	0.0000	0.0000	DIGHTON POWER ASSOCATES
MA	Bristol	25005	1200289	02	0101	10300504	12.00	MANEVU2002	0.2665	0.0000	0.0000	BS REALTY LTD PTR
MA	Bristol	25005	1200290	01	0101	10200401	29.00	MANEVU2002	5.0000	0.0000	0.0121	BRITTANY DYEING & PRINTING CORP.
MA	Bristol	25005	1200290	01	0201	10200602	29.00	MANEVU2002	0.6285	0.0000	0.0015	BRITTANY DYEING & PRINTING CORP.
MA	Bristol	25005	1200290	02	0101	10200401	4.00	MANEVU2002	0.6655	0.0000	0.0016	BRITTANY DYEING & PRINTING CORP.
MA	Bristol	25005	1200290	03	0101	10200401	14.00	MANEVU2002	2.0000	0.0000	0.0048	BRITTANY DYEING & PRINTING CORP.
MA	Bristol	25005	1200290	03	0301	10200602	14.00	MANEVU2002	0.3130	0.0000	0.0008	BRITTANY DYEING & PRINTING CORP.
MA	Bristol	25005	1200290	04	0101	10200401	25.00	MANEVU2002	4.0000	0.0000	0.0097	BRITTANY DYEING & PRINTING CORP.
MA	Bristol	25005	1200290	04	0201	10200602	25.00	MANEVU2002	0.5355	0.0000	0.0013	BRITTANY DYEING & PRINTING CORP.
MA	Bristol	25005	1200296	01	0101	10200401	8.00	MANEVU2002	2.0000	0.0000	0.0000	CLIFTEX CORPORATION
MA	Bristol	25005	1200296	02	0101	10200401	13.00	MANEVU2002	1.0000	0.0000	0.0000	CLIFTEX CORPORATION
MA	Bristol	25005	1200300	01	0101	10200603	8.00	MANEVU2002	2.0000	0.0000	0.0055	COYNE TEXTILE SERVIC
MA	Bristol	25005	1200303	02	0102	10200799	3.00	MANEVU2002	0.0485	0.0000	0.0000	EPEC INCORPORATED
MA	Bristol	25005	1200304	01	0101	10300504	13.00	MANEVU2002	0.3440	0.0000	0.0000	ERIKA REALTY TRUST
MA	Bristol	25005	1200305	01	0101	10200401	21.00	MANEVU2002	2.0000	0.0000	0.0051	FIBRE LEATHER MANUFACTURING
MA	Bristol	25005	1200305	04	0102	10200603	1.00	MANEVU2002	0.5055	0.0000	0.0014	FIBRE LEATHER MANUFACTURING
MA	Bristol	25005	1200315	01	0101	10300504	10.00	MANEVU2002	1.0000	0.0000	0.0027	UMASS NEW BEDFORD
MA	Bristol	25005	1200316	01	0101	10300602	18.00	MANEVU2002	1.0000	0.0000	0.0011	NEW BEDFORD WATER PO
MA	Bristol	25005	1200319	02	0102	10300501	3.00	MANEVU2002	1.0000	0.0000	0.0027	PLATING TECHNOLOGY INC
MA	Bristol	25005	1200321	01	0101	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0011	CENTURY LLC
MA	Bristol	25005	1200323	01	0101	10200401	6.00	MANEVU2002	1.0000	0.0000	0.0016	SHEPARD CLOTHING CO
MA	Bristol	25005	1200335	01	0101	10200501	1.00	MANEVU2002	0.0040	0.0000	0.0000	BORO SAND & STONE CORPORATION
MA	Bristol	25005	1200335	02	0102	10200501	1.00	MANEVU2002	0.2200	0.0000	0.0002	BORO SAND & STONE CORPORATION
MA	Bristol	25005	1200337	02	0101	10200603	8.00	MANEVU2002	0.2620	0.0000	0.0000	POLYMETALLURGICAL CORPORATION
MA	Bristol	25005	1200337	03	0102	10200603	1.00	MANEVU2002	0.0095	0.0000	0.0000	POLYMETALLURGICAL CORPORATION
MA	Bristol	25005	1200342	01	0101	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0011	EUREKA MFG COMPANY
MA	Bristol	25005	1200343	01	0101	10200503	5.00	MANEVU2002	0.1855	0.0000	0.0003	VH BLACKINTON & COMPANY
MA	Bristol	25005	1200343	02	0101	10200503	2.00	MANEVU2002	0.1115	0.0000	0.0003	VH BLACKINTON & COMPANY
MA	Bristol	25005	1200343	03	0101	10200501	2.00	MANEVU2002	0.1280	0.0000	0.0004	VH BLACKINTON & COMPANY
MA	Bristol	25005	1200345	01	0101	10200504	3.00	MANEVU2002	1.0000	0.0000	0.0027	TWEAVE INCORPORATED
MA	Bristol	25005	1200345	04	0101	10200504	5.00	MANEVU2002	1.0000	0.0000	0.0027	TWEAVE INCORPORATED
MA	Bristol	25005	1200373	01	0201	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	SHAWOMET GARDENS
MA	Bristol	25005	1200373	02	0202	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	SHAWOMET GARDENS
MA	Bristol	25005	1200373	03	0203	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	SHAWOMET GARDENS
MA	Bristol	25005	1200373	04	0204	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	SHAWOMET GARDENS

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MA	Bristol	25005	1200376	01	0101	10200504	9.00	MANEVU2002	0.3115	0.0000	0.0000	SWAN FINISHING COMPANY
MA	Bristol	25005	1200381	01	0101	10200501	7.00	MANEVU2002	0.1400	0.0000	0.0000	GENERAL CABLE
MA	Bristol	25005	1200381	02	0102	10200501	1.00	MANEVU2002	0.1025	0.0000	0.0003	GENERAL CABLE
MA	Bristol	25005	1200381	03	0102	10200501	1.00	MANEVU2002	0.1025	0.0000	0.0003	GENERAL CABLE
MA	Bristol	25005	1200381	04	0103	10200501	1.00	MANEVU2002	0.0105	0.0000	0.0000	GENERAL CABLE
MA	Bristol	25005	1200388	01	0101	10200504	15.00	MANEVU2002	2.0000	0.0000	0.0055	KIRKHILL-TA CO HASKON DIV
MA	Bristol	25005	1200388	01	0201	10200602	15.00	MANEVU2002	10.0000	0.0000	0.0275	KIRKHILL-TA CO HASKON DIV
MA	Bristol	25005	1200388	02	0102	10200504	13.00	MANEVU2002	2.0000	0.0000	0.0004	KIRKHILL-TA CO HASKON DIV
MA	Bristol	25005	1200388	02	0202	10200602	13.00	MANEVU2002	9.0000	0.0000	0.0020	KIRKHILL-TA CO HASKON DIV
MA	Bristol	25005	1200405	01	0101	10200501	3.00	MANEVU2002	0.1500	0.0000	0.0008	WATERS TECHNOLOGY CORPORATION
MA	Bristol	25005	1200405	02	0102	10200501	5.00	MANEVU2002	0.0280	0.0000	0.0000	WATERS TECHNOLOGY CORPORATION
MA	Bristol	25005	1200405	03	0103	10200501	6.00	MANEVU2002	0.3750	0.0000	0.0005	WATERS TECHNOLOGY CORPORATION
MA	Bristol	25005	1200408	01	0101	10200603	2.00	MANEVU2002	1.0000	0.0000	0.0027	KORBER HATS INCORPORATED
MA	Bristol	25005	1200421	01	0101	10300603	1.00	MANEVU2002	0.4200	0.0000	0.0005	ALBANY INTERNATIONAL
MA	Bristol	25005	1200424	01	0101	10200603	1.00	MANEVU2002	0.0200	0.0000	0.0001	NEW ENGLAND STERLING
MA	Bristol	25005	1200450	01	0101	10200603	4.00	MANEVU2002	0.3360	0.0000	0.0000	JOHNSON AND WALES INN
MA	Bristol	25005	1200450	02	0101	10200603	4.00	MANEVU2002	0.3360	0.0000	0.0000	JOHNSON AND WALES INN
MA	Bristol	25005	1200450	03	0101	10200603	4.00	MANEVU2002	0.2130	0.0000	0.0000	JOHNSON AND WALES INN
MA	Bristol	25005	1200470	01	0101	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0000	BISHOP STANG HIGH SCHOOL
MA	Bristol	25005	1200486	01	0101	10200501	5.00	MANEVU2002	0.1550	0.0000	0.0004	RIVERSIDE MANUFACTURING CO
MA	Bristol	25005	1200486	01	0201	10200603	5.00	MANEVU2002	0.0040	0.0000	0.0000	RIVERSIDE MANUFACTURING CO
MA	Bristol	25005	1200486	02	0102	10200501	5.00	MANEVU2002	0.1550	0.0000	0.0000	RIVERSIDE MANUFACTURING CO
MA	Bristol	25005	1200486	02	0202	10200603	5.00	MANEVU2002	0.0045	0.0000	0.0000	RIVERSIDE MANUFACTURING CO
MA	Bristol	25005	1200491	01	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0000	MORTON MIDDLE SCHOOL
MA	Bristol	25005	1200491	02	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0000	MORTON MIDDLE SCHOOL
MA	Bristol	25005	1200491	03	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0000	MORTON MIDDLE SCHOOL
MA	Bristol	25005	1200503	01	0101	10200603	3.00	MANEVU2002	0.1800	0.0000	0.0002	DEPUY ORTHOPAEDICS INCORPORATED
MA	Bristol	25005	1200503	02	0102	10200603	1.00	MANEVU2002	0.0760	0.0000	0.0002	DEPUY ORTHOPAEDICS INCORPORATED
MA	Bristol	25005	1200503	03	0103	10200603	1.00	MANEVU2002	0.0135	0.0000	0.0000	DEPUY ORTHOPAEDICS INCORPORATED
MA	Bristol	25005	1200503	04	0104	10200603	1.00	MANEVU2002	0.0265	0.0000	0.0000	DEPUY ORTHOPAEDICS INCORPORATED
MA	Bristol	25005	1200503	05	0105	10200603	1.00	MANEVU2002	0.0265	0.0000	0.0000	DEPUY ORTHOPAEDICS INCORPORATED
MA	Bristol	25005	1200503	07	0107	10200603	1.00	MANEVU2002	0.0200	0.0000	0.0000	DEPUY ORTHOPAEDICS INCORPORATED
MA	Bristol	25005	1200503	08	0108	10200603	1.00	MANEVU2002	0.0050	0.0000	0.0000	DEPUY ORTHOPAEDICS INCORPORATED
MA	Bristol	25005	1200503	09	0109	10200603	1.00	MANEVU2002	0.0190	0.0000	0.0000	DEPUY ORTHOPAEDICS INCORPORATED
MA	Bristol	25005	1200513	01	0201	10300603	5.00	MANEVU2002	0.1080	0.0000	0.0003	AEROVOX INCORPORATED
MA	Bristol	25005	1200527	01	0201	10300603	10.00	MANEVU2002	1.0000	0.0000	0.0000	NORTH ATTLEBORO MIDDLE SCHOOL
MA	Bristol	25005	1200527	02	0201	10300603	10.00	MANEVU2002	1.0000	0.0000	0.0000	NORTH ATTLEBORO MIDDLE SCHOOL
MA	Bristol	25005	1200534	01	0101	10300504	3.00	MANEVU2002	1.0000	0.0000	0.0001	BISHOP CONNOLLY HIGH SCHOOL
MA	Bristol	25005	1200553	01	0101	10300501	1.00	MANEVU2002	0.2970	0.0000	0.0008	CLEAN RENTALS INC
MA	Bristol	25005	1200570	02	0102	10200603	3.00	MANEVU2002	0.2500	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Bristol	25005	1200570	03	0102	10300603	1.00	MANEVU2002	0.0100	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Bristol	25005	1200617	05	0103	10300603	20.00	MANEVU2002	0.1010	0.0000	0.0003	STAR HOLDINGS LP
MA	Bristol	25005	1200619	01	0201	10300504	17.00	MANEVU2002	0.2900	0.0000	0.0003	ACUSHNET COMPANY - BALL PLANT III
MA	Bristol	25005	1200619	01	0101	10300602	17.00	MANEVU2002	0.2100	0.0000	0.0002	ACUSHNET COMPANY - BALL PLANT III
MA	Bristol	25005	1200619	02	0201	10300504	17.00	MANEVU2002	0.2900	0.0000	0.0003	ACUSHNET COMPANY - BALL PLANT III
MA	Bristol	25005	1200619	02	0101	10300602	17.00	MANEVU2002	0.2100	0.0000	0.0002	ACUSHNET COMPANY - BALL PLANT III
MA	Bristol	25005	1200619	03	0102	10300602	17.00	MANEVU2002	0.3450	0.0000	0.0009	ACUSHNET COMPANY - BALL PLANT III
MA	Bristol	25005	1200619	04	0103	10300603	1.00	MANEVU2002	0.0600	0.0000	0.0002	ACUSHNET COMPANY - BALL PLANT III
MA	Bristol	25005	1200622	02	0102	10300603	3.00	MANEVU2002	0.2500	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Bristol	25005	1200622	03	0103	10300603	1.00	MANEVU2002	0.0100	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Bristol	25005	1200626	01	0101	10300501	12.00	MANEVU2002	1.0000	0.0000	0.0001	NEW BEDFORD AJ GOMES
MA	Bristol	25005	1200633	01	0101	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0011	NEW BEDFORD MCFADDEN

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MA	Bristol	25005	1200633	02	0101	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0011	NEW BEDFORD MCFADDEN
MA	Bristol	25005	1200638	01	0101	10200603	1.00	MANEVU2002	0.1200	0.0000	0.0003	MAIN STREET TEXTILE
MA	Bristol	25005	1200646	02	0101	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0000	NEW BEDFORD HIGH SCHOOL
MA	Bristol	25005	1200647	01	0101	10300501	5.00	MANEVU2002	1.0000	0.0000	0.0000	NEW BEDFORD NORMADIN
MA	Bristol	25005	1200657	01	0101	10300501	5.00	MANEVU2002	1.0000	0.0000	0.0011	NEW BEDFORD RODRIGUES ADMINSTRATION BLDG
MA	Bristol	25005	1200657	02	0101	10300501	5.00	MANEVU2002	1.0000	0.0000	0.0011	NEW BEDFORD RODRIGUES ADMINSTRATION BLDG
MA	Bristol	25005	1200659	01	0101	10300501	3.00	MANEVU2002	1.0000	0.0000	0.0000	NEW BEDFORD KEITH JUNIOR HIGH SCHOOL
MA	Bristol	25005	1200659	02	0101	10300501	3.00	MANEVU2002	1.0000	0.0000	0.0000	NEW BEDFORD KEITH JUNIOR HIGH SCHOOL
MA	Bristol	25005	1200673	01	0101	10300603	3.00	MANEVU2002	0.1900	0.0000	0.0002	HOMELAND BUILDERS
MA	Bristol	25005	1200707	01	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0011	AD A DAY COMPANY INCORPORATED
MA	Bristol	25005	1200724	01	0101	10300602	16.00	MANEVU2002	1.0000	0.0000	0.0001	SEEKONK HIGH SCHOOL
MA	Bristol	25005	1200724	02	0101	10300602	16.00	MANEVU2002	1.0000	0.0000	0.0001	SEEKONK HIGH SCHOOL
MA	Bristol	25005	1200735	01	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0027	SWANSEA BROWN ELEMENTARY SCHOOL
MA	Bristol	25005	1200807	01	0101	10200401	21.00	MANEVU2002	1.0000	0.0000	0.0001	GLAD REALTY
MA	Bristol	25005	1200807	02	0101	10200401	16.00	MANEVU2002	1.0000	0.0000	0.0001	GLAD REALTY
MA	Bristol	25005	1200820	01	0101	10200401	25.00	MANEVU2002	10.0000	0.0000	0.0220	SWAN FINISHING COMPANY
MA	Bristol	25005	1200820	02	0101	10200401	25.00	MANEVU2002	10.0000	0.0000	0.0220	SWAN FINISHING COMPANY
MA	Bristol	25005	1200820	03	0101	10200401	25.00	MANEVU2002	10.0000	0.0000	0.0220	SWAN FINISHING COMPANY
MA	Bristol	25005	1200821	01	0101	10200504	10.00	MANEVU2002	1.0000	0.0000	0.0027	BRISTOL PACIFIC-HOWARD ARTHUR MILLS
MA	Bristol	25005	1200822	01	0101	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0027	AMERICAN SEAFOODS INTERNATIONAL LLC
MA	Bristol	25005	1200822	02	0101	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0027	AMERICAN SEAFOODS INTERNATIONAL LLC
MA	Bristol	25005	1200824	01	0201	10200401	4.00	MANEVU2002	1.0000	0.0000	0.0027	JUSTIN CLOTHING CO
MA	Bristol	25005	1200830	01	0101	10200401	14.00	MANEVU2002	1.0000	0.0000	0.0001	TILLY REALTY
MA	Bristol	25005	1200830	02	0102	10200401	14.00	MANEVU2002	1.0000	0.0000	0.0001	TILLY REALTY
MA	Bristol	25005	1200848	01	0101	10300603	7.00	MANEVU2002	0.3300	0.0000	0.0000	ELBE CESCO UNIONBOOK
MA	Bristol	25005	1200858	01	0101	10200401	12.00	MANEVU2002	2.0000	0.0000	0.0055	CROWN SERVICE SYSTEM
MA	Bristol	25005	1200859	02	0101	10200401	15.00	MANEVU2002	6.0000	0.0000	0.0000	TILLOTSON COMPLEX
MA	Bristol	25005	1200859	03	0101	10200401	15.00	MANEVU2002	10.0000	0.0000	0.0275	TILLOTSON COMPLEX
MA	Bristol	25005	1200859	03	0201	10200602	15.00	MANEVU2002	1.0000	0.0000	0.0027	TILLOTSON COMPLEX
MA	Bristol	25005	1200859	04	0102	10200401	12.00	MANEVU2002	2.0000	0.0000	0.0055	TILLOTSON COMPLEX
MA	Bristol	25005	1200859	04	0202	10200602	12.00	MANEVU2002	2.0000	0.0000	0.0055	TILLOTSON COMPLEX
MA	Bristol	25005	1200861	01	0101	10200401	5.00	MANEVU2002	3.0000	0.0000	0.0082	CH YATES RUBBER COMPANY
MA	Bristol	25005	1200861	01	0201	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0027	CH YATES RUBBER COMPANY
MA	Bristol	25005	1200862	01	0101	10200504	10.00	MANEVU2002	2.0000	0.0000	0.0000	QUAKER FABRIC PLANT J
MA	Bristol	25005	1200870	01	0101	10200602	13.00	MANEVU2002	8.0000	0.0000	0.0220	STONE CONTAINER CORP
MA	Bristol	25005	1200875	10	0110	10200603	5.00	MANEVU2002	0.0500	0.0000	0.0001	TITLEIST BLDG C
MA	Bristol	25005	1200875	11	0111	10200603	5.00	MANEVU2002	0.0500	0.0000	0.0001	TITLEIST BLDG C
MA	Bristol	25005	1200877	01	0101	10200602	25.00	MANEVU2002	1.0000	0.0000	0.0027	SEA WATCH INTERNATIONAL LTD
MA	Bristol	25005	1200877	02	0102	10200602	29.00	MANEVU2002	1.0000	0.0000	0.0027	SEA WATCH INTERNATIONAL LTD
MA	Bristol	25005	1200879	01	0101	10200603	1.00	MANEVU2002	0.0490	0.0000	0.0001	PROFESSIONAL CONTRACT
MA	Bristol	25005	1200879	02	0101	10200603	1.00	MANEVU2002	0.0660	0.0000	0.0001	PROFESSIONAL CONTRACT
MA	Bristol	25005	1200879	05	0104	10300603	2.00	MANEVU2002	0.1150	0.0000	0.0002	PROFESSIONAL CONTRACT
MA	Bristol	25005	1200887	01	0101	10300401	26.00	MANEVU2002	1.0000	0.0000	0.0027	NEW BEDFORD REGIONAL HIGH SCHOOL
MA	Bristol	25005	1200887	02	0101	10300401	26.00	MANEVU2002	3.0000	0.0000	0.0082	NEW BEDFORD REGIONAL HIGH SCHOOL
MA	Bristol	25005	1200887	03	0101	10300401	26.00	MANEVU2002	1.0000	0.0000	0.0027	NEW BEDFORD REGIONAL HIGH SCHOOL
MA	Bristol	25005	1200912	02	0102	10200603	3.00	MANEVU2002	0.2800	0.0000	0.0000	FALL RIVER SSI
MA	Bristol	25005	1200912	04	0203	10200603	2.00	MANEVU2002	0.1300	0.0000	0.0000	FALL RIVER SSI
MA	Bristol	25005	1200912	06	0105	10200603	1.00	MANEVU2002	0.0420	0.0000	0.0001	FALL RIVER SSI
MA	Bristol	25005	1200912	07	0106	10200603	1.00	MANEVU2002	0.0420	0.0000	0.0001	FALL RIVER SSI
MA	Bristol	25005	1200912	08	0107	10200603	1.00	MANEVU2002	0.0030	0.0000	0.0000	FALL RIVER SSI
MA	Bristol	25005	1200920	01	0101	10300603	3.00	MANEVU2002	0.2000	0.0000	0.0005	GENERAL DYNAMICS C4 SYSTEMS
MA	Dukes	25007	1200349	01	0101	10300501	6.00	MANEVU2002	1.0000	0.0000	0.0022	MARTHAS VINEYARD HOSPITAL

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MA	Dukes	25007	1200349	03	0101	10300501	6.00	MANEVU2002	1.0000	0.0000	0.0022	MARTHAS VINEYARD HOSPITAL
MA	Essex	25009	1190138	01	0201	10200601	199.00	MANEVU2002	19.0000	0.0000	0.0522	GENERAL ELECTRIC AIRCRAFT ENGINES
MA	Essex	25009	1190138	02	0202	10200601	195.00	MANEVU2002	59.0000	0.0000	0.1621	GENERAL ELECTRIC AIRCRAFT ENGINES
MA	Essex	25009	1190138	03	0203	10200601	382.00	MANEVU2002	213.0000	0.0000	0.5852	GENERAL ELECTRIC AIRCRAFT ENGINES
MA	Essex	25009	1190138	07	0206	10200601	243.00	MANEVU2002	14.0000	0.0000	0.0385	GENERAL ELECTRIC AIRCRAFT ENGINES
MA	Essex	25009	1190159	02	0101	10200602	8.00	MANEVU2002	0.1860	0.0000	0.0020	BOSTIK FINDLEY INC
MA	Essex	25009	1190159	04	0102	10200602	4.00	MANEVU2002	0.1040	0.0000	0.0003	BOSTIK FINDLEY INC
MA	Essex	25009	1190159	05	0103	10200602	21.00	MANEVU2002	1.4060	0.0000	0.0000	BOSTIK FINDLEY INC
MA	Essex	25009	1190159	06	0104	10200603	4.00	MANEVU2002	0.5090	0.0000	0.0014	BOSTIK FINDLEY INC
MA	Essex	25009	1190159	07	0105	10200603	1.00	MANEVU2002	0.0350	0.0000	0.0001	BOSTIK FINDLEY INC
MA	Essex	25009	1190159	08	0106	10200603	3.00	MANEVU2002	0.1370	0.0000	0.0004	BOSTIK FINDLEY INC
MA	Essex	25009	1190159	14	0311	10300602	6.00	MANEVU2002	1.9940	0.0000	0.0055	BOSTIK FINDLEY INC
MA	Essex	25009	1190175	01	0201	10200602	87.00	MANEVU2002	2.0000	0.0000	0.0042	EASTMAN GELATINE CORP
MA	Essex	25009	1190175	02	0101	10200401	87.00	MANEVU2002	1.0000	0.0000	0.0000	EASTMAN GELATINE CORP
MA	Essex	25009	1190175	02	0201	10200602	87.00	MANEVU2002	1.0000	0.0000	0.0000	EASTMAN GELATINE CORP
MA	Essex	25009	1190175	03	0201	10200602	92.00	MANEVU2002	26.0000	0.0000	0.0743	EASTMAN GELATINE CORP
MA	Essex	25009	1190175	04	0202	10200602	93.00	MANEVU2002	21.0000	0.0000	0.0600	EASTMAN GELATINE CORP
MA	Essex	25009	1190175	05	0203	10200603	93.00	MANEVU2002	49.0000	0.0000	0.1508	EASTMAN GELATINE CORP
MA	Essex	25009	1190181	02	0102	10200602	15.00	MANEVU2002	1.0000	0.0000	0.0027	TRAVEL LEATHER CO
MA	Essex	25009	1190242	01	0101	10300401	56.00	MANEVU2002	7.0000	0.0000	0.0015	HOGAN REGIONAL CENTER
MA	Essex	25009	1190242	02	0101	10300401	56.00	MANEVU2002	13.0000	0.0000	0.0429	HOGAN REGIONAL CENTER
MA	Essex	25009	1190252	01	0101	10300504	3.00	MANEVU2002	6.0000	0.0000	0.0000	GORDON CONWELL THEOLOGICAL SEMINARY
MA	Essex	25009	1190252	02	0102	10300501	3.00	MANEVU2002	2.0000	0.0000	0.0000	GORDON CONWELL THEOLOGICAL SEMINARY
MA	Essex	25009	1190252	03	0102	10300501	3.00	MANEVU2002	2.0000	0.0000	0.0000	GORDON CONWELL THEOLOGICAL SEMINARY
MA	Essex	25009	1190259	01	0101	10300602	35.00	MANEVU2002	1.0000	0.0000	0.0027	SALEM STATE POWER PL
MA	Essex	25009	1190259	02	0101	10300401	49.00	MANEVU2002	2.0000	0.0000	0.0055	SALEM STATE POWER PL
MA	Essex	25009	1190300	01	0101	10200501	2.00	MANEVU2002	0.0520	0.0000	0.0001	CL HAUTHAWAY & SONS
MA	Essex	25009	1190300	02	0101	10200501	2.00	MANEVU2002	0.0565	0.0000	0.0000	CL HAUTHAWAY & SONS
MA	Essex	25009	1190303	01	0101	10300501	6.00	MANEVU2002	1.0000	0.0000	0.0027	KINDRED HOSPITAL BOSTON NORTH SHORE
MA	Essex	25009	1190303	02	0101	10300501	6.00	MANEVU2002	1.0000	0.0000	0.0027	KINDRED HOSPITAL BOSTON NORTH SHORE
MA	Essex	25009	1190303	03	0101	10300501	13.00	MANEVU2002	1.0000	0.0000	0.0027	KINDRED HOSPITAL BOSTON NORTH SHORE
MA	Essex	25009	1190445	01	0101	10300603	6.00	MANEVU2002	0.0570	0.0000	0.0002	GORTONS OF GLOUCESTER
MA	Essex	25009	1190445	02	0102	10300603	4.00	MANEVU2002	1.1500	0.0000	0.0032	GORTONS OF GLOUCESTER
MA	Essex	25009	1190445	03	0103	10300603	4.00	MANEVU2002	0.3840	0.0000	0.0011	GORTONS OF GLOUCESTER
MA	Essex	25009	1190445	06	0106	10300603	4.00	MANEVU2002	0.4600	0.0000	0.0013	GORTONS OF GLOUCESTER
MA	Essex	25009	1190445	07	0107	10300603	4.00	MANEVU2002	0.9600	0.0000	0.0026	GORTONS OF GLOUCESTER
MA	Essex	25009	1190445	08	0108	10300603	4.00	MANEVU2002	0.8800	0.0000	0.0024	GORTONS OF GLOUCESTER
MA	Essex	25009	1190445	09	0109	10300603	4.00	MANEVU2002	0.8100	0.0000	0.0022	GORTONS OF GLOUCESTER
MA	Essex	25009	1190501	01	0101	10200603	6.00	MANEVU2002	0.5810	0.0000	0.0011	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	02	0102	10200603	3.00	MANEVU2002	0.3305	0.0000	0.0007	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	03	0103	10200603	5.00	MANEVU2002	0.5175	0.0000	0.0010	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	04	0104	10300603	5.00	MANEVU2002	0.5175	0.0000	0.0010	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	05	0105	10300603	5.00	MANEVU2002	0.5175	0.0000	0.0010	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	06	0106	10300603	6.00	MANEVU2002	0.5810	0.0000	0.0011	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	07	0107	10300603	6.00	MANEVU2002	0.5810	0.0000	0.0011	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	08	0108	10300603	6.00	MANEVU2002	0.5810	0.0000	0.0011	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	09	0109	10300603	6.00	MANEVU2002	0.5810	0.0000	0.0011	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	12	0112	10300603	1.00	MANEVU2002	0.0285	0.0000	0.0000	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	21	0121	10200603	2.00	MANEVU2002	0.0870	0.0000	0.0002	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	22	0122	10300603	1.00	MANEVU2002	0.0205	0.0000	0.0001	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190511	02	0102	10200602	12.00	MANEVU2002	0.0200	0.0000	0.0000	KEYSPAN ENERGY DELIVERY SALEM LNG
MA	Essex	25009	1190563	01	0101	10300401	20.00	MANEVU2002	5.0000	0.0000	0.0077	NORTH SHORE MEDICAL

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Plant Name
MA	Essex	25009	1190563	02	0101	10300401	20.00	MANEVU2002	5.0000	0.0000	0.0077	NORTH SHORE MEDICAL
MA	Essex	25009	1190563	03	0101	10300401	13.00	MANEVU2002	3.0000	0.0000	0.0046	NORTH SHORE MEDICAL
MA	Essex	25009	1190653	01	0101	10300603	9.00	MANEVU2002	0.1050	0.0000	0.0000	MILLIPORE CORPORATION
MA	Essex	25009	1190653	02	0102	10200603	9.00	MANEVU2002	0.1050	0.0000	0.0000	MILLIPORE CORPORATION
MA	Essex	25009	1190654	01	0101	10300501	10.00	MANEVU2002	0.4300	0.0000	0.0000	HUNT CENTER
MA	Essex	25009	1190654	06	0204	10300603	10.00	MANEVU2002	1.1500	0.0000	0.0013	HUNT CENTER
MA	Essex	25009	1190656	01	0101	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0011	DANVERS HIGH SCHOOL
MA	Essex	25009	1190683	01	0101	10200603	6.00	MANEVU2002	2.0000	0.0000	0.0022	ITW DEVCON
MA	Essex	25009	1190683	02	0102	10200603	1.00	MANEVU2002	0.3500	0.0000	0.0010	ITW DEVCON
MA	Essex	25009	1190691	01	0101	10300603	6.00	MANEVU2002	2.0000	0.0000	0.0055	ESSEX COUNTY COURT HOUSE
MA	Essex	25009	1190691	02	0101	10300603	6.00	MANEVU2002	2.0000	0.0000	0.0055	ESSEX COUNTY COURT HOUSE
MA	Essex	25009	1190691	03	0101	10300603	6.00	MANEVU2002	2.0000	0.0000	0.0055	ESSEX COUNTY COURT HOUSE
MA	Essex	25009	1190715	01	0201	10300602	22.00	MANEVU2002	5.0000	0.0000	0.0143	BEVERLY HOSPITAL
MA	Essex	25009	1190715	02	0201	10300602	26.00	MANEVU2002	1.0000	0.0000	0.0030	BEVERLY HOSPITAL
MA	Essex	25009	1190716	01	0101	10200501	4.00	MANEVU2002	0.0100	0.0000	0.0000	CPI-BEVERLY MICROWAVE DIVISION
MA	Essex	25009	1190804	01	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0027	VARIAN SEMICONDUCTOR EQUIPMENT ASSO
MA	Essex	25009	1190804	02	0102	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0011	VARIAN SEMICONDUCTOR EQUIPMENT ASSO
MA	Essex	25009	1190804	03	0103	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0027	VARIAN SEMICONDUCTOR EQUIPMENT ASSO
MA	Essex	25009	1190804	06	0106	10200501	1.00	MANEVU2002	0.0100	0.0000	0.0000	VARIAN SEMICONDUCTOR EQUIPMENT ASSO
MA	Essex	25009	1190804	07	0107	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0011	VARIAN SEMICONDUCTOR EQUIPMENT ASSO
MA	Essex	25009	1190804	08	0108	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0011	VARIAN SEMICONDUCTOR EQUIPMENT ASSO
MA	Essex	25009	1190820	03	0103	10300501	0.00	MANEVU2002	0.1000	0.0000	0.0000	UNIVAR USA INCORPORATED
MA	Essex	25009	1190833	01	0201	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0027	UNION HOSPITAL
MA	Essex	25009	1190833	02	0201	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0027	UNION HOSPITAL
MA	Essex	25009	1190833	03	0201	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	UNION HOSPITAL
MA	Essex	25009	1190833	04	0201	10300603	1.00	MANEVU2002	2.0000	0.0000	0.0055	UNION HOSPITAL
MA	Essex	25009	1190833	06	0201	10300602	1.00	MANEVU2002	2.0000	0.0000	0.0055	UNION HOSPITAL
MA	Essex	25009	1190836	01	0101	10200401	8.00	MANEVU2002	1.0000	0.0000	0.0000	LYNN PLASTICS COMPANY LLC
MA	Essex	25009	1190838	01	0101	10200602	17.00	MANEVU2002	0.5350	0.0000	0.0015	GARELICK FARMS - LYNN
MA	Essex	25009	1190838	02	0101	10200602	21.00	MANEVU2002	0.7150	0.0000	0.0020	GARELICK FARMS - LYNN
MA	Essex	25009	1190838	03	0101	10200602	10.00	MANEVU2002	0.5020	0.0000	0.0014	GARELICK FARMS - LYNN
MA	Essex	25009	1190838	04	0101	10200603	4.00	MANEVU2002	0.6780	0.0000	0.0019	GARELICK FARMS - LYNN
MA	Essex	25009	1190838	06	0103	10200501	4.00	MANEVU2002	0.5610	0.0000	0.0006	GARELICK FARMS - LYNN
MA	Essex	25009	1190838	06	0203	10200602	4.00	MANEVU2002	0.2660	0.0000	0.0003	GARELICK FARMS - LYNN
MA	Essex	25009	1190931	01	0101	10300603	7.00	MANEVU2002	0.2000	0.0000	0.0002	VERIZON MASSACHUSETTS
MA	Essex	25009	1190931	02	0101	10300603	7.00	MANEVU2002	0.2000	0.0000	0.0002	VERIZON MASSACHUSETTS
MA	Essex	25009	1190931	03	0102	10300603	7.00	MANEVU2002	0.0005	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Essex	25009	1190983	01	0101	10200501	10.00	MANEVU2002	1.0000	0.0000	0.0027	SALEM OIL & GREASE COMPANY
MA	Essex	25009	1190983	02	0101	10200501	0.00	MANEVU2002	1.0000	0.0000	0.0027	SALEM OIL & GREASE COMPANY
MA	Essex	25009	1190983	03	0102	10200501	10.00	MANEVU2002	0.3000	0.0000	0.0008	SALEM OIL & GREASE COMPANY
MA	Essex	25009	1191021	02	0101	10200602	13.00	MANEVU2002	0.3300	0.0000	0.0009	NORTHSHORE MALL
MA	Essex	25009	1191021	03	0101	10200602	14.00	MANEVU2002	0.3300	0.0000	0.0009	NORTHSHORE MALL
MA	Essex	25009	1191068	01	0101	10300401	8.00	MANEVU2002	1.0000	0.0000	0.0000	ADDISON GILBERT HOSPITAL
MA	Essex	25009	1191068	02	0101	10300401	8.00	MANEVU2002	1.0000	0.0000	0.0000	ADDISON GILBERT HOSPITAL
MA	Essex	25009	1191068	04	0203	10300603	3.00	MANEVU2002	0.0330	0.0000	0.0002	ADDISON GILBERT HOSPITAL
MA	Essex	25009	1191068	05	0204	10300603	1.00	MANEVU2002	0.0470	0.0000	0.0001	ADDISON GILBERT HOSPITAL
MA	Essex	25009	1191068	06	0205	10300603	1.00	MANEVU2002	0.0470	0.0000	0.0001	ADDISON GILBERT HOSPITAL
MA	Essex	25009	1191068	08	0206	10300603	1.00	MANEVU2002	0.0470	0.0000	0.0001	ADDISON GILBERT HOSPITAL
MA	Essex	25009	1191068	09	0207	10300603	1.00	MANEVU2002	0.0470	0.0000	0.0001	ADDISON GILBERT HOSPITAL
MA	Essex	25009	1191331	01	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	TANNERY II
MA	Essex	25009	1191342	01	0101	10300603	9.00	MANEVU2002	1.0000	0.0000	0.0027	HARBOR LOFTS VAMP BD
MA	Essex	25009	1191387	01	0101	10200501	8.00	MANEVU2002	1.0000	0.0000	0.0027	STAHL USA INCORPORATED

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MA	Essex	25009	1191387	02	0102	10200501	10.00	MANEVU2002	1.0000	0.0000	0.0027	STAHL USA INCORPORATED
MA	Essex	25009	1191387	03	0203	10200501	4.00	MANEVU2002	0.1210	0.0000	0.0003	STAHL USA INCORPORATED
MA	Essex	25009	1191387	04	0104	10200501	1.00	MANEVU2002	0.2085	0.0000	0.0002	STAHL USA INCORPORATED
MA	Essex	25009	1191533	02	0101	10200603	5.00	MANEVU2002	1.9265	0.0000	0.0053	BRADFORD & BIGELOW INC
MA	Essex	25009	1191841	01	0101	10200501	13.00	MANEVU2002	0.3650	0.0000	0.0010	OSRAM SYLVANIA INC
MA	Essex	25009	1191841	01	0201	10200602	13.00	MANEVU2002	1.0000	0.0000	0.0027	OSRAM SYLVANIA INC
MA	Essex	25009	1191841	02	0101	10200501	13.00	MANEVU2002	0.3650	0.0000	0.0010	OSRAM SYLVANIA INC
MA	Essex	25009	1191841	02	0201	10200602	13.00	MANEVU2002	0.2050	0.0000	0.0006	OSRAM SYLVANIA INC
MA	Essex	25009	1191906	01	0101	10300603	4.00	MANEVU2002	0.0050	0.0000	0.0000	KEYSPAN ENERGY-DANVERSPORT
MA	Essex	25009	1191906	02	0102	10300501	4.00	MANEVU2002	0.0070	0.0000	0.0000	KEYSPAN ENERGY-DANVERSPORT
MA	Essex	25009	1191906	07	0107	10300603	1.00	MANEVU2002	0.0050	0.0000	0.0000	KEYSPAN ENERGY-DANVERSPORT
MA	Essex	25009	1191938	01	0101	10300501	8.00	MANEVU2002	0.1400	0.0000	0.0000	MACLELLAN-AMESBURY
MA	Essex	25009	1191946	01	0101	10300603	9.00	MANEVU2002	0.4940	0.0000	0.0014	ENDICOTT COLLEGE
MA	Essex	25009	1191946	02	0102	10300603	9.00	MANEVU2002	0.3000	0.0000	0.0008	ENDICOTT COLLEGE
MA	Essex	25009	1191946	03	0103	10300603	8.00	MANEVU2002	0.3620	0.0000	0.0010	ENDICOTT COLLEGE
MA	Essex	25009	1191946	06	0106	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	ENDICOTT COLLEGE
MA	Essex	25009	1191946	07	0107	10300501	1.00	MANEVU2002	0.0950	0.0000	0.0003	ENDICOTT COLLEGE
MA	Essex	25009	1192860	01	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0004	US POSTAL SERVICE
MA	Essex	25009	1192860	02	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0004	US POSTAL SERVICE
MA	Essex	25009	1192860	03	0102	10300603	2.00	MANEVU2002	0.0780	0.0000	0.0000	US POSTAL SERVICE
MA	Essex	25009	1197654	01	0201	10200501	325.00	MANEVU2002	1.0000	0.0000	0.0030	WHEELABRATOR SAUGUS JV
MA	Essex	25009	1197654	02	0201	10200501	325.00	MANEVU2002	1.0000	0.0000	0.0030	WHEELABRATOR SAUGUS JV
MA	Essex	25009	1210003	01	0101	10300501	41.00	MANEVU2002	2.0000	0.0000	0.0000	PHILLIPS ACADEMY
MA	Essex	25009	1210003	01	0201	10300602	41.00	MANEVU2002	0.9000	0.0000	0.0000	PHILLIPS ACADEMY
MA	Essex	25009	1210003	02	0101	10300501	41.00	MANEVU2002	0.4000	0.0000	0.0000	PHILLIPS ACADEMY
MA	Essex	25009	1210003	02	0201	10300602	41.00	MANEVU2002	0.1000	0.0000	0.0000	PHILLIPS ACADEMY
MA	Essex	25009	1210003	03	0101	10300501	41.00	MANEVU2002	1.0000	0.0000	0.0000	PHILLIPS ACADEMY
MA	Essex	25009	1210003	03	0201	10300602	41.00	MANEVU2002	0.9000	0.0000	0.0000	PHILLIPS ACADEMY
MA	Essex	25009	1210009	01	0101	10200401	5.00	MANEVU2002	2.0000	0.0000	0.0000	EVERETT MILLS STEAM CO
MA	Essex	25009	1210009	01	0201	10200603	5.00	MANEVU2002	2.0000	0.0000	0.0000	EVERETT MILLS STEAM CO
MA	Essex	25009	1210009	02	0101	10200401	24.00	MANEVU2002	1.0000	0.0000	0.0000	EVERETT MILLS STEAM CO
MA	Essex	25009	1210009	02	0201	10200602	24.00	MANEVU2002	1.0000	0.0000	0.0000	EVERETT MILLS STEAM CO
MA	Essex	25009	1210017	01	0101	10200401	150.00	MANEVU2002	174.0000	0.0000	0.4780	HAVERHILL PAPERBOARD
MA	Essex	25009	1210017	01	0201	10200601	150.00	MANEVU2002	13.0000	0.0000	0.0357	HAVERHILL PAPERBOARD
MA	Essex	25009	1210025	02	0101	10300401	11.00	MANEVU2002	2.0000	0.0000	0.0000	LAWRENCE GENERAL HOSPITAL
MA	Essex	25009	1210025	04	0101	10300401	15.00	MANEVU2002	8.0000	0.0000	0.0220	LAWRENCE GENERAL HOSPITAL
MA	Essex	25009	1210027	01	0201	10200603	6.00	MANEVU2002	0.3500	0.0000	0.0005	SOUTHWICK CLOTHING LLC
MA	Essex	25009	1210027	02	0202	10200603	6.00	MANEVU2002	0.5500	0.0000	0.0008	SOUTHWICK CLOTHING LLC
MA	Essex	25009	1210029	01	0101	10200602	17.00	MANEVU2002	2.0000	0.0000	0.0000	WOOD AYER REALTY COMPANY
MA	Essex	25009	1210029	02	0101	10200602	17.00	MANEVU2002	2.0000	0.0000	0.0000	WOOD AYER REALTY COMPANY
MA	Essex	25009	1210030	01	0101	10200401	56.00	MANEVU2002	40.0000	0.0000	0.1055	MERRIMAC PAPER COMPANY
MA	Essex	25009	1210032	02	0101	10200401	25.00	MANEVU2002	2.0000	0.0000	0.0000	PACIFIC MILLS INDUSTRIAL COMPLEX
MA	Essex	25009	1210032	03	0101	10200401	25.00	MANEVU2002	2.0000	0.0000	0.0000	PACIFIC MILLS INDUSTRIAL COMPLEX
MA	Essex	25009	1210053	02	0101	10200401	48.00	MANEVU2002	1.0000	0.0000	0.0000	LUCENT TECHNOLOGIES
MA	Essex	25009	1210053	03	0101	10200401	40.00	MANEVU2002	11.0000	0.0000	0.0459	LUCENT TECHNOLOGIES
MA	Essex	25009	1210053	04	0101	10200401	48.00	MANEVU2002	11.0000	0.0000	0.0000	LUCENT TECHNOLOGIES
MA	Essex	25009	1210063	01	0101	10200401	29.00	MANEVU2002	3.0000	0.0000	0.0082	GILLETTE COMPANY THE
MA	Essex	25009	1210063	02	0102	10200401	29.00	MANEVU2002	4.0000	0.0000	0.0110	GILLETTE COMPANY THE
MA	Essex	25009	1210063	03	0103	10200401	29.00	MANEVU2002	10.0000	0.0000	0.0275	GILLETTE COMPANY THE
MA	Essex	25009	1210066	07	0104	10200603	2.00	MANEVU2002	1.0000	0.0000	0.0011	ITW FOILMARK INC
MA	Essex	25009	1210081	01	0101	10300602	10.00	MANEVU2002	0.1000	0.0000	0.0001	EISAI RESEARCH INSTI
MA	Essex	25009	1210081	02	0101	10300603	5.00	MANEVU2002	0.2000	0.0000	0.0002	EISAI RESEARCH INSTI

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MA	Essex	25009	1210081	03	0101	10300603	1.00	MANEVU2002	0.1000	0.0000	0.0003	EISAI RESEARCH INSTI
MA	Essex	25009	1210081	04	0101	10300602	1.00	MANEVU2002	0.1000	0.0000	0.0003	EISAI RESEARCH INSTI
MA	Essex	25009	1210081	05	0101	10300603	1.00	MANEVU2002	0.1000	0.0000	0.0003	EISAI RESEARCH INSTI
MA	Essex	25009	1210081	06	0101	10300603	1.00	MANEVU2002	0.1000	0.0000	0.0003	EISAI RESEARCH INSTI
MA	Essex	25009	1210081	07	0101	10200603	1.00	MANEVU2002	0.1000	0.0000	0.0003	EISAI RESEARCH INSTI
MA	Essex	25009	1210093	01	0401	10200504	15.00	MANEVU2002	2.0000	0.0000	0.0033	VERNON PLASTICS INC
MA	Essex	25009	1210093	01	0201	10200602	15.00	MANEVU2002	1.0000	0.0000	0.0016	VERNON PLASTICS INC
MA	Essex	25009	1210095	05	0105	10300603	1.00	MANEVU2002	0.1000	0.0000	0.0002	BRADFORD COLLEGE
MA	Essex	25009	1210095	08	0106	10300603	1.00	MANEVU2002	0.0900	0.0000	0.0002	BRADFORD COLLEGE
MA	Essex	25009	1210095	15	0108	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	BRADFORD COLLEGE
MA	Essex	25009	1210095	16	0109	10300501	1.00	MANEVU2002	0.0250	0.0000	0.0000	BRADFORD COLLEGE
MA	Essex	25009	1210095	17	0109	10300501	1.00	MANEVU2002	0.0200	0.0000	0.0000	BRADFORD COLLEGE
MA	Essex	25009	1210095	18	0110	10300603	1.00	MANEVU2002	0.0140	0.0000	0.0000	BRADFORD COLLEGE
MA	Essex	25009	1210095	19	0111	10300603	1.00	MANEVU2002	0.0200	0.0000	0.0001	BRADFORD COLLEGE
MA	Essex	25009	1210095	21	0112	10300603	1.00	MANEVU2002	0.0200	0.0000	0.0000	BRADFORD COLLEGE
MA	Essex	25009	1210095	22	0113	10300603	1.00	MANEVU2002	0.0200	0.0000	0.0000	BRADFORD COLLEGE
MA	Essex	25009	1210095	23	0114	10300603	1.00	MANEVU2002	0.0870	0.0000	0.0001	BRADFORD COLLEGE
MA	Essex	25009	1210095	24	0114	10300603	1.00	MANEVU2002	0.0870	0.0000	0.0001	BRADFORD COLLEGE
MA	Essex	25009	1210095	25	0114	10300603	1.00	MANEVU2002	0.0870	0.0000	0.0001	BRADFORD COLLEGE
MA	Essex	25009	1210102	09	0107	10200603	3.00	MANEVU2002	0.2000	0.0000	0.0005	HOOD COATINGS
MA	Essex	25009	1210106	01	0101	10200603	6.00	MANEVU2002	2.0000	0.0000	0.0000	RIVERWALK DEV INC
MA	Essex	25009	1210106	02	0101	10200603	6.00	MANEVU2002	2.0000	0.0000	0.0000	RIVERWALK DEV INC
MA	Essex	25009	1210106	03	0102	10200603	3.00	MANEVU2002	2.0000	0.0000	0.0000	RIVERWALK DEV INC
MA	Essex	25009	1210108	03	0103	10200603	5.00	MANEVU2002	0.2500	0.0000	0.0007	SCHNEIDER AUTOMATION
MA	Essex	25009	1210124	01	0101	10200401	16.00	MANEVU2002	4.0000	0.0000	0.0110	ARAMARK UNIFORMS
MA	Essex	25009	1210140	01	0101	10200501	6.00	MANEVU2002	1.0000	0.0000	0.0000	ANDREA MANAGEMENT COMPANY
MA	Essex	25009	1210144	01	0101	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0027	US INTERNAL REVENUE SERVICE
MA	Essex	25009	1210144	02	0102	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0055	US INTERNAL REVENUE SERVICE
MA	Essex	25009	1210144	03	0103	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0000	US INTERNAL REVENUE SERVICE
MA	Essex	25009	1210144	04	0104	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0000	US INTERNAL REVENUE SERVICE
MA	Essex	25009	1210150	03	0103	10200603	2.00	MANEVU2002	1.0000	0.0000	0.0027	NOVEON INCORPORATED
MA	Essex	25009	1210164	01	0101	10300602	13.00	MANEVU2002	0.8015	0.0000	0.0009	MERRIMACK COLLEGE
MA	Essex	25009	1210164	02	0102	10300602	13.00	MANEVU2002	0.8015	0.0000	0.0009	MERRIMACK COLLEGE
MA	Essex	25009	1210164	03	0103	10300603	2.00	MANEVU2002	0.2745	0.0000	0.0003	MERRIMACK COLLEGE
MA	Essex	25009	1210164	04	0104	10300603	2.00	MANEVU2002	0.2745	0.0000	0.0003	MERRIMACK COLLEGE
MA	Essex	25009	1210164	05	0105	10300603	2.00	MANEVU2002	0.1885	0.0000	0.0002	MERRIMACK COLLEGE
MA	Essex	25009	1210164	06	0105	10300603	2.00	MANEVU2002	0.1885	0.0000	0.0002	MERRIMACK COLLEGE
MA	Essex	25009	1210164	07	0106	10300603	2.00	MANEVU2002	0.1340	0.0000	0.0001	MERRIMACK COLLEGE
MA	Essex	25009	1210164	08	0107	10300603	1.00	MANEVU2002	0.1825	0.0000	0.0002	MERRIMACK COLLEGE
MA	Essex	25009	1210164	09	0108	10300603	2.00	MANEVU2002	0.2195	0.0000	0.0002	MERRIMACK COLLEGE
MA	Essex	25009	1210164	10	0108	10300603	2.00	MANEVU2002	0.2195	0.0000	0.0002	MERRIMACK COLLEGE
MA	Essex	25009	1210164	11	0109	10300603	1.00	MANEVU2002	0.0855	0.0000	0.0001	MERRIMACK COLLEGE
MA	Essex	25009	1210164	12	0110	10300603	1.00	MANEVU2002	0.0825	0.0000	0.0001	MERRIMACK COLLEGE
MA	Essex	25009	1210164	13	0110	10300603	1.00	MANEVU2002	0.0825	0.0000	0.0001	MERRIMACK COLLEGE
MA	Essex	25009	1210164	14	0111	10300603	1.00	MANEVU2002	0.0890	0.0000	0.0001	MERRIMACK COLLEGE
MA	Essex	25009	1210164	18	0115	10300603	2.00	MANEVU2002	0.1275	0.0000	0.0001	MERRIMACK COLLEGE
MA	Essex	25009	1210164	19	0116	10300603	2.00	MANEVU2002	0.1825	0.0000	0.0002	MERRIMACK COLLEGE
MA	Essex	25009	1210185	01	0101	10300603	5.00	MANEVU2002	5.0000	0.0000	0.0055	MERRIMACK MUTUAL FIRE INSURANCE COMPANY
MA	Essex	25009	1210185	02	0101	10300603	5.00	MANEVU2002	5.0000	0.0000	0.0055	MERRIMACK MUTUAL FIRE INSURANCE COMPANY
MA	Essex	25009	1210194	01	0101	10200603	8.00	MANEVU2002	0.8000	0.0000	0.0022	RAYTHEON RF COMPONENTS
MA	Essex	25009	1210194	02	0101	10200603	8.00	MANEVU2002	0.8000	0.0000	0.0022	RAYTHEON RF COMPONENTS
MA	Essex	25009	1210194	03	0102	10200603	6.00	MANEVU2002	0.9000	0.0000	0.0025	RAYTHEON RF COMPONENTS

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MA	Essex	25009	1210194	04	0102	10200603	6.00	MANEVU2002	0.9000	0.0000	0.0025	RAYTHEON RF COMPONENTS
MA	Essex	25009	1210201	01	0101	10300504	3.00	MANEVU2002	2.0000	0.0000	0.0029	MERRIMACK VALLEY HOSPITAL
MA	Essex	25009	1210201	01	0201	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0014	MERRIMACK VALLEY HOSPITAL
MA	Essex	25009	1210202	01	0101	10200401	25.00	MANEVU2002	4.0000	0.0000	0.0110	DYETEX INC
MA	Essex	25009	1210212	01	0101	10200401	70.00	MANEVU2002	7.0000	0.0000	0.0008	MALDEN MILLS INDUSTRIES
MA	Essex	25009	1210212	01	0201	10200602	70.00	MANEVU2002	1.0000	0.0000	0.0001	MALDEN MILLS INDUSTRIES
MA	Essex	25009	1210212	02	0101	10200401	70.00	MANEVU2002	4.0000	0.0000	0.0013	MALDEN MILLS INDUSTRIES
MA	Essex	25009	1210212	02	0201	10200602	70.00	MANEVU2002	0.3345	0.0000	0.0001	MALDEN MILLS INDUSTRIES
MA	Essex	25009	1210213	01	0101	10300401	18.00	MANEVU2002	4.0000	0.0000	0.0066	HOLY FAMILY HOSPITAL
MA	Essex	25009	1210213	01	0201	10300602	18.00	MANEVU2002	0.2960	0.0000	0.0005	HOLY FAMILY HOSPITAL
MA	Essex	25009	1210213	02	0101	10300401	18.00	MANEVU2002	2.0000	0.0000	0.0064	HOLY FAMILY HOSPITAL
MA	Essex	25009	1210213	03	0101	10300401	18.00	MANEVU2002	3.0000	0.0000	0.0007	HOLY FAMILY HOSPITAL
MA	Essex	25009	1210219	01	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0026	ANDOVER COATED PRODUCTS INC
MA	Essex	25009	1210221	01	0101	10200603	8.00	MANEVU2002	0.4000	0.0000	0.0000	FERRAZ SHAWMUT INC
MA	Essex	25009	1210221	01	0201	10200501	8.00	MANEVU2002	0.2800	0.0000	0.0000	FERRAZ SHAWMUT INC
MA	Essex	25009	1210221	02	0102	10200603	8.00	MANEVU2002	0.0400	0.0000	0.0000	FERRAZ SHAWMUT INC
MA	Essex	25009	1210221	02	0202	10200501	8.00	MANEVU2002	0.2800	0.0000	0.0000	FERRAZ SHAWMUT INC
MA	Essex	25009	1210224	05	0104	10200603	2.00	MANEVU2002	0.4300	0.0000	0.0012	BERKSHIRE MANUFACTURED PRODUCTS INC
MA	Essex	25009	1210225	01	0101	10300401	15.00	MANEVU2002	3.0000	0.0000	0.0082	ANNA JAQUES HOSPITAL
MA	Essex	25009	1210225	02	0201	10300602	15.00	MANEVU2002	1.0000	0.0000	0.0027	ANNA JAQUES HOSPITAL
MA	Essex	25009	1210231	01	0101	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0027	FANTINI BAKERY
MA	Essex	25009	1210241	01	0201	10300602	13.00	MANEVU2002	0.0800	0.0000	0.0000	BROOKS SCHOOL
MA	Essex	25009	1210241	02	0201	10300602	13.00	MANEVU2002	0.0800	0.0000	0.0000	BROOKS SCHOOL
MA	Essex	25009	1210241	03	0201	10300601	6.00	MANEVU2002	0.0300	0.0000	0.0000	BROOKS SCHOOL
MA	Essex	25009	1210241	04	0102	10300501	7.00	MANEVU2002	0.8800	0.0000	0.0014	BROOKS SCHOOL
MA	Essex	25009	1210242	01	0201	10200799	8.00	MANEVU2002	0.0540	0.0000	0.0001	GREATER LAWRENCE SANITARY DISTRICT
MA	Essex	25009	1210242	01	0101	10200603	8.00	MANEVU2002	1.0000	0.0000	0.0027	GREATER LAWRENCE SANITARY DISTRICT
MA	Essex	25009	1210242	02	0202	10200799	8.00	MANEVU2002	0.0540	0.0000	0.0001	GREATER LAWRENCE SANITARY DISTRICT
MA	Essex	25009	1210242	03	0203	10200799	8.00	MANEVU2002	0.0540	0.0000	0.0001	GREATER LAWRENCE SANITARY DISTRICT
MA	Essex	25009	1210262	01	0101	10300603	8.00	MANEVU2002	0.7870	0.0000	0.0009	COLUMBO
MA	Essex	25009	1210262	02	0102	10300603	8.00	MANEVU2002	1.5730	0.0000	0.0043	COLUMBO
MA	Essex	25009	1210267	14	0114	10200603	1.00	MANEVU2002	0.0125	0.0000	0.0000	CARGOCAIRE ENGINEERING
MA	Essex	25009	1210293	01	0101	10300603	8.00	MANEVU2002	1.0000	0.0000	0.0016	PUTNAM INVESTMENTS
MA	Essex	25009	1210293	02	0102	10300603	8.00	MANEVU2002	1.0000	0.0000	0.0016	PUTNAM INVESTMENTS
MA	Essex	25009	1210296	01	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0011	HANCOCK COURTS
MA	Essex	25009	1210308	01	0101	10200603	2.00	MANEVU2002	0.1755	0.0000	0.0004	BME ENGINEERING INCORPORATED
MA	Essex	25009	1210312	01	0101	10200603	4.00	MANEVU2002	0.3030	0.0000	0.0003	HEWLETT PACKARD CORPORATION
MA	Essex	25009	1210312	02	0102	10200603	4.00	MANEVU2002	0.3030	0.0000	0.0003	HEWLETT PACKARD CORPORATION
MA	Essex	25009	1210312	06	0103	10200603	1.00	MANEVU2002	0.0310	0.0000	0.0001	HEWLETT PACKARD CORPORATION
MA	Essex	25009	1210322	05	0105	10200603	1.00	MANEVU2002	0.0800	0.0000	0.0001	KEYSPAN ENERGY-HAVERHILL
MA	Essex	25009	1210322	06	0105	10200603	1.00	MANEVU2002	0.0800	0.0000	0.0001	KEYSPAN ENERGY-HAVERHILL
MA	Essex	25009	1210322	07	0106	10200603	1.00	MANEVU2002	0.0790	0.0000	0.0001	KEYSPAN ENERGY-HAVERHILL
MA	Essex	25009	1210366	01	0101	10300501	6.00	MANEVU2002	0.2000	0.0000	0.0002	ANDOVER DOHERTY MIDDLE SCHOOL
MA	Essex	25009	1210366	02	0101	10300501	6.00	MANEVU2002	0.2000	0.0000	0.0002	ANDOVER DOHERTY MIDDLE SCHOOL
MA	Essex	25009	1210367	01	0101	10300501	6.00	MANEVU2002	0.1000	0.0000	0.0001	ANDOVER SOUTH ELEMENTARY
MA	Essex	25009	1210367	02	0101	10300501	6.00	MANEVU2002	0.1000	0.0000	0.0001	ANDOVER SOUTH ELEMENTARY
MA	Essex	25009	1210374	01	0101	10200602	17.00	MANEVU2002	1.0000	0.0000	0.0027	EISAI RESEARCH INSTI
MA	Essex	25009	1210374	03	0103	10200603	1.00	MANEVU2002	0.1000	0.0000	0.0003	EISAI RESEARCH INSTI
MA	Essex	25009	1210379	05	0105	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0027	ALDEN MERRELL CORPORATION
MA	Essex	25009	1210379	09	0109	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	ALDEN MERRELL CORPORATION
MA	Essex	25009	1210411	09	0108	10300603	3.00	MANEVU2002	0.0090	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Essex	25009	1210411	10	0108	10300603	3.00	MANEVU2002	0.0900	0.0000	0.0000	VERIZON MASSACHUSETTS

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MA	Essex	25009	1210411	11	0109	10300603	1.00	MANEVU2002	0.0200	0.0000	0.0001	VERIZON MASSACHUSETTS
MA	Essex	25009	1211013	01	0201	10200602	13.00	MANEVU2002	2.6600	0.0000	0.0073	RAYTHEON SYSTEMS COMPANY - IDS
MA	Essex	25009	1211013	02	0201	10200602	13.00	MANEVU2002	2.6600	0.0000	0.0073	RAYTHEON SYSTEMS COMPANY - IDS
MA	Essex	25009	1211013	03	0202	10200603	6.00	MANEVU2002	0.8000	0.0000	0.0022	RAYTHEON SYSTEMS COMPANY - IDS
MA	Essex	25009	1211013	04	0202	10200603	6.00	MANEVU2002	0.8000	0.0000	0.0022	RAYTHEON SYSTEMS COMPANY - IDS
MA	Essex	25009	1211013	05	0203	10200603	10.00	MANEVU2002	0.4500	0.0000	0.0012	RAYTHEON SYSTEMS COMPANY - IDS
MA	Essex	25009	1211013	06	0204	10200603	10.00	MANEVU2002	0.4500	0.0000	0.0025	RAYTHEON SYSTEMS COMPANY - IDS
MA	Essex	25009	1211015	08	0106	10200602	48.00	MANEVU2002	2.0000	0.0000	0.0055	GENETICS INSTITUTE LLC
MA	Essex	25009	1211015	09	0106	10200602	46.00	MANEVU2002	1.0000	0.0000	0.0027	GENETICS INSTITUTE LLC
MA	Franklin	25011	0420053	01	0101	10301002	3.00	MANEVU2002	0.0010	0.0000	0.0000	BERKSHIRE GAS GREENFIELD
MA	Franklin	25011	0420053	02	0102	10300603	4.00	MANEVU2002	2.0000	0.0000	0.0022	BERKSHIRE GAS GREENFIELD
MA	Franklin	25011	0420061	01	0101	10300401	44.00	MANEVU2002	2.0000	0.0000	0.0055	BBA NONWOVENS COLRAIN
MA	Franklin	25011	0420100	01	0201	10200501	16.00	MANEVU2002	0.5670	0.0000	0.0012	ESLEECK MANUFACTURING
MA	Franklin	25011	0420100	01	0101	10200602	16.00	MANEVU2002	1.1500	0.0000	0.0025	ESLEECK MANUFACTURING
MA	Franklin	25011	0420100	02	0201	10200501	16.00	MANEVU2002	0.7340	0.0000	0.0016	ESLEECK MANUFACTURING
MA	Franklin	25011	0420100	02	0101	10200602	16.00	MANEVU2002	1.5750	0.0000	0.0035	ESLEECK MANUFACTURING
MA	Franklin	25011	0420100	03	0201	10200501	16.00	MANEVU2002	0.6360	0.0000	0.0014	ESLEECK MANUFACTURING
MA	Franklin	25011	0420100	03	0101	10200602	16.00	MANEVU2002	1.5330	0.0000	0.0034	ESLEECK MANUFACTURING
MA	Franklin	25011	0420121	01	0101	10200401	78.00	MANEVU2002	55.0000	0.0000	0.1692	ERVING PAPER MILLS
MA	Franklin	25011	0420121	02	0102	10200401	49.00	MANEVU2002	1.0000	0.0000	0.0109	ERVING PAPER MILLS
MA	Franklin	25011	0420121	03	0102	10200401	15.00	MANEVU2002	0.3800	0.0000	0.0041	ERVING PAPER MILLS
MA	Franklin	25011	0420227	02	0102	10200501	3.00	MANEVU2002	1.0000	0.0000	0.0011	BOSTON & MAINE CORPORATION
MA	Franklin	25011	0420356	01	0101	10300501	24.00	MANEVU2002	1.0000	0.0000	0.0000	DEERFIELD ACADEMY-TRUSTEE
MA	Franklin	25011	0420382	01	0101	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0015	FARREN CARE CENTER
MA	Franklin	25011	0420382	02	0101	10300504	6.00	MANEVU2002	1.0000	0.0000	0.0015	FARREN CARE CENTER
MA	Franklin	25011	0420386	01	0101	10300401	15.00	MANEVU2002	2.0000	0.0000	0.0011	FRANKLIN MEDICAL CEN
MA	Franklin	25011	0420386	02	0101	10300401	15.00	MANEVU2002	2.0000	0.0000	0.0011	FRANKLIN MEDICAL CEN
MA	Franklin	25011	0420386	03	0101	10300401	3.00	MANEVU2002	0.4300	0.0000	0.0002	FRANKLIN MEDICAL CEN
MA	Franklin	25011	0420386	04	0101	10300401	3.00	MANEVU2002	0.4300	0.0000	0.0012	FRANKLIN MEDICAL CEN
MA	Franklin	25011	0420386	05	0101	10300401	10.00	MANEVU2002	2.0000	0.0000	0.0055	FRANKLIN MEDICAL CEN
MA	Franklin	25011	0420391	01	0101	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0000	FRONTIER REGIONAL SCHOOL DISTRICT
MA	Franklin	25011	0420391	02	0101	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0000	FRONTIER REGIONAL SCHOOL DISTRICT
MA	Franklin	25011	0420417	01	0101	10200501	2.00	MANEVU2002	1.0000	0.0000	0.0011	GREENFIELD INDUSTRIES
MA	Franklin	25011	0420417	05	0102	10300601	1.00	MANEVU2002	0.0285	0.0000	0.0000	GREENFIELD INDUSTRIES
MA	Franklin	25011	0420458	01	0101	10200401	11.00	MANEVU2002	1.0000	0.0000	0.0000	RODNEY HUNT COMPANY
MA	Franklin	25011	0420458	02	0102	10200401	11.00	MANEVU2002	1.0000	0.0000	0.0000	RODNEY HUNT COMPANY
MA	Franklin	25011	0420467	01	0101	10200603	1.00	MANEVU2002	0.4875	0.0000	0.0005	JUDD WIRE INCORPORATED
MA	Franklin	25011	0420550	01	0101	10300401	11.00	MANEVU2002	3.0000	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420550	02	0101	10300401	9.00	MANEVU2002	3.0000	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420550	03	0101	10300401	13.00	MANEVU2002	3.0000	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420550	04	0101	10300401	15.00	MANEVU2002	3.0000	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420550	05	0101	10300501	9.00	MANEVU2002	0.5605	0.0000	0.0015	NORTHFIELD MT HERMON
MA	Franklin	25011	0420551	01	0101	10300401	7.00	MANEVU2002	2.0000	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420551	02	0101	10300401	7.00	MANEVU2002	2.0000	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420551	03	0101	10300401	9.00	MANEVU2002	2.0000	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420551	04	0101	10300401	9.00	MANEVU2002	2.0000	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420551	05	0102	10300501	3.00	MANEVU2002	0.3230	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420554	01	0101	10300501	12.00	MANEVU2002	2.0000	0.0000	0.0000	PIONEER VALLEY REGIONAL SCHOOL
MA	Franklin	25011	0420603	02	0102	10200401	8.00	MANEVU2002	1.0000	0.0000	0.0005	LUNT SILVERSMITHS
MA	Franklin	25011	0420811	01	0101	10200501	1.00	MANEVU2002	1.0000	0.0000	0.0027	FOREST PRODUCTS ASSOCIATION
MA	Franklin	25011	0420853	03	0103	10200603	8.00	MANEVU2002	0.3220	0.0000	0.0004	HARDIGG INDUSTRIES
MA	Hampden	25013	0420005	04	0104	10200603	3.00	MANEVU2002	0.5000	0.0000	0.0014	TENNESSEE GAS PIPELINE STATION 261

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MA	Hampden	25013	0420014	01	0201	10200602	31.00	MANEVU2002	0.0005	0.0000	0.0000	TOP-FLIGHT GOLF COMPANY
MA	Hampden	25013	0420014	03	0201	10200602	31.00	MANEVU2002	13.0000	0.0000	0.0357	TOP-FLIGHT GOLF COMPANY
MA	Hampden	25013	0420014	04	0101	10200602	27.00	MANEVU2002	5.0000	0.0000	0.0000	TOP-FLIGHT GOLF COMPANY
MA	Hampden	25013	0420016	01	0101	10200401	15.00	MANEVU2002	8.0000	0.0000	0.0220	FACEMATE CORP
MA	Hampden	25013	0420017	01	0201	10300602	18.00	MANEVU2002	0.2650	0.0000	0.0000	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	03	0102	10300502	36.00	MANEVU2002	1.5230	0.0000	0.0000	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	04	0102	10300502	36.00	MANEVU2002	1.5230	0.0000	0.0000	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	05	0103	10300503	7.00	MANEVU2002	0.0400	0.0000	0.0000	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	05	0203	10300603	7.00	MANEVU2002	0.0485	0.0000	0.0000	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	06	0204	10300603	6.00	MANEVU2002	0.0045	0.0000	0.0000	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	07	0205	10300603	6.00	MANEVU2002	0.0045	0.0000	0.0000	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	08	0206	10300603	6.00	MANEVU2002	0.0855	0.0000	0.0001	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	09	0107	10300503	6.00	MANEVU2002	0.0310	0.0000	0.0001	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	19	0212	10300603	5.00	MANEVU2002	4.5000	0.0000	0.0124	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	19	0112	10300501	5.00	MANEVU2002	0.2950	0.0000	0.0008	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420036	01	0101	10300401	15.00	MANEVU2002	1.0000	0.0000	0.0055	HOLYOKE HOSPITAL
MA	Hampden	25013	0420036	02	0101	10300401	15.00	MANEVU2002	3.0000	0.0000	0.0165	HOLYOKE HOSPITAL
MA	Hampden	25013	0420036	02	0201	10300603	15.00	MANEVU2002	2.0000	0.0000	0.0110	HOLYOKE HOSPITAL
MA	Hampden	25013	0420036	03	0102	10300401	30.00	MANEVU2002	2.0000	0.0000	0.0000	HOLYOKE HOSPITAL
MA	Hampden	25013	0420036	03	0202	10300601	30.00	MANEVU2002	4.0000	0.0000	0.0000	HOLYOKE HOSPITAL
MA	Hampden	25013	0420041	01	0201	10300602	26.00	MANEVU2002	5.0000	0.0000	0.0082	PROVIDENCE HOSPITAL
MA	Hampden	25013	0420041	02	0201	10300602	26.00	MANEVU2002	5.0000	0.0000	0.0082	PROVIDENCE HOSPITAL
MA	Hampden	25013	0420047	01	0101	10200401	28.00	MANEVU2002	6.0000	0.0000	0.0000	LUDLOW INDUSTRIAL REALTIES
MA	Hampden	25013	0420047	02	0102	10200401	28.00	MANEVU2002	4.0000	0.0000	0.0000	LUDLOW INDUSTRIAL REALTIES
MA	Hampden	25013	0420062	01	0101	10200504	21.00	MANEVU2002	1.0000	0.0000	0.0014	CASCADES DIAMOND INCORPORATED
MA	Hampden	25013	0420062	02	0102	10200504	21.00	MANEVU2002	2.0000	0.0000	0.0029	CASCADES DIAMOND INCORPORATED
MA	Hampden	25013	0420062	03	0103	10200504	29.00	MANEVU2002	1.0000	0.0000	0.0010	CASCADES DIAMOND INCORPORATED
MA	Hampden	25013	0420065	01	0101	10300401	25.00	MANEVU2002	6.0000	0.0000	0.0092	MA MONSON DEVELOPMENTAL CENTER
MA	Hampden	25013	0420065	02	0101	10300401	25.00	MANEVU2002	9.0000	0.0000	0.0138	MA MONSON DEVELOPMENTAL CENTER
MA	Hampden	25013	0420065	03	0101	10300401	27.00	MANEVU2002	2.0000	0.0000	0.0031	MA MONSON DEVELOPMENTAL CENTER
MA	Hampden	25013	0420080	01	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	REEDS LANDING
MA	Hampden	25013	0420083	01	0101	10200501	23.00	MANEVU2002	1.0000	0.0000	0.0000	INDIAN ORCHARD MILL
MA	Hampden	25013	0420085	01	0101	10300401	30.00	MANEVU2002	1.0000	0.0000	0.0027	MASS MUTUAL INSURANCE
MA	Hampden	25013	0420085	01	0201	10300602	30.00	MANEVU2002	1.0500	0.0000	0.0029	MASS MUTUAL INSURANCE
MA	Hampden	25013	0420085	02	0101	10300401	30.00	MANEVU2002	2.0000	0.0000	0.0055	MASS MUTUAL INSURANCE
MA	Hampden	25013	0420085	03	0101	10300401	30.00	MANEVU2002	1.0000	0.0000	0.0027	MASS MUTUAL INSURANCE
MA	Hampden	25013	0420085	04	0101	10300401	30.00	MANEVU2002	1.0000	0.0000	0.0027	MASS MUTUAL INSURANCE
MA	Hampden	25013	0420085	04	0201	10300602	30.00	MANEVU2002	0.5500	0.0000	0.0015	MASS MUTUAL INSURANCE
MA	Hampden	25013	0420086	02	0202	10300601	110.00	MANEVU2002	5.0000	0.0000	0.0137	SOLUTIA INCORPORATED
MA	Hampden	25013	0420086	03	0103	10200601	196.00	MANEVU2002	11.0000	0.0000	0.0302	SOLUTIA INCORPORATED
MA	Hampden	25013	0420086	04	0104	10200204	249.00	MANEVU2002	240.0000	0.0000	0.6593	SOLUTIA INCORPORATED
MA	Hampden	25013	0420087	01	0201	10300603	9.00	MANEVU2002	4.0000	0.0000	0.0127	PARK VIEW SPECIALTY HOSPITAL
MA	Hampden	25013	0420087	01	0101	10300501	9.00	MANEVU2002	2.0000	0.0000	0.0064	PARK VIEW SPECIALTY HOSPITAL
MA	Hampden	25013	0420087	02	0101	10300501	9.00	MANEVU2002	1.0000	0.0000	0.0044	PARK VIEW SPECIALTY HOSPITAL
MA	Hampden	25013	0420087	02	0201	10300602	9.00	MANEVU2002	1.0000	0.0000	0.0044	PARK VIEW SPECIALTY HOSPITAL
MA	Hampden	25013	0420089	01	0101	10200401	16.00	MANEVU2002	4.0000	0.0000	0.0044	SMITH & WESSON
MA	Hampden	25013	0420089	01	0201	10200602	16.00	MANEVU2002	0.3000	0.0000	0.0003	SMITH & WESSON
MA	Hampden	25013	0420089	02	0101	10200401	16.00	MANEVU2002	1.0000	0.0000	0.0011	SMITH & WESSON
MA	Hampden	25013	0420089	02	0201	10200602	16.00	MANEVU2002	0.2700	0.0000	0.0003	SMITH & WESSON
MA	Hampden	25013	0420093	01	0101	10300401	34.00	MANEVU2002	7.0000	0.0000	0.0331	BAYSTATE MEDICAL CEN
MA	Hampden	25013	0420093	01	0201	10300602	34.00	MANEVU2002	3.0000	0.0000	0.0142	BAYSTATE MEDICAL CEN
MA	Hampden	25013	0420093	02	0101	10300401	34.00	MANEVU2002	4.0000	0.0000	0.0035	BAYSTATE MEDICAL CEN

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MA	Hampden	25013	0420093	02	0201	10300602	34.00	MANEVU2002	2.0000	0.0000	0.0018	BAYSTATE MEDICAL CEN
MA	Hampden	25013	0420093	03	0101	10300401	33.00	MANEVU2002	6.0000	0.0000	0.0026	BAYSTATE MEDICAL CEN
MA	Hampden	25013	0420093	03	0201	10300602	33.00	MANEVU2002	1.0000	0.0000	0.0004	BAYSTATE MEDICAL CEN
MA	Hampden	25013	0420094	01	0201	10300602	38.00	MANEVU2002	2.0000	0.0000	0.0015	SPRINGFIELD TECHNICAL COLLEGE
MA	Hampden	25013	0420094	02	0201	10300602	38.00	MANEVU2002	2.0000	0.0000	0.0055	SPRINGFIELD TECHNICAL COLLEGE
MA	Hampden	25013	0420094	03	0201	10300602	38.00	MANEVU2002	2.0000	0.0000	0.0055	SPRINGFIELD TECHNICAL COLLEGE
MA	Hampden	25013	0420095	01	0301	10200504	29.00	MANEVU2002	3.0000	0.0000	0.0016	TITEFLEX CORPORATION
MA	Hampden	25013	0420095	01	0201	10200602	29.00	MANEVU2002	2.0000	0.0000	0.0011	TITEFLEX CORPORATION
MA	Hampden	25013	0420096	01	0101	10300401	27.00	MANEVU2002	1.0000	0.0000	0.0000	SOUTH CAMPUS GROUP LLC
MA	Hampden	25013	0420096	01	0201	10300602	27.00	MANEVU2002	0.1000	0.0000	0.0000	SOUTH CAMPUS GROUP LLC
MA	Hampden	25013	0420096	02	0101	10300401	25.00	MANEVU2002	1.0000	0.0000	0.0000	SOUTH CAMPUS GROUP LLC
MA	Hampden	25013	0420096	02	0201	10300602	25.00	MANEVU2002	0.1000	0.0000	0.0000	SOUTH CAMPUS GROUP LLC
MA	Hampden	25013	0420096	08	0203	10300603	3.00	MANEVU2002	0.0615	0.0000	0.0002	SOUTH CAMPUS GROUP LLC
MA	Hampden	25013	0420107	01	0102	10300603	1.00	MANEVU2002	7.0000	0.0000	0.0192	COLUMBIA MANUFACTURING INCORPORATED
MA	Hampden	25013	0420107	01	0202	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	COLUMBIA MANUFACTURING INCORPORATED
MA	Hampden	25013	0420107	03	0201	10300603	8.00	MANEVU2002	3.0000	0.0000	0.0066	COLUMBIA MANUFACTURING INCORPORATED
MA	Hampden	25013	0420107	04	0201	10300603	8.00	MANEVU2002	3.0000	0.0000	0.0066	COLUMBIA MANUFACTURING INCORPORATED
MA	Hampden	25013	0420113	01	0101	10300504	58.00	MANEVU2002	7.0000	0.0000	0.0000	WESTFIELD STATE COLLEGE
MA	Hampden	25013	0420113	02	0101	10300504	58.00	MANEVU2002	5.0000	0.0000	0.0000	WESTFIELD STATE COLLEGE
MA	Hampden	25013	0420113	03	0101	10300504	17.00	MANEVU2002	5.0000	0.0000	0.0000	WESTFIELD STATE COLLEGE
MA	Hampden	25013	0420128	01	0201	10200501	6.00	MANEVU2002	0.5355	0.0000	0.0015	HAZEN PAPER COMPANY
MA	Hampden	25013	0420128	01	0101	10200603	6.00	MANEVU2002	0.2935	0.0000	0.0008	HAZEN PAPER COMPANY
MA	Hampden	25013	0420128	02	0202	10200501	2.00	MANEVU2002	0.1755	0.0000	0.0005	HAZEN PAPER COMPANY
MA	Hampden	25013	0420128	02	0102	10200603	2.00	MANEVU2002	0.0810	0.0000	0.0002	HAZEN PAPER COMPANY
MA	Hampden	25013	0420129	01	0101	10200501	1.00	MANEVU2002	0.2000	0.0000	0.0000	NEW ENGLAND ETCHING
MA	Hampden	25013	0420145	01	0101	10200602	10.00	MANEVU2002	1.0000	0.0000	0.0029	HOLYOKE CARD COMPANY
MA	Hampden	25013	0420149	01	0101	10200501	6.00	MANEVU2002	0.0300	0.0000	0.0000	EASTERN ETCHNG & MANUFACTURING
MA	Hampden	25013	0420149	08	0101	10200603	1.00	MANEVU2002	0.0050	0.0000	0.0000	EASTERN ETCHNG & MANUFACTURING
MA	Hampden	25013	0420150	01	0101	10200602	10.00	MANEVU2002	1.0000	0.0000	0.0014	DANAHER TOOL GROUP
MA	Hampden	25013	0420150	03	0103	10200603	13.00	MANEVU2002	2.0000	0.0000	0.0029	DANAHER TOOL GROUP
MA	Hampden	25013	0420150	04	0104	10200602	13.00	MANEVU2002	2.0000	0.0000	0.0029	DANAHER TOOL GROUP
MA	Hampden	25013	0420150	06	0106	10200603	5.00	MANEVU2002	0.4000	0.0000	0.0006	DANAHER TOOL GROUP
MA	Hampden	25013	0420152	01	0101	10200401	20.00	MANEVU2002	3.0000	0.0000	0.0000	TEXON USA
MA	Hampden	25013	0420152	02	0102	10200401	43.00	MANEVU2002	23.0000	0.0000	0.0632	TEXON USA
MA	Hampden	25013	0420157	03	0202	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	SULLIVAN PAPER COMPANY
MA	Hampden	25013	0420172	01	0101	10200501	3.00	MANEVU2002	0.0860	0.0000	0.0001	HANO DOCUMENT PRINTE
MA	Hampden	25013	0420172	02	0102	10200603	3.00	MANEVU2002	0.0520	0.0000	0.0001	HANO DOCUMENT PRINTE
MA	Hampden	25013	0420172	03	0103	10300603	3.00	MANEVU2002	0.0500	0.0000	0.0001	HANO DOCUMENT PRINTE
MA	Hampden	25013	0420181	10	0110	10200603	6.00	MANEVU2002	0.0200	0.0000	0.0001	HAMPDEN PAPERS INC
MA	Hampden	25013	0420186	01	0101	10201002	4.00	MANEVU2002	1.0000	0.0000	0.0000	CARAUSTAR INDUSTRIES
MA	Hampden	25013	0420187	01	0101	10200501	10.00	MANEVU2002	1.0000	0.0000	0.0027	FOUNTAIN PLATING COMPANY
MA	Hampden	25013	0420187	01	0201	10200602	10.00	MANEVU2002	1.0000	0.0000	0.0027	FOUNTAIN PLATING COMPANY
MA	Hampden	25013	0420191	02	0102	10300603	3.00	MANEVU2002	0.2210	0.0000	0.0006	UNIFIRST CORPORATION
MA	Hampden	25013	0420202	09	0103	10200501	1.00	MANEVU2002	0.0690	0.0000	0.0000	EXXON MOBIL OIL CORPORATION
MA	Hampden	25013	0420202	10	0103	10200501	1.00	MANEVU2002	0.0290	0.0000	0.0000	EXXON MOBIL OIL CORPORATION
MA	Hampden	25013	0420208	02	0102	10200504	5.00	MANEVU2002	0.2160	0.0000	0.0000	HASBRO GAMES
MA	Hampden	25013	0420208	03	0103	10200504	5.00	MANEVU2002	0.2160	0.0000	0.0000	HASBRO GAMES
MA	Hampden	25013	0420208	04	0104	10200504	5.00	MANEVU2002	0.2160	0.0000	0.0000	HASBRO GAMES
MA	Hampden	25013	0420208	05	0105	10200504	8.00	MANEVU2002	0.7080	0.0000	0.0000	HASBRO GAMES
MA	Hampden	25013	0420208	05	0205	10200603	8.00	MANEVU2002	0.0380	0.0000	0.0000	HASBRO GAMES
MA	Hampden	25013	0420208	06	0106	10200504	10.00	MANEVU2002	0.7080	0.0000	0.0000	HASBRO GAMES
MA	Hampden	25013	0420208	07	0107	10200504	8.00	MANEVU2002	0.5900	0.0000	0.0000	HASBRO GAMES

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MA	Hampden	25013	0420221	01	0101	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0000	SPRINGFIELD LIBRARY & MUSEUM
MA	Hampden	25013	0420222	01	0101	10300602	6.00	MANEVU2002	1.0000	0.0000	0.0000	CW REALTY COMPANY
MA	Hampden	25013	0420222	02	0101	10300602	6.00	MANEVU2002	1.0000	0.0000	0.0000	CW REALTY COMPANY
MA	Hampden	25013	0420226	02	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	1350 MAIN STREET
MA	Hampden	25013	0420226	03	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	1350 MAIN STREET
MA	Hampden	25013	0420228	01	0101	10200602	15.00	MANEVU2002	8.0000	0.0000	0.0220	NOVA CHEMICALS INC
MA	Hampden	25013	0420243	02	0102	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0007	BAY STATE GAS CO
MA	Hampden	25013	0420259	01	0101	10300501	9.00	MANEVU2002	1.0000	0.0000	0.0000	AGAWAM SCHOOL SYSTEM
MA	Hampden	25013	0420265	01	0101	10200603	3.00	MANEVU2002	0.0825	0.0000	0.0002	AVERY DENNISON CORPORATION
MA	Hampden	25013	0420265	02	0102	10200603	1.00	MANEVU2002	0.0205	0.0000	0.0000	AVERY DENNISON CORPORATION
MA	Hampden	25013	0420265	03	0203	10200603	9.00	MANEVU2002	0.0205	0.0000	0.0000	AVERY DENNISON CORPORATION
MA	Hampden	25013	0420270	01	0201	10200602	12.00	MANEVU2002	1.0000	0.0000	0.0000	AMERICAN SAW & MANUFACTURING
MA	Hampden	25013	0420271	01	0101	10300603	8.00	MANEVU2002	2.0000	0.0000	0.0055	INTERNATIONAL METAL PRODUCTS
MA	Hampden	25013	0420288	01	0201	10300603	4.00	MANEVU2002	0.0635	0.0000	0.0000	MA ANG 104 FIGHTER WING
MA	Hampden	25013	0420288	02	0101	10300501	5.00	MANEVU2002	0.0915	0.0000	0.0000	MA ANG 104 FIGHTER WING
MA	Hampden	25013	0420288	02	0201	10300603	5.00	MANEVU2002	0.0785	0.0000	0.0000	MA ANG 104 FIGHTER WING
MA	Hampden	25013	0420288	03	0101	10300603	1.00	MANEVU2002	0.0030	0.0000	0.0000	MA ANG 104 FIGHTER WING
MA	Hampden	25013	0420288	26	0206	10300603	2.00	MANEVU2002	0.0600	0.0000	0.0002	MA ANG 104 FIGHTER WING
MA	Hampden	25013	0420288	27	0206	10300601	9.00	MANEVU2002	0.0600	0.0000	0.0002	MA ANG 104 FIGHTER WING
MA	Hampden	25013	0420301	01	0201	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0000	WESTOVER JOB CORPS CENTER
MA	Hampden	25013	0420304	01	0101	10200504	10.00	MANEVU2002	1.0000	0.0000	0.0011	OMNIGLOW CORPORATION
MA	Hampden	25013	0420304	01	0201	10200602	10.00	MANEVU2002	1.0000	0.0000	0.0011	OMNIGLOW CORPORATION
MA	Hampden	25013	0420304	02	0101	10200504	10.00	MANEVU2002	1.0000	0.0000	0.0011	OMNIGLOW CORPORATION
MA	Hampden	25013	0420318	01	0101	10300602	14.00	MANEVU2002	1.0000	0.0000	0.0000	CHESTNUT PARK ASSOC
MA	Hampden	25013	0420318	02	0101	10300602	14.00	MANEVU2002	1.0000	0.0000	0.0000	CHESTNUT PARK ASSOC
MA	Hampden	25013	0420349	01	0101	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0027	COREX PRODUCTS INC
MA	Hampden	25013	0420362	03	0103	10300501	5.00	MANEVU2002	0.6000	0.0000	0.0016	VERIZON MASSACHUSETTS (SPRINGFIELD)
MA	Hampden	25013	0420365	01	0101	10200401	14.00	MANEVU2002	6.0000	0.0000	0.0165	SMURFIT-STONE CONTAINER CORP
MA	Hampden	25013	0420372	01	0101	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0000	EAST LONGMEADOW HIGH
MA	Hampden	25013	0420390	02	0202	10200602	10.00	MANEVU2002	2.0000	0.0000	0.0044	FRIENDLY ICE CREAM
MA	Hampden	25013	0420395	01	0101	10200602	24.00	MANEVU2002	1.0000	0.0000	0.0022	LONGVIEW FIBRE CO
MA	Hampden	25013	0420395	02	0101	10200602	11.00	MANEVU2002	1.0000	0.0000	0.0000	LONGVIEW FIBRE CO
MA	Hampden	25013	0420395	03	0102	10200603	1.00	MANEVU2002	0.0120	0.0000	0.0000	LONGVIEW FIBRE CO
MA	Hampden	25013	0420395	04	0103	10200603	2.00	MANEVU2002	0.0830	0.0000	0.0002	LONGVIEW FIBRE CO
MA	Hampden	25013	0420433	01	0101	10200602	21.00	MANEVU2002	2.0000	0.0000	0.0055	HERCULES INC
MA	Hampden	25013	0420436	01	0101	10300501	4.00	MANEVU2002	0.0655	0.0000	0.0000	HOLYOKE WWT PLANT
MA	Hampden	25013	0420436	02	0102	10300501	4.00	MANEVU2002	0.0655	0.0000	0.0000	HOLYOKE WWT PLANT
MA	Hampden	25013	0420436	03	0103	10300501	9.00	MANEVU2002	0.0655	0.0000	0.0000	HOLYOKE WWT PLANT
MA	Hampden	25013	0420456	01	0101	10300501	8.00	MANEVU2002	1.0000	0.0000	0.0022	HP HOOD INC
MA	Hampden	25013	0420456	01	0201	10200603	8.00	MANEVU2002	1.0000	0.0000	0.0022	HP HOOD INC
MA	Hampden	25013	0420460	02	0101	10300401	15.00	MANEVU2002	2.0000	0.0000	0.0000	CABOTVILLE INDUSTRIAL PARK
MA	Hampden	25013	0420473	01	0101	10300501	6.00	MANEVU2002	1.0000	0.0000	0.0000	KIMBALL CONDOMINIUMS
MA	Hampden	25013	0420489	02	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0000	LONGMEADOW HIGH SCHOOL
MA	Hampden	25013	0420489	04	0101	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0000	LONGMEADOW HIGH SCHOOL
MA	Hampden	25013	0420500	01	0101	10200501	0.00	MANEVU2002	1.0000	0.0000	0.0027	MAACO AUTO PAINTING
MA	Hampden	25013	0420507	03	0103	10200603	2.00	MANEVU2002	0.2500	0.0000	0.0007	MCKINSTRY INCORPORATED
MA	Hampden	25013	0420507	04	0104	10200603	2.00	MANEVU2002	0.1000	0.0000	0.0000	MCKINSTRY INCORPORATED
MA	Hampden	25013	0420508	01	0101	10300501	23.00	MANEVU2002	1.0000	0.0000	0.0007	MERCY MEDICAL CENTER
MA	Hampden	25013	0420508	01	0201	10300602	23.00	MANEVU2002	1.0000	0.0000	0.0007	MERCY MEDICAL CENTER
MA	Hampden	25013	0420508	02	0201	10300602	23.00	MANEVU2002	2.0000	0.0000	0.0013	MERCY MEDICAL CENTER
MA	Hampden	25013	0420508	02	0101	10300501	23.00	MANEVU2002	1.0000	0.0000	0.0007	MERCY MEDICAL CENTER
MA	Hampden	25013	0420508	03	0101	10300501	23.00	MANEVU2002	1.0000	0.0000	0.0007	MERCY MEDICAL CENTER

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MA	Hampden	25013	0420508	03	0201	10300602	23.00	MANEVU2002	1.0000	0.0000	0.0007	MERCY MEDICAL CENTER
MA	Hampden	25013	0420524	01	0201	10300603	9.00	MANEVU2002	3.0000	0.0000	0.0000	SPRINGFIELD MUNICIPAL HEATING PLANT
MA	Hampden	25013	0420524	02	0201	10300603	9.00	MANEVU2002	3.0000	0.0000	0.0000	SPRINGFIELD MUNICIPAL HEATING PLANT
MA	Hampden	25013	0420527	01	0101	10200501	4.00	MANEVU2002	1.0000	0.0000	0.0018	NATIONAL METAL FINISHING, INC
MA	Hampden	25013	0420527	01	0201	10200603	4.00	MANEVU2002	0.0005	0.0000	0.0000	NATIONAL METAL FINISHING, INC
MA	Hampden	25013	0420527	02	0101	10200501	4.00	MANEVU2002	1.0000	0.0000	0.0018	NATIONAL METAL FINISHING, INC
MA	Hampden	25013	0420527	02	0201	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0018	NATIONAL METAL FINISHING, INC
MA	Hampden	25013	0420569	02	0101	10300603	11.00	MANEVU2002	1.0000	0.0000	0.0000	OUR LADY OF ELMS COLLEGE
MA	Hampden	25013	0420569	03	0102	10300602	2.00	MANEVU2002	0.0750	0.0000	0.0000	OUR LADY OF ELMS COLLEGE
MA	Hampden	25013	0420587	23	0123	10200603	9.00	MANEVU2002	1.0000	0.0000	0.0000	POLY METAL FINISHING
MA	Hampden	25013	0420594	02	0102	10300501	1.00	MANEVU2002	0.7500	0.0000	0.0021	RATHBONE PRECISION METALS
MA	Hampden	25013	0420629	01	0101	10300602	10.00	MANEVU2002	4.0000	0.0000	0.0044	HOLYOKE SOLDIERS HOME
MA	Hampden	25013	0420629	02	0101	10300602	10.00	MANEVU2002	4.0000	0.0000	0.0000	HOLYOKE SOLDIERS HOME
MA	Hampden	25013	0420639	01	0101	10200501	8.00	MANEVU2002	0.1200	0.0000	0.0003	SOUTHWORTH COMPANY
MA	Hampden	25013	0420639	02	0101	10200602	8.00	MANEVU2002	5.0000	0.0000	0.0121	SOUTHWORTH COMPANY
MA	Hampden	25013	0420641	01	0101	10300501	25.00	MANEVU2002	1.0000	0.0000	0.0000	SPRINGFIELD COLLEGE
MA	Hampden	25013	0420641	02	0101	10300501	25.00	MANEVU2002	1.0000	0.0000	0.0000	SPRINGFIELD COLLEGE
MA	Hampden	25013	0420641	02	0201	10300602	25.00	MANEVU2002	1.0000	0.0000	0.0000	SPRINGFIELD COLLEGE
MA	Hampden	25013	0420641	03	0201	10300602	8.00	MANEVU2002	1.0000	0.0000	0.0000	SPRINGFIELD COLLEGE
MA	Hampden	25013	0420647	01	0101	10300602	31.00	MANEVU2002	1.0000	0.0000	0.0000	SPRINGFIELD INDUSTRIAL CENTER
MA	Hampden	25013	0420647	02	0102	10300603	31.00	MANEVU2002	1.0000	0.0000	0.0000	SPRINGFIELD INDUSTRIAL CENTER
MA	Hampden	25013	0420687	01	0201	10300501	11.00	MANEVU2002	1.0000	0.0000	0.0000	PUTNAM VOCATIONAL HIGH SCHOOL
MA	Hampden	25013	0420687	02	0201	10300501	11.00	MANEVU2002	1.0000	0.0000	0.0000	PUTNAM VOCATIONAL HIGH SCHOOL
MA	Hampden	25013	0420687	03	0102	10300501	14.00	MANEVU2002	1.0000	0.0000	0.0011	PUTNAM VOCATIONAL HIGH SCHOOL
MA	Hampden	25013	0420687	04	0102	10300501	11.00	MANEVU2002	1.0000	0.0000	0.0011	PUTNAM VOCATIONAL HIGH SCHOOL
MA	Hampden	25013	0420687	05	0102	10300501	11.00	MANEVU2002	1.0000	0.0000	0.0011	PUTNAM VOCATIONAL HIGH SCHOOL
MA	Hampden	25013	0420709	01	0101	10200401	15.00	MANEVU2002	2.0000	0.0000	0.0000	INTERNATIONAL PAPER
MA	Hampden	25013	0420709	02	0101	10200401	28.00	MANEVU2002	2.0000	0.0000	0.0000	INTERNATIONAL PAPER
MA	Hampden	25013	0420727	01	0101	10300602	5.00	MANEVU2002	1.0000	0.0000	0.0000	US POSTAL SERVICE
MA	Hampden	25013	0420727	02	0101	10300602	5.00	MANEVU2002	1.0000	0.0000	0.0000	US POSTAL SERVICE
MA	Hampden	25013	0420743	01	0201	10300603	9.00	MANEVU2002	2.0000	0.0000	0.0055	WESTERN MASS RENDERING CO INC
MA	Hampden	25013	0420762	03	0102	10200401	5.00	MANEVU2002	2.0000	0.0000	0.0000	380 UNION ST PROPERTIES LLC
MA	Hampden	25013	0420774	01	0101	10300501	5.00	MANEVU2002	1.0000	0.0000	0.0000	WEST SPRINGFIELD SENIOR HIGH SCHOOL
MA	Hampden	25013	0420774	02	0101	10300501	5.00	MANEVU2002	1.0000	0.0000	0.0000	WEST SPRINGFIELD SENIOR HIGH SCHOOL
MA	Hampden	25013	0420778	03	0101	10300501	21.00	MANEVU2002	1.0000	0.0000	0.0000	MINNECHAUG HIGH
MA	Hampden	25013	0420788	01	0101	10200401	25.00	MANEVU2002	8.0000	0.0000	0.0220	AGRI MARK INC
MA	Hampden	25013	0420788	02	0101	10200401	25.00	MANEVU2002	8.0000	0.0000	0.0220	AGRI MARK INC
MA	Hampden	25013	0420804	01	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	CLASSICAL HIGH CONDOMINIUMS
MA	Hampden	25013	0420815	01	0101	10300603	6.00	MANEVU2002	2.0000	0.0000	0.0022	HOLYOKE MALL AT INGLESIDE
MA	Hampden	25013	0420815	02	0102	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	HOLYOKE MALL AT INGLESIDE
MA	Hampden	25013	0420817	01	0101	10200603	2.00	MANEVU2002	2.0000	0.0000	0.0022	K AND M ELECTRONICS
MA	Hampden	25013	0420817	02	0102	10200603	2.00	MANEVU2002	2.0000	0.0000	0.0022	K AND M ELECTRONICS
MA	Hampden	25013	0420838	01	0101	10300501	1.00	MANEVU2002	0.0800	0.0000	0.0001	SOUTH HADLEY WWTP
MA	Hampden	25013	0420838	02	0102	10300501	1.00	MANEVU2002	0.0125	0.0000	0.0000	SOUTH HADLEY WWTP
MA	Hampshire	25015	0420003	01	0101	10300401	62.00	MANEVU2002	2.0000	0.0000	0.0000	AMHERST COLLEGE
MA	Hampshire	25015	0420003	01	0201	10300602	62.00	MANEVU2002	3.0000	0.0000	0.0000	AMHERST COLLEGE
MA	Hampshire	25015	0420003	01	0301	10300401	62.00	MANEVU2002	5.0000	0.0000	0.0000	AMHERST COLLEGE
MA	Hampshire	25015	0420003	02	0302	10300401	62.00	MANEVU2002	5.0000	0.0000	0.0165	AMHERST COLLEGE
MA	Hampshire	25015	0420003	02	0102	10300401	62.00	MANEVU2002	2.0000	0.0000	0.0066	AMHERST COLLEGE
MA	Hampshire	25015	0420003	02	0202	10300602	62.00	MANEVU2002	3.0000	0.0000	0.0099	AMHERST COLLEGE
MA	Hampshire	25015	0420004	01	0201	10300602	75.00	MANEVU2002	7.0000	0.0000	0.0162	UMASS AMHERST CAMPUS
MA	Hampshire	25015	0420004	01	0101	10300501	75.00	MANEVU2002	2.0000	0.0000	0.0046	UMASS AMHERST CAMPUS

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MA	Hampshire	25015	0420004	02	0201	10300602	76.00	MANEVU2002	7.0000	0.0000	0.0077	UMASS AMHERST CAMPUS
MA	Hampshire	25015	0420004	03	0201	10300602	75.00	MANEVU2002	2.0000	0.0000	0.0026	UMASS AMHERST CAMPUS
MA	Hampshire	25015	0420004	04	0102	10300208	66.00	MANEVU2002	42.0000	0.0000	0.0000	UMASS AMHERST CAMPUS
MA	Hampshire	25015	0420004	05	0102	10300208	66.00	MANEVU2002	39.0000	0.0000	0.0257	UMASS AMHERST CAMPUS
MA	Hampshire	25015	0420004	06	0102	10300208	66.00	MANEVU2002	57.0000	0.0000	0.1253	UMASS AMHERST CAMPUS
MA	Hampshire	25015	0420004	15	0203	10200602	77.00	MANEVU2002	7.0000	0.0000	0.0092	UMASS AMHERST CAMPUS
MA	Hampshire	25015	0420018	01	0101	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0000	BRIDGE STREET SCHOOL
MA	Hampshire	25015	0420018	02	0101	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0000	BRIDGE STREET SCHOOL
MA	Hampshire	25015	0420023	01	0101	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0000	ROBERT K FINN SCHOOL
MA	Hampshire	25015	0420023	02	0101	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0000	ROBERT K FINN SCHOOL
MA	Hampshire	25015	0420033	01	0101	10300602	25.00	MANEVU2002	1.0415	0.0000	0.0029	MINUTE MAID COMPANY THE
MA	Hampshire	25015	0420033	02	0102	10300602	25.00	MANEVU2002	1.0415	0.0000	0.0029	MINUTE MAID COMPANY THE
MA	Hampshire	25015	0420033	03	0103	10300602	25.00	MANEVU2002	1.0415	0.0000	0.0029	MINUTE MAID COMPANY THE
MA	Hampshire	25015	0420051	01	0101	10200501	0.00	MANEVU2002	0.0170	0.0000	0.0000	SOUTH HADLEY SEWER PUMP STATION
MA	Hampshire	25015	0420054	01	0101	10300501	25.00	MANEVU2002	0.3000	0.0000	0.0008	COOLEY DICKINSON HOSPITAL
MA	Hampshire	25015	0420054	01	0201	10300602	25.00	MANEVU2002	0.0235	0.0000	0.0001	COOLEY DICKINSON HOSPITAL
MA	Hampshire	25015	0420054	02	0101	10300501	17.00	MANEVU2002	0.3000	0.0000	0.0008	COOLEY DICKINSON HOSPITAL
MA	Hampshire	25015	0420054	03	0101	10300903	31.00	MANEVU2002	7.0000	0.0000	0.0192	COOLEY DICKINSON HOSPITAL
MA	Hampshire	25015	0420058	01	0101	10300401	50.00	MANEVU2002	5.0000	0.0000	0.0000	SMITH COLLEGE
MA	Hampshire	25015	0420058	04	0101	10300401	70.00	MANEVU2002	16.0000	0.0000	0.0053	SMITH COLLEGE
MA	Hampshire	25015	0420058	05	0201	10300401	69.00	MANEVU2002	20.0000	0.0000	0.0000	SMITH COLLEGE
MA	Hampshire	25015	0420058	08	0104	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0055	SMITH COLLEGE
MA	Hampshire	25015	0420058	15	0108	10300501	1.00	MANEVU2002	0.0075	0.0000	0.0000	SMITH COLLEGE
MA	Hampshire	25015	0420059	01	0201	10300602	24.00	MANEVU2002	2.0000	0.0000	0.0033	US VA MEDICAL CENTER
MA	Hampshire	25015	0420059	02	0201	10300602	24.00	MANEVU2002	2.0000	0.0000	0.0033	US VA MEDICAL CENTER
MA	Hampshire	25015	0420059	03	0201	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0016	US VA MEDICAL CENTER
MA	Hampshire	25015	0420073	01	0101	10300401	25.00	MANEVU2002	2.0000	0.0000	0.0000	MOUNT HOLYOKE COLLEGE
MA	Hampshire	25015	0420073	01	0201	10300602	25.00	MANEVU2002	2.0000	0.0000	0.0000	MOUNT HOLYOKE COLLEGE
MA	Hampshire	25015	0420073	02	0101	10300401	20.00	MANEVU2002	9.0000	0.0000	0.0000	MOUNT HOLYOKE COLLEGE
MA	Hampshire	25015	0420073	03	0101	10300401	25.00	MANEVU2002	4.0000	0.0000	0.0000	MOUNT HOLYOKE COLLEGE
MA	Hampshire	25015	0420073	03	0201	10300602	25.00	MANEVU2002	1.0000	0.0000	0.0000	MOUNT HOLYOKE COLLEGE
MA	Hampshire	25015	0420073	06	0103	10300603	10.00	MANEVU2002	0.4900	0.0000	0.0013	MOUNT HOLYOKE COLLEGE
MA	Hampshire	25015	0420073	06	0203	10300501	10.00	MANEVU2002	0.1810	0.0000	0.0005	MOUNT HOLYOKE COLLEGE
MA	Hampshire	25015	0420073	15	0107	10300401	24.00	MANEVU2002	0.0825	0.0000	0.0002	MOUNT HOLYOKE COLLEGE
MA	Hampshire	25015	0420134	01	0201	10200602	4.00	MANEVU2002	0.0020	0.0000	0.0000	NATIONAL NONWOVENS
MA	Hampshire	25015	0420134	02	0102	10200401	5.00	MANEVU2002	0.2885	0.0000	0.0008	NATIONAL NONWOVENS
MA	Hampshire	25015	0420134	02	0202	10200603	5.00	MANEVU2002	0.0075	0.0000	0.0000	NATIONAL NONWOVENS
MA	Hampshire	25015	0420134	03	0103	10200401	5.00	MANEVU2002	0.5360	0.0000	0.0015	NATIONAL NONWOVENS
MA	Hampshire	25015	0420134	03	0203	10200603	5.00	MANEVU2002	0.0195	0.0000	0.0001	NATIONAL NONWOVENS
MA	Hampshire	25015	0420135	01	0201	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0000	EASTWORKS LLP
MA	Hampshire	25015	0420138	01	0101	10200603	2.00	MANEVU2002	0.0665	0.0000	0.0000	TUBED PRODUCTS L.L.C.
MA	Hampshire	25015	0420151	01	0101	10200603	4.00	MANEVU2002	0.4335	0.0000	0.0012	PERSTORP COMPOUNDS INCORPORATED
MA	Hampshire	25015	0420151	02	0102	10200603	3.00	MANEVU2002	0.2590	0.0000	0.0007	PERSTORP COMPOUNDS INCORPORATED
MA	Hampshire	25015	0420151	03	0103	10200603	3.00	MANEVU2002	0.4335	0.0000	0.0012	PERSTORP COMPOUNDS INCORPORATED
MA	Hampshire	25015	0420151	04	0104	10200603	4.00	MANEVU2002	0.4335	0.0000	0.0012	PERSTORP COMPOUNDS INCORPORATED
MA	Hampshire	25015	0420189	01	0101	10200501	5.00	MANEVU2002	0.6105	0.0000	0.0017	KANZAKI SPECIALTY PAPERS
MA	Hampshire	25015	0420189	01	0201	10201002	5.00	MANEVU2002	0.0290	0.0000	0.0001	KANZAKI SPECIALTY PAPERS
MA	Hampshire	25015	0420189	02	0101	10200501	8.00	MANEVU2002	0.2230	0.0000	0.0006	KANZAKI SPECIALTY PAPERS
MA	Hampshire	25015	0420189	10	0107	10201002	1.00	MANEVU2002	0.0700	0.0000	0.0002	KANZAKI SPECIALTY PAPERS
MA	Hampshire	25015	0420193	01	0201	10200602	39.00	MANEVU2002	4.4090	0.0000	0.0121	INTELICOAT TECHNOLOGIES
MA	Hampshire	25015	0420193	02	0201	10200602	39.00	MANEVU2002	4.4090	0.0000	0.0121	INTELICOAT TECHNOLOGIES
MA	Hampshire	25015	0420193	03	0202	10200602	77.00	MANEVU2002	3.2095	0.0000	0.0088	INTELICOAT TECHNOLOGIES

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MA	Hampshire	25015	0420207	01	0201	10200603	8.00	MANEVU2002	0.8600	0.0000	0.0024	EASTHAMPTON DYE WORK
MA	Hampshire	25015	0420207	02	0201	10300603	8.00	MANEVU2002	0.8600	0.0000	0.0024	EASTHAMPTON DYE WORK
MA	Hampshire	25015	0420230	01	0101	10200504	21.00	MANEVU2002	1.0000	0.0000	0.0001	MONTGOMERY COMPANY
MA	Hampshire	25015	0420230	02	0101	10200504	21.00	MANEVU2002	1.0000	0.0000	0.0001	MONTGOMERY COMPANY
MA	Hampshire	25015	0420273	02	0101	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0000	AMHERST JUNIOR HIGH SCHOOL
MA	Hampshire	25015	0420278	01	0101	10200501	3.00	MANEVU2002	1.0000	0.0000	0.0000	AMHERST WILDWOOD SCHOOL
MA	Hampshire	25015	0420278	02	0101	10200501	3.00	MANEVU2002	1.0000	0.0000	0.0000	AMHERST WILDWOOD SCHOOL
MA	Hampshire	25015	0420338	01	0101	10300401	28.00	MANEVU2002	2.0000	0.0000	0.0000	CLARKE SCHOOL FOR DEAF
MA	Hampshire	25015	0420338	02	0101	10300401	25.00	MANEVU2002	2.0000	0.0000	0.0000	CLARKE SCHOOL FOR DEAF
MA	Hampshire	25015	0420338	03	0102	10300401	1.00	MANEVU2002	0.0800	0.0000	0.0002	CLARKE SCHOOL FOR DEAF
MA	Hampshire	25015	0420343	01	0101	10200401	20.00	MANEVU2002	0.1360	0.0000	0.0004	NATIONAL NONWOVENS
MA	Hampshire	25015	0420343	03	0101	10200401	25.00	MANEVU2002	4.4050	0.0000	0.0121	NATIONAL NONWOVENS
MA	Hampshire	25015	0420474	04	0103	10200603	1.00	MANEVU2002	0.0050	0.0000	0.0000	KOLLMORGEN CORPORATION ELECTRO-OPTICAL
MA	Hampshire	25015	0420519	01	0301	10300504	25.00	MANEVU2002	2.0000	0.0000	0.0009	MONTGOMERY COMPANY
MA	Hampshire	25015	0420519	02	0302	10200504	25.00	MANEVU2002	2.0000	0.0000	0.0009	MONTGOMERY COMPANY
MA	Hampshire	25015	0420574	01	0101	10200603	5.00	MANEVU2002	0.1545	0.0000	0.0000	PACKAGING CORPORATION OF AMERICA
MA	Hampshire	25015	0420574	02	0102	10200603	4.00	MANEVU2002	0.1545	0.0000	0.0000	PACKAGING CORPORATION OF AMERICA
MA	Hampshire	25015	0420574	04	0104	10200602	15.00	MANEVU2002	2.0000	0.0000	0.0040	PACKAGING CORPORATION OF AMERICA
MA	Hampshire	25015	0420742	01	0101	10300501	6.00	MANEVU2002	1.0000	0.0000	0.0000	WARE HIGH SCHOOL
MA	Hampshire	25015	0420745	01	0101	10300501	3.00	MANEVU2002	1.0000	0.0000	0.0000	WARE MIDDLE SCHOOL
MA	Middlesex	25017	1180297	03	0103	10300603	2.00	MANEVU2002	0.1200	0.0000	0.0003	EMC CORPORATION
MA	Middlesex	25017	1180299	01	0101	10300401	21.00	MANEVU2002	1.0000	0.0000	0.0011	MCI SHIRLEY
MA	Middlesex	25017	1180299	02	0101	10300401	21.00	MANEVU2002	3.0000	0.0000	0.0033	MCI SHIRLEY
MA	Middlesex	25017	1180320	01	0101	10300603	2.00	MANEVU2002	0.3600	0.0000	0.0000	COMPAQ COMPUTER CORPORATION-TAY2
MA	Middlesex	25017	1180363	01	0101	10300603	7.00	MANEVU2002	0.5700	0.0000	0.0000	EMC CORPORATION
MA	Middlesex	25017	1180375	01	0201	10200501	1.00	MANEVU2002	0.1000	0.0000	0.0000	IDEAL CONCRETE BLOCK CO
MA	Middlesex	25017	1180375	02	0102	10300603	1.00	MANEVU2002	0.1000	0.0000	0.0000	IDEAL CONCRETE BLOCK CO
MA	Middlesex	25017	1180378	01	0101	10300603	7.00	MANEVU2002	0.7400	0.0000	0.0020	COMPAQ COMPUTER CORP
MA	Middlesex	25017	1180795	01	0101	10200603	3.00	MANEVU2002	0.2235	0.0000	0.0002	BEMIS ASSOCIATES INC
MA	Middlesex	25017	1180805	01	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	NORTH MIDDLESEX REGIONAL HIGH
MA	Middlesex	25017	1190002	01	0201	10300602	20.00	MANEVU2002	1.0000	0.0000	0.0011	MCLEAN HOSPITAL
MA	Middlesex	25017	1190002	02	0101	10300401	21.00	MANEVU2002	2.0000	0.0000	0.0033	MCLEAN HOSPITAL
MA	Middlesex	25017	1190002	02	0201	10300602	21.00	MANEVU2002	1.0000	0.0000	0.0016	MCLEAN HOSPITAL
MA	Middlesex	25017	1190002	03	0201	10200602	10.00	MANEVU2002	1.0000	0.0000	0.0027	MCLEAN HOSPITAL
MA	Middlesex	25017	1190029	02	0102	10200603	10.00	MANEVU2002	1.1300	0.0000	0.0031	GENZYME CORPORATION
MA	Middlesex	25017	1190045	01	0101	10200603	6.00	MANEVU2002	1.0000	0.0000	0.0027	NEORESINS
MA	Middlesex	25017	1190045	02	0102	10200603	6.00	MANEVU2002	1.0000	0.0000	0.0027	NEORESINS
MA	Middlesex	25017	1190095	13	0113	10300603	1.00	MANEVU2002	0.0780	0.0000	0.0001	CHARLES RIVER LABORATORIES
MA	Middlesex	25017	1190095	14	0114	10300603	1.00	MANEVU2002	0.0025	0.0000	0.0000	CHARLES RIVER LABORATORIES
MA	Middlesex	25017	1190107	03	0201	10300602	11.00	MANEVU2002	0.4500	0.0000	0.0012	SANCTA MARIA NURSING FACILITY
MA	Middlesex	25017	1190108	01	0101	10300602	25.00	MANEVU2002	2.0000	0.0000	0.0055	YOUVILLE HOSPITAL
MA	Middlesex	25017	1190108	02	0101	10300602	25.00	MANEVU2002	2.0000	0.0000	0.0055	YOUVILLE HOSPITAL
MA	Middlesex	25017	1190108	03	0102	10300603	10.00	MANEVU2002	4.0000	0.0000	0.0110	YOUVILLE HOSPITAL
MA	Middlesex	25017	1190133	01	0101	10300401	17.00	MANEVU2002	4.0000	0.0000	0.0110	WHIDDEN MEMORIAL HOSPITAL
MA	Middlesex	25017	1190133	02	0101	10300401	17.00	MANEVU2002	4.0000	0.0000	0.0110	WHIDDEN MEMORIAL HOSPITAL
MA	Middlesex	25017	1190134	05	0101	10200906	13.00	MANEVU2002	1.0000	0.0000	0.0027	AVERY DENNISON CORP
MA	Middlesex	25017	1190136	03	0101	10200401	29.00	MANEVU2002	5.0000	0.0000	0.0137	SAXONVILLE REALTY TRUST
MA	Middlesex	25017	1190152	02	0101	10300401	21.00	MANEVU2002	5.0000	0.0000	0.0137	LAWRENCE MEMORIAL HOSPITAL
MA	Middlesex	25017	1190152	02	0201	10300602	21.00	MANEVU2002	0.3320	0.0000	0.0009	LAWRENCE MEMORIAL HOSPITAL
MA	Middlesex	25017	1190152	03	0101	10300401	21.00	MANEVU2002	0.6865	0.0000	0.0019	LAWRENCE MEMORIAL HOSPITAL
MA	Middlesex	25017	1190152	03	0201	10300602	21.00	MANEVU2002	0.3210	0.0000	0.0009	LAWRENCE MEMORIAL HOSPITAL
MA	Middlesex	25017	1190156	01	0101	10300401	27.00	MANEVU2002	10.0000	0.0000	0.0011	TUFTS UNIVERSITY

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MA	Middlesex	25017	1190156	02	0101	10300401	29.00	MANEVU2002	8.0000	0.0000	0.0009	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	03	0101	10300501	49.00	MANEVU2002	1.0000	0.0000	0.0000	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	04	0102	10300401	13.00	MANEVU2002	3.0000	0.0000	0.0003	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	05	0102	10300401	13.00	MANEVU2002	3.0000	0.0000	0.0003	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	15	0107	10300602	2.00	MANEVU2002	0.0710	0.0000	0.0006	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	16	0107	10300603	1.00	MANEVU2002	0.0710	0.0000	0.0002	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	17	0108	10300603	1.00	MANEVU2002	0.0895	0.0000	0.0002	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	18	0108	10300603	1.00	MANEVU2002	0.0895	0.0000	0.0002	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	19	0109	10300603	2.00	MANEVU2002	0.1665	0.0000	0.0005	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	20	0110	10300603	3.00	MANEVU2002	0.3925	0.0000	0.0011	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	21	0110	10300603	3.00	MANEVU2002	0.3925	0.0000	0.0011	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	75	0121	10300603	9.00	MANEVU2002	0.6430	0.0000	0.0000	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	76	0121	10300603	2.00	MANEVU2002	0.1510	0.0000	0.0000	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	77	0121	10300501	10.00	MANEVU2002	0.3995	0.0000	0.0000	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	78	0121	10300603	1.00	MANEVU2002	0.0370	0.0000	0.0000	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	79	0121	10300603	5.00	MANEVU2002	0.0105	0.0000	0.0000	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	80	0121	10300603	1.00	MANEVU2002	0.0320	0.0000	0.0001	TUFTS UNIVERSITY
MA	Middlesex	25017	1190158	01	0101	10300504	21.00	MANEVU2002	1.0000	0.0000	0.0019	MELROSE WAKEFIELD HOSPITAL
MA	Middlesex	25017	1190158	02	0101	10300504	21.00	MANEVU2002	1.0000	0.0000	0.0019	MELROSE WAKEFIELD HOSPITAL
MA	Middlesex	25017	1190158	02	0201	10300602	21.00	MANEVU2002	0.4000	0.0000	0.0007	MELROSE WAKEFIELD HOSPITAL
MA	Middlesex	25017	1190158	03	0101	10300603	3.00	MANEVU2002	0.3200	0.0000	0.0009	MELROSE WAKEFIELD HOSPITAL
MA	Middlesex	25017	1190162	01	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0000	ANDOVER NEWTON THEOLOGICAL SCHOOL
MA	Middlesex	25017	1190162	02	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0000	ANDOVER NEWTON THEOLOGICAL SCHOOL
MA	Middlesex	25017	1190167	01	0101	10300504	21.00	MANEVU2002	1.0000	0.0000	0.0027	CHAPEL BRIDGE PARK ASSOCIATES
MA	Middlesex	25017	1190168	01	0101	10300401	25.00	MANEVU2002	8.0000	0.0000	0.0220	NEWTON WELLESLEY HOSPITAL
MA	Middlesex	25017	1190168	02	0101	10300401	25.00	MANEVU2002	8.0000	0.0000	0.0220	NEWTON WELLESLEY HOSPITAL
MA	Middlesex	25017	1190168	03	0101	10300401	25.00	MANEVU2002	8.0000	0.0000	0.0220	NEWTON WELLESLEY HOSPITAL
MA	Middlesex	25017	1190193	01	0101	10200501	5.00	MANEVU2002	0.0090	0.0000	0.0000	ROSENFELD CONCRETE CORP
MA	Middlesex	25017	1190202	01	0101	10300504	32.00	MANEVU2002	2.0000	0.0000	0.0084	STONEHAM RESEARCH CENTER
MA	Middlesex	25017	1190202	02	0101	10300401	10.00	MANEVU2002	2.0000	0.0000	0.0048	STONEHAM RESEARCH CENTER
MA	Middlesex	25017	1190203	01	0101	10300401	15.00	MANEVU2002	1.0000	0.0000	0.0027	SC WAKEFIELD 200
MA	Middlesex	25017	1190203	02	0102	10300401	15.00	MANEVU2002	1.0000	0.0000	0.0027	SC WAKEFIELD 200
MA	Middlesex	25017	1190203	03	0103	10300401	15.00	MANEVU2002	1.0000	0.0000	0.0027	SC WAKEFIELD 200
MA	Middlesex	25017	1190209	02	0101	10300401	30.00	MANEVU2002	7.0000	0.0000	0.0192	FERNALD CENTER
MA	Middlesex	25017	1190209	03	0101	10300401	30.00	MANEVU2002	11.0000	0.0000	0.0302	FERNALD CENTER
MA	Middlesex	25017	1190213	01	0101	10200401	17.00	MANEVU2002	1.0000	0.0000	0.0027	POLAROID CORPORATION
MA	Middlesex	25017	1190213	02	0101	10200401	25.00	MANEVU2002	2.0000	0.0000	0.0055	POLAROID CORPORATION
MA	Middlesex	25017	1190213	03	0102	10200401	10.00	MANEVU2002	3.0000	0.0000	0.0082	POLAROID CORPORATION
MA	Middlesex	25017	1190214	01	0201	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0027	STANDARD THOMSON CORPORATION
MA	Middlesex	25017	1190226	01	0101	10200602	17.00	MANEVU2002	1.5200	0.0000	0.0042	ANALOG DEVICES INC
MA	Middlesex	25017	1190226	02	0102	10200602	17.00	MANEVU2002	1.5200	0.0000	0.0042	ANALOG DEVICES INC
MA	Middlesex	25017	1190226	03	0103	10200602	20.00	MANEVU2002	1.5200	0.0000	0.0042	ANALOG DEVICES INC
MA	Middlesex	25017	1190226	04	0104	10200603	5.00	MANEVU2002	0.4800	0.0000	0.0013	ANALOG DEVICES INC
MA	Middlesex	25017	1190232	01	0101	10300501	10.00	MANEVU2002	0.0320	0.0000	0.0001	WINCHESTER HOSPITAL
MA	Middlesex	25017	1190232	01	0201	10200602	10.00	MANEVU2002	0.5210	0.0000	0.0014	WINCHESTER HOSPITAL
MA	Middlesex	25017	1190232	02	0101	10300501	10.00	MANEVU2002	0.0320	0.0000	0.0001	WINCHESTER HOSPITAL
MA	Middlesex	25017	1190232	02	0201	10200602	10.00	MANEVU2002	0.5210	0.0000	0.0014	WINCHESTER HOSPITAL
MA	Middlesex	25017	1190232	03	0201	10300501	10.00	MANEVU2002	0.5210	0.0000	0.0014	WINCHESTER HOSPITAL
MA	Middlesex	25017	1190232	03	0101	10200602	10.00	MANEVU2002	0.0320	0.0000	0.0001	WINCHESTER HOSPITAL
MA	Middlesex	25017	1190232	04	0104	10200603	2.00	MANEVU2002	1.1125	0.0000	0.0031	WINCHESTER HOSPITAL
MA	Middlesex	25017	1190234	02	0102	10200401	143.00	MANEVU2002	5.0000	0.0000	0.0137	KRAFT FOODS
MA	Middlesex	25017	1190234	02	0202	10200601	143.00	MANEVU2002	40.0000	0.0000	0.1099	KRAFT FOODS

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MA	Middlesex	25017	1190234	03	0103	10200401	112.00	MANEVU2002	2.0000	0.0000	0.0055	KRAFT FOODS
MA	Middlesex	25017	1190234	03	0203	10200601	112.00	MANEVU2002	19.0000	0.0000	0.0522	KRAFT FOODS
MA	Middlesex	25017	1190241	01	0101	10200401	60.00	MANEVU2002	40.0000	0.0000	0.1099	NATICK PAPERBOARD
MA	Middlesex	25017	1190241	01	0201	10200602	60.00	MANEVU2002	6.0000	0.0000	0.0165	NATICK PAPERBOARD
MA	Middlesex	25017	1190247	32	0130	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0027	BENTLEY COLLEGE
MA	Middlesex	25017	1190247	35	0133	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	BENTLEY COLLEGE
MA	Middlesex	25017	1190247	37	0135	10300603	8.00	MANEVU2002	1.0000	0.0000	0.0027	BENTLEY COLLEGE
MA	Middlesex	25017	1190248	01	0201	10300602	28.00	MANEVU2002	2.0000	0.0000	0.0022	US EDITH NOURSE VA HOSPITAL
MA	Middlesex	25017	1190248	02	0201	10300603	28.00	MANEVU2002	1.0000	0.0000	0.0027	US EDITH NOURSE VA HOSPITAL
MA	Middlesex	25017	1190248	03	0201	10300602	44.00	MANEVU2002	0.1000	0.0000	0.0001	US EDITH NOURSE VA HOSPITAL
MA	Middlesex	25017	1190258	01	0101	10300602	12.00	MANEVU2002	7.0000	0.0000	0.0192	ROYAL INSTITUTIONAL SERVICES
MA	Middlesex	25017	1190258	02	0102	10300602	8.00	MANEVU2002	4.0000	0.0000	0.0110	ROYAL INSTITUTIONAL SERVICES
MA	Middlesex	25017	1190269	01	0101	10300501	21.00	MANEVU2002	0.6130	0.0000	0.0000	CAMBRIDGE HOSPITAL
MA	Middlesex	25017	1190269	01	0201	10300602	21.00	MANEVU2002	0.7990	0.0000	0.0000	CAMBRIDGE HOSPITAL
MA	Middlesex	25017	1190269	02	0101	10300501	21.00	MANEVU2002	0.6130	0.0000	0.0000	CAMBRIDGE HOSPITAL
MA	Middlesex	25017	1190269	02	0201	10300602	21.00	MANEVU2002	1.0000	0.0000	0.0000	CAMBRIDGE HOSPITAL
MA	Middlesex	25017	1190269	03	0101	10300501	20.00	MANEVU2002	1.0000	0.0000	0.0000	CAMBRIDGE HOSPITAL
MA	Middlesex	25017	1190269	03	0201	10300602	20.00	MANEVU2002	1.0000	0.0000	0.0000	CAMBRIDGE HOSPITAL
MA	Middlesex	25017	1190292	01	0101	10300401	65.00	MANEVU2002	8.0000	0.0000	0.0220	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	01	0201	10300602	65.00	MANEVU2002	5.0000	0.0000	0.0137	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	02	0101	10300401	65.00	MANEVU2002	3.0000	0.0000	0.0082	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	02	0201	10300602	65.00	MANEVU2002	3.0000	0.0000	0.0082	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	03	0101	10300401	46.00	MANEVU2002	11.0000	0.0000	0.0302	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	03	0201	10300602	46.00	MANEVU2002	0.3300	0.0000	0.0009	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	06	0103	10300504	6.00	MANEVU2002	0.6600	0.0000	0.0018	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	07	0103	10300504	6.00	MANEVU2002	0.6600	0.0000	0.0018	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	10	0105	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0011	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	11	0105	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0011	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	12	0106	10300501	9.00	MANEVU2002	1.0000	0.0000	0.0011	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	13	0106	10300501	9.00	MANEVU2002	1.0000	0.0000	0.0011	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	18	0109	10300602	17.00	MANEVU2002	0.0300	0.0000	0.0000	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	19	0110	10300501	4.00	MANEVU2002	0.5000	0.0000	0.0005	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	21	0112	10300504	24.00	MANEVU2002	0.2000	0.0000	0.0005	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190293	01	0101	10200401	0.00	MANEVU2002	0.3800	0.0000	0.0000	JG MACLELLAN CONCRETE CO
MA	Middlesex	25017	1190308	01	0101	10200603	1.00	MANEVU2002	0.1055	0.0000	0.0002	SURFACE COATINGS INCORPORATED
MA	Middlesex	25017	1190308	02	0102	10200603	8.00	MANEVU2002	0.7655	0.0000	0.0008	SURFACE COATINGS INCORPORATED
MA	Middlesex	25017	1190308	03	0103	10200603	13.00	MANEVU2002	1.1705	0.0000	0.0013	SURFACE COATINGS INCORPORATED
MA	Middlesex	25017	1190329	11	0107	10200603	2.00	MANEVU2002	0.0620	0.0000	0.0002	HUB FABRIC LEATHER
MA	Middlesex	25017	1190329	12	0108	10200603	4.00	MANEVU2002	0.1020	0.0000	0.0003	HUB FABRIC LEATHER
MA	Middlesex	25017	1190335	02	0201	10300602	95.00	MANEVU2002	2.0000	0.0000	0.0000	BRANDEIS UNIVERSITY
MA	Middlesex	25017	1190335	03	0201	10300602	32.00	MANEVU2002	2.0000	0.0000	0.0055	BRANDEIS UNIVERSITY
MA	Middlesex	25017	1190335	04	0201	10300602	32.00	MANEVU2002	2.0000	0.0000	0.0000	BRANDEIS UNIVERSITY
MA	Middlesex	25017	1190335	05	0201	10300602	32.00	MANEVU2002	2.0000	0.0000	0.0000	BRANDEIS UNIVERSITY
MA	Middlesex	25017	1190358	01	0101	10200603	1.00	MANEVU2002	0.1000	0.0000	0.0003	HK GRAPHICS INC
MA	Middlesex	25017	1190365	01	0101	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0011	CAVICCHIO GREENHOUSE
MA	Middlesex	25017	1190365	02	0102	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0011	CAVICCHIO GREENHOUSE
MA	Middlesex	25017	1190365	03	0103	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0011	CAVICCHIO GREENHOUSE
MA	Middlesex	25017	1190424	01	0101	10200401	17.00	MANEVU2002	3.0000	0.0000	0.0000	IVEX NOVACEL INC
MA	Middlesex	25017	1190453	01	0201	10200603	4.00	MANEVU2002	2.0000	0.0000	0.0055	HC STARCK INCORPORATED
MA	Middlesex	25017	1190465	01	0101	10200603	8.00	MANEVU2002	1.0000	0.0000	0.0027	PRINTED CIRCUIT CORP
MA	Middlesex	25017	1190468	01	0101	10300602	7.00	MANEVU2002	1.0000	0.0000	0.0027	FUJIFILM MICRODISKS
MA	Middlesex	25017	1190468	02	0101	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0027	FUJIFILM MICRODISKS

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MA	Middlesex	25017	1190471	02	0101	10200401	10.00	MANEVU2002	2.0000	0.0000	0.0000	NOVA BIOMEDICAL
MA	Middlesex	25017	1190496	01	0201	10200602	8.00	MANEVU2002	0.2095	0.0000	0.0006	MIDDLESEX RESEARCH M
MA	Middlesex	25017	1190496	02	0202	10200602	7.00	MANEVU2002	0.0580	0.0000	0.0000	MIDDLESEX RESEARCH M
MA	Middlesex	25017	1190496	03	0103	10200603	3.00	MANEVU2002	0.0910	0.0000	0.0002	MIDDLESEX RESEARCH M
MA	Middlesex	25017	1190499	01	0101	10200401	43.00	MANEVU2002	18.0000	0.0000	0.0495	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	01	0201	10200602	43.00	MANEVU2002	0.0500	0.0000	0.0001	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	02	0101	10200401	43.00	MANEVU2002	12.0000	0.0000	0.0330	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	02	0201	10200602	43.00	MANEVU2002	2.0000	0.0000	0.0055	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	03	0102	10200401	43.00	MANEVU2002	19.0000	0.0000	0.0522	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	03	0202	10300602	43.00	MANEVU2002	2.0000	0.0000	0.0055	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	04	0102	10200401	43.00	MANEVU2002	17.0000	0.0000	0.0467	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	04	0202	10200602	43.00	MANEVU2002	1.0000	0.0000	0.0027	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	05	0203	10200603	180.00	MANEVU2002	0.3000	0.0000	0.0000	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	05	0303	10300603	180.00	MANEVU2002	1.0000	0.0000	0.0000	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	05	0503	10300602	180.00	MANEVU2002	1.0000	0.0000	0.0000	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	05	0603	10300602	180.00	MANEVU2002	1.0000	0.0000	0.0000	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	05	0703	10300603	180.00	MANEVU2002	0.4000	0.0000	0.0000	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	05	0803	10300603	180.00	MANEVU2002	0.0005	0.0000	0.0000	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	05	1003	10301002	180.00	MANEVU2002	0.1000	0.0000	0.0000	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	06	0204	10300603	3.00	MANEVU2002	0.1000	0.0000	0.0001	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190506	01	0101	10200603	3.00	MANEVU2002	0.4000	0.0000	0.0011	DUNCAN GROUP THE
MA	Middlesex	25017	1190543	01	0201	10300602	26.00	MANEVU2002	0.0005	0.0000	0.0000	MT AUBURN HOSPITAL
MA	Middlesex	25017	1190543	02	0201	10300602	26.00	MANEVU2002	0.4000	0.0000	0.0011	MT AUBURN HOSPITAL
MA	Middlesex	25017	1190543	03	0101	10300501	26.00	MANEVU2002	2.0000	0.0000	0.0055	MT AUBURN HOSPITAL
MA	Middlesex	25017	1190543	03	0201	10300602	26.00	MANEVU2002	2.0000	0.0000	0.0055	MT AUBURN HOSPITAL
MA	Middlesex	25017	1190544	01	0101	10300602	43.00	MANEVU2002	2.0000	0.0000	0.0055	MALDEN MEDICAL CENTER
MA	Middlesex	25017	1190544	02	0102	10300602	25.00	MANEVU2002	1.0000	0.0000	0.0027	MALDEN MEDICAL CENTER
MA	Middlesex	25017	1190572	01	0201	10300603	8.00	MANEVU2002	1.0000	0.0000	0.0027	DEACONESS WALTHAM HOSPITAL
MA	Middlesex	25017	1190572	02	0201	10300603	29.00	MANEVU2002	1.0000	0.0000	0.0027	DEACONESS WALTHAM HOSPITAL
MA	Middlesex	25017	1190576	15	0113	10200603	5.00	MANEVU2002	2.0000	0.0000	0.0055	M/A COM INC
MA	Middlesex	25017	1190576	16	0114	10200603	6.00	MANEVU2002	2.0000	0.0000	0.0055	M/A COM INC
MA	Middlesex	25017	1190579	02	0201	10300602	42.00	MANEVU2002	4.0000	0.0000	0.0110	MCI CONCORD
MA	Middlesex	25017	1190579	03	0201	10300602	42.00	MANEVU2002	5.0000	0.0000	0.0137	MCI CONCORD
MA	Middlesex	25017	1190580	01	0101	10300401	17.00	MANEVU2002	4.0000	0.0000	0.0044	MCI FRAMINGHAM
MA	Middlesex	25017	1190580	02	0101	10300401	10.00	MANEVU2002	2.0000	0.0000	0.0022	MCI FRAMINGHAM
MA	Middlesex	25017	1190580	03	0101	10300401	17.00	MANEVU2002	4.0000	0.0000	0.0044	MCI FRAMINGHAM
MA	Middlesex	25017	1190580	04	0101	10300401	17.00	MANEVU2002	4.0000	0.0000	0.0044	MCI FRAMINGHAM
MA	Middlesex	25017	1190584	01	0101	10300401	29.00	MANEVU2002	7.0000	0.0000	0.0092	FRAMINGHAM STATE COL
MA	Middlesex	25017	1190584	02	0101	10300401	29.00	MANEVU2002	5.0000	0.0000	0.0066	FRAMINGHAM STATE COL
MA	Middlesex	25017	1190584	03	0101	10300401	41.00	MANEVU2002	2.0000	0.0000	0.0000	FRAMINGHAM STATE COL
MA	Middlesex	25017	1190584	04	0102	10300603	3.00	MANEVU2002	0.0985	0.0000	0.0003	FRAMINGHAM STATE COL
MA	Middlesex	25017	1190584	05	0102	10300603	1.00	MANEVU2002	0.0495	0.0000	0.0001	FRAMINGHAM STATE COL
MA	Middlesex	25017	1190585	01	0101	10200603	4.00	MANEVU2002	0.9965	0.0000	0.0027	CHOMERICS INCORPORATED
MA	Middlesex	25017	1190586	01	0101	10200501	8.00	MANEVU2002	1.0000	0.0000	0.0027	GOOD HUMOR BREYERS ICE CREAM
MA	Middlesex	25017	1190586	02	0101	10200501	8.00	MANEVU2002	1.0000	0.0000	0.0027	GOOD HUMOR BREYERS ICE CREAM
MA	Middlesex	25017	1190587	01	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0016	BETHANY HEALTH CARE
MA	Middlesex	25017	1190587	02	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0016	BETHANY HEALTH CARE
MA	Middlesex	25017	1190593	01	0201	10300602	25.00	MANEVU2002	2.0000	0.0000	0.0042	LAHEY HITCHCOCK MEDI
MA	Middlesex	25017	1190593	02	0101	10300501	25.00	MANEVU2002	2.0000	0.0000	0.0042	LAHEY HITCHCOCK MEDI
MA	Middlesex	25017	1190593	02	0201	10300602	25.00	MANEVU2002	2.0000	0.0000	0.0042	LAHEY HITCHCOCK MEDI
MA	Middlesex	25017	1190593	03	0201	10300602	25.00	MANEVU2002	2.0000	0.0000	0.0042	LAHEY HITCHCOCK MEDI
MA	Middlesex	25017	1190600	01	0101	10200602	13.00	MANEVU2002	0.7700	0.0000	0.0021	MILLIPORE CORPORATION

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MA	Middlesex	25017	1190600	02	0102	10200603	6.00	MANEVU2002	0.5900	0.0000	0.0016	MILLIPORE CORPORATION
MA	Middlesex	25017	1190600	03	0103	10200603	6.00	MANEVU2002	0.5900	0.0000	0.0016	MILLIPORE CORPORATION
MA	Middlesex	25017	1190600	07	0107	10200602	13.00	MANEVU2002	1.0000	0.0000	0.0027	MILLIPORE CORPORATION
MA	Middlesex	25017	1190601	01	0201	10200603	10.00	MANEVU2002	0.2420	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	02	0201	10200602	10.00	MANEVU2002	0.2420	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	03	0102	10200603	5.00	MANEVU2002	0.0670	0.0000	0.0002	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	04	0203	10200603	3.00	MANEVU2002	0.2670	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	05	0203	10200603	2.00	MANEVU2002	0.2670	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	06	0204	10200603	6.00	MANEVU2002	0.3000	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	07	0204	10200603	6.00	MANEVU2002	0.3000	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	08	0205	10200603	5.00	MANEVU2002	0.2670	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	09	0205	10200603	5.00	MANEVU2002	0.2670	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	10	0206	10200603	6.00	MANEVU2002	0.2670	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	11	0207	10200603	6.00	MANEVU2002	0.2670	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190608	01	0201	10300602	5.00	MANEVU2002	1.0000	0.0000	0.0027	EMERSON HOSPITAL
MA	Middlesex	25017	1190608	02	0201	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	EMERSON HOSPITAL
MA	Middlesex	25017	1190608	03	0201	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	EMERSON HOSPITAL
MA	Middlesex	25017	1190608	04	0202	10300603	4.00	MANEVU2002	0.2400	0.0000	0.0007	EMERSON HOSPITAL
MA	Middlesex	25017	1190608	14	0107	10300501	1.00	MANEVU2002	0.0500	0.0000	0.0001	EMERSON HOSPITAL
MA	Middlesex	25017	1190617	01	0101	10201002	20.00	MANEVU2002	12.0000	0.0000	0.0330	BOSTON GAS EVERETT
MA	Middlesex	25017	1190617	02	0102	10201001	8.00	MANEVU2002	2.0000	0.0000	0.0055	BOSTON GAS EVERETT
MA	Middlesex	25017	1190617	03	0103	10201002	6.00	MANEVU2002	2.0000	0.0000	0.0055	BOSTON GAS EVERETT
MA	Middlesex	25017	1190634	01	0101	10300501	150.00	MANEVU2002	4.0000	0.0000	0.0110	SPRAGUE-EVERETT TERMINAL
MA	Middlesex	25017	1190639	01	0101	10200501	1.00	MANEVU2002	0.0150	0.0000	0.0000	TRIRAM CORPORATION
MA	Middlesex	25017	1190676	04	0104	10300603	1.00	MANEVU2002	0.0190	0.0000	0.0001	MA ANG CURTIS
MA	Middlesex	25017	1190677	01	0101	10300401	37.00	MANEVU2002	2.0000	0.0000	0.0037	US ARMY SOLDIER SYSTEMS CENTER
MA	Middlesex	25017	1190677	01	0201	10300602	37.00	MANEVU2002	0.0665	0.0000	0.0001	US ARMY SOLDIER SYSTEMS CENTER
MA	Middlesex	25017	1190677	02	0102	10300401	37.00	MANEVU2002	2.0000	0.0000	0.0037	US ARMY SOLDIER SYSTEMS CENTER
MA	Middlesex	25017	1190677	02	0202	10300602	37.00	MANEVU2002	0.0665	0.0000	0.0001	US ARMY SOLDIER SYSTEMS CENTER
MA	Middlesex	25017	1190677	03	0103	10300401	37.00	MANEVU2002	2.0000	0.0000	0.0037	US ARMY SOLDIER SYSTEMS CENTER
MA	Middlesex	25017	1190677	03	0203	10300602	37.00	MANEVU2002	0.0665	0.0000	0.0001	US ARMY SOLDIER SYSTEMS CENTER
MA	Middlesex	25017	1190692	01	0101	10200501	6.00	MANEVU2002	0.2275	0.0000	0.0003	IONICS INCORPORATED
MA	Middlesex	25017	1190692	02	0101	10200501	2.00	MANEVU2002	0.0065	0.0000	0.0000	IONICS INCORPORATED
MA	Middlesex	25017	1190719	01	0101	10300602	15.00	MANEVU2002	0.2220	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	01	0201	10300501	15.00	MANEVU2002	0.0540	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	02	0101	10300602	15.00	MANEVU2002	0.2220	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	02	0201	10300501	15.00	MANEVU2002	0.0540	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	03	0101	10300602	15.00	MANEVU2002	0.2220	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	03	0201	10300501	15.00	MANEVU2002	0.0540	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	04	0101	10300602	15.00	MANEVU2002	0.2220	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	04	0201	10300501	15.00	MANEVU2002	0.0540	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	07	0102	10300501	4.00	MANEVU2002	0.0930	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	08	0103	10300501	5.00	MANEVU2002	0.1940	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	21	0101	10300603	5.00	MANEVU2002	0.0425	0.0000	0.0001	MITRE CORPORATION
MA	Middlesex	25017	1190719	22	0101	10200501	0.00	MANEVU2002	0.0500	0.0000	0.0001	MITRE CORPORATION
MA	Middlesex	25017	1190720	01	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0001	CARDINAL HEALTH
MA	Middlesex	25017	1190723	23	0123	10300501	1.00	MANEVU2002	0.0285	0.0000	0.0000	MIT LINCOLN LABORATORY
MA	Middlesex	25017	1190723	24	0124	10300501	1.00	MANEVU2002	0.0250	0.0000	0.0000	MIT LINCOLN LABORATORY
MA	Middlesex	25017	1190723	25	0125	10300501	1.00	MANEVU2002	0.0270	0.0000	0.0000	MIT LINCOLN LABORATORY
MA	Middlesex	25017	1190723	26	0126	10300501	2.00	MANEVU2002	0.0935	0.0000	0.0001	MIT LINCOLN LABORATORY
MA	Middlesex	25017	1190723	27	0127	10300501	1.00	MANEVU2002	0.0125	0.0000	0.0000	MIT LINCOLN LABORATORY
MA	Middlesex	25017	1190723	28	0128	10300501	3.00	MANEVU2002	0.4230	0.0000	0.0005	MIT LINCOLN LABORATORY

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MA	Middlesex	25017	1190723	29	0129	10300501	1.00	MANEVU2002	0.0930	0.0000	0.0001	MIT LINCOLN LABORATORY
MA	Middlesex	25017	1190725	02	0102	10200501	17.00	MANEVU2002	1.0000	0.0000	0.0027	ASHLAND TECHNOLOGY CENTER
MA	Middlesex	25017	1190739	04	0102	10300501	4.00	MANEVU2002	1.0000	0.0000	0.0027	WALDEN PARK ASSOCIATES
MA	Middlesex	25017	1190762	01	0101	10300602	33.00	MANEVU2002	1.0000	0.0000	0.0024	METROWEST MEDICAL CENTER
MA	Middlesex	25017	1190762	02	0201	10300602	34.00	MANEVU2002	1.0000	0.0000	0.0024	METROWEST MEDICAL CENTER
MA	Middlesex	25017	1190765	01	0101	10200602	13.00	MANEVU2002	3.0000	0.0000	0.0033	INTERNATIONAL PAPER
MA	Middlesex	25017	1190775	01	0101	10300401	6.00	MANEVU2002	2.0000	0.0000	0.0055	TASCO REALTY COMPANY
MA	Middlesex	25017	1190781	01	0101	10200603	6.00	MANEVU2002	1.0000	0.0000	0.0027	HOPWOOD GLOBE LTD
MA	Middlesex	25017	1190782	01	0101	10200603	4.00	MANEVU2002	0.2910	0.0000	0.0008	PIANTEDOSI BAKING CO
MA	Middlesex	25017	1190782	02	0101	10200603	4.00	MANEVU2002	0.1535	0.0000	0.0004	PIANTEDOSI BAKING CO
MA	Middlesex	25017	1190791	03	0202	10200603	1.00	MANEVU2002	18.0000	0.0000	0.0000	GENERAL ELECTRIC INTERNATIONAL INC
MA	Middlesex	25017	1190793	06	0105	10200603	1.00	MANEVU2002	0.1000	0.0000	0.0001	QUEBECOR WORLD ACME PRINTING CO
MA	Middlesex	25017	1190793	07	0106	10200603	2.00	MANEVU2002	0.3000	0.0000	0.0002	QUEBECOR WORLD ACME PRINTING CO
MA	Middlesex	25017	1190810	01	0101	10300504	14.00	MANEVU2002	1.0000	0.0000	0.0027	ARLINGTON REDEVELOPMENT BOARD
MA	Middlesex	25017	1190810	02	0101	10300504	14.00	MANEVU2002	1.0000	0.0000	0.0027	ARLINGTON REDEVELOPMENT BOARD
MA	Middlesex	25017	1190813	01	0201	10200602	15.00	MANEVU2002	0.3100	0.0000	0.0000	RAYTHEON COMPANY EXECUTIVE OFFICES
MA	Middlesex	25017	1190813	02	0201	10200603	8.00	MANEVU2002	0.0340	0.0000	0.0000	RAYTHEON COMPANY EXECUTIVE OFFICES
MA	Middlesex	25017	1190813	07	0103	10200603	2.00	MANEVU2002	0.1560	0.0000	0.0000	RAYTHEON COMPANY EXECUTIVE OFFICES
MA	Middlesex	25017	1190813	14	0107	10200603	1.00	MANEVU2002	0.0650	0.0000	0.0002	RAYTHEON COMPANY EXECUTIVE OFFICES
MA	Middlesex	25017	1190814	01	0101	10200602	34.00	MANEVU2002	7.0000	0.0000	0.0192	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190814	02	0102	10200602	34.00	MANEVU2002	7.0000	0.0000	0.0192	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190814	03	0103	10200602	34.00	MANEVU2002	7.0000	0.0000	0.0192	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190814	04	0104	10200602	34.00	MANEVU2002	7.0000	0.0000	0.0192	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190814	10	0110	10200603	1.00	MANEVU2002	0.0300	0.0000	0.0001	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190814	13	0113	10200602	29.00	MANEVU2002	2.0000	0.0000	0.0055	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190814	19	0119	10200602	65.00	MANEVU2002	7.0000	0.0000	0.0192	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190814	20	0120	10200602	65.00	MANEVU2002	6.0000	0.0000	0.0165	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190814	21	0121	10200603	9.00	MANEVU2002	0.6300	0.0000	0.0017	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190832	01	0101	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0024	METROWEST MEDICAL CENTER
MA	Middlesex	25017	1190832	03	0101	10300602	13.00	MANEVU2002	2.0000	0.0000	0.0048	METROWEST MEDICAL CENTER
MA	Middlesex	25017	1190832	04	0102	10300603	2.00	MANEVU2002	0.3000	0.0000	0.0008	METROWEST MEDICAL CENTER
MA	Middlesex	25017	1190847	15	0110	10200501	3.00	MANEVU2002	1.0000	0.0000	0.0011	ARROW INTERNATIONAL
MA	Middlesex	25017	1190883	01	0101	10200603	4.00	MANEVU2002	0.4580	0.0000	0.0013	IBM CORP - CAMBRIDGE
MA	Middlesex	25017	1190883	03	0102	10300603	1.00	MANEVU2002	0.0660	0.0000	0.0002	IBM CORP - CAMBRIDGE
MA	Middlesex	25017	1190883	08	0104	10300603	6.00	MANEVU2002	0.1475	0.0000	0.0004	IBM CORP - CAMBRIDGE
MA	Middlesex	25017	1190887	01	0101	10300501	9.00	MANEVU2002	1.0000	0.0000	0.0027	MYSTIC VALLEY TOWERS
MA	Middlesex	25017	1190887	02	0101	10300501	9.00	MANEVU2002	1.0000	0.0000	0.0027	MYSTIC VALLEY TOWERS
MA	Middlesex	25017	1190895	01	0201	10300602	17.00	MANEVU2002	0.3595	0.0000	0.0000	WALTHAM ENGINEERING
MA	Middlesex	25017	1190895	02	0201	10300602	17.00	MANEVU2002	0.3595	0.0000	0.0000	WALTHAM ENGINEERING
MA	Middlesex	25017	1190901	01	0101	10200603	3.00	MANEVU2002	0.2300	0.0000	0.0006	HAARTZ CORP
MA	Middlesex	25017	1190905	01	0101	10300602	10.00	MANEVU2002	0.0020	0.0000	0.0000	STOW PARTNERS LLC
MA	Middlesex	25017	1190906	01	0101	10300501	10.00	MANEVU2002	0.0490	0.0000	0.0000	PERKINS SCHOOL
MA	Middlesex	25017	1190906	01	0201	10300602	10.00	MANEVU2002	0.4165	0.0000	0.0000	PERKINS SCHOOL
MA	Middlesex	25017	1190906	02	0101	10300501	10.00	MANEVU2002	0.0490	0.0000	0.0000	PERKINS SCHOOL
MA	Middlesex	25017	1190906	02	0201	10300602	10.00	MANEVU2002	0.4165	0.0000	0.0000	PERKINS SCHOOL
MA	Middlesex	25017	1190906	03	0101	10300501	10.00	MANEVU2002	0.0490	0.0000	0.0000	PERKINS SCHOOL
MA	Middlesex	25017	1190906	03	0201	10300501	10.00	MANEVU2002	0.4165	0.0000	0.0000	PERKINS SCHOOL
MA	Middlesex	25017	1190906	04	0201	10300603	10.00	MANEVU2002	0.4165	0.0000	0.0011	PERKINS SCHOOL
MA	Middlesex	25017	1190906	04	0101	10300501	10.00	MANEVU2002	0.0490	0.0000	0.0001	PERKINS SCHOOL
MA	Middlesex	25017	1190907	01	0101	10300501	8.00	MANEVU2002	1.0000	0.0000	0.0011	MARLBOROUGH HOSPITAL
MA	Middlesex	25017	1190907	03	0101	10300602	10.00	MANEVU2002	1.0000	0.0000	0.0027	MARLBOROUGH HOSPITAL
MA	Middlesex	25017	1190910	01	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0011	ROHM AND HAAS ELECTRONIC MATERIALS LLC

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MA	Middlesex	25017	1190910	02	0101	10200603	3.00	MANEVU2002	0.5800	0.0000	0.0006	ROHM AND HAAS ELECTRONIC MATERIALS LLC
MA	Middlesex	25017	1190910	03	0102	10300603	2.00	MANEVU2002	0.2800	0.0000	0.0008	ROHM AND HAAS ELECTRONIC MATERIALS LLC
MA	Middlesex	25017	1190910	04	0102	10200603	2.00	MANEVU2002	0.2800	0.0000	0.0008	ROHM AND HAAS ELECTRONIC MATERIALS LLC
MA	Middlesex	25017	1190910	05	0103	10200603	5.00	MANEVU2002	0.2900	0.0000	0.0008	ROHM AND HAAS ELECTRONIC MATERIALS LLC
MA	Middlesex	25017	1190910	06	0103	10200603	5.00	MANEVU2002	0.2900	0.0000	0.0008	ROHM AND HAAS ELECTRONIC MATERIALS LLC
MA	Middlesex	25017	1190910	07	0104	10200601	3.00	MANEVU2002	0.0930	0.0000	0.0003	ROHM AND HAAS ELECTRONIC MATERIALS LLC
MA	Middlesex	25017	1190910	08	0105	10200603	2.00	MANEVU2002	0.1020	0.0000	0.0003	ROHM AND HAAS ELECTRONIC MATERIALS LLC
MA	Middlesex	25017	1190910	15	0109	10200603	5.00	MANEVU2002	0.2900	0.0000	0.0003	ROHM AND HAAS ELECTRONIC MATERIALS LLC
MA	Middlesex	25017	1190920	01	0101	10200603	1.00	MANEVU2002	0.2175	0.0000	0.0002	MILLIPORE CORPORATION
MA	Middlesex	25017	1190922	01	0101	10300501	21.00	MANEVU2002	1.0000	0.0000	0.0027	TOWERS AT CHESTNUT H
MA	Middlesex	25017	1190922	02	0101	10300602	21.00	MANEVU2002	1.0000	0.0000	0.0027	TOWERS AT CHESTNUT H
MA	Middlesex	25017	1190930	01	0201	10200603	5.00	MANEVU2002	0.0100	0.0000	0.0000	HOBBS BROOK MANAGEMENT
MA	Middlesex	25017	1190930	02	0201	10200603	5.00	MANEVU2002	0.1000	0.0000	0.0001	HOBBS BROOK MANAGEMENT
MA	Middlesex	25017	1190930	03	0201	10200603	3.00	MANEVU2002	0.1000	0.0000	0.0001	HOBBS BROOK MANAGEMENT
MA	Middlesex	25017	1190949	01	0101	10300603	8.00	MANEVU2002	1.0000	0.0000	0.0011	FARLEY SCHOOL
MA	Middlesex	25017	1190953	01	0101	10200501	3.00	MANEVU2002	1.0000	0.0000	0.0027	CHASE WALTON ELASTOMERS
MA	Middlesex	25017	1190953	02	0102	10200501	2.00	MANEVU2002	1.0000	0.0000	0.0000	CHASE WALTON ELASTOMERS
MA	Middlesex	25017	1190954	02	0101	10300501	4.00	MANEVU2002	1.0000	0.0000	0.0027	ADDISON WESLEY COMPANY
MA	Middlesex	25017	1190954	05	0103	10300601	1.00	MANEVU2002	1.0000	0.0000	0.0027	ADDISON WESLEY COMPANY
MA	Middlesex	25017	1190954	06	0104	10300601	2.00	MANEVU2002	1.0000	0.0000	0.0027	ADDISON WESLEY COMPANY
MA	Middlesex	25017	1190957	12	0112	10200799	23.00	MANEVU2002	1.0000	0.0000	0.0060	HOPKINTON LNG CORP
MA	Middlesex	25017	1190968	01	0101	10300602	55.00	MANEVU2002	1.0000	0.0000	0.0011	WALSH MIDDLE SCHOOL
MA	Middlesex	25017	1190968	02	0101	10300602	55.00	MANEVU2002	1.0000	0.0000	0.0011	WALSH MIDDLE SCHOOL
MA	Middlesex	25017	1190968	03	0101	10300602	55.00	MANEVU2002	1.0000	0.0000	0.0011	WALSH MIDDLE SCHOOL
MA	Middlesex	25017	1190974	01	0101	10300501	0.00	MANEVU2002	1.0000	0.0000	0.0027	READING HIGH SCHOOL
MA	Middlesex	25017	1190975	01	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	WALTHAM GOVERNMENT CENTER
MA	Middlesex	25017	1190978	01	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0011	GALVIN MIDDLE SCHOOL
MA	Middlesex	25017	1190995	02	0102	10200501	29.00	MANEVU2002	3.0000	0.0000	0.0082	WELLESLEY ROSEWOOD MAYNARD MILL LP
MA	Middlesex	25017	1190999	02	0202	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0022	RAYTHEON SYSTEMS
MA	Middlesex	25017	1191008	01	0201	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0027	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1191008	02	0201	10200603	5.00	MANEVU2002	0.3900	0.0000	0.0011	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1191011	01	0101	10300602	10.00	MANEVU2002	1.0000	0.0000	0.0011	KING SCHOOL
MA	Middlesex	25017	1191011	02	0101	10300602	10.00	MANEVU2002	1.0000	0.0000	0.0011	KING SCHOOL
MA	Middlesex	25017	1191022	01	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0011	KENNEDY MIDDLE SCHOOL
MA	Middlesex	25017	1191022	02	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0011	KENNEDY MIDDLE SCHOOL
MA	Middlesex	25017	1191034	01	0101	10300603	8.00	MANEVU2002	0.5600	0.0000	0.0003	GRACE PERFORMANCE CHEMICALS
MA	Middlesex	25017	1191034	02	0101	10300603	8.00	MANEVU2002	0.5600	0.0000	0.0006	GRACE PERFORMANCE CHEMICALS
MA	Middlesex	25017	1191047	01	0101	10300602	25.00	MANEVU2002	2.5640	0.0000	0.0070	MARRIOTT HOTEL
MA	Middlesex	25017	1191047	02	0101	10300602	3.00	MANEVU2002	0.5780	0.0000	0.0016	MARRIOTT HOTEL
MA	Middlesex	25017	1191058	02	0101	10300501	8.00	MANEVU2002	1.0000	0.0000	0.0027	UMASS EASTERN MASS EXT CENTER
MA	Middlesex	25017	1191065	01	0101	10200602	21.00	MANEVU2002	1.0000	0.0000	0.0000	RAYTHEON COMPANY MPT
MA	Middlesex	25017	1191070	01	0101	10200603	1.00	MANEVU2002	0.1550	0.0000	0.0002	WAKEFIELD CORPORATION THE
MA	Middlesex	25017	1191074	01	0101	10300504	13.00	MANEVU2002	1.0000	0.0000	0.0011	CLARENDON HILL TOWER
MA	Middlesex	25017	1191074	02	0101	10300504	13.00	MANEVU2002	1.0000	0.0000	0.0011	CLARENDON HILL TOWER
MA	Middlesex	25017	1191074	03	0101	10300504	13.00	MANEVU2002	1.0000	0.0000	0.0011	CLARENDON HILL TOWER
MA	Middlesex	25017	1191077	01	0101	10300504	6.00	MANEVU2002	2.0000	0.0000	0.0055	UNIVERSAL LAUNDRY
MA	Middlesex	25017	1191078	01	0201	10300602	19.00	MANEVU2002	0.4200	0.0000	0.0012	SOMERVILLE HOSPITAL
MA	Middlesex	25017	1191078	02	0202	10300603	8.00	MANEVU2002	0.0600	0.0000	0.0002	SOMERVILLE HOSPITAL
MA	Middlesex	25017	1191078	03	0103	10300603	1.00	MANEVU2002	0.0630	0.0000	0.0002	SOMERVILLE HOSPITAL
MA	Middlesex	25017	1191078	04	0104	10300603	1.00	MANEVU2002	0.0020	0.0000	0.0000	SOMERVILLE HOSPITAL
MA	Middlesex	25017	1191120	01	0101	10300401	18.00	MANEVU2002	2.0000	0.0000	0.0055	MAHONEYS GARDEN CENTER
MA	Middlesex	25017	1191120	02	0102	10300401	18.00	MANEVU2002	2.0000	0.0000	0.0000	MAHONEYS GARDEN CENTER

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MA	Middlesex	25017	1191120	03	0103	10300401	18.00	MANEVU2002	2.0000	0.0000	0.0000	MAHONEYS GARDEN CENTER
MA	Middlesex	25017	1191149	01	0101	10200602	12.00	MANEVU2002	2.0000	0.0000	0.0022	NORTHERN RESEARCH & ENGINEERING
MA	Middlesex	25017	1191157	03	0102	10300501	6.00	MANEVU2002	3.0000	0.0000	0.0033	BEDFORD SENIOR HIGH
MA	Middlesex	25017	1191166	01	0101	10200603	1.00	MANEVU2002	0.1400	0.0000	0.0008	AGGREGATE INDUSTRIES NORTHEAST REGIONINC
MA	Middlesex	25017	1191173	01	0201	10300501	8.00	MANEVU2002	0.2800	0.0000	0.0008	HOBBS BROOK MANAGEMENT
MA	Middlesex	25017	1191173	01	0101	10300603	8.00	MANEVU2002	0.2800	0.0000	0.0008	HOBBS BROOK MANAGEMENT
MA	Middlesex	25017	1191173	03	0102	10300603	1.00	MANEVU2002	0.0200	0.0000	0.0001	HOBBS BROOK MANAGEMENT
MA	Middlesex	25017	1191174	02	0102	10300602	6.00	MANEVU2002	0.2600	0.0000	0.0007	HOBBS BROOK MANAGEMENT
MA	Middlesex	25017	1191174	03	0103	10300603	1.00	MANEVU2002	0.0100	0.0000	0.0000	HOBBS BROOK MANAGEMENT
MA	Middlesex	25017	1191179	01	0101	10200602	1.00	MANEVU2002	0.0250	0.0000	0.0000	LIGHTOLIER - WILMINGTON
MA	Middlesex	25017	1191179	19	0119	10300602	1.00	MANEVU2002	0.1000	0.0000	0.0000	LIGHTOLIER - WILMINGTON
MA	Middlesex	25017	1191192	01	0101	10300504	13.00	MANEVU2002	1.0000	0.0000	0.0027	JEFFERSON SMURFIT CO
MA	Middlesex	25017	1191192	01	0201	10200602	13.00	MANEVU2002	1.0000	0.0000	0.0027	JEFFERSON SMURFIT CO
MA	Middlesex	25017	1191192	02	0102	10300504	13.00	MANEVU2002	0.1735	0.0000	0.0000	JEFFERSON SMURFIT CO
MA	Middlesex	25017	1191192	02	0202	10200602	13.00	MANEVU2002	0.0150	0.0000	0.0000	JEFFERSON SMURFIT CO
MA	Middlesex	25017	1191200	02	0102	10200501	2.00	MANEVU2002	0.0900	0.0000	0.0002	AGGREGATE INDUSTRIES-NORTHEAST REGIONINC
MA	Middlesex	25017	1191203	01	0101	10300602	13.00	MANEVU2002	0.5500	0.0000	0.0015	VERIZON LABORATORIES
MA	Middlesex	25017	1191203	02	0101	10300602	13.00	MANEVU2002	0.5515	0.0000	0.0015	VERIZON LABORATORIES
MA	Middlesex	25017	1191203	03	0101	10300602	13.00	MANEVU2002	0.5515	0.0000	0.0015	VERIZON LABORATORIES
MA	Middlesex	25017	1191203	04	0102	10200603	6.00	MANEVU2002	0.2760	0.0000	0.0008	VERIZON LABORATORIES
MA	Middlesex	25017	1191203	05	0102	10200603	6.00	MANEVU2002	0.2760	0.0000	0.0008	VERIZON LABORATORIES
MA	Middlesex	25017	1191203	06	0102	10200603	6.00	MANEVU2002	0.2760	0.0000	0.0008	VERIZON LABORATORIES
MA	Middlesex	25017	1191203	10	0106	10200603	1.00	MANEVU2002	0.0440	0.0000	0.0001	VERIZON LABORATORIES
MA	Middlesex	25017	1191232	01	0101	10200602	8.00	MANEVU2002	0.7800	0.0000	0.0021	NYACOL PRODUCTS INCORPORATED
MA	Middlesex	25017	1191232	02	0102	10200602	8.00	MANEVU2002	0.5200	0.0000	0.0014	NYACOL PRODUCTS INCORPORATED
MA	Middlesex	25017	1191239	01	0101	10300401	5.00	MANEVU2002	1.0000	0.0000	0.0000	HEIMLICH NURSERIES
MA	Middlesex	25017	1191245	01	0101	10200501	8.00	MANEVU2002	2.0000	0.0000	0.0000	SKYWORKS SOLUTIONS INC
MA	Middlesex	25017	1191245	02	0102	10200603	11.00	MANEVU2002	1.0000	0.0000	0.0000	SKYWORKS SOLUTIONS INC
MA	Middlesex	25017	1191245	03	0102	10200601	10.00	MANEVU2002	1.1500	0.0000	0.0000	SKYWORKS SOLUTIONS INC
MA	Middlesex	25017	1191246	01	0101	10200401	13.00	MANEVU2002	2.0000	0.0000	0.0000	JP BARTLETT COMPANY
MA	Middlesex	25017	1191246	02	0102	10200401	13.00	MANEVU2002	3.0000	0.0000	0.0082	JP BARTLETT COMPANY
MA	Middlesex	25017	1191246	02	0302	10300501	13.00	MANEVU2002	1.0000	0.0000	0.0027	JP BARTLETT COMPANY
MA	Middlesex	25017	1191268	02	0101	10200602	13.00	MANEVU2002	2.0000	0.0000	0.0000	MBTA EVERETT SHOPS
MA	Middlesex	25017	1191269	01	0101	10200501	45.00	MANEVU2002	0.5455	0.0000	0.0030	TEXTRON SYSTEMS CORPORATION
MA	Middlesex	25017	1191269	01	0201	10200602	45.00	MANEVU2002	0.0345	0.0000	0.0002	TEXTRON SYSTEMS CORPORATION
MA	Middlesex	25017	1191269	02	0102	10200501	38.00	MANEVU2002	0.3670	0.0000	0.0031	TEXTRON SYSTEMS CORPORATION
MA	Middlesex	25017	1191269	02	0202	10200602	38.00	MANEVU2002	0.0035	0.0000	0.0000	TEXTRON SYSTEMS CORPORATION
MA	Middlesex	25017	1191269	03	0103	10200501	38.00	MANEVU2002	0.4950	0.0000	0.0000	TEXTRON SYSTEMS CORPORATION
MA	Middlesex	25017	1191269	03	0203	10200602	38.00	MANEVU2002	0.0985	0.0000	0.0000	TEXTRON SYSTEMS CORPORATION
MA	Middlesex	25017	1191269	04	0104	10200501	1.00	MANEVU2002	0.0290	0.0000	0.0000	TEXTRON SYSTEMS CORPORATION
MA	Middlesex	25017	1191275	01	0201	10200603	8.00	MANEVU2002	1.0000	0.0000	0.0011	WAYLAND BUSINESS CENTER
MA	Middlesex	25017	1191279	02	0101	10300603	11.00	MANEVU2002	1.0000	0.0000	0.0001	NEWTOWNE COURT APARTMENTS
MA	Middlesex	25017	1191282	01	0101	10200603	2.00	MANEVU2002	0.2860	0.0000	0.0008	SANMINA - SCI CORP
MA	Middlesex	25017	1191282	02	0102	10200603	5.00	MANEVU2002	0.0715	0.0000	0.0002	SANMINA - SCI CORP
MA	Middlesex	25017	1191296	03	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0027	KIDDE FENWAL INCORPORATED
MA	Middlesex	25017	1191301	04	0102	10200603	1.00	MANEVU2002	0.0140	0.0000	0.0000	HERLEY MICRODYNAMICS
MA	Middlesex	25017	1191305	01	0101	10300504	11.00	MANEVU2002	0.4800	0.0000	0.0005	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	02	0101	10300603	1.00	MANEVU2002	1.1100	0.0000	0.0030	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	03	0102	10300504	8.00	MANEVU2002	0.7800	0.0000	0.0021	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	04	0103	10300504	4.00	MANEVU2002	0.8500	0.0000	0.0009	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	05	0103	10300504	4.00	MANEVU2002	0.8500	0.0000	0.0009	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	06	0104	10300603	4.00	MANEVU2002	3.2400	0.0000	0.0036	ARTHUR D LITTLE INCORPORATED

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MA	Middlesex	25017	1191305	07	0104	10300603	4.00	MANEVU2002	3.2400	0.0000	0.0036	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	08	0105	10300603	1.00	MANEVU2002	1.0600	0.0000	0.0012	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	11	0106	10300603	1.00	MANEVU2002	1.1100	0.0000	0.0012	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	12	0106	10300603	2.00	MANEVU2002	2.2400	0.0000	0.0062	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	18	0104	10200603	4.00	MANEVU2002	3.2400	0.0000	0.0036	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	19	0104	10200603	4.00	MANEVU2002	3.2400	0.0000	0.0036	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191309	01	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON SCIENTIFIC CORPORATION
MA	Middlesex	25017	1191309	02	0101	10300603	5.00	MANEVU2002	0.1000	0.0000	0.0001	BOSTON SCIENTIFIC CORPORATION
MA	Middlesex	25017	1191309	04	0103	10200603	2.00	MANEVU2002	0.2000	0.0000	0.0002	BOSTON SCIENTIFIC CORPORATION
MA	Middlesex	25017	1191309	05	0103	10200603	2.00	MANEVU2002	0.2000	0.0000	0.0002	BOSTON SCIENTIFIC CORPORATION
MA	Middlesex	25017	1191316	01	0101	10301002	2.00	MANEVU2002	0.0140	0.0000	0.0000	MWRA WESTON RESERVOI
MA	Middlesex	25017	1191347	01	0101	10300503	1.00	MANEVU2002	0.0570	0.0000	0.0000	MWRA ALEWIFE BROOK P
MA	Middlesex	25017	1191361	02	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	MA STATE POLICE
MA	Middlesex	25017	1191389	14	0102	10300501	12.00	MANEVU2002	0.1100	0.0000	0.0000	LONGVIEW FIBRE COMPANY
MA	Middlesex	25017	1191398	01	0101	10300504	18.00	MANEVU2002	2.0000	0.0000	0.0007	REGIS COLLEGE
MA	Middlesex	25017	1191398	01	0201	10300602	18.00	MANEVU2002	1.0000	0.0000	0.0003	REGIS COLLEGE
MA	Middlesex	25017	1191398	02	0101	10300504	18.00	MANEVU2002	2.0000	0.0000	0.0007	REGIS COLLEGE
MA	Middlesex	25017	1191398	02	0201	10300602	18.00	MANEVU2002	1.0000	0.0000	0.0003	REGIS COLLEGE
MA	Middlesex	25017	1191398	04	0102	10300603	1.00	MANEVU2002	0.0440	0.0000	0.0001	REGIS COLLEGE
MA	Middlesex	25017	1191398	06	0103	10200603	2.00	MANEVU2002	0.0635	0.0000	0.0003	REGIS COLLEGE
MA	Middlesex	25017	1191398	08	0105	10300603	2.00	MANEVU2002	0.0070	0.0000	0.0000	REGIS COLLEGE
MA	Middlesex	25017	1191398	10	0106	10300603	1.00	MANEVU2002	0.0150	0.0000	0.0001	REGIS COLLEGE
MA	Middlesex	25017	1191398	11	0107	10300501	1.00	MANEVU2002	0.0450	0.0000	0.0000	REGIS COLLEGE
MA	Middlesex	25017	1191398	12	0108	10300501	1.00	MANEVU2002	0.0535	0.0000	0.0000	REGIS COLLEGE
MA	Middlesex	25017	1191398	15	0110	10300603	1.00	MANEVU2002	0.0120	0.0000	0.0000	REGIS COLLEGE
MA	Middlesex	25017	1191445	01	0101	10300603	1.00	MANEVU2002	0.0520	0.0000	0.0000	EAST WEST ENTERPRISE
MA	Middlesex	25017	1191445	02	0101	10300603	1.00	MANEVU2002	0.0520	0.0000	0.0000	EAST WEST ENTERPRISE
MA	Middlesex	25017	1191445	04	0101	10300603	1.00	MANEVU2002	0.0520	0.0000	0.0000	EAST WEST ENTERPRISE
MA	Middlesex	25017	1191445	05	0101	10300603	1.00	MANEVU2002	0.0290	0.0000	0.0001	EAST WEST ENTERPRISE
MA	Middlesex	25017	1191445	10	0106	10300603	2.00	MANEVU2002	0.0440	0.0000	0.0000	EAST WEST ENTERPRISE
MA	Middlesex	25017	1191463	01	0101	10300601	12.00	MANEVU2002	10.0000	0.0000	0.0000	PUTNAM GARDENS
MA	Middlesex	25017	1191463	02	0101	10300601	2.00	MANEVU2002	4.0000	0.0000	0.0110	PUTNAM GARDENS
MA	Middlesex	25017	1191468	01	0101	10300601	11.00	MANEVU2002	2.0000	0.0000	0.0015	ROOSEVELT TOWERS
MA	Middlesex	25017	1191469	01	0101	10300603	12.00	MANEVU2002	1.0000	0.0000	0.0009	WASHINGTON ELMS APARTMENTS
MA	Middlesex	25017	1191485	01	0101	10300603	3.00	MANEVU2002	0.2800	0.0000	0.0000	RADCLIFFE PERKINS CAMPUS
MA	Middlesex	25017	1191485	01	0201	10300501	3.00	MANEVU2002	0.0700	0.0000	0.0000	RADCLIFFE PERKINS CAMPUS
MA	Middlesex	25017	1191485	02	0101	10300603	17.00	MANEVU2002	0.3600	0.0000	0.0000	RADCLIFFE PERKINS CAMPUS
MA	Middlesex	25017	1191485	02	0201	10300504	17.00	MANEVU2002	2.0000	0.0000	0.0000	RADCLIFFE PERKINS CAMPUS
MA	Middlesex	25017	1191541	01	0101	10200603	8.00	MANEVU2002	0.1350	0.0000	0.0000	RAYTHEON ELECTRONIC
MA	Middlesex	25017	1191541	02	0102	10200603	6.00	MANEVU2002	1.0000	0.0000	0.0011	RAYTHEON ELECTRONIC
MA	Middlesex	25017	1191541	03	0103	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0011	RAYTHEON ELECTRONIC
MA	Middlesex	25017	1191541	04	0104	10200603	2.00	MANEVU2002	0.1600	0.0000	0.0004	RAYTHEON ELECTRONIC
MA	Middlesex	25017	1191541	09	0109	10200603	1.00	MANEVU2002	0.0700	0.0000	0.0001	RAYTHEON ELECTRONIC
MA	Middlesex	25017	1191541	12	0112	10200603	1.00	MANEVU2002	0.0050	0.0000	0.0000	RAYTHEON ELECTRONIC
MA	Middlesex	25017	1191564	01	0101	10300603	10.00	MANEVU2002	0.3710	0.0000	0.0004	BOSE CORPORATION
MA	Middlesex	25017	1191564	02	0102	10300603	3.00	MANEVU2002	0.0930	0.0000	0.0001	BOSE CORPORATION
MA	Middlesex	25017	1191564	03	0103	10300603	2.00	MANEVU2002	0.0595	0.0000	0.0001	BOSE CORPORATION
MA	Middlesex	25017	1191581	01	0101	10200603	11.00	MANEVU2002	0.7400	0.0000	0.0002	TECOGEN
MA	Middlesex	25017	1191598	01	0101	10200501	6.00	MANEVU2002	0.5000	0.0000	0.0014	LEDGEMONT RESEARCH
MA	Middlesex	25017	1191598	02	0101	10200501	14.00	MANEVU2002	0.5000	0.0000	0.0000	LEDGEMONT RESEARCH
MA	Middlesex	25017	1191604	01	0101	10300603	55.00	MANEVU2002	4.0000	0.0000	0.0018	HARVARD UNIVERSITY
MA	Middlesex	25017	1191604	01	0201	10300501	55.00	MANEVU2002	0.3300	0.0000	0.0001	HARVARD UNIVERSITY

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MA	Middlesex	25017	1191604	02	0101	10300602	55.00	MANEVU2002	1.0000	0.0000	0.0011	HARVARD UNIVERSITY
MA	Middlesex	25017	1191604	02	0201	10300504	55.00	MANEVU2002	0.3100	0.0000	0.0003	HARVARD UNIVERSITY
MA	Middlesex	25017	1191604	03	0101	10300603	5.00	MANEVU2002	0.1800	0.0000	0.0005	HARVARD UNIVERSITY
MA	Middlesex	25017	1191612	05	0105	10200603	3.00	MANEVU2002	0.0420	0.0000	0.0001	MA BAY COMMUTER RAILROAD CO
MA	Middlesex	25017	1191612	06	0106	10200603	2.00	MANEVU2002	0.0190	0.0000	0.0001	MA BAY COMMUTER RAILROAD CO
MA	Middlesex	25017	1191612	08	0108	10200603	2.00	MANEVU2002	0.0190	0.0000	0.0001	MA BAY COMMUTER RAILROAD CO
MA	Middlesex	25017	1191631	01	0101	10300603	1.00	MANEVU2002	0.4865	0.0000	0.0005	WYETH RESEARCH
MA	Middlesex	25017	1191631	02	0102	10300603	1.00	MANEVU2002	0.4865	0.0000	0.0005	WYETH RESEARCH
MA	Middlesex	25017	1191631	03	0103	10300603	1.00	MANEVU2002	0.3045	0.0000	0.0003	WYETH RESEARCH
MA	Middlesex	25017	1191631	04	0104	10300603	2.00	MANEVU2002	2.5560	0.0000	0.0028	WYETH RESEARCH
MA	Middlesex	25017	1191631	05	0105	10200603	1.00	MANEVU2002	1.4605	0.0000	0.0016	WYETH RESEARCH
MA	Middlesex	25017	1191631	06	0106	10300603	1.00	MANEVU2002	0.5110	0.0000	0.0014	WYETH RESEARCH
MA	Middlesex	25017	1191631	10	0110	10300603	1.00	MANEVU2002	0.4360	0.0000	0.0005	WYETH RESEARCH
MA	Middlesex	25017	1191638	01	0101	10200602	55.00	MANEVU2002	1.0000	0.0000	0.0027	FOREST CITY MANAGEMENT
MA	Middlesex	25017	1191638	02	0101	10200602	55.00	MANEVU2002	1.0000	0.0000	0.0027	FOREST CITY MANAGEMENT
MA	Middlesex	25017	1191668	01	0101	10200603	1.00	MANEVU2002	0.0130	0.0000	0.0000	LEE PRODUCTS COMPANY
MA	Middlesex	25017	1191680	01	0101	10300603	25.00	MANEVU2002	0.5700	0.0000	0.0009	WYETH RESEARCH
MA	Middlesex	25017	1191680	02	0101	10300603	25.00	MANEVU2002	0.5700	0.0000	0.0009	WYETH RESEARCH
MA	Middlesex	25017	1191680	03	0101	10300603	25.00	MANEVU2002	0.5200	0.0000	0.0009	WYETH RESEARCH
MA	Middlesex	25017	1191721	01	0101	10200501	5.00	MANEVU2002	0.3775	0.0000	0.0000	MWRA PRISON POINT PU
MA	Middlesex	25017	1191722	04	0104	10200501	3.00	MANEVU2002	0.0240	0.0000	0.0000	MWRA COTTAGE FARMS
MA	Middlesex	25017	1191722	10	0107	10200501	0.00	MANEVU2002	0.0085	0.0000	0.0000	MWRA COTTAGE FARMS
MA	Middlesex	25017	1191722	11	0107	10300501	0.00	MANEVU2002	0.0085	0.0000	0.0000	MWRA COTTAGE FARMS
MA	Middlesex	25017	1191745	01	0101	10300602	42.00	MANEVU2002	0.4600	0.0000	0.0009	ASTRAZENECA PHARMACEUTICALS LP
MA	Middlesex	25017	1191745	02	0101	10200602	42.00	MANEVU2002	0.9600	0.0000	0.0018	ASTRAZENECA PHARMACEUTICALS LP
MA	Middlesex	25017	1191745	03	0101	10300602	17.00	MANEVU2002	0.4600	0.0000	0.0009	ASTRAZENECA PHARMACEUTICALS LP
MA	Middlesex	25017	1191753	01	0101	10200603	5.00	MANEVU2002	0.1400	0.0000	0.0002	WYETH RESEARCH
MA	Middlesex	25017	1191753	02	0101	10200603	5.00	MANEVU2002	0.1400	0.0000	0.0002	WYETH RESEARCH
MA	Middlesex	25017	1191753	03	0101	10200603	4.00	MANEVU2002	0.0400	0.0000	0.0001	WYETH RESEARCH
MA	Middlesex	25017	1191753	04	0101	10200603	4.00	MANEVU2002	0.0400	0.0000	0.0001	WYETH RESEARCH
MA	Middlesex	25017	1191753	05	0102	10200603	1.00	MANEVU2002	0.0200	0.0000	0.0001	WYETH RESEARCH
MA	Middlesex	25017	1191753	06	0102	10200603	1.00	MANEVU2002	0.0200	0.0000	0.0001	WYETH RESEARCH
MA	Middlesex	25017	1191771	01	0101	10200602	8.00	MANEVU2002	1.9000	0.0000	0.0000	GENZYME CORPORATION
MA	Middlesex	25017	1191777	01	0101	10200603	3.00	MANEVU2002	0.1000	0.0000	0.0003	FM CALLAHAN & SONS
MA	Middlesex	25017	1191812	01	0101	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0027	LISTA INTERNATIONAL CORP
MA	Middlesex	25017	1191812	02	0102	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0027	LISTA INTERNATIONAL CORP
MA	Middlesex	25017	1191839	01	0101	10300602	9.00	MANEVU2002	0.7165	0.0000	0.0000	ARQULE INCORPORATED
MA	Middlesex	25017	1191844	01	0201	10300601	211.00	MANEVU2002	5.0000	0.0000	0.0137	MIT
MA	Middlesex	25017	1191844	03	0101	10300401	116.00	MANEVU2002	10.0000	0.0000	0.0275	MIT
MA	Middlesex	25017	1191844	03	0201	10300601	116.00	MANEVU2002	19.0000	0.0000	0.0522	MIT
MA	Middlesex	25017	1191844	04	0101	10300401	116.00	MANEVU2002	10.0000	0.0000	0.0275	MIT
MA	Middlesex	25017	1191844	04	0201	10300601	116.00	MANEVU2002	17.0000	0.0000	0.0467	MIT
MA	Middlesex	25017	1191844	05	0201	10300601	145.00	MANEVU2002	16.0000	0.0000	0.0440	MIT
MA	Middlesex	25017	1191844	05	0101	10300401	145.00	MANEVU2002	2.0000	0.0000	0.0055	MIT
MA	Middlesex	25017	1191844	16	0107	10300603	4.00	MANEVU2002	0.3700	0.0000	0.0010	MIT
MA	Middlesex	25017	1191844	17	0108	10300603	4.00	MANEVU2002	0.0900	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	18	0109	10300603	4.00	MANEVU2002	0.2100	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	19	0110	10300603	4.00	MANEVU2002	0.2100	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	20	0111	10300603	4.00	MANEVU2002	0.2100	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	24	0114	10300603	5.00	MANEVU2002	0.1600	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	29	0118	10300603	4.00	MANEVU2002	0.2500	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	30	0119	10300603	4.00	MANEVU2002	0.2500	0.0000	0.0000	MIT

									2002 NOx Emissions			
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MA	Middlesex	25017	1191844	35	0124	10300603	8.00	MANEVU2002	0.3700	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	35	0224	10300603	8.00	MANEVU2002	0.0500	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	42	0127	10300603	10.00	MANEVU2002	0.6200	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	43	0127	10300501	126.00	MANEVU2002	0.1100	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	44	0127	10300603	15.00	MANEVU2002	0.1300	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	44	0227	10300603	15.00	MANEVU2002	0.2200	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	44	0327	10300603	15.00	MANEVU2002	0.2800	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	47	0529	10300501	2.00	MANEVU2002	0.0200	0.0000	0.0001	MIT
MA	Middlesex	25017	1191847	01	0101	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0027	CHARLES STARK DRAPER
MA	Middlesex	25017	1191847	02	0102	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0027	CHARLES STARK DRAPER
MA	Middlesex	25017	1191847	03	0103	10200602	13.00	MANEVU2002	1.0000	0.0000	0.0027	CHARLES STARK DRAPER
MA	Middlesex	25017	1191854	01	0101	10300603	6.00	MANEVU2002	0.1520	0.0000	0.0000	AG/ND 225 METRONORTH LESSEE LLC
MA	Middlesex	25017	1191855	01	0101	10300602	25.00	MANEVU2002	0.3260	0.0000	0.0009	ARQULE INCORPORATED
MA	Middlesex	25017	1191855	02	0102	10300603	1.00	MANEVU2002	0.1970	0.0000	0.0005	ARQULE INCORPORATED
MA	Middlesex	25017	1191855	03	0102	10300603	1.00	MANEVU2002	0.2570	0.0000	0.0007	ARQULE INCORPORATED
MA	Middlesex	25017	1191866	03	0103	10300603	5.00	MANEVU2002	0.3100	0.0000	0.0000	SUN MICROSYSTEMS INCORPORATED
MA	Middlesex	25017	1191874	01	0101	10300603	5.00	MANEVU2002	0.1810	0.0000	0.0000	PFIZER GLOBAL RESEARCH & DEVELOPMENT
MA	Middlesex	25017	1191874	02	0102	10300603	2.00	MANEVU2002	0.0590	0.0000	0.0001	PFIZER GLOBAL RESEARCH & DEVELOPMENT
MA	Middlesex	25017	1191874	03	0102	10300603	2.00	MANEVU2002	0.0590	0.0000	0.0000	PFIZER GLOBAL RESEARCH & DEVELOPMENT
MA	Middlesex	25017	1191874	04	0102	10300603	2.00	MANEVU2002	0.0590	0.0000	0.0002	PFIZER GLOBAL RESEARCH & DEVELOPMENT
MA	Middlesex	25017	1191874	05	0102	10300603	2.00	MANEVU2002	0.0590	0.0000	0.0002	PFIZER GLOBAL RESEARCH & DEVELOPMENT
MA	Middlesex	25017	1191874	07	0104	10300603	1.00	MANEVU2002	0.0060	0.0000	0.0000	PFIZER GLOBAL RESEARCH & DEVELOPMENT
MA	Middlesex	25017	1191874	08	0105	10300603	1.00	MANEVU2002	0.2500	0.0000	0.0007	PFIZER GLOBAL RESEARCH & DEVELOPMENT
MA	Middlesex	25017	1191878	01	0101	10300603	6.00	MANEVU2002	0.1900	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Middlesex	25017	1191879	03	0102	10300603	5.00	MANEVU2002	0.2200	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Middlesex	25017	1191879	04	0102	10300603	5.00	MANEVU2002	0.0100	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Middlesex	25017	1191881	01	0101	10300603	12.00	MANEVU2002	0.2800	0.0000	0.0008	WAKEFIELD MATERIALS
MA	Middlesex	25017	1191891	01	0101	10300603	3.00	MANEVU2002	0.1600	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Middlesex	25017	1191895	01	0101	10300603	3.00	MANEVU2002	0.0105	0.0000	0.0000	NATICK HIGH SCHOOL
MA	Middlesex	25017	1191895	02	0101	10300504	10.00	MANEVU2002	1.0000	0.0000	0.0027	NATICK HIGH SCHOOL
MA	Middlesex	25017	1191895	03	0101	10300504	10.00	MANEVU2002	1.0000	0.0000	0.0027	NATICK HIGH SCHOOL
MA	Middlesex	25017	1191895	04	0101	10300504	10.00	MANEVU2002	1.0000	0.0000	0.0027	NATICK HIGH SCHOOL
MA	Middlesex	25017	1191896	01	0101	10300603	6.00	MANEVU2002	1.2180	0.0000	0.0033	TRANSKARYOTIC THERAPIES, INC
MA	Middlesex	25017	1191896	02	0101	10300603	6.00	MANEVU2002	1.2180	0.0000	0.0033	TRANSKARYOTIC THERAPIES, INC
MA	Middlesex	25017	1191896	04	0103	10300603	5.00	MANEVU2002	0.0550	0.0000	0.0002	TRANSKARYOTIC THERAPIES, INC
MA	Middlesex	25017	1191896	05	0103	10300603	1.00	MANEVU2002	0.0550	0.0000	0.0002	TRANSKARYOTIC THERAPIES, INC
MA	Middlesex	25017	1191897	02	0102	10200602	12.00	MANEVU2002	0.8000	0.0000	0.0000	GENZYME CORPORATION
MA	Middlesex	25017	1191898	01	0101	10200602	5.00	MANEVU2002	0.5000	0.0000	0.0000	GENZYME CORPORATION
MA	Middlesex	25017	1191901	01	0101	10300603	20.00	MANEVU2002	1.8000	0.0000	0.0000	GENZYME CORPORATION
MA	Middlesex	25017	1192000	01	0101	10200603	27.00	MANEVU2002	2.0000	0.0000	0.0022	KENS FOODS INCORPORATED
MA	Middlesex	25017	1192000	02	0102	10300701	3.00	MANEVU2002	0.3500	0.0000	0.0010	KENS FOODS INCORPORATED
MA	Middlesex	25017	1192000	03	0103	10300701	12.00	MANEVU2002	0.3700	0.0000	0.0010	KENS FOODS INCORPORATED
MA	Middlesex	25017	1193766	06	0103	10200603	5.00	MANEVU2002	0.0660	0.0000	0.0002	MADICO INC
MA	Middlesex	25017	1193766	07	0104	10200603	10.00	MANEVU2002	0.1735	0.0000	0.0005	MADICO INC
MA	Middlesex	25017	1194011	01	0101	10200504	12.00	MANEVU2002	1.0000	0.0000	0.0027	MASS CONTAINER CORPORATION
MA	Middlesex	25017	1194011	02	0102	10200504	12.00	MANEVU2002	1.0000	0.0000	0.0000	MASS CONTAINER CORPORATION
MA	Middlesex	25017	1194014	01	0101	10300602	16.00	MANEVU2002	3.0000	0.0000	0.0082	RICH PRODUCTS CORPORATION
MA	Middlesex	25017	1194015	03	0103	10200603	6.00	MANEVU2002	2.0000	0.0000	0.0033	INTEL MASSACHUSETTS INC
MA	Middlesex	25017	1194015	05	0105	10200602	40.00	MANEVU2002	4.0000	0.0000	0.0066	INTEL MASSACHUSETTS INC
MA	Middlesex	25017	1194015	09	0109	10200602	32.00	MANEVU2002	5.0000	0.0000	0.0082	INTEL MASSACHUSETTS INC
MA	Middlesex	25017	1194015	10	0110	10200602	32.00	MANEVU2002	5.0000	0.0000	0.0082	INTEL MASSACHUSETTS INC
MA	Middlesex	25017	1194015	11	0111	10200602	32.00	MANEVU2002	5.0000	0.0000	0.0082	INTEL MASSACHUSETTS INC

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MA	Middlesex	25017	1194017	05	0105	10300603	4.00	MANEVU2002	0.9900	0.0000	0.0000	EMC CORPORATION
MA	Middlesex	25017	1194017	06	0106	10300603	3.00	MANEVU2002	0.3900	0.0000	0.0000	EMC CORPORATION
MA	Middlesex	25017	1194017	07	0107	10300603	2.00	MANEVU2002	0.1500	0.0000	0.0004	EMC CORPORATION
MA	Middlesex	25017	1195717	01	0101	10300603	6.00	MANEVU2002	0.6305	0.0000	0.0017	PURECOAT NORTH LLC
MA	Middlesex	25017	1195717	02	0101	10300603	6.00	MANEVU2002	0.6305	0.0000	0.0017	PURECOAT NORTH LLC
MA	Middlesex	25017	1197586	01	0101	10200504	17.00	MANEVU2002	1.0000	0.0000	0.0000	STARMET CORPORATION
MA	Middlesex	25017	1197586	02	0101	10200504	17.00	MANEVU2002	1.0000	0.0000	0.0000	STARMET CORPORATION
MA	Middlesex	25017	1210014	01	0101	10200501	6.00	MANEVU2002	1.0000	0.0000	0.0027	EMPIRE LINEN
MA	Middlesex	25017	1210014	01	0201	10200603	6.00	MANEVU2002	1.0000	0.0000	0.0027	EMPIRE LINEN
MA	Middlesex	25017	1210020	01	0101	10200504	11.00	MANEVU2002	1.0000	0.0000	0.0027	GLOBE NEWSPAPER COMPANY
MA	Middlesex	25017	1210020	02	0101	10200504	11.00	MANEVU2002	1.0000	0.0000	0.0027	GLOBE NEWSPAPER COMPANY
MA	Middlesex	25017	1210020	03	0102	10300504	9.00	MANEVU2002	1.0000	0.0000	0.0011	GLOBE NEWSPAPER COMPANY
MA	Middlesex	25017	1210033	01	0101	10200401	20.00	MANEVU2002	2.0000	0.0000	0.0000	AMERICRAFT CARTON INC
MA	Middlesex	25017	1210033	02	0102	10200401	17.00	MANEVU2002	1.0000	0.0000	0.0000	AMERICRAFT CARTON INC
MA	Middlesex	25017	1210036	01	0101	10200603	4.00	MANEVU2002	0.2800	0.0000	0.0008	IDEAL TAPE COMPANY
MA	Middlesex	25017	1210036	02	0102	10200603	4.00	MANEVU2002	0.2800	0.0000	0.0008	IDEAL TAPE COMPANY
MA	Middlesex	25017	1210040	01	0101	10300401	20.00	MANEVU2002	5.0000	0.0000	0.0198	UMASS LOWELL-SOUTH CAMPUS
MA	Middlesex	25017	1210040	02	0101	10300401	15.00	MANEVU2002	11.0000	0.0000	0.0326	UMASS LOWELL-SOUTH CAMPUS
MA	Middlesex	25017	1210040	03	0101	10300401	15.00	MANEVU2002	3.0000	0.0000	0.0122	UMASS LOWELL-SOUTH CAMPUS
MA	Middlesex	25017	1210040	09	0103	10300603	3.00	MANEVU2002	0.0560	0.0000	0.0001	UMASS LOWELL-SOUTH CAMPUS
MA	Middlesex	25017	1210041	01	0101	10300401	20.00	MANEVU2002	1.0000	0.0000	0.0015	UMASS LOWELL-NORTH CAMPUS
MA	Middlesex	25017	1210041	02	0201	10300602	24.00	MANEVU2002	1.0000	0.0000	0.0054	UMASS LOWELL-NORTH CAMPUS
MA	Middlesex	25017	1210041	03	0101	10300401	36.00	MANEVU2002	18.0000	0.0000	0.0000	UMASS LOWELL-NORTH CAMPUS
MA	Middlesex	25017	1210050	01	0101	10200603	5.00	MANEVU2002	0.2450	0.0000	0.0007	MAJILITE MFG INC
MA	Middlesex	25017	1210050	02	0101	10200603	3.00	MANEVU2002	0.1300	0.0000	0.0000	MAJILITE MFG INC
MA	Middlesex	25017	1210061	01	0101	10200601	3.00	MANEVU2002	1.0000	0.0000	0.0027	ROCHE BROTHERS BARREL & DRUM CO.
MA	Middlesex	25017	1210076	04	0102	10300603	5.00	MANEVU2002	0.0010	0.0000	0.0000	GETRONICS INCORPORATED
MA	Middlesex	25017	1210076	05	0102	10300603	5.00	MANEVU2002	0.0010	0.0000	0.0000	GETRONICS INCORPORATED
MA	Middlesex	25017	1210086	02	0202	10200401	50.00	MANEVU2002	43.0000	0.0000	0.1181	HOLLINGSWORTH & VOSE
MA	Middlesex	25017	1210086	02	0102	10200401	50.00	MANEVU2002	0.0215	0.0000	0.0001	HOLLINGSWORTH & VOSE
MA	Middlesex	25017	1210086	03	0202	10200401	50.00	MANEVU2002	2.0000	0.0000	0.0055	HOLLINGSWORTH & VOSE
MA	Middlesex	25017	1210087	12	0105	10200603	3.00	MANEVU2002	0.4500	0.0000	0.0011	BRADFORD INDUSTRIES
MA	Middlesex	25017	1210087	26	0108	10200603	10.00	MANEVU2002	1.0000	0.0000	0.0027	BRADFORD INDUSTRIES
MA	Middlesex	25017	1210090	01	0201	10200601	99.00	MANEVU2002	5.0000	0.0000	0.0000	SBGI CORP
MA	Middlesex	25017	1210129	01	0101	10200603	6.00	MANEVU2002	0.4560	0.0000	0.0013	BALLARD MATERIAL PRODUCTS
MA	Middlesex	25017	1210147	01	0101	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0001	UMASS LOWELL-RESIDENTIAL NC
MA	Middlesex	25017	1210147	05	0103	10300603	8.00	MANEVU2002	0.2700	0.0000	0.0007	UMASS LOWELL-RESIDENTIAL NC
MA	Middlesex	25017	1210147	06	0104	10300603	10.00	MANEVU2002	0.1300	0.0000	0.0004	UMASS LOWELL-RESIDENTIAL NC
MA	Middlesex	25017	1210147	07	0105	10300603	6.00	MANEVU2002	0.2500	0.0000	0.0007	UMASS LOWELL-RESIDENTIAL NC
MA	Middlesex	25017	1210147	08	0106	10300603	6.00	MANEVU2002	0.2400	0.0000	0.0007	UMASS LOWELL-RESIDENTIAL NC
MA	Middlesex	25017	1210147	09	0107	10300603	8.00	MANEVU2002	0.0800	0.0000	0.0002	UMASS LOWELL-RESIDENTIAL NC
MA	Middlesex	25017	1210147	10	0108	10300603	8.00	MANEVU2002	0.0800	0.0000	0.0002	UMASS LOWELL-RESIDENTIAL NC
MA	Middlesex	25017	1210153	03	0102	10200603	6.00	MANEVU2002	0.1150	0.0000	0.0000	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	04	0102	10200603	6.00	MANEVU2002	0.0350	0.0000	0.0000	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	05	0103	10200602	10.00	MANEVU2002	0.6690	0.0000	0.0018	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	06	0103	10200602	10.00	MANEVU2002	0.1260	0.0000	0.0000	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	07	0103	10200603	1.00	MANEVU2002	0.0430	0.0000	0.0001	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	08	0103	10200603	2.00	MANEVU2002	0.0670	0.0000	0.0002	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	09	0104	10200603	3.00	MANEVU2002	0.4590	0.0000	0.0013	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	79	0170	10200603	5.00	MANEVU2002	0.1320	0.0000	0.0004	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	80	0170	10200603	5.00	MANEVU2002	0.1320	0.0000	0.0004	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	81	0170	10200603	3.00	MANEVU2002	0.2970	0.0000	0.0008	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC

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MA	Middlesex	25017	1210156	01	0201	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0027	MIDDLESEX HOUSE OF CORRECTION
MA	Middlesex	25017	1210156	02	0201	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0027	MIDDLESEX HOUSE OF CORRECTION
MA	Middlesex	25017	1210159	04	0204	10200602	17.00	MANEVU2002	0.3690	0.0000	0.0000	BNZ MATERIALS INC
MA	Middlesex	25017	1210159	05	0205	10200602	17.00	MANEVU2002	0.1890	0.0000	0.0006	BNZ MATERIALS INC
MA	Middlesex	25017	1210159	16	0116	10200603	6.00	MANEVU2002	0.1095	0.0000	0.0003	BNZ MATERIALS INC
MA	Middlesex	25017	1210162	01	0101	10200501	20.00	MANEVU2002	2.0000	0.0000	0.0055	INTERSTATE CONTAINER
MA	Middlesex	25017	1210162	03	0202	10200603	4.00	MANEVU2002	0.4530	0.0000	0.0012	INTERSTATE CONTAINER
MA	Middlesex	25017	1210165	03	0101	10300601	5.00	MANEVU2002	1.0000	0.0000	0.0109	HEALTHSOUTH ST JOSEPHS HEALTHCARE CENTER
MA	Middlesex	25017	1210169	01	0101	10200501	5.00	MANEVU2002	0.1900	0.0000	0.0000	JG MCLELLAN CONCRETE
MA	Middlesex	25017	1210181	01	0101	10300401	41.00	MANEVU2002	2.0000	0.0000	0.0055	ST MEMORIAL MEDICAL
MA	Middlesex	25017	1210181	01	0201	10300602	41.00	MANEVU2002	1.0000	0.0000	0.0027	ST MEMORIAL MEDICAL
MA	Middlesex	25017	1210181	02	0101	10300401	41.00	MANEVU2002	2.0000	0.0000	0.0055	ST MEMORIAL MEDICAL
MA	Middlesex	25017	1210181	02	0201	10300602	41.00	MANEVU2002	1.0000	0.0000	0.0027	ST MEMORIAL MEDICAL
MA	Middlesex	25017	1210181	03	0101	10300401	41.00	MANEVU2002	2.0000	0.0000	0.0055	ST MEMORIAL MEDICAL
MA	Middlesex	25017	1210181	03	0201	10300602	41.00	MANEVU2002	1.0000	0.0000	0.0027	ST MEMORIAL MEDICAL
MA	Middlesex	25017	1210193	04	0104	10200603	6.00	MANEVU2002	0.3525	0.0000	0.0004	SPECIALTY MATERIALS INCORPORATED
MA	Middlesex	25017	1210193	05	0105	10200603	6.00	MANEVU2002	0.3060	0.0000	0.0003	SPECIALTY MATERIALS INCORPORATED
MA	Middlesex	25017	1210215	01	0101	10200603	9.00	MANEVU2002	1.0000	0.0000	0.0011	LOWELL HOUSING AUTHORITY
MA	Middlesex	25017	1210215	02	0101	10200603	9.00	MANEVU2002	1.0000	0.0000	0.0011	LOWELL HOUSING AUTHORITY
MA	Middlesex	25017	1210215	03	0101	10200603	9.00	MANEVU2002	1.0000	0.0000	0.0011	LOWELL HOUSING AUTHORITY
MA	Middlesex	25017	1210232	01	0101	10200602	12.00	MANEVU2002	1.0000	0.0000	0.0027	CROSSPOINT LIMITED
MA	Middlesex	25017	1210247	01	0101	10200401	69.00	MANEVU2002	17.0000	0.0000	0.0411	BAKER COMMODITIES
MA	Middlesex	25017	1210247	01	0201	10200602	69.00	MANEVU2002	5.0000	0.0000	0.0121	BAKER COMMODITIES
MA	Middlesex	25017	1210247	03	0103	10200504	18.00	MANEVU2002	0.0950	0.0000	0.0001	BAKER COMMODITIES
MA	Middlesex	25017	1210247	04	0103	10200602	16.00	MANEVU2002	0.0860	0.0000	0.0000	BAKER COMMODITIES
MA	Middlesex	25017	1210247	05	0103	10200603	8.00	MANEVU2002	0.6010	0.0000	0.0027	BAKER COMMODITIES
MA	Middlesex	25017	1210255	01	0101	10300602	23.00	MANEVU2002	2.0000	0.0000	0.0110	TEWKSBURY HOSPITAL
MA	Middlesex	25017	1210255	02	0101	10300602	51.00	MANEVU2002	2.0000	0.0000	0.0000	TEWKSBURY HOSPITAL
MA	Middlesex	25017	1210255	02	0201	10300401	51.00	MANEVU2002	10.0000	0.0000	0.0000	TEWKSBURY HOSPITAL
MA	Middlesex	25017	1210255	03	0101	10300602	66.00	MANEVU2002	2.0000	0.0000	0.0000	TEWKSBURY HOSPITAL
MA	Middlesex	25017	1210255	03	0201	10300401	66.00	MANEVU2002	10.0000	0.0000	0.0000	TEWKSBURY HOSPITAL
MA	Middlesex	25017	1210256	01	0101	10200603	2.00	MANEVU2002	0.1000	0.0000	0.0001	CABOT CORPORATION
MA	Middlesex	25017	1210256	02	0101	10200603	2.00	MANEVU2002	0.1000	0.0000	0.0001	CABOT CORPORATION
MA	Middlesex	25017	1210256	03	0102	10200603	2.00	MANEVU2002	0.1000	0.0000	0.0001	CABOT CORPORATION
MA	Middlesex	25017	1210256	04	0102	10200603	2.00	MANEVU2002	0.1000	0.0000	0.0001	CABOT CORPORATION
MA	Middlesex	25017	1210265	03	0203	10300602	60.00	MANEVU2002	4.0000	0.0000	0.0066	LOWELL COGEN COMPANY
MA	Middlesex	25017	1210265	04	0204	10300603	60.00	MANEVU2002	3.0000	0.0000	0.0043	LOWELL COGEN COMPANY
MA	Middlesex	25017	1210265	04	0104	10300501	60.00	MANEVU2002	0.4010	0.0000	0.0006	LOWELL COGEN COMPANY
MA	Middlesex	25017	1210265	09	0106	10200501	1.00	MANEVU2002	0.0460	0.0000	0.0001	LOWELL COGEN COMPANY
MA	Middlesex	25017	1210265	10	0106	10200603	1.00	MANEVU2002	0.0225	0.0000	0.0002	LOWELL COGEN COMPANY
MA	Middlesex	25017	1210284	01	0101	10200603	1.00	MANEVU2002	0.0200	0.0000	0.0000	KEYSPAN ENERGY-TEWSKBURY
MA	Middlesex	25017	1210284	02	0102	10200603	3.00	MANEVU2002	0.2300	0.0000	0.0003	KEYSPAN ENERGY-TEWSKBURY
MA	Middlesex	25017	1210284	10	0110	10200602	20.00	MANEVU2002	0.0200	0.0000	0.0000	KEYSPAN ENERGY-TEWSKBURY
MA	Middlesex	25017	1210284	11	0111	10200602	20.00	MANEVU2002	0.0200	0.0000	0.0000	KEYSPAN ENERGY-TEWSKBURY
MA	Middlesex	25017	1210284	12	0112	10200602	14.00	MANEVU2002	0.0200	0.0000	0.0000	KEYSPAN ENERGY-TEWSKBURY
MA	Middlesex	25017	1210284	13	0113	10200602	14.00	MANEVU2002	0.0200	0.0000	0.0000	KEYSPAN ENERGY-TEWSKBURY
MA	Middlesex	25017	1210301	02	0102	10200603	1.00	MANEVU2002	0.0500	0.0000	0.0001	FREUDENBERG NONWOVEN
MA	Middlesex	25017	1210316	01	0201	10300602	29.00	MANEVU2002	3.0000	0.0000	0.0082	LOWELL GENERAL HOSPITAL
MA	Middlesex	25017	1210316	01	0101	10300401	29.00	MANEVU2002	1.0000	0.0000	0.0027	LOWELL GENERAL HOSPITAL
MA	Middlesex	25017	1210316	02	0201	10300602	29.00	MANEVU2002	3.0000	0.0000	0.0082	LOWELL GENERAL HOSPITAL
MA	Middlesex	25017	1210316	02	0101	10300401	29.00	MANEVU2002	1.0000	0.0000	0.0027	LOWELL GENERAL HOSPITAL
MA	Middlesex	25017	1210316	03	0201	10300602	29.00	MANEVU2002	3.0000	0.0000	0.0082	LOWELL GENERAL HOSPITAL

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MA	Middlesex	25017	1210316	03	0101	10300401	29.00	MANEVU2002	1.0000	0.0000	0.0027	LOWELL GENERAL HOSPITAL
MA	Middlesex	25017	1210329	01	0101	10300602	3.00	MANEVU2002	2.0000	0.0000	0.0000	NORTH STREET SCHOOL
MA	Middlesex	25017	1210329	02	0101	10300602	3.00	MANEVU2002	2.0000	0.0000	0.0000	NORTH STREET SCHOOL
MA	Middlesex	25017	1210330	01	0101	10200602	17.00	MANEVU2002	0.4110	0.0000	0.0011	M/A COM INC
MA	Middlesex	25017	1210330	02	0102	10200602	17.00	MANEVU2002	0.4110	0.0000	0.0011	M/A COM INC
MA	Middlesex	25017	1210335	11	0107	10200603	1.00	MANEVU2002	0.0530	0.0000	0.0001	CAMBRIDGE TOOL & MANUFACTURING COMPANY
MA	Middlesex	25017	1210362	04	0103	10200501	1.00	MANEVU2002	0.0145	0.0000	0.0000	UAE-LOWELL POWER LLC
MA	Middlesex	25017	1210362	05	0104	10200501	5.00	MANEVU2002	0.2865	0.0000	0.0008	UAE-LOWELL POWER LLC
MA	Middlesex	25017	1210373	11	0111	10200603	3.00	MANEVU2002	2.4465	0.0000	0.0067	M/A COM INCORPORATED
MA	Middlesex	25017	1210373	12	0111	10200603	3.00	MANEVU2002	2.4465	0.0000	0.0067	M/A COM INCORPORATED
MA	Middlesex	25017	1210386	01	0201	10200602	21.00	MANEVU2002	0.1930	0.0000	0.0005	SOUTHERN CONTAINER
MA	Middlesex	25017	1210386	02	0201	10200602	21.00	MANEVU2002	0.1930	0.0000	0.0005	SOUTHERN CONTAINER
MA	Middlesex	25017	1210395	09	0109	10300603	1.00	MANEVU2002	0.0150	0.0000	0.0000	FINISH UNLIMITED INCORPORATED
MA	Middlesex	25017	1210406	01	0101	10300603	3.00	MANEVU2002	0.6400	0.0000	0.0000	495 NETWORK CENTER
MA	Middlesex	25017	1210406	02	0101	10300603	3.00	MANEVU2002	0.9000	0.0000	0.0000	495 NETWORK CENTER
MA	Middlesex	25017	1210406	03	0102	10300603	5.00	MANEVU2002	0.6400	0.0000	0.0000	495 NETWORK CENTER
MA	Middlesex	25017	1210406	04	0102	10300603	5.00	MANEVU2002	0.6400	0.0000	0.0000	495 NETWORK CENTER
MA	Middlesex	25017	1210406	05	0103	10300603	2.00	MANEVU2002	0.6400	0.0000	0.0000	495 NETWORK CENTER
MA	Middlesex	25017	1210408	02	0202	10300501	8.00	MANEVU2002	0.0990	0.0000	0.0000	UMASS LOWELL - WEST CAMPUS
MA	Middlesex	25017	1210412	01	0101	10300603	12.00	MANEVU2002	1.7000	0.0000	0.0047	VERIZON MASSACHUSETTS
MA	Middlesex	25017	1210418	01	0101	10200501	8.00	MANEVU2002	0.1600	0.0000	0.0004	GRANITE STATE-WESTFORD
MA	Middlesex	25017	1210892	02	0101	10200603	8.00	MANEVU2002	1.0000	0.0000	0.0011	LOWELL HOUSING AUTHORITY
MA	Middlesex	25017	1210892	03	0101	10200603	8.00	MANEVU2002	1.0000	0.0000	0.0011	LOWELL HOUSING AUTHORITY
MA	Middlesex	25017	1210893	01	0101	10200603	9.00	MANEVU2002	1.0000	0.0000	0.0011	LOWELL HOUSING AUTHORITY
MA	Middlesex	25017	1210893	02	0101	10300603	9.00	MANEVU2002	1.0000	0.0000	0.0011	LOWELL HOUSING AUTHORITY
MA	Middlesex	25017	1210893	03	0101	10200603	9.00	MANEVU2002	1.0000	0.0000	0.0011	LOWELL HOUSING AUTHORITY
MA	Middlesex	25017	1210901	02	0102	10300603	4.00	MANEVU2002	0.0935	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	03	0103	10300603	4.00	MANEVU2002	0.0590	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	04	0101	10300603	4.00	MANEVU2002	0.0010	0.0000	0.0000	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	05	0104	10300603	4.00	MANEVU2002	0.0825	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	06	0102	10300603	4.00	MANEVU2002	0.0935	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	07	0105	10300603	8.00	MANEVU2002	0.0390	0.0000	0.0000	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	08	0104	10300603	4.00	MANEVU2002	0.0825	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	09	0106	10300603	8.00	MANEVU2002	0.0390	0.0000	0.0000	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	10	0107	10300603	6.00	MANEVU2002	0.1210	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	11	0108	10300603	6.00	MANEVU2002	0.1210	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	12	0109	10300603	6.00	MANEVU2002	0.1210	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	22	0103	10300603	4.00	MANEVU2002	0.0590	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210907	01	0101	10200401	29.00	MANEVU2002	9.0000	0.0000	0.0247	VERYFINE PRODUCTS INC
MA	Middlesex	25017	1210907	02	0101	10200401	33.00	MANEVU2002	9.0000	0.0000	0.0247	VERYFINE PRODUCTS INC
MA	Middlesex	25017	1210907	03	0101	10200401	33.00	MANEVU2002	9.0000	0.0000	0.0247	VERYFINE PRODUCTS INC
MA	Middlesex	25017	1210907	04	0102	10200603	4.00	MANEVU2002	0.5000	0.0000	0.0014	VERYFINE PRODUCTS INC
MA	Middlesex	25017	1210907	06	0104	10200603	1.00	MANEVU2002	0.0345	0.0000	0.0001	VERYFINE PRODUCTS INC
MA	Middlesex	25017	1210916	01	0101	10200401	7.00	MANEVU2002	1.0000	0.0000	0.0011	PEPPERHORN LLC
MA	Middlesex	25017	1210916	02	0102	10200401	9.00	MANEVU2002	1.0000	0.0000	0.0011	PEPPERHORN LLC
MA	Middlesex	25017	1210926	01	0101	10200602	10.00	MANEVU2002	2.0000	0.0000	0.0055	SHANKLIN CORPORATION
MA	Middlesex	25017	1210928	01	0101	10300504	10.00	MANEVU2002	1.0000	0.0000	0.0000	COURIER WESTFORD
MA	Middlesex	25017	1210932	01	0101	10300603	2.00	MANEVU2002	0.3400	0.0000	0.0009	WESTFORD ANODIZING CORPORATION
MA	Middlesex	25017	1210937	01	0101	10300602	15.00	MANEVU2002	1.3150	0.0000	0.0014	NASOYA FOODS INC
MA	Middlesex	25017	1210937	02	0102	10300603	5.00	MANEVU2002	0.3290	0.0000	0.0004	NASOYA FOODS INC
MA	Middlesex	25017	1210937	03	0103	10300602	15.00	MANEVU2002	0.1540	0.0000	0.0002	NASOYA FOODS INC
MA	Middlesex	25017	1210937	04	0104	10300602	2.00	MANEVU2002	0.1540	0.0000	0.0004	NASOYA FOODS INC

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MA	Middlesex	25017	1214002	01	0101	10200603	12.00	MANEVU2002	1.0000	0.0000	0.0016	CPF CO-OP INC
MA	Middlesex	25017	1214002	02	0102	10200602	25.00	MANEVU2002	1.0000	0.0000	0.0016	CPF CO-OP INC
MA	Middlesex	25017	1214008	01	0101	10200501	12.00	MANEVU2002	2.0000	0.0000	0.0000	AGGREGATE INDUSTRIES INC
MA	Middlesex	25017	1214011	04	0103	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0011	DEVENS COMMERCE CTR
MA	Middlesex	25017	1214011	05	0103	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0027	DEVENS COMMERCE CTR
MA	Middlesex	25017	1214011	33	0223	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0011	DEVENS COMMERCE CTR
MA	Norfolk	25021	1190073	01	0101	10200504	8.00	MANEVU2002	1.0000	0.0000	0.0000	COUNTRY CLUB THE
MA	Norfolk	25021	1190081	01	0101	10300501	15.00	MANEVU2002	1.0000	0.0000	0.0027	BRAINTREE HOSPITAL LLC
MA	Norfolk	25021	1190081	02	0101	10300501	15.00	MANEVU2002	1.0000	0.0000	0.0027	BRAINTREE HOSPITAL LLC
MA	Norfolk	25021	1190110	01	0101	10200401	15.00	MANEVU2002	2.5000	0.0000	0.0069	DRAPER PROPERTIES INCORPORATED
MA	Norfolk	25021	1190110	01	0201	10200602	15.00	MANEVU2002	2.5000	0.0000	0.0069	DRAPER PROPERTIES INCORPORATED
MA	Norfolk	25021	1190110	02	0102	10200401	15.00	MANEVU2002	0.6400	0.0000	0.0018	DRAPER PROPERTIES INCORPORATED
MA	Norfolk	25021	1190110	02	0202	10300602	15.00	MANEVU2002	1.6000	0.0000	0.0044	DRAPER PROPERTIES INCORPORATED
MA	Norfolk	25021	1190113	01	0101	10200603	9.00	MANEVU2002	4.0000	0.0000	0.0110	CASUAL MALE CORPORATION
MA	Norfolk	25021	1190113	02	0103	10200603	9.00	MANEVU2002	4.0000	0.0000	0.0110	CASUAL MALE CORPORATION
MA	Norfolk	25021	1190113	03	0102	10200603	9.00	MANEVU2002	3.0000	0.0000	0.0082	CASUAL MALE CORPORATION
MA	Norfolk	25021	1190114	01	0101	10200401	70.00	MANEVU2002	8.0000	0.0000	0.0220	PLYMOUTH RUBBER COMPANY
MA	Norfolk	25021	1190114	01	0201	10200602	70.00	MANEVU2002	5.0000	0.0000	0.0137	PLYMOUTH RUBBER COMPANY
MA	Norfolk	25021	1190114	02	0101	10200401	70.00	MANEVU2002	8.0000	0.0000	0.0220	PLYMOUTH RUBBER COMPANY
MA	Norfolk	25021	1190114	02	0201	10200602	70.00	MANEVU2002	5.0000	0.0000	0.0137	PLYMOUTH RUBBER COMPANY
MA	Norfolk	25021	1190114	03	0101	10200401	70.00	MANEVU2002	8.0000	0.0000	0.0220	PLYMOUTH RUBBER COMPANY
MA	Norfolk	25021	1190114	03	0201	10200602	70.00	MANEVU2002	5.0000	0.0000	0.0137	PLYMOUTH RUBBER COMPANY
MA	Norfolk	25021	1190198	01	0101	10200603	1.00	MANEVU2002	1.0000	0.0000	0.0027	SOUTH SHORE PLATING COMPANY INCORPORATED
MA	Norfolk	25021	1190228	02	0203	10300602	21.00	MANEVU2002	1.0000	0.0000	0.0000	SOUTH SHORE HOSPITAL
MA	Norfolk	25021	1190228	03	0103	10300504	21.00	MANEVU2002	4.0000	0.0000	0.0000	SOUTH SHORE HOSPITAL
MA	Norfolk	25021	1190228	04	0103	10300504	8.00	MANEVU2002	4.0000	0.0000	0.0193	SOUTH SHORE HOSPITAL
MA	Norfolk	25021	1190228	05	0103	10300504	21.00	MANEVU2002	4.0000	0.0000	0.0000	SOUTH SHORE HOSPITAL
MA	Norfolk	25021	1190236	01	0101	10300504	5.00	MANEVU2002	0.5000	0.0000	0.0003	GENERAL DYNAMICS C4 SYSTEMS
MA	Norfolk	25021	1190236	02	0102	10200504	4.00	MANEVU2002	1.0000	0.0000	0.0005	GENERAL DYNAMICS C4 SYSTEMS
MA	Norfolk	25021	1190246	03	0201	10200602	22.00	MANEVU2002	2.0000	0.0000	0.0055	SOUTHWOOD COMMUNITY HOSPITAL
MA	Norfolk	25021	1190260	01	0101	10200401	44.00	MANEVU2002	8.0000	0.0000	0.0220	HOLLINGSWORTH & VOSE
MA	Norfolk	25021	1190260	01	0201	10300602	44.00	MANEVU2002	0.8000	0.0000	0.0022	HOLLINGSWORTH & VOSE
MA	Norfolk	25021	1190261	01	0101	10300401	51.00	MANEVU2002	9.0000	0.0000	0.0247	WELLESLEY COLLEGE
MA	Norfolk	25021	1190261	02	0101	10300401	51.00	MANEVU2002	15.0000	0.0000	0.0412	WELLESLEY COLLEGE
MA	Norfolk	25021	1190261	03	0201	10300602	5.00	MANEVU2002	0.1000	0.0000	0.0005	WELLESLEY COLLEGE
MA	Norfolk	25021	1190261	04	0201	10300602	56.00	MANEVU2002	8.0000	0.0000	0.0220	WELLESLEY COLLEGE
MA	Norfolk	25021	1190261	04	0101	10300401	56.00	MANEVU2002	0.2100	0.0000	0.0006	WELLESLEY COLLEGE
MA	Norfolk	25021	1190265	01	0101	10200401	36.00	MANEVU2002	22.0000	0.0000	0.0604	POLAROID CORPORATION
MA	Norfolk	25021	1190304	07	0104	10300603	2.00	MANEVU2002	0.4550	0.0000	0.0000	MWRA FORE RIVER STAGING AREA
MA	Norfolk	25021	1190304	08	0104	10300603	2.00	MANEVU2002	0.4550	0.0000	0.0000	MWRA FORE RIVER STAGING AREA
MA	Norfolk	25021	1190304	09	0105	10300603	8.00	MANEVU2002	0.2255	0.0000	0.0001	MWRA FORE RIVER STAGING AREA
MA	Norfolk	25021	1190306	02	0102	10200602	17.00	MANEVU2002	1.0000	0.0000	0.0027	COCA COLA BOTTLING C
MA	Norfolk	25021	1190306	03	0103	10200602	17.00	MANEVU2002	1.0000	0.0000	0.0027	COCA COLA BOTTLING C
MA	Norfolk	25021	1190438	01	0301	10300401	25.00	MANEVU2002	2.0000	0.0000	0.0055	BROOKHOUSE CONDOMINIUMS
MA	Norfolk	25021	1190438	02	0301	10300401	25.00	MANEVU2002	2.0000	0.0000	0.0055	BROOKHOUSE CONDOMINIUMS
MA	Norfolk	25021	1190438	03	0301	10300401	25.00	MANEVU2002	2.0000	0.0000	0.0055	BROOKHOUSE CONDOMINIUMS
MA	Norfolk	25021	1190438	04	0301	10300401	25.00	MANEVU2002	2.0000	0.0000	0.0055	BROOKHOUSE CONDOMINIUMS
MA	Norfolk	25021	1190444	01	0101	10300501	4.00	MANEVU2002	1.0000	0.0000	0.0011	NEWMAN BUILDING
MA	Norfolk	25021	1190444	02	0101	10300501	4.00	MANEVU2002	1.0000	0.0000	0.0011	NEWMAN BUILDING
MA	Norfolk	25021	1190452	01	0101	10200401	10.00	MANEVU2002	1.0000	0.0000	0.0005	GENERAL DYNAMICS CORPORATION
MA	Norfolk	25021	1190452	02	0101	10200401	10.00	MANEVU2002	1.0000	0.0000	0.0005	GENERAL DYNAMICS CORPORATION
MA	Norfolk	25021	1190452	06	0105	10200603	1.00	MANEVU2002	0.0210	0.0000	0.0001	GENERAL DYNAMICS CORPORATION

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MA	Norfolk	25021	1190497	01	0101	10200401	91.00	MANEVU2002	30.0000	0.0000	0.0824	TWIN RIVERS TECHNOLOGY
MA	Norfolk	25021	1190497	02	0101	10200401	44.00	MANEVU2002	12.0000	0.0000	0.0330	TWIN RIVERS TECHNOLOGY
MA	Norfolk	25021	1190558	03	0102	10300504	8.00	MANEVU2002	2.0000	0.0000	0.0055	MILTON HOSPITAL
MA	Norfolk	25021	1190558	13	0101	10300504	1.00	MANEVU2002	2.0000	0.0000	0.0055	MILTON HOSPITAL
MA	Norfolk	25021	1190559	04	0101	10300504	3.00	MANEVU2002	1.0000	0.0000	0.0027	DEACONESS GLOVER HOSPITAL
MA	Norfolk	25021	1190564	02	0102	10200501	1.00	MANEVU2002	0.2425	0.0000	0.0007	CLEAN HARBORS OF BRAINTREE
MA	Norfolk	25021	1190564	03	0103	10200501	6.00	MANEVU2002	0.0410	0.0000	0.0001	CLEAN HARBORS OF BRAINTREE
MA	Norfolk	25021	1190569	30	0121	10200603	1.00	MANEVU2002	0.0045	0.0000	0.0000	WOLLASTON ALLOYS INC
MA	Norfolk	25021	1190578	01	0101	10300602	36.00	MANEVU2002	2.0000	0.0000	0.0055	MCI CEDAR JUNCTION
MA	Norfolk	25021	1190578	02	0101	10300504	36.00	MANEVU2002	2.0000	0.0000	0.0055	MCI CEDAR JUNCTION
MA	Norfolk	25021	1190578	03	0101	10300504	36.00	MANEVU2002	1.0000	0.0000	0.0027	MCI CEDAR JUNCTION
MA	Norfolk	25021	1190581	01	0101	10300401	35.00	MANEVU2002	10.0000	0.0000	0.0275	MCI NORFOLK
MA	Norfolk	25021	1190581	02	0101	10300401	35.00	MANEVU2002	10.0000	0.0000	0.0275	MCI NORFOLK
MA	Norfolk	25021	1190581	03	0101	10300401	35.00	MANEVU2002	10.0000	0.0000	0.0275	MCI NORFOLK
MA	Norfolk	25021	1190591	01	0101	10300401	29.00	MANEVU2002	6.0000	0.0000	0.0330	QUINCY MEDICAL CENTER
MA	Norfolk	25021	1190591	02	0101	10300401	29.00	MANEVU2002	12.0000	0.0000	0.0000	QUINCY MEDICAL CENTER
MA	Norfolk	25021	1190599	01	0101	10200504	8.00	MANEVU2002	1.0000	0.0000	0.0027	CUMBERLAND FARMS INC
MA	Norfolk	25021	1190599	03	0102	10200504	3.00	MANEVU2002	1.0000	0.0000	0.0000	CUMBERLAND FARMS INC
MA	Norfolk	25021	1190599	04	0103	10200501	2.00	MANEVU2002	0.0875	0.0000	0.0002	CUMBERLAND FARMS INC
MA	Norfolk	25021	1190602	01	0101	10200603	6.00	MANEVU2002	0.3440	0.0000	0.0009	EMERSON & CUMING COMPOSITE MATERIALS
MA	Norfolk	25021	1190678	12	0112	10200602	16.00	MANEVU2002	1.0000	0.0000	0.0027	GILLETTE
MA	Norfolk	25021	1190797	02	0101	10200603	8.00	MANEVU2002	0.2175	0.0000	0.0000	GAF MATERIALS CORP
MA	Norfolk	25021	1190868	01	0101	10300501	10.00	MANEVU2002	7.0000	0.0000	0.0000	REGENCY PARK
MA	Norfolk	25021	1190981	01	0101	10300504	16.00	MANEVU2002	1.0000	0.0000	0.0000	WELLESLEY PUBLIC SCHOOLS
MA	Norfolk	25021	1191010	01	0101	10300401	23.00	MANEVU2002	1.0000	0.0000	0.0027	MASSACHUSETTS HOSPITAL SCHOOL
MA	Norfolk	25021	1191010	01	0201	10300602	23.00	MANEVU2002	1.0000	0.0000	0.0027	MASSACHUSETTS HOSPITAL SCHOOL
MA	Norfolk	25021	1191010	02	0101	10300401	23.00	MANEVU2002	1.0000	0.0000	0.0027	MASSACHUSETTS HOSPITAL SCHOOL
MA	Norfolk	25021	1191010	02	0201	10300602	23.00	MANEVU2002	1.0000	0.0000	0.0027	MASSACHUSETTS HOSPITAL SCHOOL
MA	Norfolk	25021	1191010	03	0101	10300401	11.00	MANEVU2002	1.0000	0.0000	0.0027	MASSACHUSETTS HOSPITAL SCHOOL
MA	Norfolk	25021	1191010	03	0201	10300602	11.00	MANEVU2002	1.0000	0.0000	0.0027	MASSACHUSETTS HOSPITAL SCHOOL
MA	Norfolk	25021	1191013	01	0101	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0027	NILES COMPANY INCORPORATED, THE
MA	Norfolk	25021	1191013	02	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	NILES COMPANY INCORPORATED, THE
MA	Norfolk	25021	1191038	01	0101	10300401	21.00	MANEVU2002	2.1000	0.0000	0.0058	CARITAS NORWOOD HOSP
MA	Norfolk	25021	1191038	01	0201	10300602	21.00	MANEVU2002	0.3900	0.0000	0.0011	CARITAS NORWOOD HOSP
MA	Norfolk	25021	1191038	02	0101	10300401	21.00	MANEVU2002	2.1000	0.0000	0.0058	CARITAS NORWOOD HOSP
MA	Norfolk	25021	1191038	02	0201	10300602	21.00	MANEVU2002	0.3650	0.0000	0.0010	CARITAS NORWOOD HOSP
MA	Norfolk	25021	1191038	03	0101	10300401	21.00	MANEVU2002	2.1000	0.0000	0.0058	CARITAS NORWOOD HOSP
MA	Norfolk	25021	1191038	03	0201	10300602	21.00	MANEVU2002	0.3900	0.0000	0.0011	CARITAS NORWOOD HOSP
MA	Norfolk	25021	1191043	10	0101	10200501	0.00	MANEVU2002	0.0900	0.0000	0.0001	CAMGER CHEMICAL
MA	Norfolk	25021	1191071	01	0201	10200603	10.00	MANEVU2002	0.6415	0.0000	0.0000	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191071	02	0201	10200603	11.00	MANEVU2002	0.6415	0.0000	0.0000	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191071	04	0103	10200603	10.00	MANEVU2002	0.6390	0.0000	0.0001	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191071	05	0103	10200603	10.00	MANEVU2002	0.6380	0.0000	0.0001	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191071	07	0105	10200603	3.00	MANEVU2002	0.2210	0.0000	0.0000	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191071	08	0105	10200603	4.00	MANEVU2002	0.2210	0.0000	0.0000	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191071	09	0106	10200603	2.00	MANEVU2002	0.1220	0.0000	0.0000	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191071	16	0111	10300603	9.00	MANEVU2002	0.5700	0.0000	0.0016	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191072	01	0101	10200401	21.00	MANEVU2002	2.0000	0.0000	0.0022	BIRD MACHINE
MA	Norfolk	25021	1191072	02	0101	10200401	21.00	MANEVU2002	2.0000	0.0000	0.0022	BIRD MACHINE
MA	Norfolk	25021	1191089	01	0101	10200501	5.00	MANEVU2002	0.0760	0.0000	0.0001	FACTORY MUTUAL ENGINEERING
MA	Norfolk	25021	1191089	03	0201	10200602	12.00	MANEVU2002	0.3800	0.0000	0.0004	FACTORY MUTUAL ENGINEERING
MA	Norfolk	25021	1191089	08	0106	10300501	0.00	MANEVU2002	0.0765	0.0000	0.0002	FACTORY MUTUAL ENGINEERING

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Plant Name
MA	Norfolk	25021	1191137	01	0101	10200501	8.00	MANEVU2002	0.0800	0.0000	0.0002	VARNEY BROS SAND & GRAVEL
MA	Norfolk	25021	1191145	01	0101	10200501	13.00	MANEVU2002	1.0000	0.0000	0.0000	NORWOOD COMMERCE CENTER
MA	Norfolk	25021	1191145	03	0102	10200501	8.00	MANEVU2002	0.2860	0.0000	0.0000	NORWOOD COMMERCE CENTER
MA	Norfolk	25021	1191205	01	0101	10200603	2.00	MANEVU2002	0.3125	0.0000	0.0009	MICROWAVE DEVELOPMENT
MA	Norfolk	25021	1191256	02	0102	10200501	5.00	MANEVU2002	1.0000	0.0000	0.0027	ROSENFELD CONCRETE COMPANY
MA	Norfolk	25021	1191292	01	0101	10200603	2.00	MANEVU2002	0.0510	0.0000	0.0001	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191292	02	0101	10200603	2.00	MANEVU2002	0.0510	0.0000	0.0001	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191292	03	0101	10200603	3.00	MANEVU2002	0.0750	0.0000	0.0002	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191292	04	0102	10200603	1.00	MANEVU2002	0.0205	0.0000	0.0001	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191320	90	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	G&L TRILLING HOUSE
MA	Norfolk	25021	1191326	01	0101	10200501	1.00	MANEVU2002	0.0045	0.0000	0.0000	MWRA BROOKLINE PUMP
MA	Norfolk	25021	1191562	01	0101	10300504	6.00	MANEVU2002	1.0000	0.0000	0.0027	BARCLAY HOUSE THE
MA	Norfolk	25021	1191590	01	0101	10300501	14.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON SCIENTIFIC CORPORATION
MA	Norfolk	25021	1191590	02	0101	10300501	14.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON SCIENTIFIC CORPORATION
MA	Norfolk	25021	1191595	01	0101	10300602	46.00	MANEVU2002	1.0000	0.0000	0.0027	STATE STREET BANK SQUARE
MA	Norfolk	25021	1191595	02	0102	10300602	46.00	MANEVU2002	1.0000	0.0000	0.0027	STATE STREET BANK SQUARE
MA	Norfolk	25021	1191595	19	0109	10300501	10.00	MANEVU2002	0.0115	0.0000	0.0000	STATE STREET BANK SQUARE
MA	Norfolk	25021	1191698	01	0101	10300602	21.00	MANEVU2002	0.1600	0.0000	0.0000	REEBOK WORLD HEADQUARTERS
MA	Norfolk	25021	1191698	02	0101	10300602	20.00	MANEVU2002	0.1600	0.0000	0.0000	REEBOK WORLD HEADQUARTERS
MA	Norfolk	25021	1191724	04	0104	10300501	1.00	MANEVU2002	0.0345	0.0000	0.0000	MWRA BRAINTREE WEYMOUTH
MA	Norfolk	25021	1191744	01	0101	10200501	7.00	MANEVU2002	0.5155	0.0000	0.0014	MWRA NUT ISLAND HDWRKS
MA	Norfolk	25021	1191744	02	0101	10200501	7.00	MANEVU2002	0.5155	0.0000	0.0014	MWRA NUT ISLAND HDWRKS
MA	Norfolk	25021	1191744	03	0101	10200501	7.00	MANEVU2002	0.5155	0.0000	0.0014	MWRA NUT ISLAND HDWRKS
MA	Norfolk	25021	1191892	01	0101	10300602	31.00	MANEVU2002	2.5200	0.0000	0.0000	BABSON COLLEGE
MA	Norfolk	25021	1191892	02	0101	10300603	5.00	MANEVU2002	0.1800	0.0000	0.0005	BABSON COLLEGE
MA	Norfolk	25021	1191892	05	0102	10300603	9.00	MANEVU2002	0.3000	0.0000	0.0008	BABSON COLLEGE
MA	Norfolk	25021	1191892	06	0102	10300603	6.00	MANEVU2002	0.0900	0.0000	0.0002	BABSON COLLEGE
MA	Norfolk	25021	1191892	07	0103	10300603	27.00	MANEVU2002	1.1700	0.0000	0.0032	BABSON COLLEGE
MA	Norfolk	25021	1191892	09	0103	10300603	7.00	MANEVU2002	0.2900	0.0000	0.0008	BABSON COLLEGE
MA	Norfolk	25021	1191892	11	0104	10300501	3.00	MANEVU2002	1.1700	0.0000	0.0032	BABSON COLLEGE
MA	Norfolk	25021	1191892	12	0105	10300501	3.00	MANEVU2002	0.0800	0.0000	0.0002	BABSON COLLEGE
MA	Norfolk	25021	1191892	13	0106	10300501	1.00	MANEVU2002	0.0300	0.0000	0.0001	BABSON COLLEGE
MA	Norfolk	25021	1191892	14	0107	10300501	6.00	MANEVU2002	0.4100	0.0000	0.0011	BABSON COLLEGE
MA	Norfolk	25021	1191892	15	0107	10300501	7.00	MANEVU2002	0.9900	0.0000	0.0027	BABSON COLLEGE
MA	Norfolk	25021	1191893	06	0105	10300603	3.00	MANEVU2002	0.1960	0.0000	0.0005	TRANSKARYOTIC THERAPIES, INC (TKT)
MA	Norfolk	25021	1191894	01	0101	10300603	4.00	MANEVU2002	0.3290	0.0000	0.0009	ORGANOGENESIS INC
MA	Norfolk	25021	1191894	02	0102	10300603	4.00	MANEVU2002	0.3010	0.0000	0.0008	ORGANOGENESIS INC
MA	Norfolk	25021	1191894	03	0103	10300603	6.00	MANEVU2002	0.0070	0.0000	0.0000	ORGANOGENESIS INC
MA	Norfolk	25021	1191904	01	0101	10200602	12.00	MANEVU2002	0.8840	0.0000	0.0024	TYCO ELECTRONICS CORP
MA	Norfolk	25021	1191908	01	0101	10201002	4.00	MANEVU2002	0.0040	0.0000	0.0000	KEYSPAN ENERGY-NORWOOD
MA	Norfolk	25021	1192121	01	0101	10200603	1.00	MANEVU2002	0.2800	0.0000	0.0008	AVON TAPE INC
MA	Norfolk	25021	1192121	02	0102	10200601	2.00	MANEVU2002	0.0640	0.0000	0.0002	AVON TAPE INC
MA	Norfolk	25021	1192122	01	0101	10200603	3.00	MANEVU2002	0.2300	0.0000	0.0008	CHAPMAN MFG CO INC
MA	Norfolk	25021	1192134	01	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	AVON HIGH SCHOOL
MA	Norfolk	25021	1192134	02	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	AVON HIGH SCHOOL
MA	Norfolk	25021	1192491	09	0109	10200603	2.00	MANEVU2002	0.0365	0.0000	0.0001	COURIER STOUGHTON
MA	Norfolk	25021	1192491	11	0111	10200603	2.00	MANEVU2002	0.0135	0.0000	0.0000	COURIER STOUGHTON
MA	Norfolk	25021	1192492	01	0101	10200603	5.00	MANEVU2002	0.3500	0.0000	0.0000	ARK LES CORPORATION
MA	Norfolk	25021	1192497	01	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	NEW ENGLAND SINAI HOSPITAL
MA	Norfolk	25021	1192516	04	0102	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0001	STOUGHTON HIGH SCHOOL
MA	Norfolk	25021	1195127	01	0101	10200501	21.00	MANEVU2002	0.5500	0.0000	0.0000	TRESCA BROTHERS SAND & GRAVEL
MA	Norfolk	25021	1195127	02	0102	10200501	3.00	MANEVU2002	0.0500	0.0000	0.0000	TRESCA BROTHERS SAND & GRAVEL

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MA	Norfolk	25021	1195127	14	0107	10200603	3.00	MANEVU2002	0.0400	0.0000	0.0001	TRESCA BROTHERS SAND & GRAVEL
MA	Norfolk	25021	1195639	07	0107	10200501	1.00	MANEVU2002	0.0110	0.0000	0.0000	AINSLIE CORPORATION
MA	Norfolk	25021	1195639	09	0109	10200603	1.00	MANEVU2002	0.0075	0.0000	0.0000	AINSLIE CORPORATION
MA	Norfolk	25021	1195639	10	0110	10200603	5.00	MANEVU2002	0.0735	0.0000	0.0002	AINSLIE CORPORATION
MA	Norfolk	25021	1197301	14	0114	10200603	3.00	MANEVU2002	0.2800	0.0000	0.0003	ANALOG DEVICES INCORPORATED
MA	Norfolk	25021	1197301	15	0114	10200603	3.00	MANEVU2002	0.2800	0.0000	0.0003	ANALOG DEVICES INCORPORATED
MA	Norfolk	25021	1197301	19	0116	10200603	1.00	MANEVU2002	0.2200	0.0000	0.0002	ANALOG DEVICES INCORPORATED
MA	Norfolk	25021	1197301	20	0116	10200603	1.00	MANEVU2002	0.2200	0.0000	0.0002	ANALOG DEVICES INCORPORATED
MA	Norfolk	25021	1200125	01	0101	10200401	35.00	MANEVU2002	4.0000	0.0000	0.0110	INVENSYS SYSTEMS
MA	Norfolk	25021	1200125	01	0201	10200602	35.00	MANEVU2002	1.0000	0.0000	0.0027	INVENSYS SYSTEMS
MA	Norfolk	25021	1200125	02	0101	10200401	51.00	MANEVU2002	5.0000	0.0000	0.0137	INVENSYS SYSTEMS
MA	Norfolk	25021	1200125	02	0201	10200602	51.00	MANEVU2002	1.0000	0.0000	0.0027	INVENSYS SYSTEMS
MA	Norfolk	25021	1200125	03	0102	10200401	12.00	MANEVU2002	1.0000	0.0000	0.0027	INVENSYS SYSTEMS
MA	Norfolk	25021	1200125	04	0103	10200401	13.00	MANEVU2002	1.0000	0.0000	0.0027	INVENSYS SYSTEMS
MA	Norfolk	25021	1200127	01	0101	10200401	16.00	MANEVU2002	0.7800	0.0000	0.0017	CLARK CUTLER MCDERMO
MA	Norfolk	25021	1200127	01	0201	10200602	16.00	MANEVU2002	0.7800	0.0000	0.0017	CLARK CUTLER MCDERMO
MA	Norfolk	25021	1200127	02	0101	10200401	35.00	MANEVU2002	0.7935	0.0000	0.0017	CLARK CUTLER MCDERMO
MA	Norfolk	25021	1200127	02	0201	10200602	35.00	MANEVU2002	0.7800	0.0000	0.0017	CLARK CUTLER MCDERMO
MA	Norfolk	25021	1200128	01	0101	10300602	17.00	MANEVU2002	0.2150	0.0000	0.0000	DEAN COLLEGE
MA	Norfolk	25021	1200128	02	0101	10300602	17.00	MANEVU2002	0.2375	0.0000	0.0000	DEAN COLLEGE
MA	Norfolk	25021	1200128	03	0102	10300603	4.00	MANEVU2002	0.0590	0.0000	0.0000	DEAN COLLEGE
MA	Norfolk	25021	1200128	04	0102	10300603	4.00	MANEVU2002	0.0655	0.0000	0.0000	DEAN COLLEGE
MA	Norfolk	25021	1200128	05	0103	10300603	4.00	MANEVU2002	0.1145	0.0000	0.0000	DEAN COLLEGE
MA	Norfolk	25021	1200128	06	0104	10300603	8.00	MANEVU2002	0.0635	0.0000	0.0000	DEAN COLLEGE
MA	Norfolk	25021	1200128	07	0105	10300501	8.00	MANEVU2002	1.1680	0.0000	0.0001	DEAN COLLEGE
MA	Norfolk	25021	1200128	08	0105	10200501	6.00	MANEVU2002	1.6325	0.0000	0.0002	DEAN COLLEGE
MA	Norfolk	25021	1200128	09	0105	10300603	8.00	MANEVU2002	0.1840	0.0000	0.0000	DEAN COLLEGE
MA	Norfolk	25021	1200128	10	0105	10300603	3.00	MANEVU2002	0.0270	0.0000	0.0001	DEAN COLLEGE
MA	Norfolk	25021	1200129	01	0101	10200602	10.00	MANEVU2002	1.0000	0.0000	0.0027	FRANKLIN PAINT CO
MA	Norfolk	25021	1200137	01	0101	10200603	15.00	MANEVU2002	0.7000	0.0000	0.0019	PROMA TECHNOLOGIES
MA	Norfolk	25021	1200137	02	0102	10200602	15.00	MANEVU2002	0.8000	0.0000	0.0022	PROMA TECHNOLOGIES
MA	Norfolk	25021	1200205	02	0102	10200501	1.00	MANEVU2002	0.0080	0.0000	0.0000	VARNEY BROTHERS SAND & GRAVEL INC
MA	Norfolk	25021	1200205	03	0103	10200501	1.00	MANEVU2002	0.0700	0.0000	0.0002	VARNEY BROTHERS SAND & GRAVEL INC
MA	Norfolk	25021	1200205	05	0105	10200501	1.00	MANEVU2002	0.0300	0.0000	0.0001	VARNEY BROTHERS SAND & GRAVEL INC
MA	Norfolk	25021	1200205	06	0106	10200501	3.00	MANEVU2002	0.1000	0.0000	0.0000	VARNEY BROTHERS SAND & GRAVEL INC
MA	Norfolk	25021	1200228	01	0101	10200401	20.00	MANEVU2002	3.0000	0.0000	0.0082	J&J CORRUGATED BOX CO
MA	Norfolk	25021	1200228	01	0201	10200602	20.00	MANEVU2002	0.7000	0.0000	0.0019	J&J CORRUGATED BOX CO
MA	Norfolk	25021	1200228	02	0101	10200401	27.00	MANEVU2002	4.0000	0.0000	0.0110	J&J CORRUGATED BOX CO
MA	Norfolk	25021	1200228	02	0201	10200602	27.00	MANEVU2002	1.0500	0.0000	0.0029	J&J CORRUGATED BOX CO
MA	Norfolk	25021	1200270	01	0101	10200602	10.00	MANEVU2002	1.2800	0.0000	0.0035	EMC CORPORATION
MA	Norfolk	25021	1200270	02	0102	10200603	8.00	MANEVU2002	1.0300	0.0000	0.0028	EMC CORPORATION
MA	Norfolk	25021	1200270	03	0103	10200603	1.00	MANEVU2002	0.0400	0.0000	0.0001	EMC CORPORATION
MA	Norfolk	25021	1200270	04	0104	10200603	1.00	MANEVU2002	0.1000	0.0000	0.0003	EMC CORPORATION
MA	Norfolk	25021	1200270	05	0105	10200603	1.00	MANEVU2002	0.0400	0.0000	0.0001	EMC CORPORATION
MA	Norfolk	25021	1200403	01	0101	10200603	9.00	MANEVU2002	0.1900	0.0000	0.0000	TYCO VALVES & CONTROLS LP-WRENTHAM
MA	Norfolk	25021	1200403	02	0101	10200603	8.00	MANEVU2002	0.1800	0.0000	0.0000	TYCO VALVES & CONTROLS LP-WRENTHAM
MA	Norfolk	25021	1200403	04	0103	10200603	1.00	MANEVU2002	0.0020	0.0000	0.0000	TYCO VALVES & CONTROLS LP-WRENTHAM
MA	Norfolk	25021	1200403	05	0104	10200603	1.00	MANEVU2002	0.0050	0.0000	0.0000	TYCO VALVES & CONTROLS LP-WRENTHAM
MA	Norfolk	25021	1200403	06	0105	10200602	12.00	MANEVU2002	0.0900	0.0000	0.0002	TYCO VALVES & CONTROLS LP-WRENTHAM
MA	Norfolk	25021	1200403	07	0106	10200602	12.00	MANEVU2002	0.0900	0.0000	0.0002	TYCO VALVES & CONTROLS LP-WRENTHAM
MA	Norfolk	25021	1200452	01	0101	10200603	1.00	MANEVU2002	0.0435	0.0000	0.0001	FABREEKA INTERNATIONAL INC
MA	Norfolk	25021	1200511	02	0102	10300603	20.00	MANEVU2002	2.0000	0.0000	0.0088	NORTHEAST CONCRETE PRODUCTS CORP.

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
MA	Norfolk	25021	1200538	08	0108	10300603	12.00	MANEVU2002	0.1170	0.0000	0.0003	SMTC MANUFACTURING CORPORATION
MA	Norfolk	25021	1200538	14	0114	10300603	1.00	MANEVU2002	0.0010	0.0000	0.0000	SMTC MANUFACTURING CORPORATION
MA	Norfolk	25021	1200794	02	0101	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0001	KING PHILIP REGIONAL
MA	Norfolk	25021	1200794	04	0101	10300602	30.00	MANEVU2002	1.0000	0.0000	0.0001	KING PHILIP REGIONAL
MA	Norfolk	25021	1200828	02	0101	10300401	35.00	MANEVU2002	6.0000	0.0000	0.0165	MASS WRENTHAM DEVELOPMENT CENTER
MA	Norfolk	25021	1200828	03	0101	10200602	35.00	MANEVU2002	0.2000	0.0000	0.0005	MASS WRENTHAM DEVELOPMENT CENTER
MA	Norfolk	25021	1200828	04	0101	10300401	51.00	MANEVU2002	19.0000	0.0000	0.0522	MASS WRENTHAM DEVELOPMENT CENTER
MA	Norfolk	25021	1200828	05	0101	10300401	51.00	MANEVU2002	5.0000	0.0000	0.0137	MASS WRENTHAM DEVELOPMENT CENTER
MA	Norfolk	25021	1200828	22	0103	10300603	2.00	MANEVU2002	0.1635	0.0000	0.0004	MASS WRENTHAM DEVELOPMENT CENTER
MA	Norfolk	25021	1200868	01	0101	10200401	17.00	MANEVU2002	4.0000	0.0000	0.0220	GARELICK FARMS INC
MA	Norfolk	25021	1200868	01	0201	10200602	17.00	MANEVU2002	1.0000	0.0000	0.0055	GARELICK FARMS INC
MA	Norfolk	25021	1200868	02	0102	10200401	21.00	MANEVU2002	3.0000	0.0000	0.0000	GARELICK FARMS INC
MA	Norfolk	25021	1200868	02	0202	10200602	21.00	MANEVU2002	1.0000	0.0000	0.0000	GARELICK FARMS INC
MA	Norfolk	25021	1201509	06	0106	10200603	3.00	MANEVU2002	0.4780	0.0000	0.0013	ANP BELLINGHAM
MA	Norfolk	25021	1201509	07	0107	10200603	3.00	MANEVU2002	0.1230	0.0000	0.0003	ANP BELLINGHAM
MA	Norfolk	25021	1201509	15	0115	10200603	3.00	MANEVU2002	0.1230	0.0000	0.0003	ANP BELLINGHAM
MA	Plymouth	25023	1191332	01	0101	10200503	1.00	MANEVU2002	0.0100	0.0000	0.0000	MWRA HINGHAM PUMP STATION
MA	Plymouth	25023	1192104	01	0101	10200603	8.00	MANEVU2002	1.4400	0.0000	0.0002	BRIGHTON REALTY TRUST
MA	Plymouth	25023	1192104	02	0101	10200603	6.00	MANEVU2002	1.4400	0.0000	0.0002	BRIGHTON REALTY TRUST
MA	Plymouth	25023	1192145	01	0101	10300401	44.00	MANEVU2002	9.0000	0.0000	0.0010	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	02	0101	10300401	44.00	MANEVU2002	9.0000	0.0000	0.0010	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	03	0101	10300401	44.00	MANEVU2002	9.0000	0.0000	0.0010	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	05	0102	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0027	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	06	0103	10200603	2.00	MANEVU2002	1.0000	0.0000	0.0027	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	07	0103	10200603	1.00	MANEVU2002	1.0000	0.0000	0.0027	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	14	0107	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0000	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	15	0107	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0000	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	49	0140	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0000	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	51	0141	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	52	0141	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192148	01	0101	10200501	1.00	MANEVU2002	0.0070	0.0000	0.0000	BRISCO BALING COMPANY
MA	Plymouth	25023	1192150	01	0101	10200501	5.00	MANEVU2002	0.1000	0.0000	0.0003	INSULATION TECH
MA	Plymouth	25023	1192151	01	0201	10300603	92.00	MANEVU2002	1.4055	0.0000	0.0002	MCI BRIDGEWATER CORRECTIONAL COMPLEX
MA	Plymouth	25023	1192151	02	0201	10300603	92.00	MANEVU2002	1.4055	0.0000	0.0039	MCI BRIDGEWATER CORRECTIONAL COMPLEX
MA	Plymouth	25023	1192151	03	0201	10300603	41.00	MANEVU2002	0.9370	0.0000	0.0026	MCI BRIDGEWATER CORRECTIONAL COMPLEX
MA	Plymouth	25023	1192180	01	0101	10300501	2.00	MANEVU2002	0.3120	0.0000	0.0009	BROCKTON HOSPITAL
MA	Plymouth	25023	1192180	02	0101	10300501	2.00	MANEVU2002	0.3120	0.0000	0.0009	BROCKTON HOSPITAL
MA	Plymouth	25023	1192180	03	0201	10300602	17.00	MANEVU2002	1.0630	0.0000	0.0029	BROCKTON HOSPITAL
MA	Plymouth	25023	1192180	04	0201	10300602	10.00	MANEVU2002	1.0630	0.0000	0.0029	BROCKTON HOSPITAL
MA	Plymouth	25023	1192184	01	0101	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0027	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	02	0101	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0027	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	03	0101	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0027	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	10	0106	10300603	1.00	MANEVU2002	0.1250	0.0000	0.0003	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	11	0106	10300603	1.00	MANEVU2002	0.1250	0.0000	0.0003	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	12	0106	10300603	1.00	MANEVU2002	0.1250	0.0000	0.0003	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	13	0106	10300603	1.00	MANEVU2002	0.1250	0.0000	0.0003	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	19	0106	10300601	1.00	MANEVU2002	0.1250	0.0000	0.0003	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	20	0106	10300603	1.00	MANEVU2002	0.1250	0.0000	0.0003	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	21	0106	10300603	1.00	MANEVU2002	0.1250	0.0000	0.0003	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192185	01	0201	10200602	18.00	MANEVU2002	3.0000	0.0000	0.0082	CHURCHILL LINEN SERVICE
MA	Plymouth	25023	1192201	01	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	FAIRFIELD FARMS KITC
MA	Plymouth	25023	1192201	01	0201	10200602	10.00	MANEVU2002	1.0000	0.0000	0.0027	FAIRFIELD FARMS KITC

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MA	Plymouth	25023	1192201	02	0101	10300501	8.00	MANEVU2002	1.0000	0.0000	0.0027	FAIRFIELD FARMS KITC
MA	Plymouth	25023	1192208	01	0101	10200603	3.00	MANEVU2002	0.0010	0.0000	0.0000	BROCKTON MULTI SERVICE CENTER
MA	Plymouth	25023	1192208	02	0101	10200603	3.00	MANEVU2002	0.0010	0.0000	0.0000	BROCKTON MULTI SERVICE CENTER
MA	Plymouth	25023	1192224	02	0102	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0027	SUPERIOR BAKING COMPANY
MA	Plymouth	25023	1192229	01	0201	10300603	28.00	MANEVU2002	1.0000	0.0000	0.0016	US VA MEDICAL CENTER
MA	Plymouth	25023	1192229	02	0201	10300602	28.00	MANEVU2002	1.0000	0.0000	0.0002	US VA MEDICAL CENTER
MA	Plymouth	25023	1192229	03	0201	10300602	22.00	MANEVU2002	1.0000	0.0000	0.0021	US VA MEDICAL CENTER
MA	Plymouth	25023	1192233	01	0101	10200602	14.00	MANEVU2002	0.2700	0.0000	0.0000	BROCKTON SSI WWTP
MA	Plymouth	25023	1192233	03	0103	10200603	2.00	MANEVU2002	1.0000	0.0000	0.0000	BROCKTON SSI WWTP
MA	Plymouth	25023	1192233	04	0104	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0000	BROCKTON SSI WWTP
MA	Plymouth	25023	1192233	06	0106	10200501	4.00	MANEVU2002	2.0000	0.0000	0.0011	BROCKTON SSI WWTP
MA	Plymouth	25023	1192261	01	0101	10200603	6.00	MANEVU2002	0.1300	0.0000	0.0004	ZOOTS INC
MA	Plymouth	25023	1192261	02	0101	10200603	6.00	MANEVU2002	0.1300	0.0000	0.0004	ZOOTS INC
MA	Plymouth	25023	1192261	03	0102	10300603	2.00	MANEVU2002	0.0950	0.0000	0.0003	ZOOTS INC
MA	Plymouth	25023	1192279	01	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0027	DUXBURY INTERMEDIATE SCHOOL
MA	Plymouth	25023	1192288	01	0201	10200602	10.00	MANEVU2002	0.6795	0.0000	0.0019	EQUITY INDUSTRIAL GHEB LLP
MA	Plymouth	25023	1192288	02	0201	10200603	10.00	MANEVU2002	0.0340	0.0000	0.0001	EQUITY INDUSTRIAL GHEB LLP
MA	Plymouth	25023	1192339	01	0101	10200501	1.00	MANEVU2002	0.0935	0.0000	0.0001	CRI TECH
MA	Plymouth	25023	1192339	07	0107	10201002	1.00	MANEVU2002	0.0065	0.0000	0.0000	CRI TECH
MA	Plymouth	25023	1192425	02	0101	10200501	13.00	MANEVU2002	1.0000	0.0000	0.0003	CODMAN FL & JC CO
MA	Plymouth	25023	1192435	01	0101	10200603	3.00	MANEVU2002	3.4200	0.0000	0.0038	ITW TACC
MA	Plymouth	25023	1192460	01	0101	10200602	4.00	MANEVU2002	0.1300	0.0000	0.0000	GATES INTERMEDIATE SCHOOL
MA	Plymouth	25023	1192460	02	0102	10200603	4.00	MANEVU2002	0.1300	0.0000	0.0000	GATES INTERMEDIATE SCHOOL
MA	Plymouth	25023	1192460	03	0103	10200602	4.00	MANEVU2002	0.1300	0.0000	0.0000	GATES INTERMEDIATE SCHOOL
MA	Plymouth	25023	1192464	01	0101	10300504	6.00	MANEVU2002	0.7100	0.0000	0.0000	WAMPATUCK ELEMENTRY SCHOOL
MA	Plymouth	25023	1192464	02	0102	10300504	6.00	MANEVU2002	0.2400	0.0000	0.0000	WAMPATUCK ELEMENTRY SCHOOL
MA	Plymouth	25023	1192521	01	0101	10200504	16.00	MANEVU2002	5.0000	0.0000	0.0000	RUSSOS GREENHOUSE
MA	Plymouth	25023	1192521	02	0102	10200504	16.00	MANEVU2002	1.0000	0.0000	0.0011	RUSSOS GREENHOUSE
MA	Plymouth	25023	1192527	21	0119	10200501	1.00	MANEVU2002	0.0170	0.0000	0.0000	SHAWMUT CORPORATION
MA	Plymouth	25023	1192527	24	0122	10200603	3.00	MANEVU2002	0.0600	0.0000	0.0002	SHAWMUT CORPORATION
MA	Plymouth	25023	1192527	28	0126	10200603	1.00	MANEVU2002	0.0035	0.0000	0.0000	SHAWMUT CORPORATION
MA	Plymouth	25023	1200260	01	0101	10300504	1.00	MANEVU2002	0.0175	0.0000	0.0000	DB FINISHING COMAPNY
MA	Plymouth	25023	1200260	02	0101	10300504	1.00	MANEVU2002	0.0175	0.0000	0.0000	DB FINISHING COMAPNY
MA	Plymouth	25023	1200278	01	0101	10200401	25.00	MANEVU2002	3.0000	0.0000	0.0082	OCEAN SPRAY CRANBERRIES INC
MA	Plymouth	25023	1200278	01	0201	10200602	25.00	MANEVU2002	0.4525	0.0000	0.0012	OCEAN SPRAY CRANBERRIES INC
MA	Plymouth	25023	1200278	02	0102	10200401	25.00	MANEVU2002	3.0000	0.0000	0.0082	OCEAN SPRAY CRANBERRIES INC
MA	Plymouth	25023	1200278	02	0202	10200602	25.00	MANEVU2002	0.4525	0.0000	0.0012	OCEAN SPRAY CRANBERRIES INC
MA	Plymouth	25023	1200278	03	0103	10200401	25.00	MANEVU2002	3.0000	0.0000	0.0082	OCEAN SPRAY CRANBERRIES INC
MA	Plymouth	25023	1200278	03	0203	10200602	25.00	MANEVU2002	0.4525	0.0000	0.0012	OCEAN SPRAY CRANBERRIES INC
MA	Plymouth	25023	1200278	04	0104	10200401	25.00	MANEVU2002	3.0000	0.0000	0.0082	OCEAN SPRAY CRANBERRIES INC
MA	Plymouth	25023	1200278	04	0204	10200602	25.00	MANEVU2002	0.4525	0.0000	0.0012	OCEAN SPRAY CRANBERRIES INC
MA	Plymouth	25023	1200363	07	0103	10200604	6.00	MANEVU2002	4.0000	0.0000	0.0110	JORDON HOSPITAL THE
MA	Plymouth	25023	1200363	08	0104	10200604	6.00	MANEVU2002	4.0000	0.0000	0.0110	JORDON HOSPITAL THE
MA	Plymouth	25023	1200365	01	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0011	REVERE GRAPHICS WORLDWIDE
MA	Plymouth	25023	1200365	02	0102	10200602	3.00	MANEVU2002	1.0000	0.0000	0.0011	REVERE GRAPHICS WORLDWIDE
MA	Plymouth	25023	1200400	04	0101	10300504	9.00	MANEVU2002	2.0000	0.0000	0.0002	TOBEY HOSPITAL
MA	Plymouth	25023	1200489	01	0101	10300501	1.00	MANEVU2002	0.0050	0.0000	0.0000	REMCO CONCRETE
MA	Plymouth	25023	1200489	02	0102	10300501	1.00	MANEVU2002	0.0115	0.0000	0.0000	REMCO CONCRETE
MA	Plymouth	25023	1200489	03	0103	10300504	1.00	MANEVU2002	0.0030	0.0000	0.0000	REMCO CONCRETE
MA	Plymouth	25023	1200507	01	0101	10200603	21.00	MANEVU2002	2.0000	0.0000	0.0055	DECAS CRANBERRY PROD
MA	Plymouth	25023	1200637	02	0102	10300603	5.00	MANEVU2002	0.0375	0.0000	0.0001	FRANKLIN FIXTURES INC
MA	Plymouth	25023	1200642	01	0101	10300603	1.00	MANEVU2002	0.0400	0.0000	0.0000	VERIZON MASSACHUSETTS

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MA	Plymouth	25023	1200642	02	0101	10300603	5.00	MANEVU2002	0.1600	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Plymouth	25023	1200702	01	0101	10300504	16.00	MANEVU2002	1.0000	0.0000	0.0027	PLYMOUTH NORTH HIGH
MA	Plymouth	25023	1200738	02	0102	10200603	4.00	MANEVU2002	0.0045	0.0000	0.0000	TECH ETCH INCORPORATED
MA	Suffolk	25025	1190009	02	0102	10200501	184.00	MANEVU2002	1.0000	0.0000	0.0000	TRIGEN BOSTON ENERGY CORP
MA	Suffolk	25025	1190009	03	0103	10200501	161.00	MANEVU2002	1.0000	0.0000	0.0000	TRIGEN BOSTON ENERGY CORP
MA	Suffolk	25025	1190017	01	0101	10300501	38.00	MANEVU2002	2.0000	0.0000	0.0055	UMASS MEDICAL SCHOOL JAMICA PLAIN
MA	Suffolk	25025	1190017	02	0101	10300501	38.00	MANEVU2002	2.0000	0.0000	0.0055	UMASS MEDICAL SCHOOL JAMICA PLAIN
MA	Suffolk	25025	1190017	03	0101	10300501	38.00	MANEVU2002	2.0000	0.0000	0.0055	UMASS MEDICAL SCHOOL JAMICA PLAIN
MA	Suffolk	25025	1190018	01	0101	10300602	14.00	MANEVU2002	1.0000	0.0000	0.0027	MASS COLLEGE OF ART
MA	Suffolk	25025	1190018	02	0101	10300602	20.00	MANEVU2002	2.0000	0.0000	0.0055	MASS COLLEGE OF ART
MA	Suffolk	25025	1190018	03	0101	10300602	20.00	MANEVU2002	2.0000	0.0000	0.0055	MASS COLLEGE OF ART
MA	Suffolk	25025	1190030	01	0101	10300504	6.00	MANEVU2002	1.0000	0.0000	0.0027	DIMOCK COMMUNITY HEA
MA	Suffolk	25025	1190030	02	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0000	DIMOCK COMMUNITY HEA
MA	Suffolk	25025	1190030	03	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0000	DIMOCK COMMUNITY HEA
MA	Suffolk	25025	1190033	01	0101	10200401	142.00	MANEVU2002	23.0000	0.0000	0.0632	GILLETTE COMPANY THE
MA	Suffolk	25025	1190033	01	0201	10200601	142.00	MANEVU2002	107.0000	0.0000	0.2940	GILLETTE COMPANY THE
MA	Suffolk	25025	1190033	02	0101	10200401	142.00	MANEVU2002	23.0000	0.0000	0.0632	GILLETTE COMPANY THE
MA	Suffolk	25025	1190033	02	0201	10200601	142.00	MANEVU2002	107.0000	0.0000	0.2940	GILLETTE COMPANY THE
MA	Suffolk	25025	1190034	01	0101	10300504	15.00	MANEVU2002	1.0000	0.0000	0.0027	GLOBE NEWSPAPER COMPANY
MA	Suffolk	25025	1190034	01	0201	10300602	15.00	MANEVU2002	1.0000	0.0000	0.0027	GLOBE NEWSPAPER COMPANY
MA	Suffolk	25025	1190034	02	0202	10300602	15.00	MANEVU2002	4.0000	0.0000	0.0110	GLOBE NEWSPAPER COMPANY
MA	Suffolk	25025	1190034	02	0102	10300504	15.00	MANEVU2002	1.0000	0.0000	0.0027	GLOBE NEWSPAPER COMPANY
MA	Suffolk	25025	1190034	03	0103	10300504	15.00	MANEVU2002	1.0000	0.0000	0.0027	GLOBE NEWSPAPER COMPANY
MA	Suffolk	25025	1190034	03	0203	10300602	15.00	MANEVU2002	1.0000	0.0000	0.0027	GLOBE NEWSPAPER COMPANY
MA	Suffolk	25025	1190036	01	0101	10300504	25.00	MANEVU2002	2.0000	0.0000	0.0002	HOFFMAN BUILDING
MA	Suffolk	25025	1190040	01	0101	10300504	25.00	MANEVU2002	3.0000	0.0000	0.0082	BOSTON PUBLIC HEALTH-LONG ISLAND
MA	Suffolk	25025	1190040	02	0101	10300504	25.00	MANEVU2002	3.0000	0.0000	0.0082	BOSTON PUBLIC HEALTH-LONG ISLAND
MA	Suffolk	25025	1190040	03	0101	10300504	13.00	MANEVU2002	3.0000	0.0000	0.0082	BOSTON PUBLIC HEALTH-LONG ISLAND
MA	Suffolk	25025	1190040	04	0102	10300502	4.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON PUBLIC HEALTH-LONG ISLAND
MA	Suffolk	25025	1190040	05	0102	10300501	4.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON PUBLIC HEALTH-LONG ISLAND
MA	Suffolk	25025	1190050	01	0101	10200603	8.00	MANEVU2002	0.4425	0.0000	0.0012	UNIFIRST CORPORATION
MA	Suffolk	25025	1190054	01	0201	10300602	21.00	MANEVU2002	2.0000	0.0000	0.0055	NORTHEASTERN UNIVERSITY
MA	Suffolk	25025	1190054	02	0201	10300602	32.00	MANEVU2002	3.0000	0.0000	0.0082	NORTHEASTERN UNIVERSITY
MA	Suffolk	25025	1190054	03	0201	10300602	32.00	MANEVU2002	4.0000	0.0000	0.0110	NORTHEASTERN UNIVERSITY
MA	Suffolk	25025	1190054	04	0201	10300602	42.00	MANEVU2002	8.0000	0.0000	0.0220	NORTHEASTERN UNIVERSITY
MA	Suffolk	25025	1190054	05	0201	10300602	42.00	MANEVU2002	8.0000	0.0000	0.0088	NORTHEASTERN UNIVERSITY
MA	Suffolk	25025	1190059	01	0101	10300401	45.00	MANEVU2002	8.0000	0.0000	0.0009	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	02	0101	10300401	15.00	MANEVU2002	2.0000	0.0000	0.0002	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	03	0101	10300401	24.00	MANEVU2002	3.0000	0.0000	0.0003	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	04	0102	10300603	1.00	MANEVU2002	0.2665	0.0000	0.0005	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	05	0103	10300603	4.00	MANEVU2002	0.0940	0.0000	0.0002	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	06	0104	10300603	4.00	MANEVU2002	0.0940	0.0000	0.0002	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	07	0105	10300501	2.00	MANEVU2002	0.1910	0.0000	0.0000	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	08	0106	10300501	2.00	MANEVU2002	0.1910	0.0000	0.0000	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	09	0107	10300603	1.00	MANEVU2002	0.1880	0.0000	0.0003	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	10	0108	10300603	1.00	MANEVU2002	0.1880	0.0000	0.0003	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	23	0217	10300602	25.00	MANEVU2002	0.0110	0.0000	0.0000	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	24	0217	10300602	25.00	MANEVU2002	0.0110	0.0000	0.0000	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	27	0118	10300501	3.00	MANEVU2002	0.0675	0.0000	0.0001	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	28	0118	10300501	3.00	MANEVU2002	0.0650	0.0000	0.0001	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	29	0118	10300501	3.00	MANEVU2002	0.0675	0.0000	0.0001	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190065	01	0101	10300602	11.00	MANEVU2002	1.0000	0.0000	0.0027	SUFFOLK COUNTY COURT

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MA	Suffolk	25025	1190065	02	0101	10300602	11.00	MANEVU2002	1.0000	0.0000	0.0027	SUFFOLK COUNTY COURT
MA	Suffolk	25025	1190065	03	0102	10300603	11.00	MANEVU2002	1.0000	0.0000	0.0027	SUFFOLK COUNTY COURT
MA	Suffolk	25025	1190065	04	0102	10300602	11.00	MANEVU2002	1.0000	0.0000	0.0027	SUFFOLK COUNTY COURT
MA	Suffolk	25025	1190068	01	0101	10300501	7.00	MANEVU2002	0.8670	0.0000	0.0031	BRIGHTON MARINE HEALTH
MA	Suffolk	25025	1190068	02	0101	10300501	14.00	MANEVU2002	0.8670	0.0000	0.0024	BRIGHTON MARINE HEALTH
MA	Suffolk	25025	1190069	01	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	ST MARYS WOMEN & INFANTS
MA	Suffolk	25025	1190070	01	0101	10300501	32.00	MANEVU2002	2.0000	0.0000	0.0000	LEMUEL SHATTUCK HOSPITAL
MA	Suffolk	25025	1190070	01	0201	10300602	32.00	MANEVU2002	2.0000	0.0000	0.0000	LEMUEL SHATTUCK HOSPITAL
MA	Suffolk	25025	1190070	02	0101	10300501	32.00	MANEVU2002	2.0000	0.0000	0.0073	LEMUEL SHATTUCK HOSPITAL
MA	Suffolk	25025	1190070	02	0201	10300602	32.00	MANEVU2002	2.0000	0.0000	0.0073	LEMUEL SHATTUCK HOSPITAL
MA	Suffolk	25025	1190070	12	0101	10300501	8.00	MANEVU2002	1.0000	0.0000	0.0082	LEMUEL SHATTUCK HOSPITAL
MA	Suffolk	25025	1190075	03	0101	10200401	49.00	MANEVU2002	16.0000	0.0000	0.0000	BAY STATE PAPER CO
MA	Suffolk	25025	1190075	04	0101	10200401	86.00	MANEVU2002	4.0000	0.0000	0.0000	BAY STATE PAPER CO
MA	Suffolk	25025	1190075	05	0101	10200401	121.00	MANEVU2002	93.0000	0.0000	0.2759	BAY STATE PAPER CO
MA	Suffolk	25025	1190079	01	0101	10300603	5.00	MANEVU2002	0.3000	0.0000	0.0000	US BARNES BLDG
MA	Suffolk	25025	1190079	02	0101	10300603	5.00	MANEVU2002	0.3000	0.0000	0.0000	US BARNES BLDG
MA	Suffolk	25025	1190079	03	0101	10300603	5.00	MANEVU2002	0.3000	0.0000	0.0000	US BARNES BLDG
MA	Suffolk	25025	1190086	01	0101	10300602	7.00	MANEVU2002	1.0000	0.0000	0.0027	SIMMONS COLLEGE
MA	Suffolk	25025	1190086	03	0101	10300602	7.00	MANEVU2002	1.0000	0.0000	0.0027	SIMMONS COLLEGE
MA	Suffolk	25025	1190086	05	0202	10300602	14.00	MANEVU2002	2.0000	0.0000	0.0055	SIMMONS COLLEGE
MA	Suffolk	25025	1190099	01	0101	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0011	BAKER SQUARE CONDOMINIUM
MA	Suffolk	25025	1190100	01	0101	10300602	2.00	MANEVU2002	0.2000	0.0000	0.0002	BHA MARY ELLEN MCCORMICK
MA	Suffolk	25025	1190119	01	0101	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0074	CHELSEA SOLDIERS HOME
MA	Suffolk	25025	1190119	02	0101	10300602	29.00	MANEVU2002	1.0000	0.0000	0.0000	CHELSEA SOLDIERS HOME
MA	Suffolk	25025	1190119	03	0101	10300602	29.00	MANEVU2002	3.0000	0.0000	0.0000	CHELSEA SOLDIERS HOME
MA	Suffolk	25025	1190225	01	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0027	TERADYNE INC
MA	Suffolk	25025	1190225	02	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0027	TERADYNE INC
MA	Suffolk	25025	1190245	01	0201	10300602	33.00	MANEVU2002	4.0000	0.0000	0.0110	HEBREW REHABILITATION CENTER
MA	Suffolk	25025	1190245	01	0101	10300501	33.00	MANEVU2002	1.0000	0.0000	0.0027	HEBREW REHABILITATION CENTER
MA	Suffolk	25025	1190256	01	0101	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0009	BHA MISSION HILL
MA	Suffolk	25025	1190256	02	0101	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0009	BHA MISSION HILL
MA	Suffolk	25025	1190256	03	0102	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0009	BHA MISSION HILL
MA	Suffolk	25025	1190256	04	0103	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0009	BHA MISSION HILL
MA	Suffolk	25025	1190273	01	0101	10300603	8.00	MANEVU2002	0.7550	0.0000	0.0008	ZOO NEW ENGLAND
MA	Suffolk	25025	1190273	02	0102	10300603	8.00	MANEVU2002	0.5000	0.0000	0.0005	ZOO NEW ENGLAND
MA	Suffolk	25025	1190273	03	0103	10300603	5.00	MANEVU2002	0.1000	0.0000	0.0000	ZOO NEW ENGLAND
MA	Suffolk	25025	1190273	04	0103	10300602	5.00	MANEVU2002	0.1000	0.0000	0.0000	ZOO NEW ENGLAND
MA	Suffolk	25025	1190273	05	0104	10300603	2.00	MANEVU2002	0.1000	0.0000	0.0000	ZOO NEW ENGLAND
MA	Suffolk	25025	1190273	06	0104	10300603	2.00	MANEVU2002	0.1000	0.0000	0.0000	ZOO NEW ENGLAND
MA	Suffolk	25025	1190279	01	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	COASTAL OIL OF NEW ENGLAND
MA	Suffolk	25025	1190279	02	0102	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	COASTAL OIL OF NEW ENGLAND
MA	Suffolk	25025	1190290	03	0202	10300602	25.00	MANEVU2002	2.0000	0.0000	0.0055	CARNEY HOSPITAL
MA	Suffolk	25025	1190290	04	0202	10300602	26.00	MANEVU2002	3.0000	0.0000	0.0082	CARNEY HOSPITAL
MA	Suffolk	25025	1190309	01	0101	10300501	11.00	MANEVU2002	1.2000	0.0000	0.0000	HARBOR TOWERS I & II
MA	Suffolk	25025	1190309	02	0101	10300501	11.00	MANEVU2002	1.2000	0.0000	0.0000	HARBOR TOWERS I & II
MA	Suffolk	25025	1190309	03	0101	10300501	11.00	MANEVU2002	1.2000	0.0000	0.0033	HARBOR TOWERS I & II
MA	Suffolk	25025	1190309	04	0101	10300501	11.00	MANEVU2002	1.2000	0.0000	0.0033	HARBOR TOWERS I & II
MA	Suffolk	25025	1190328	01	0101	10200501	1.00	MANEVU2002	0.0385	0.0000	0.0000	MWRA DELAURIE PUMP STATION
MA	Suffolk	25025	1190328	02	0101	10200501	1.00	MANEVU2002	0.0385	0.0000	0.0000	MWRA DELAURIE PUMP STATION
MA	Suffolk	25025	1190328	03	0101	10200501	1.00	MANEVU2002	0.0385	0.0000	0.0000	MWRA DELAURIE PUMP STATION
MA	Suffolk	25025	1190341	01	0101	10300501	1.00	MANEVU2002	1.0000	0.0000	0.0011	BOYD SMITH INCORPORATED
MA	Suffolk	25025	1190341	02	0101	10300504	1.00	MANEVU2002	1.0000	0.0000	0.0011	BOYD SMITH INCORPORATED

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MA	Suffolk	25025	1190341	03	0101	10300501	1.00	MANEVU2002	1.0000	0.0000	0.0011	BOYD SMITH INCORPORATED
MA	Suffolk	25025	1190345	01	0101	10200603	1.00	MANEVU2002	0.0315	0.0000	0.0001	CLIFLEX BELLOWS CORPORATION
MA	Suffolk	25025	1190350	01	0101	10300603	3.00	MANEVU2002	2.0000	0.0000	0.0000	CAMELOT COMPANY THE
MA	Suffolk	25025	1190350	02	0101	10300603	3.00	MANEVU2002	2.0000	0.0000	0.0000	CAMELOT COMPANY THE
MA	Suffolk	25025	1190350	04	0103	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0000	CAMELOT COMPANY THE
MA	Suffolk	25025	1190350	05	0103	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0000	CAMELOT COMPANY THE
MA	Suffolk	25025	1190357	01	0101	10300401	6.00	MANEVU2002	2.0000	0.0000	0.0037	DAMRELL EWER PARTNERS LLC
MA	Suffolk	25025	1190359	01	0201	10300602	21.00	MANEVU2002	1.9500	0.0000	0.0054	FIRST CHURCH OF CHRIST SCIENTIST
MA	Suffolk	25025	1190359	01	0101	10300501	21.00	MANEVU2002	0.6200	0.0000	0.0017	FIRST CHURCH OF CHRIST SCIENTIST
MA	Suffolk	25025	1190359	02	0201	10300602	21.00	MANEVU2002	1.9500	0.0000	0.0054	FIRST CHURCH OF CHRIST SCIENTIST
MA	Suffolk	25025	1190359	02	0101	10300501	21.00	MANEVU2002	0.6200	0.0000	0.0017	FIRST CHURCH OF CHRIST SCIENTIST
MA	Suffolk	25025	1190359	03	0101	10300501	6.00	MANEVU2002	0.1900	0.0000	0.0000	FIRST CHURCH OF CHRIST SCIENTIST
MA	Suffolk	25025	1190359	03	0201	10300603	6.00	MANEVU2002	0.5900	0.0000	0.0000	FIRST CHURCH OF CHRIST SCIENTIST
MA	Suffolk	25025	1190390	02	0102	10300603	3.00	MANEVU2002	0.1500	0.0000	0.0002	TUFTS UNIVERSITY BOSTON CAMPUS
MA	Suffolk	25025	1190394	01	0101	10300603	4.00	MANEVU2002	3.0000	0.0000	0.0000	MASS COLLEGE OF PHARMACY & HEALTH SERVIC
MA	Suffolk	25025	1190399	01	0101	10300504	25.00	MANEVU2002	1.0000	0.0000	0.0027	BUNKER HILL COMMUNIT
MA	Suffolk	25025	1190399	01	0201	10300602	25.00	MANEVU2002	0.3100	0.0000	0.0009	BUNKER HILL COMMUNIT
MA	Suffolk	25025	1190399	02	0101	10300504	25.00	MANEVU2002	2.0000	0.0000	0.0055	BUNKER HILL COMMUNIT
MA	Suffolk	25025	1190399	02	0201	10300602	25.00	MANEVU2002	0.3100	0.0000	0.0009	BUNKER HILL COMMUNIT
MA	Suffolk	25025	1190399	03	0102	10300504	25.00	MANEVU2002	1.0000	0.0000	0.0027	BUNKER HILL COMMUNIT
MA	Suffolk	25025	1190399	03	0202	10300602	25.00	MANEVU2002	0.3100	0.0000	0.0009	BUNKER HILL COMMUNIT
MA	Suffolk	25025	1190400	01	0101	10200603	1.00	MANEVU2002	0.0355	0.0000	0.0000	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	02	0102	10200603	1.00	MANEVU2002	0.0355	0.0000	0.0000	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	03	0103	10200603	1.00	MANEVU2002	0.0355	0.0000	0.0000	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	04	0104	10200603	1.00	MANEVU2002	0.0355	0.0000	0.0000	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	07	0107	10200603	1.00	MANEVU2002	0.0085	0.0000	0.0000	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	10	0110	10200603	1.00	MANEVU2002	0.0810	0.0000	0.0001	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	11	0111	10200603	1.00	MANEVU2002	0.0810	0.0000	0.0001	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	12	0112	10200603	1.00	MANEVU2002	0.0810	0.0000	0.0001	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	15	0115	10200603	1.00	MANEVU2002	0.0700	0.0000	0.0002	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	18	0118	10200603	1.00	MANEVU2002	0.0595	0.0000	0.0000	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	19	0118	10200603	1.00	MANEVU2002	0.0595	0.0000	0.0000	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	22	0120	10200603	1.00	MANEVU2002	0.0035	0.0000	0.0000	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190403	01	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0027	TERADYNE INC
MA	Suffolk	25025	1190403	02	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0027	TERADYNE INC
MA	Suffolk	25025	1190405	04	0102	10300504	25.00	MANEVU2002	2.0000	0.0000	0.0055	NEW ENGLAND BAPTIST HOSPITAL
MA	Suffolk	25025	1190405	05	0102	10300504	25.00	MANEVU2002	2.0000	0.0000	0.0055	NEW ENGLAND BAPTIST HOSPITAL
MA	Suffolk	25025	1190405	06	0102	10300504	25.00	MANEVU2002	2.0000	0.0000	0.0055	NEW ENGLAND BAPTIST HOSPITAL
MA	Suffolk	25025	1190415	01	0101	10200504	6.00	MANEVU2002	1.0000	0.0000	0.0038	BOSTON WHARF COMPANY
MA	Suffolk	25025	1190418	01	0101	10200501	7.00	MANEVU2002	1.0000	0.0000	0.0038	BOSTON WHARF COMPANY
MA	Suffolk	25025	1190419	01	0101	10200504	9.00	MANEVU2002	1.0000	0.0000	0.0038	BOSTON WHARF COMPANY
MA	Suffolk	25025	1190419	02	0101	10200504	9.00	MANEVU2002	1.0000	0.0000	0.0038	BOSTON WHARF COMPANY
MA	Suffolk	25025	1190433	01	0101	10200602	17.00	MANEVU2002	2.0000	0.0000	0.0055	MORGAN SERVICES INC
MA	Suffolk	25025	1190470	01	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0036	FAIRMONT COPLEY PLAZA
MA	Suffolk	25025	1190470	02	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	FAIRMONT COPLEY PLAZA
MA	Suffolk	25025	1190473	01	0101	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0011	BRAEMORE APARTMENTS
MA	Suffolk	25025	1190481	01	0101	10200501	25.00	MANEVU2002	0.0880	0.0000	0.0000	CONOCO PHILLIPS COMPANY
MA	Suffolk	25025	1190481	02	0202	10200602	25.00	MANEVU2002	0.0030	0.0000	0.0000	CONOCO PHILLIPS COMPANY
MA	Suffolk	25025	1190482	01	0101	10200501	33.00	MANEVU2002	1.0000	0.0000	0.0000	COASTAL OIL OF NEW ENGLAND
MA	Suffolk	25025	1190482	05	0106	10200501	2.00	MANEVU2002	0.0865	0.0000	0.0000	COASTAL OIL OF NEW ENGLAND
MA	Suffolk	25025	1190482	31	0105	10200501	1.00	MANEVU2002	0.0730	0.0000	0.0000	COASTAL OIL OF NEW ENGLAND
MA	Suffolk	25025	1190483	01	0101	10300501	2.00	MANEVU2002	0.1030	0.0000	0.0000	GULF OIL LP CHELSEA

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MA	Suffolk	25025	1190490	01	0101	10200501	1.00	MANEVU2002	0.0460	0.0000	0.0001	IRVING OIL TERMINALS
MA	Suffolk	25025	1190492	01	0101	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0027	FORSYTH DENTAL CENTER
MA	Suffolk	25025	1190509	20	0113	10300603	1.00	MANEVU2002	0.0885	0.0000	0.0002	CHILDRENS HOSPITAL
MA	Suffolk	25025	1190513	01	0101	10300603	39.00	MANEVU2002	2.0000	0.0000	0.0022	MASS GENERAL HOSPITAL
MA	Suffolk	25025	1190513	02	0102	10300602	31.00	MANEVU2002	4.0000	0.0000	0.0044	MASS GENERAL HOSPITAL
MA	Suffolk	25025	1190525	01	0201	10300602	32.00	MANEVU2002	4.0000	0.0000	0.0018	VA BOSTON HEALTHCARE SYSTEM
MA	Suffolk	25025	1190525	02	0201	10300602	32.00	MANEVU2002	2.0000	0.0000	0.0000	VA BOSTON HEALTHCARE SYSTEM
MA	Suffolk	25025	1190525	04	0202	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0079	VA BOSTON HEALTHCARE SYSTEM
MA	Suffolk	25025	1190525	05	0103	10300603	1.00	MANEVU2002	0.1830	0.0000	0.0000	VA BOSTON HEALTHCARE SYSTEM
MA	Suffolk	25025	1190525	16	0103	10300603	1.00	MANEVU2002	0.1830	0.0000	0.0000	VA BOSTON HEALTHCARE SYSTEM
MA	Suffolk	25025	1190549	02	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	FAULKNER HOSPITAL
MA	Suffolk	25025	1190549	03	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	FAULKNER HOSPITAL
MA	Suffolk	25025	1190549	04	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	FAULKNER HOSPITAL
MA	Suffolk	25025	1190549	05	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	FAULKNER HOSPITAL
MA	Suffolk	25025	1190552	01	0101	10300404	15.00	MANEVU2002	2.0000	0.0000	0.0110	JAMAICAWAY TOWER
MA	Suffolk	25025	1190552	02	0101	10300404	15.00	MANEVU2002	2.0000	0.0000	0.0000	JAMAICAWAY TOWER
MA	Suffolk	25025	1190574	01	0101	10200501	3.00	MANEVU2002	0.1700	0.0000	0.0001	ARMSTRONG PHARMACEUTICALS INC
MA	Suffolk	25025	1190574	02	0102	10200601	1.00	MANEVU2002	0.0300	0.0000	0.0000	ARMSTRONG PHARMACEUTICALS INC
MA	Suffolk	25025	1190596	01	0101	10200602	30.00	MANEVU2002	3.0000	0.0000	0.0082	MBTA SOUTH STATION
MA	Suffolk	25025	1190596	02	0102	10200602	40.00	MANEVU2002	3.0000	0.0000	0.0082	MBTA SOUTH STATION
MA	Suffolk	25025	1190658	01	0101	10200501	6.00	MANEVU2002	0.4625	0.0000	0.0000	MWRA CHELSEA CREEK
MA	Suffolk	25025	1190658	02	0101	10200501	6.00	MANEVU2002	1.3875	0.0000	0.0000	MWRA CHELSEA CREEK
MA	Suffolk	25025	1190658	03	0102	10200603	1.00	MANEVU2002	0.1925	0.0000	0.0005	MWRA CHELSEA CREEK
MA	Suffolk	25025	1190659	01	0101	10300601	1.00	MANEVU2002	1.0000	0.0000	0.0011	DOUBLETREE GUEST SUITES
MA	Suffolk	25025	1190663	01	0101	10200501	4.00	MANEVU2002	1.0000	0.0000	0.0000	MWRA WARD STREET
MA	Suffolk	25025	1190663	02	0101	10200501	5.00	MANEVU2002	1.0000	0.0000	0.0000	MWRA WARD STREET
MA	Suffolk	25025	1190674	01	0101	10200501	6.00	MANEVU2002	1.0000	0.0000	0.0008	MWRA COLUMBUS PARK
MA	Suffolk	25025	1190674	02	0101	10200501	6.00	MANEVU2002	1.0000	0.0000	0.0001	MWRA COLUMBUS PARK
MA	Suffolk	25025	1190694	01	0101	10300501	9.00	MANEVU2002	1.0000	0.0000	0.0027	RITZ CARLTON HOTEL
MA	Suffolk	25025	1190694	02	0201	10200501	9.00	MANEVU2002	1.0000	0.0000	0.0027	RITZ CARLTON HOTEL
MA	Suffolk	25025	1190703	01	0101	10200603	21.00	MANEVU2002	0.2605	0.0000	0.0000	BOSTON SAND & GRAVEL
MA	Suffolk	25025	1190703	02	0102	10200603	15.00	MANEVU2002	0.0650	0.0000	0.0000	BOSTON SAND & GRAVEL
MA	Suffolk	25025	1190772	01	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	GENERAL MILLS BAKERIES & FOODSERVICE
MA	Suffolk	25025	1190773	01	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0027	PILLSBURY BAKERIES
MA	Suffolk	25025	1190805	01	0201	10300602	13.00	MANEVU2002	0.9000	0.0000	0.0010	BHA BROMLEY HEATH TMC
MA	Suffolk	25025	1190805	02	0201	10300602	13.00	MANEVU2002	0.9000	0.0000	0.0010	BHA BROMLEY HEATH TMC
MA	Suffolk	25025	1190805	03	0201	10300602	17.00	MANEVU2002	0.9000	0.0000	0.0010	BHA BROMLEY HEATH TMC
MA	Suffolk	25025	1190805	04	0201	10300602	13.00	MANEVU2002	0.9000	0.0000	0.0010	BHA BROMLEY HEATH TMC
MA	Suffolk	25025	1190805	05	0202	10300602	11.00	MANEVU2002	0.8000	0.0000	0.0009	BHA BROMLEY HEATH TMC
MA	Suffolk	25025	1190805	06	0202	10300602	11.00	MANEVU2002	0.8000	0.0000	0.0009	BHA BROMLEY HEATH TMC
MA	Suffolk	25025	1190805	07	0202	10300602	11.00	MANEVU2002	0.8000	0.0000	0.0009	BHA BROMLEY HEATH TMC
MA	Suffolk	25025	1190846	01	0101	10200603	2.00	MANEVU2002	0.2200	0.0000	0.0008	AGGREGATE INDUSTRIES NORTHEAST
MA	Suffolk	25025	1190862	05	0105	10200603	2.00	MANEVU2002	0.4500	0.0000	0.0012	STOP & SHOP COMPANY
MA	Suffolk	25025	1190862	06	0106	10200603	2.00	MANEVU2002	0.4750	0.0000	0.0013	STOP & SHOP COMPANY
MA	Suffolk	25025	1190871	01	0101	10200501	5.00	MANEVU2002	0.2900	0.0000	0.0000	GRAPHIC ARTS FINSHERS INC
MA	Suffolk	25025	1190899	01	0101	10300504	25.00	MANEVU2002	1.0000	0.0000	0.0000	WENTWORTH INSTITUTE
MA	Suffolk	25025	1190899	02	0201	10300602	10.00	MANEVU2002	0.3900	0.0000	0.0000	WENTWORTH INSTITUTE
MA	Suffolk	25025	1190899	04	0103	10300603	4.00	MANEVU2002	0.1300	0.0000	0.0000	WENTWORTH INSTITUTE
MA	Suffolk	25025	1190899	05	0103	10300603	4.00	MANEVU2002	0.1300	0.0000	0.0000	WENTWORTH INSTITUTE
MA	Suffolk	25025	1190933	01	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON PARK PLAZA HOTEL
MA	Suffolk	25025	1190933	01	0201	10300401	5.00	MANEVU2002	0.1035	0.0000	0.0003	BOSTON PARK PLAZA HOTEL
MA	Suffolk	25025	1190933	02	0101	10300602	25.00	MANEVU2002	5.0000	0.0000	0.0137	BOSTON PARK PLAZA HOTEL

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MA	Suffolk	25025	1190933	02	0201	10300401	25.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON PARK PLAZA HOTEL
MA	Suffolk	25025	1190933	03	0101	10300401	25.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON PARK PLAZA HOTEL
MA	Suffolk	25025	1190948	01	0101	10200501	4.00	MANEVU2002	0.0880	0.0000	0.0000	NEW BALANCE ATHLETIC SHOE INC
MA	Suffolk	25025	1191063	01	0201	10300603	8.00	MANEVU2002	2.0000	0.0000	0.0077	MERCANTILE WHARF BUILDING
MA	Suffolk	25025	1191063	02	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0038	MERCANTILE WHARF BUILDING
MA	Suffolk	25025	1191083	01	0101	10300501	0.00	MANEVU2002	1.0000	0.0000	0.0011	38 CHAUNCY STREET LLC
MA	Suffolk	25025	1191191	01	0201	10200505	244.00	MANEVU2002	3.0000	0.0000	0.0007	MEDICAL AREA TOTAL ENERGY
MA	Suffolk	25025	1191191	01	0101	10200604	244.00	MANEVU2002	46.0000	0.0000	0.0101	MEDICAL AREA TOTAL ENERGY
MA	Suffolk	25025	1191191	02	0201	10200505	244.00	MANEVU2002	1.0000	0.0000	0.0043	MEDICAL AREA TOTAL ENERGY
MA	Suffolk	25025	1191191	02	0101	10200602	244.00	MANEVU2002	62.0000	0.0000	0.2657	MEDICAL AREA TOTAL ENERGY
MA	Suffolk	25025	1191191	03	0201	10200505	244.00	MANEVU2002	4.0000	0.0000	0.0013	MEDICAL AREA TOTAL ENERGY
MA	Suffolk	25025	1191191	03	0101	10200604	244.00	MANEVU2002	39.0000	0.0000	0.0129	MEDICAL AREA TOTAL ENERGY
MA	Suffolk	25025	1191191	04	0201	10200602	225.00	MANEVU2002	37.0000	0.0000	0.1260	MEDICAL AREA TOTAL ENERGY
MA	Suffolk	25025	1191191	05	0201	10200604	225.00	MANEVU2002	31.0000	0.0000	0.1260	MEDICAL AREA TOTAL ENERGY
MA	Suffolk	25025	1191194	02	0101	10300401	14.00	MANEVU2002	1.0000	0.0000	0.0036	A SHAPIRO BOSTON INCORPORATED
MA	Suffolk	25025	1191194	90	0101	10300401	14.00	MANEVU2002	1.0000	0.0000	0.0000	A SHAPIRO BOSTON INCORPORATED
MA	Suffolk	25025	1191235	07	0106	10300603	3.00	MANEVU2002	0.4900	0.0000	0.0013	FLEET CENTER, THE
MA	Suffolk	25025	1191235	08	0107	10300603	3.00	MANEVU2002	0.4900	0.0000	0.0013	FLEET CENTER, THE
MA	Suffolk	25025	1191235	09	0108	10300603	7.00	MANEVU2002	1.1000	0.0000	0.0030	FLEET CENTER, THE
MA	Suffolk	25025	1191235	10	0109	10300603	7.00	MANEVU2002	1.1000	0.0000	0.0030	FLEET CENTER, THE
MA	Suffolk	25025	1191366	01	0101	10300602	15.00	MANEVU2002	1.4000	0.0000	0.0000	BHA MAVERICK DEVELOPMENT
MA	Suffolk	25025	1191366	02	0101	10300602	15.00	MANEVU2002	1.4000	0.0000	0.0000	BHA MAVERICK DEVELOPMENT
MA	Suffolk	25025	1191366	03	0101	10300602	15.00	MANEVU2002	0.9000	0.0000	0.0000	BHA MAVERICK DEVELOPMENT
MA	Suffolk	25025	1191367	01	0101	10300504	7.00	MANEVU2002	1.0000	0.0000	0.0027	BHA LENOX STREET
MA	Suffolk	25025	1191367	03	0101	10300504	7.00	MANEVU2002	1.0000	0.0000	0.0027	BHA LENOX STREET
MA	Suffolk	25025	1191367	04	0101	10300504	7.00	MANEVU2002	1.0000	0.0000	0.0027	BHA LENOX STREET
MA	Suffolk	25025	1191370	01	0101	10300504	9.00	MANEVU2002	1.0000	0.0000	0.0027	BHA WHITTIER
MA	Suffolk	25025	1191370	02	0101	10300504	9.00	MANEVU2002	1.0000	0.0000	0.0027	BHA WHITTIER
MA	Suffolk	25025	1191370	03	0101	10300504	9.00	MANEVU2002	1.0000	0.0000	0.0027	BHA WHITTIER
MA	Suffolk	25025	1191372	01	0101	10300504	8.00	MANEVU2002	3.0000	0.0000	0.0033	BHA BEECH STREET
MA	Suffolk	25025	1191372	02	0101	10300504	8.00	MANEVU2002	3.0000	0.0000	0.0033	BHA BEECH STREET
MA	Suffolk	25025	1191372	03	0101	10300504	9.00	MANEVU2002	2.0000	0.0000	0.0022	BHA BEECH STREET
MA	Suffolk	25025	1191373	01	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	BHA FRANKLIN HILL
MA	Suffolk	25025	1191373	02	0101	10300602	6.00	MANEVU2002	1.0000	0.0000	0.0027	BHA FRANKLIN HILL
MA	Suffolk	25025	1191374	01	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0027	BHA ARCHDALE
MA	Suffolk	25025	1191374	02	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0027	BHA ARCHDALE
MA	Suffolk	25025	1191374	03	0101	10300504	8.00	MANEVU2002	2.0000	0.0000	0.0055	BHA ARCHDALE
MA	Suffolk	25025	1191374	06	0103	10300601	2.00	MANEVU2002	0.3000	0.0000	0.0008	BHA ARCHDALE
MA	Suffolk	25025	1191375	01	0101	10300504	6.00	MANEVU2002	1.5000	0.0000	0.0013	BHA SOUTH STREET
MA	Suffolk	25025	1191375	02	0101	10300504	6.00	MANEVU2002	2.0000	0.0000	0.0018	BHA SOUTH STREET
MA	Suffolk	25025	1191375	03	0101	10300504	6.00	MANEVU2002	1.5000	0.0000	0.0013	BHA SOUTH STREET
MA	Suffolk	25025	1191377	01	0101	10300603	10.00	MANEVU2002	1.1000	0.0000	0.0030	BHA CAMDEN STREET
MA	Suffolk	25025	1191378	01	0101	10300603	6.00	MANEVU2002	0.6000	0.0000	0.0000	BHA OLD COLONY DEVELOPMENT
MA	Suffolk	25025	1191378	03	0102	10300603	6.00	MANEVU2002	2.6000	0.0000	0.0000	BHA OLD COLONY DEVELOPMENT
MA	Suffolk	25025	1191378	05	0103	10300603	7.00	MANEVU2002	3.3000	0.0000	0.0000	BHA OLD COLONY DEVELOPMENT
MA	Suffolk	25025	1191378	08	0104	10300603	8.00	MANEVU2002	1.5000	0.0000	0.0000	BHA OLD COLONY DEVELOPMENT
MA	Suffolk	25025	1191379	01	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	BHA CHARLESTOWN
MA	Suffolk	25025	1191379	02	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0011	BHA CHARLESTOWN
MA	Suffolk	25025	1191379	03	0102	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0011	BHA CHARLESTOWN
MA	Suffolk	25025	1191379	04	0102	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0011	BHA CHARLESTOWN
MA	Suffolk	25025	1191379	05	0103	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0011	BHA CHARLESTOWN
MA	Suffolk	25025	1191392	05	0104	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0000	MBTA CHARLESTON YARD

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MA	Suffolk	25025	1191397	01	0101	10300603	10.00	MANEVU2002	0.7380	0.0000	0.0000	BARRY CONTROLS
MA	Suffolk	25025	1191397	02	0102	10200501	5.00	MANEVU2002	0.4055	0.0000	0.0011	BARRY CONTROLS
MA	Suffolk	25025	1191397	09	0103	10200603	3.00	MANEVU2002	0.6200	0.0000	0.0017	BARRY CONTROLS
MA	Suffolk	25025	1191431	02	0102	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	BETH ISRAEL DEACONESS MEDICAL CENTER
MA	Suffolk	25025	1191492	01	0101	10300603	5.00	MANEVU2002	0.1600	0.0000	0.0004	HARVARD LONGWOOD CAMPUS
MA	Suffolk	25025	1191492	01	0201	10300501	5.00	MANEVU2002	0.0300	0.0000	0.0001	HARVARD LONGWOOD CAMPUS
MA	Suffolk	25025	1191492	02	0101	10300603	3.00	MANEVU2002	0.1200	0.0000	0.0001	HARVARD LONGWOOD CAMPUS
MA	Suffolk	25025	1191504	01	0101	10200603	8.00	MANEVU2002	0.9500	0.0000	0.0010	KEYSPAN ENERGY DELIVERY CP LNG
MA	Suffolk	25025	1191504	02	0102	10200603	3.00	MANEVU2002	0.1100	0.0000	0.0000	KEYSPAN ENERGY DELIVERY CP LNG
MA	Suffolk	25025	1191504	03	0103	10200602	48.00	MANEVU2002	0.0700	0.0000	0.0000	KEYSPAN ENERGY DELIVERY CP LNG
MA	Suffolk	25025	1191504	04	0104	10200602	48.00	MANEVU2002	0.0700	0.0000	0.0000	KEYSPAN ENERGY DELIVERY CP LNG
MA	Suffolk	25025	1191504	05	0105	10200602	48.00	MANEVU2002	0.0700	0.0000	0.0000	KEYSPAN ENERGY DELIVERY CP LNG
MA	Suffolk	25025	1191504	13	0110	10200603	3.00	MANEVU2002	0.0200	0.0000	0.0001	KEYSPAN ENERGY DELIVERY CP LNG
MA	Suffolk	25025	1191508	01	0201	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0038	NOVELTY BIAS BIND CO
MA	Suffolk	25025	1191517	01	0201	10300501	4.00	MANEVU2002	0.0075	0.0000	0.0000	USDA HUMAN NUTRITION
MA	Suffolk	25025	1191517	02	0201	10300501	8.00	MANEVU2002	0.0075	0.0000	0.0000	USDA HUMAN NUTRITION
MA	Suffolk	25025	1191517	03	0201	10300501	8.00	MANEVU2002	0.0075	0.0000	0.0000	USDA HUMAN NUTRITION
MA	Suffolk	25025	1191521	01	0101	10200401	13.00	MANEVU2002	2.0000	0.0000	0.0055	CROWN SERVICE SYSTEM
MA	Suffolk	25025	1191521	01	0201	10200602	13.00	MANEVU2002	0.2000	0.0000	0.0005	CROWN SERVICE SYSTEM
MA	Suffolk	25025	1191526	02	0101	10300501	4.00	MANEVU2002	1.0000	0.0000	0.0027	ATIC
MA	Suffolk	25025	1191557	01	0101	10200504	8.00	MANEVU2002	1.0000	0.0000	0.0038	BOSTON WHARF COMPANY
MA	Suffolk	25025	1191559	01	0101	10200501	9.00	MANEVU2002	8.0000	0.0000	0.0308	BOSTON WHARF COMPANY
MA	Suffolk	25025	1191578	01	0101	10300401	15.00	MANEVU2002	2.0000	0.0000	0.0033	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	02	0101	10300401	15.00	MANEVU2002	5.0000	0.0000	0.0082	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	03	0101	10300401	25.00	MANEVU2002	6.0000	0.0000	0.0099	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	04	0102	10300401	25.00	MANEVU2002	8.0000	0.0000	0.0132	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	05	0102	10300401	25.00	MANEVU2002	8.0000	0.0000	0.0132	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	06	0102	10300401	25.00	MANEVU2002	8.0000	0.0000	0.0132	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	07	0102	10300401	25.00	MANEVU2002	8.0000	0.0000	0.0132	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	08	0102	10300401	25.00	MANEVU2002	8.0000	0.0000	0.0132	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	11	0104	10300603	15.00	MANEVU2002	0.3665	0.0000	0.0006	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	11	0204	10300501	15.00	MANEVU2002	0.0485	0.0000	0.0001	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	12	0104	10300603	15.00	MANEVU2002	0.3665	0.0000	0.0006	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	12	0204	10300501	15.00	MANEVU2002	0.0485	0.0000	0.0001	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	13	0104	10300603	15.00	MANEVU2002	0.3665	0.0000	0.0006	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	13	0204	10300501	15.00	MANEVU2002	0.0485	0.0000	0.0001	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	17	0108	10300603	33.00	MANEVU2002	0.2650	0.0000	0.0004	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	18	0108	10300603	33.00	MANEVU2002	3.4220	0.0000	0.0056	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	18	0208	10300501	33.00	MANEVU2002	2.0150	0.0000	0.0033	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	19	0108	10300603	33.00	MANEVU2002	5.2325	0.0000	0.0288	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	20	0108	10300603	33.00	MANEVU2002	0.7690	0.0000	0.0013	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	21	0108	10300504	33.00	MANEVU2002	2.0000	0.0000	0.0033	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	22	0108	10300501	211.00	MANEVU2002	8.0000	0.0000	0.0132	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	23	0108	10300501	13.00	MANEVU2002	1.3330	0.0000	0.0022	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	63	0115	10300602	33.00	MANEVU2002	0.6305	0.0000	0.0010	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	64	0115	10300602	33.00	MANEVU2002	0.6305	0.0000	0.0010	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	65	0115	10300602	33.00	MANEVU2002	0.6305	0.0000	0.0010	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191591	01	0101	10200504	3.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON WHARF COMPANY
MA	Suffolk	25025	1191591	02	0102	10200504	5.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON WHARF COMPANY
MA	Suffolk	25025	1191617	01	0101	10300401	12.00	MANEVU2002	6.0000	0.0000	0.0112	CHELSEA SANDWICH LLC
MA	Suffolk	25025	1191617	02	0101	10300401	12.00	MANEVU2002	5.0000	0.0000	0.0093	CHELSEA SANDWICH LLC
MA	Suffolk	25025	1191679	01	0101	10200501	6.00	MANEVU2002	0.0700	0.0000	0.0002	BERKLEE COLLEGE OF MUSIC

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MA	Suffolk	25025	1191679	01	0201	10200603	6.00	MANEVU2002	0.5700	0.0000	0.0016	BERKLEE COLLEGE OF MUSIC
MA	Suffolk	25025	1191679	02	0101	10200501	6.00	MANEVU2002	0.0700	0.0000	0.0002	BERKLEE COLLEGE OF MUSIC
MA	Suffolk	25025	1191679	02	0201	10200603	6.00	MANEVU2002	0.5700	0.0000	0.0016	BERKLEE COLLEGE OF MUSIC
MA	Suffolk	25025	1191679	03	0101	10200501	6.00	MANEVU2002	0.0700	0.0000	0.0002	BERKLEE COLLEGE OF MUSIC
MA	Suffolk	25025	1191679	03	0201	10200603	6.00	MANEVU2002	0.5700	0.0000	0.0016	BERKLEE COLLEGE OF MUSIC
MA	Suffolk	25025	1191695	01	0101	10200501	15.00	MANEVU2002	3.0000	0.0000	0.0109	BOSTON MUSEUM OF FINE ARTS
MA	Suffolk	25025	1191695	02	0102	10200501	14.00	MANEVU2002	3.0000	0.0000	0.0109	BOSTON MUSEUM OF FINE ARTS
MA	Suffolk	25025	1191695	03	0103	10200501	14.00	MANEVU2002	3.0000	0.0000	0.0109	BOSTON MUSEUM OF FINE ARTS
MA	Suffolk	25025	1191709	01	0201	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0019	US VA MEDICAL CENTER
MA	Suffolk	25025	1191709	02	0202	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0019	US VA MEDICAL CENTER
MA	Suffolk	25025	1191709	03	0203	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0019	US VA MEDICAL CENTER
MA	Suffolk	25025	1191709	04	0204	10300603	8.00	MANEVU2002	1.0000	0.0000	0.0019	US VA MEDICAL CENTER
MA	Suffolk	25025	1191709	05	0205	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0019	US VA MEDICAL CENTER
MA	Suffolk	25025	1191710	01	0101	10300401	6.00	MANEVU2002	2.0000	0.0000	0.0000	FENWAY PARKSIDE LP
MA	Suffolk	25025	1191712	03	0103	10200603	4.00	MANEVU2002	0.2200	0.0000	0.0006	BOSTON GAS COMPANY
MA	Suffolk	25025	1191728	03	0102	10200501	1.00	MANEVU2002	0.1700	0.0000	0.0000	FIRST ELECTRONICS COMPANY
MA	Suffolk	25025	1191729	01	0101	10200603	4.00	MANEVU2002	0.2200	0.0000	0.0002	VERIZON MASSACHUSETTS
MA	Suffolk	25025	1191729	02	0101	10200603	4.00	MANEVU2002	0.2200	0.0000	0.0006	VERIZON MASSACHUSETTS
MA	Suffolk	25025	1191746	01	0101	10300602	10.00	MANEVU2002	2.0000	0.0000	0.0000	SOUTH BOSTON HIGH SCHOOL
MA	Suffolk	25025	1191760	01	0101	10300603	10.00	MANEVU2002	0.9900	0.0000	0.0027	KAYEM FOODS, INC
MA	Suffolk	25025	1191760	02	0102	10300603	5.00	MANEVU2002	0.2500	0.0000	0.0007	KAYEM FOODS, INC
MA	Suffolk	25025	1191833	01	0101	10200601	20.00	MANEVU2002	1.0000	0.0000	0.0027	RITZ TOWERS-BOSTON COMMONS
MA	Suffolk	25025	1191833	02	0102	10200601	20.00	MANEVU2002	6.0000	0.0000	0.0165	RITZ TOWERS-BOSTON COMMONS
MA	Suffolk	25025	1191876	02	0102	10200603	1.00	MANEVU2002	0.1600	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Suffolk	25025	1191876	03	0102	10200603	5.00	MANEVU2002	0.0200	0.0000	0.0001	VERIZON MASSACHUSETTS
MA	Suffolk	25025	1191899	12	0109	10300501	215.00	MANEVU2002	12.0000	0.0000	0.0330	MWRA DEER ISLAND
MA	Suffolk	25025	1195596	06	0106	10200603	8.00	MANEVU2002	1.0000	0.0000	0.0033	SYNTHON IND INCORPORATED
MA	Suffolk	25025	1197511	02	0102	10300501	1.00	MANEVU2002	0.1195	0.0000	0.0000	AMERICAN ARCHTEC IRON
MA	Worcester	25027	1180004	01	0101	10200401	13.00	MANEVU2002	4.0000	0.0000	0.0044	LS STARRETT COMPANY
MA	Worcester	25027	1180004	02	0101	10200401	13.00	MANEVU2002	4.0000	0.0000	0.0044	LS STARRETT COMPANY
MA	Worcester	25027	1180013	01	0101	10300603	1.00	MANEVU2002	0.0020	0.0000	0.0000	NYPRO INCORPORATED
MA	Worcester	25027	1180015	03	0102	10300603	1.00	MANEVU2002	0.1700	0.0000	0.0005	CLINTON HOSPITAL
MA	Worcester	25027	1180017	01	0101	10200603	1.00	MANEVU2002	0.1675	0.0000	0.0002	ROCKBESTOS SURPRENAN
MA	Worcester	25027	1180017	03	0102	10200603	1.00	MANEVU2002	0.1675	0.0000	0.0002	ROCKBESTOS SURPRENAN
MA	Worcester	25027	1180017	05	0104	10200603	4.00	MANEVU2002	0.1110	0.0000	0.0001	ROCKBESTOS SURPRENAN
MA	Worcester	25027	1180017	06	0105	10200603	4.00	MANEVU2002	0.1110	0.0000	0.0001	ROCKBESTOS SURPRENAN
MA	Worcester	25027	1180018	02	0102	10300504	20.00	MANEVU2002	1.0000	0.0000	0.0000	CLINTON ADAMS COPORATION
MA	Worcester	25027	1180021	01	0101	10200501	10.00	MANEVU2002	0.4400	0.0000	0.0000	TOLTEC INC
MA	Worcester	25027	1180021	02	0102	10200603	1.00	MANEVU2002	0.0005	0.0000	0.0000	TOLTEC INC
MA	Worcester	25027	1180023	02	0101	10200401	17.00	MANEVU2002	2.0000	0.0000	0.0037	INTERFACE FABRICS GROUP FINISHING INC
MA	Worcester	25027	1180023	03	0101	10200401	18.00	MANEVU2002	3.0000	0.0000	0.0056	INTERFACE FABRICS GROUP FINISHING INC
MA	Worcester	25027	1180023	04	0102	10200401	34.00	MANEVU2002	12.0000	0.0000	0.0224	INTERFACE FABRICS GROUP FINISHING INC
MA	Worcester	25027	1180023	05	0103	10201002	6.00	MANEVU2002	0.1315	0.0000	0.0004	INTERFACE FABRICS GROUP FINISHING INC
MA	Worcester	25027	1180023	26	0103	10201002	0.00	MANEVU2002	0.1655	0.0000	0.0005	INTERFACE FABRICS GROUP FINISHING INC
MA	Worcester	25027	1180023	27	0118	10201002	13.00	MANEVU2002	0.0495	0.0000	0.0001	INTERFACE FABRICS GROUP FINISHING INC
MA	Worcester	25027	1180023	28	0119	10201002	13.00	MANEVU2002	0.0495	0.0000	0.0001	INTERFACE FABRICS GROUP FINISHING INC
MA	Worcester	25027	1180024	02	0101	10300501	24.00	MANEVU2002	1.5900	0.0000	0.0040	BURBANK HOSPITAL
MA	Worcester	25027	1180024	02	0201	10300602	24.00	MANEVU2002	0.0400	0.0000	0.0001	BURBANK HOSPITAL
MA	Worcester	25027	1180024	03	0101	10300501	24.00	MANEVU2002	1.6500	0.0000	0.0049	BURBANK HOSPITAL
MA	Worcester	25027	1180027	01	0101	10200401	108.00	MANEVU2002	25.0000	0.0000	0.0797	SMURFIT MUNKSJO PAPER INCORPORATED
MA	Worcester	25027	1180027	01	0201	10200601	108.00	MANEVU2002	9.0000	0.0000	0.0287	SMURFIT MUNKSJO PAPER INCORPORATED
MA	Worcester	25027	1180027	02	0101	10200401	95.00	MANEVU2002	6.0000	0.0000	0.0237	SMURFIT MUNKSJO PAPER INCORPORATED

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MA	Worcester	25027	1180027	03	0102	10200401	40.00	MANEVU2002	3.0000	0.0000	0.0000	SMURFIT MUNKSJO PAPER INCORPORATED
MA	Worcester	25027	1180028	01	0101	10300401	25.00	MANEVU2002	9.0000	0.0000	0.0247	FITCHBURG STATE COLLEGE
MA	Worcester	25027	1180028	02	0101	10300401	55.00	MANEVU2002	1.0000	0.0000	0.0027	FITCHBURG STATE COLLEGE
MA	Worcester	25027	1180028	03	0101	10300401	52.00	MANEVU2002	5.0000	0.0000	0.0137	FITCHBURG STATE COLLEGE
MA	Worcester	25027	1180029	02	0201	10200601	25.00	MANEVU2002	5.1815	0.0000	0.0000	GENERAL ELECTRIC FITCHBURG
MA	Worcester	25027	1180030	01	0101	10300401	13.00	MANEVU2002	1.0000	0.0000	0.0005	SIMONDS INDUSTRIES
MA	Worcester	25027	1180030	01	0201	10200602	13.00	MANEVU2002	0.3000	0.0000	0.0002	SIMONDS INDUSTRIES
MA	Worcester	25027	1180030	02	0101	10300401	13.00	MANEVU2002	3.0000	0.0000	0.0016	SIMONDS INDUSTRIES
MA	Worcester	25027	1180032	01	0101	10300401	22.00	MANEVU2002	7.0000	0.0000	0.0462	NORTH CENTRAL CORRECTIONAL INSTITUTE
MA	Worcester	25027	1180032	03	0102	10300401	43.00	MANEVU2002	7.0000	0.0000	0.0308	NORTH CENTRAL CORRECTIONAL INSTITUTE
MA	Worcester	25027	1180032	04	0102	10300401	43.00	MANEVU2002	4.0000	0.0000	0.0000	NORTH CENTRAL CORRECTIONAL INSTITUTE
MA	Worcester	25027	1180033	01	0101	10300401	13.00	MANEVU2002	2.0000	0.0000	0.0035	HEYWOOD HOSPITAL
MA	Worcester	25027	1180033	02	0101	10300401	10.00	MANEVU2002	2.0000	0.0000	0.0092	HEYWOOD HOSPITAL
MA	Worcester	25027	1180033	03	0101	10300401	10.00	MANEVU2002	3.0000	0.0000	0.0082	HEYWOOD HOSPITAL
MA	Worcester	25027	1180035	02	0201	10200401	63.00	MANEVU2002	46.0000	0.0000	0.1163	SEAMAN PAPER COMPANY
MA	Worcester	25027	1180035	03	0101	10200401	33.00	MANEVU2002	2.0000	0.0000	0.0033	SEAMAN PAPER COMPANY
MA	Worcester	25027	1180039	02	0102	10200602	15.00	MANEVU2002	4.0000	0.0000	0.0145	WYMAN GORDON COMPANY
MA	Worcester	25027	1180039	03	0103	10200602	15.00	MANEVU2002	2.0000	0.0000	0.0000	WYMAN GORDON COMPANY
MA	Worcester	25027	1180039	19	0117	10200603	4.00	MANEVU2002	1.7400	0.0000	0.0048	WYMAN GORDON COMPANY
MA	Worcester	25027	1180041	01	0101	10300602	13.00	MANEVU2002	2.0000	0.0000	0.0055	ISOMEDIX INCORPORATED
MA	Worcester	25027	1180043	01	0101	10200603	2.00	MANEVU2002	1.0000	0.0000	0.0027	FP INTERNATIONAL
MA	Worcester	25027	1180045	01	0101	10300401	26.00	MANEVU2002	9.0000	0.0000	0.0000	ATLANTIC UNION COLLEGE
MA	Worcester	25027	1180049	01	0101	10200504	4.00	MANEVU2002	1.0000	0.0000	0.0027	ALPHA GARY CORP
MA	Worcester	25027	1180055	01	0201	10200401	25.00	MANEVU2002	6.0000	0.0000	0.0165	CROCKER TECHNICAL PAPERS INC
MA	Worcester	25027	1180055	01	0101	10200602	25.00	MANEVU2002	2.0000	0.0000	0.0055	CROCKER TECHNICAL PAPERS INC
MA	Worcester	25027	1180055	02	0201	10200401	25.00	MANEVU2002	6.0000	0.0000	0.0165	CROCKER TECHNICAL PAPERS INC
MA	Worcester	25027	1180055	02	0101	10200602	25.00	MANEVU2002	2.0000	0.0000	0.0055	CROCKER TECHNICAL PAPERS INC
MA	Worcester	25027	1180064	01	0101	10200401	8.00	MANEVU2002	4.0000	0.0000	0.0110	QUABAUG CORPORATION
MA	Worcester	25027	1180064	02	0101	10200401	8.00	MANEVU2002	4.0000	0.0000	0.0044	QUABAUG CORPORATION
MA	Worcester	25027	1180066	02	0201	10200501	0.00	MANEVU2002	1.0000	0.0000	0.0027	AMERICAN RECLAMATION
MA	Worcester	25027	1180071	01	0101	10200602	21.00	MANEVU2002	13.0000	0.0000	0.0357	TUTHILL ENERGY SYSTEMS/COPPUS TURBINE
MA	Worcester	25027	1180075	01	0101	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0011	UNIVERSITY OF MASS MEDICAL SCHOOL
MA	Worcester	25027	1180075	02	0102	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0027	UNIVERSITY OF MASS MEDICAL SCHOOL
MA	Worcester	25027	1180076	01	0101	10300401	11.00	MANEVU2002	3.0000	0.0000	0.0082	RUSSELL HARRINGTON
MA	Worcester	25027	1180084	01	0101	10300602	29.00	MANEVU2002	1.0000	0.0000	0.0011	DEPOT STREET ASSOCIATES
MA	Worcester	25027	1180087	01	0101	10200401	21.00	MANEVU2002	3.0000	0.0000	0.0082	CUMBERLAND FARMS INC
MA	Worcester	25027	1180087	02	0101	10200401	3.00	MANEVU2002	1.0000	0.0000	0.0027	CUMBERLAND FARMS INC
MA	Worcester	25027	1180087	04	0103	10200603	1.00	MANEVU2002	0.1470	0.0000	0.0004	CUMBERLAND FARMS INC
MA	Worcester	25027	1180088	01	0101	10200401	29.00	MANEVU2002	8.0000	0.0000	0.0220	HARDWICK KNITTED FABRIC
MA	Worcester	25027	1180088	02	0101	10200401	5.00	MANEVU2002	1.0000	0.0000	0.0005	HARDWICK KNITTED FABRIC
MA	Worcester	25027	1180089	02	0101	10200401	14.00	MANEVU2002	2.0000	0.0000	0.0022	WARREN PUMPS INC
MA	Worcester	25027	1180090	01	0101	10200401	25.00	MANEVU2002	4.0000	0.0000	0.0110	WILLIAM WRIGHT COMPANY
MA	Worcester	25027	1180090	02	0101	10200401	12.00	MANEVU2002	2.0000	0.0000	0.0055	WILLIAM WRIGHT COMPANY
MA	Worcester	25027	1180090	03	0101	10200501	1.00	MANEVU2002	0.0025	0.0000	0.0000	WILLIAM WRIGHT COMPANY
MA	Worcester	25027	1180090	07	0104	10200501	1.00	MANEVU2002	0.1010	0.0000	0.0003	WILLIAM WRIGHT COMPANY
MA	Worcester	25027	1180092	01	0101	10200401	33.00	MANEVU2002	8.0000	0.0000	0.0193	CRANSTON PRINT WORKS
MA	Worcester	25027	1180092	02	0101	10200401	100.00	MANEVU2002	14.0000	0.0000	0.0246	CRANSTON PRINT WORKS
MA	Worcester	25027	1180092	03	0101	10200401	111.00	MANEVU2002	28.0000	0.0000	0.0769	CRANSTON PRINT WORKS
MA	Worcester	25027	1180094	03	0101	10300401	57.00	MANEVU2002	16.0000	0.0000	0.0000	WESTBOROUGH STATE HOSPITAL
MA	Worcester	25027	1180094	04	0101	10300401	57.00	MANEVU2002	16.0000	0.0000	0.0440	WESTBOROUGH STATE HOSPITAL
MA	Worcester	25027	1180101	01	0101	10200602	20.00	MANEVU2002	0.1920	0.0000	0.0021	CHEMDESIGN CORP
MA	Worcester	25027	1180101	04	0103	10200602	33.00	MANEVU2002	2.1815	0.0000	0.0060	CHEMDESIGN CORP

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MA	Worcester	25027	1180102	01	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0000	ASSUMPTION COLLEGE
MA	Worcester	25027	1180102	02	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0000	ASSUMPTION COLLEGE
MA	Worcester	25027	1180103	01	0101	10300602	26.00	MANEVU2002	3.0000	0.0000	0.0082	ASTRAZENECA L.P.
MA	Worcester	25027	1180103	02	0101	10300602	26.00	MANEVU2002	3.0000	0.0000	0.0082	ASTRAZENECA L.P.
MA	Worcester	25027	1180103	04	0103	10200603	3.00	MANEVU2002	0.2465	0.0000	0.0007	ASTRAZENECA L.P.
MA	Worcester	25027	1180103	05	0103	10300603	3.00	MANEVU2002	0.2465	0.0000	0.0007	ASTRAZENECA L.P.
MA	Worcester	25027	1180105	01	0101	10300401	21.00	MANEVU2002	2.0000	0.0000	0.0022	CLARK UNIVERSITY
MA	Worcester	25027	1180105	01	0201	10300602	21.00	MANEVU2002	1.0000	0.0000	0.0011	CLARK UNIVERSITY
MA	Worcester	25027	1180105	02	0101	10300401	21.00	MANEVU2002	2.0000	0.0000	0.0022	CLARK UNIVERSITY
MA	Worcester	25027	1180105	02	0201	10300602	21.00	MANEVU2002	1.0000	0.0000	0.0011	CLARK UNIVERSITY
MA	Worcester	25027	1180105	03	0102	10300401	29.00	MANEVU2002	7.0000	0.0000	0.0077	CLARK UNIVERSITY
MA	Worcester	25027	1180105	03	0202	10300602	29.00	MANEVU2002	10.0000	0.0000	0.0110	CLARK UNIVERSITY
MA	Worcester	25027	1180106	01	0101	10300401	24.00	MANEVU2002	4.0000	0.0000	0.0044	COLLEGE OF THE HOLY CROSS
MA	Worcester	25027	1180106	01	0201	10300602	24.00	MANEVU2002	0.5000	0.0000	0.0005	COLLEGE OF THE HOLY CROSS
MA	Worcester	25027	1180106	02	0101	10300401	24.00	MANEVU2002	4.0000	0.0000	0.0057	COLLEGE OF THE HOLY CROSS
MA	Worcester	25027	1180106	02	0201	10300602	24.00	MANEVU2002	0.5000	0.0000	0.0007	COLLEGE OF THE HOLY CROSS
MA	Worcester	25027	1180106	03	0101	10300401	24.00	MANEVU2002	3.0000	0.0000	0.0036	COLLEGE OF THE HOLY CROSS
MA	Worcester	25027	1180106	03	0201	10300602	24.00	MANEVU2002	0.4000	0.0000	0.0005	COLLEGE OF THE HOLY CROSS
MA	Worcester	25027	1180106	04	0101	10300401	24.00	MANEVU2002	3.0000	0.0000	0.0046	COLLEGE OF THE HOLY CROSS
MA	Worcester	25027	1180106	04	0201	10300602	24.00	MANEVU2002	0.4000	0.0000	0.0006	COLLEGE OF THE HOLY CROSS
MA	Worcester	25027	1180107	01	0101	10300401	25.00	MANEVU2002	2.0000	0.0000	0.0055	GRAND REALTY TRUST
MA	Worcester	25027	1180108	01	0101	10200401	15.00	MANEVU2002	2.0000	0.0000	0.0000	DAVID CLARK COMPANY
MA	Worcester	25027	1180115	01	0201	10200601	70.00	MANEVU2002	4.0000	0.0000	0.0044	ST GOBAIN
MA	Worcester	25027	1180115	02	0201	10200601	70.00	MANEVU2002	5.0000	0.0000	0.0055	ST GOBAIN
MA	Worcester	25027	1180115	03	0201	10200601	70.00	MANEVU2002	2.0000	0.0000	0.0022	ST GOBAIN
MA	Worcester	25027	1180115	04	0301	10200222	230.00	MANEVU2002	9.0000	0.0000	0.0099	ST GOBAIN
MA	Worcester	25027	1180115	04	0201	10200601	230.00	MANEVU2002	19.0000	0.0000	0.0209	ST GOBAIN
MA	Worcester	25027	1180115	11	0306	10200603	8.00	MANEVU2002	0.0470	0.0000	0.0001	ST GOBAIN
MA	Worcester	25027	1180115	11	0106	10200603	8.00	MANEVU2002	0.0975	0.0000	0.0003	ST GOBAIN
MA	Worcester	25027	1180115	11	0206	10200603	8.00	MANEVU2002	1.2560	0.0000	0.0035	ST GOBAIN
MA	Worcester	25027	1180117	01	0101	10200401	9.00	MANEVU2002	2.0000	0.0000	0.0055	RAND WHITNEY CONTAINER
MA	Worcester	25027	1180117	01	0201	10200603	9.00	MANEVU2002	2.0000	0.0000	0.0055	RAND WHITNEY CONTAINER
MA	Worcester	25027	1180117	02	0102	10300401	10.00	MANEVU2002	1.0000	0.0000	0.0000	RAND WHITNEY CONTAINER
MA	Worcester	25027	1180117	02	0202	10200602	10.00	MANEVU2002	0.1900	0.0000	0.0000	RAND WHITNEY CONTAINER
MA	Worcester	25027	1180121	01	0101	10300504	6.00	MANEVU2002	1.0000	0.0000	0.0000	UMASS MEDICAL CENTER
MA	Worcester	25027	1180121	02	0101	10300504	13.00	MANEVU2002	1.0000	0.0000	0.0000	UMASS MEDICAL CENTER
MA	Worcester	25027	1180121	03	0101	10300504	12.00	MANEVU2002	2.0000	0.0000	0.0000	UMASS MEDICAL CENTER
MA	Worcester	25027	1180122	01	0101	10300401	13.00	MANEVU2002	5.0000	0.0000	0.0187	UMASS MEMORIAL MEDICAL CENTER
MA	Worcester	25027	1180122	02	0101	10300401	13.00	MANEVU2002	5.0000	0.0000	0.0187	UMASS MEMORIAL MEDICAL CENTER
MA	Worcester	25027	1180127	01	0101	10300401	18.00	MANEVU2002	6.0000	0.0000	0.0000	WORCESTER POLYTECHNICAL INSTITUTE
MA	Worcester	25027	1180127	02	0101	10300401	18.00	MANEVU2002	6.0000	0.0000	0.0000	WORCESTER POLYTECHNICAL INSTITUTE
MA	Worcester	25027	1180127	03	0101	10300401	20.00	MANEVU2002	6.0000	0.0000	0.0000	WORCESTER POLYTECHNICAL INSTITUTE
MA	Worcester	25027	1180127	04	0102	10300603	6.00	MANEVU2002	0.2030	0.0000	0.0002	WORCESTER POLYTECHNICAL INSTITUTE
MA	Worcester	25027	1180128	02	0101	10300401	25.00	MANEVU2002	7.0000	0.0000	0.0162	WORCESTER STATE HOSPITAL
MA	Worcester	25027	1180128	03	0101	10300401	25.00	MANEVU2002	7.0000	0.0000	0.0154	WORCESTER STATE HOSPITAL
MA	Worcester	25027	1180128	04	0101	10300401	15.00	MANEVU2002	4.0000	0.0000	0.0004	WORCESTER STATE HOSPITAL
MA	Worcester	25027	1180130	01	0101	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0027	YMCA CENTRAL BRANCH
MA	Worcester	25027	1180130	02	0101	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0027	YMCA CENTRAL BRANCH
MA	Worcester	25027	1180144	01	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0011	ATHOL HIGH SCHOOL
MA	Worcester	25027	1180148	04	0101	10300501	3.00	MANEVU2002	1.0000	0.0000	0.0011	AUBURN HIGH SCHOOL
MA	Worcester	25027	1180151	01	0101	10200501	6.00	MANEVU2002	1.0000	0.0000	0.0027	GITTO GLOBAL CORP
MA	Worcester	25027	1180160	01	0101	10300504	16.00	MANEVU2002	1.0000	0.0000	0.0000	BF BROWN MIDDLE SCHOOL

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MA	Worcester	25027	1180166	01	0101	10300504	9.00	MANEVU2002	2.0000	0.0000	0.0022	MEMORIAL MIDDLE SCHOOL
MA	Worcester	25027	1180176	04	0204	10300701	2.00	MANEVU2002	0.4000	0.0000	0.0004	MWRA CLINTON WWTP
MA	Worcester	25027	1180176	05	0205	10300701	2.00	MANEVU2002	0.4000	0.0000	0.0012	MWRA CLINTON WWTP
MA	Worcester	25027	1180177	01	0101	10300903	6.00	MANEVU2002	0.6200	0.0000	0.0007	FW LOMBARD COMPANY
MA	Worcester	25027	1180186	01	0101	10300401	34.00	MANEVU2002	2.0000	0.0000	0.0055	ABBOTT BIORESEARCH CENTER INC
MA	Worcester	25027	1180186	01	0201	10300602	34.00	MANEVU2002	3.0000	0.0000	0.0082	ABBOTT BIORESEARCH CENTER INC
MA	Worcester	25027	1180186	02	0101	10300401	34.00	MANEVU2002	2.0000	0.0000	0.0055	ABBOTT BIORESEARCH CENTER INC
MA	Worcester	25027	1180186	02	0201	10300602	34.00	MANEVU2002	3.0000	0.0000	0.0082	ABBOTT BIORESEARCH CENTER INC
MA	Worcester	25027	1180193	01	0101	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0011	LEOMINSTER HIGH SCHOOL
MA	Worcester	25027	1180193	02	0101	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0011	LEOMINSTER HIGH SCHOOL
MA	Worcester	25027	1180199	01	0101	10201002	14.00	MANEVU2002	1.0000	0.0000	0.0011	OFS FITEL-STURBRIDGE
MA	Worcester	25027	1180214	01	0101	10300602	10.00	MANEVU2002	0.1725	0.0000	0.0004	INNER TITE CORPORATION
MA	Worcester	25027	1180214	02	0101	10300603	4.00	MANEVU2002	0.0690	0.0000	0.0001	INNER TITE CORPORATION
MA	Worcester	25027	1180215	01	0101	10300504	10.00	MANEVU2002	1.0000	0.0000	0.0000	LANCASTER DCAM STATE COMPLEX
MA	Worcester	25027	1180215	02	0101	10300504	12.00	MANEVU2002	1.0000	0.0000	0.0000	LANCASTER DCAM STATE COMPLEX
MA	Worcester	25027	1180215	04	0103	10300501	1.00	MANEVU2002	0.1980	0.0000	0.0003	LANCASTER DCAM STATE COMPLEX
MA	Worcester	25027	1180215	05	0104	10300501	1.00	MANEVU2002	0.0390	0.0000	0.0000	LANCASTER DCAM STATE COMPLEX
MA	Worcester	25027	1180215	17	0108	10300501	1.00	MANEVU2002	0.0190	0.0000	0.0001	LANCASTER DCAM STATE COMPLEX
MA	Worcester	25027	1180215	19	0110	10300501	0.00	MANEVU2002	0.0170	0.0000	0.0000	LANCASTER DCAM STATE COMPLEX
MA	Worcester	25027	1180215	20	0111	10300501	1.00	MANEVU2002	0.0030	0.0000	0.0000	LANCASTER DCAM STATE COMPLEX
MA	Worcester	25027	1180225	01	0201	10200603	10.00	MANEVU2002	1.0000	0.0000	0.0027	NEW ENGLAND WOODEN W
MA	Worcester	25027	1180225	02	0202	10200603	7.00	MANEVU2002	0.3500	0.0000	0.0000	NEW ENGLAND WOODEN W
MA	Worcester	25027	1180227	02	0102	10200602	25.00	MANEVU2002	3.0000	0.0000	0.0082	NEW CORR PACKAGING
MA	Worcester	25027	1180233	01	0101	10300501	3.00	MANEVU2002	0.3300	0.0000	0.0004	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180233	02	0101	10300501	3.00	MANEVU2002	0.3300	0.0000	0.0004	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180233	03	0101	10300501	3.00	MANEVU2002	0.3300	0.0000	0.0004	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180233	04	0102	10300603	1.00	MANEVU2002	3.0000	0.0000	0.0082	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180233	05	0103	10300603	1.00	MANEVU2002	2.0000	0.0000	0.0055	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180233	06	0104	10300603	1.00	MANEVU2002	2.0000	0.0000	0.0055	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180240	01	0101	10300401	18.00	MANEVU2002	2.0000	0.0000	0.0055	COYNE TEXTILE SERVIC
MA	Worcester	25027	1180241	02	0101	10300501	18.00	MANEVU2002	1.0000	0.0000	0.0011	UNUM-PROVIDENT COMPANY
MA	Worcester	25027	1180242	01	0101	10300603	1.00	MANEVU2002	0.0055	0.0000	0.0000	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180242	02	0102	10300501	3.00	MANEVU2002	0.3300	0.0000	0.0004	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180242	03	0102	10300501	3.00	MANEVU2002	0.3300	0.0000	0.0004	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180242	04	0102	10300501	2.00	MANEVU2002	0.3300	0.0000	0.0004	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180243	01	0101	10200603	5.00	MANEVU2002	0.4805	0.0000	0.0013	QUANTUM CORPORATION
MA	Worcester	25027	1180243	02	0102	10300603	5.00	MANEVU2002	0.0050	0.0000	0.0000	QUANTUM CORPORATION
MA	Worcester	25027	1180243	03	0103	10300603	2.00	MANEVU2002	0.1970	0.0000	0.0005	QUANTUM CORPORATION
MA	Worcester	25027	1180246	01	0101	10200501	5.00	MANEVU2002	0.3200	0.0000	0.0004	MADIX INCORPORATED
MA	Worcester	25027	1180247	01	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0027	PAN-GLO
MA	Worcester	25027	1180249	01	0101	10300501	8.00	MANEVU2002	1.0000	0.0000	0.0004	US POSTAL SERVICE
MA	Worcester	25027	1180249	02	0101	10200503	8.00	MANEVU2002	4.0000	0.0000	0.0018	US POSTAL SERVICE
MA	Worcester	25027	1180249	04	0101	10200603	1.00	MANEVU2002	0.0085	0.0000	0.0000	US POSTAL SERVICE
MA	Worcester	25027	1180254	01	0101	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0000	WORCESTER REGIONAL TRANSIT AUTHORITY
MA	Worcester	25027	1180254	02	0102	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0000	WORCESTER REGIONAL TRANSIT AUTHORITY
MA	Worcester	25027	1180257	01	0101	10200501	7.00	MANEVU2002	0.2900	0.0000	0.0003	SOUTHBRIDGE SHEET METAL WORKS
MA	Worcester	25027	1180262	02	0101	10300501	4.00	MANEVU2002	3.0000	0.0000	0.0033	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	04	0103	10300501	1.00	MANEVU2002	0.0030	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	09	0107	10300603	1.00	MANEVU2002	0.0185	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	10	0108	10300603	1.00	MANEVU2002	0.0185	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	12	0110	10300603	1.00	MANEVU2002	0.0470	0.0000	0.0001	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	15	0113	10300501	1.00	MANEVU2002	0.0060	0.0000	0.0000	TUFTS UNIVERSITY

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MA	Worcester	25027	1180262	16	0114	10300501	1.00	MANEVU2002	0.0070	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	17	0115	10300603	1.00	MANEVU2002	0.0225	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	18	0115	10300603	1.00	MANEVU2002	0.0225	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	19	0116	10300603	1.00	MANEVU2002	0.0225	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	25	0120	10300603	1.00	MANEVU2002	0.0465	0.0000	0.0001	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	26	0121	10300603	1.00	MANEVU2002	0.0465	0.0000	0.0001	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	28	0123	10300501	1.00	MANEVU2002	0.0035	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	29	0123	10300501	1.00	MANEVU2002	0.0035	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	30	0124	10300603	1.00	MANEVU2002	0.0030	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	31	0125	10300603	1.00	MANEVU2002	0.0030	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	32	0126	10300603	1.00	MANEVU2002	0.0030	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	33	0127	10300603	1.00	MANEVU2002	0.0030	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	34	0128	10300603	1.00	MANEVU2002	0.0030	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	38	0132	10300603	1.00	MANEVU2002	0.0070	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	40	0134	10300501	1.00	MANEVU2002	0.0045	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	41	0135	10300501	1.00	MANEVU2002	0.0045	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	42	0136	10300501	1.00	MANEVU2002	0.0105	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	43	0136	10300603	1.00	MANEVU2002	0.0260	0.0000	0.0001	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	48	0141	10301002	1.00	MANEVU2002	0.0725	0.0000	0.0001	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	50	0143	10300603	1.00	MANEVU2002	0.0015	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	53	0112	10300603	1.00	MANEVU2002	0.0470	0.0000	0.0001	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	54	0103	10300501	0.00	MANEVU2002	0.0025	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	65	0141	10301002	0.00	MANEVU2002	0.0080	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	66	0146	10300501	1.00	MANEVU2002	0.0095	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	67	0148	10301002	0.00	MANEVU2002	0.0055	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	68	0149	10301002	1.00	MANEVU2002	0.0075	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	69	0149	10301002	0.00	MANEVU2002	0.0665	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180265	01	0101	10200603	3.00	MANEVU2002	0.1075	0.0000	0.0003	NYLCO CORPORATION
MA	Worcester	25027	1180265	10	0101	10300603	2.00	MANEVU2002	0.1535	0.0000	0.0004	NYLCO CORPORATION
MA	Worcester	25027	1180265	11	0109	10300501	2.00	MANEVU2002	0.1090	0.0000	0.0003	NYLCO CORPORATION
MA	Worcester	25027	1180284	01	0101	10300603	15.00	MANEVU2002	0.0015	0.0000	0.0000	ROYAL INSTITUTIONAL SERVICES, INC
MA	Worcester	25027	1180285	01	0201	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0036	HEALTHALLIANCE LEOMINSTER CAMPUS
MA	Worcester	25027	1180285	02	0101	10300501	17.00	MANEVU2002	1.0000	0.0000	0.0031	HEALTHALLIANCE LEOMINSTER CAMPUS
MA	Worcester	25027	1180285	02	0201	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0031	HEALTHALLIANCE LEOMINSTER CAMPUS
MA	Worcester	25027	1180285	03	0201	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0015	HEALTHALLIANCE LEOMINSTER CAMPUS
MA	Worcester	25027	1180291	01	0101	10200603	4.00	MANEVU2002	0.0010	0.0000	0.0000	TIRE CENTERS LLC
MA	Worcester	25027	1180294	01	0101	10200501	2.00	MANEVU2002	0.2570	0.0000	0.0007	NOVEON INCH SPECIALT
MA	Worcester	25027	1180294	02	0102	10200603	4.00	MANEVU2002	0.0105	0.0000	0.0000	NOVEON INCH SPECIALT
MA	Worcester	25027	1180294	10	0105	10200603	4.00	MANEVU2002	0.1200	0.0000	0.0003	NOVEON INCH SPECIALT
MA	Worcester	25027	1180295	02	0101	10300602	34.00	MANEVU2002	2.0000	0.0000	0.0055	ST VINCENT HOSP @ WORC MED CTR
MA	Worcester	25027	1180295	03	0101	10300602	17.00	MANEVU2002	2.0000	0.0000	0.0055	ST VINCENT HOSP @ WORC MED CTR
MA	Worcester	25027	1180300	01	0101	10200501	1.00	MANEVU2002	0.0510	0.0000	0.0000	ASHBURNHAM FINISHING
MA	Worcester	25027	1180303	05	0104	10200603	10.00	MANEVU2002	3.0000	0.0000	0.0082	POLYFOAM CORPORATION
MA	Worcester	25027	1180318	02	0101	10200401	18.00	MANEVU2002	1.0000	0.0000	0.0011	MYLEC INC
MA	Worcester	25027	1180321	01	0101	10200906	13.00	MANEVU2002	1.0000	0.0000	0.0022	HARDWICK KILNS
MA	Worcester	25027	1180321	02	0102	10200504	13.00	MANEVU2002	1.0000	0.0000	0.0022	HARDWICK KILNS
MA	Worcester	25027	1180322	01	0101	10300504	3.00	MANEVU2002	1.0000	0.0000	0.0000	MORGAN CONSTRUCTION
MA	Worcester	25027	1180322	02	0101	10300504	15.00	MANEVU2002	1.0000	0.0000	0.0000	MORGAN CONSTRUCTION
MA	Worcester	25027	1180327	02	0102	10200504	13.00	MANEVU2002	1.2300	0.0000	0.0000	MORGAN CONSTRUCTION
MA	Worcester	25027	1180327	03	0103	10200504	15.00	MANEVU2002	0.1540	0.0000	0.0000	MORGAN CONSTRUCTION
MA	Worcester	25027	1180327	04	0104	10200504	15.00	MANEVU2002	0.1540	0.0000	0.0000	MORGAN CONSTRUCTION
MA	Worcester	25027	1180327	05	0105	10200501	1.00	MANEVU2002	0.0585	0.0000	0.0000	MORGAN CONSTRUCTION

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MA	Worcester	25027	1180334	01	0101	10300401	143.00	MANEVU2002	18.0000	0.0000	0.0000	UMASS MEDICAL CENTER
MA	Worcester	25027	1180334	01	0201	10300601	143.00	MANEVU2002	23.0000	0.0000	0.0000	UMASS MEDICAL CENTER
MA	Worcester	25027	1180334	02	0101	10300401	141.00	MANEVU2002	18.0000	0.0000	0.0673	UMASS MEDICAL CENTER
MA	Worcester	25027	1180334	02	0201	10300601	141.00	MANEVU2002	29.0000	0.0000	0.1084	UMASS MEDICAL CENTER
MA	Worcester	25027	1180334	03	0102	10300401	145.00	MANEVU2002	4.0000	0.0000	0.0110	UMASS MEDICAL CENTER
MA	Worcester	25027	1180334	03	0202	10300601	145.00	MANEVU2002	3.0000	0.0000	0.0082	UMASS MEDICAL CENTER
MA	Worcester	25027	1180334	04	0103	10300401	147.00	MANEVU2002	5.0000	0.0000	0.0137	UMASS MEDICAL CENTER
MA	Worcester	25027	1180334	04	0203	10300601	147.00	MANEVU2002	2.0000	0.0000	0.0055	UMASS MEDICAL CENTER
MA	Worcester	25027	1180337	02	0101	10300504	11.00	MANEVU2002	0.0065	0.0000	0.0000	WORCESTER STATE COLLEGE
MA	Worcester	25027	1180337	04	0102	10300501	3.00	MANEVU2002	1.0000	0.0000	0.0011	WORCESTER STATE COLLEGE
MA	Worcester	25027	1180337	05	0103	10300603	4.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER STATE COLLEGE
MA	Worcester	25027	1180337	06	0103	10300603	4.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER STATE COLLEGE
MA	Worcester	25027	1180337	07	0103	10300603	3.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER STATE COLLEGE
MA	Worcester	25027	1180337	17	0109	10300602	10.00	MANEVU2002	0.0045	0.0000	0.0000	WORCESTER STATE COLLEGE
MA	Worcester	25027	1180339	01	0101	10300603	8.00	MANEVU2002	3.0000	0.0000	0.0000	WORCESTER TELEGRAM & GAZETT
MA	Worcester	25027	1180342	01	0101	10300603	1.00	MANEVU2002	0.2300	0.0000	0.0006	WAKEFIELD MATERIALS CORP
MA	Worcester	25027	1180347	01	0101	10300501	3.00	MANEVU2002	0.0840	0.0000	0.0001	KILLEEN MACHINE TOOL CO
MA	Worcester	25027	1180347	02	0102	10300501	3.00	MANEVU2002	0.0840	0.0000	0.0001	KILLEEN MACHINE TOOL CO
MA	Worcester	25027	1180352	01	0101	10200603	2.00	MANEVU2002	0.0610	0.0000	0.0001	OMNOVA SOLUTIONS INC
MA	Worcester	25027	1180352	02	0102	10200603	6.00	MANEVU2002	0.3500	0.0000	0.0008	OMNOVA SOLUTIONS INC
MA	Worcester	25027	1180355	02	0101	10200501	230.00	MANEVU2002	12.0000	0.0000	0.0330	NEWARK AMERICA
MA	Worcester	25027	1180358	01	0101	10200504	15.00	MANEVU2002	0.0870	0.0000	0.0001	ALLEGRO MICROSYSTEMS
MA	Worcester	25027	1180358	01	0201	10200602	15.00	MANEVU2002	2.0000	0.0000	0.0033	ALLEGRO MICROSYSTEMS
MA	Worcester	25027	1180358	02	0102	10200504	15.00	MANEVU2002	0.0870	0.0000	0.0001	ALLEGRO MICROSYSTEMS
MA	Worcester	25027	1180358	02	0202	10200602	15.00	MANEVU2002	2.0000	0.0000	0.0033	ALLEGRO MICROSYSTEMS
MA	Worcester	25027	1180358	04	0104	10300603	4.00	MANEVU2002	0.3150	0.0000	0.0003	ALLEGRO MICROSYSTEMS
MA	Worcester	25027	1180358	05	0105	10300603	4.00	MANEVU2002	0.3150	0.0000	0.0003	ALLEGRO MICROSYSTEMS
MA	Worcester	25027	1180360	01	0101	10300504	6.00	MANEVU2002	1.0000	0.0000	0.0011	SLATER BUILDING
MA	Worcester	25027	1180368	01	0101	10200602	29.00	MANEVU2002	10.0000	0.0000	0.0275	CREATIVE PAPER INC
MA	Worcester	25027	1180368	02	0102	10200602	29.00	MANEVU2002	10.0000	0.0000	0.0275	CREATIVE PAPER INC
MA	Worcester	25027	1180381	01	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0011	MASONIC HOME
MA	Worcester	25027	1180381	02	0101	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0011	MASONIC HOME
MA	Worcester	25027	1180386	01	0101	10200603	6.00	MANEVU2002	0.3550	0.0000	0.0010	WEETABIX COMPANY INC
MA	Worcester	25027	1180386	03	0102	10200603	6.00	MANEVU2002	4.3000	0.0000	0.0118	WEETABIX COMPANY INC
MA	Worcester	25027	1180386	04	0103	10200603	8.00	MANEVU2002	0.3550	0.0000	0.0010	WEETABIX COMPANY INC
MA	Worcester	25027	1180386	05	0104	10200603	8.00	MANEVU2002	0.8460	0.0000	0.0009	WEETABIX COMPANY INC
MA	Worcester	25027	1180386	21	0119	10200603	5.00	MANEVU2002	0.0660	0.0000	0.0002	WEETABIX COMPANY INC
MA	Worcester	25027	1180386	24	0121	10200603	1.00	MANEVU2002	0.0260	0.0000	0.0001	WEETABIX COMPANY INC
MA	Worcester	25027	1180386	25	0121	10200603	1.00	MANEVU2002	0.0090	0.0000	0.0000	WEETABIX COMPANY INC
MA	Worcester	25027	1180386	26	0121	10200603	1.00	MANEVU2002	0.0050	0.0000	0.0000	WEETABIX COMPANY INC
MA	Worcester	25027	1180396	01	0101	10200603	3.00	MANEVU2002	0.0470	0.0000	0.0001	HUB FABRIC LEATHER
MA	Worcester	25027	1180403	01	0101	10300501	3.00	MANEVU2002	0.3750	0.0000	0.0010	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180403	02	0102	10300501	2.00	MANEVU2002	0.1810	0.0000	0.0005	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180403	03	0103	10300501	1.00	MANEVU2002	0.0200	0.0000	0.0001	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180403	04	0104	10300501	2.00	MANEVU2002	0.2940	0.0000	0.0008	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180403	05	0104	10300501	2.00	MANEVU2002	0.2940	0.0000	0.0008	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180403	06	0104	10300501	2.00	MANEVU2002	0.2940	0.0000	0.0008	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180403	07	0105	10300501	1.00	MANEVU2002	0.0500	0.0000	0.0001	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180403	08	0106	10300501	1.00	MANEVU2002	0.0190	0.0000	0.0001	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180403	09	0107	10300501	1.00	MANEVU2002	0.0200	0.0000	0.0001	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180411	01	0101	10300501	4.00	MANEVU2002	0.2975	0.0000	0.0003	H&R 1871 INCORPORATE
MA	Worcester	25027	1180415	01	0201	10200906	12.00	MANEVU2002	1.0000	0.0000	0.0027	NICHOLS & STONE CO

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MA	Worcester	25027	1180415	01	0101	10200501	12.00	MANEVU2002	2.0000	0.0000	0.0055	NICHOLS & STONE CO
MA	Worcester	25027	1180416	02	0101	10200501	1.00	MANEVU2002	0.0985	0.0000	0.0000	FWL INDUSTRIES
MA	Worcester	25027	1180422	01	0201	10200602	15.00	MANEVU2002	0.2560	0.0000	0.0000	URQUHART FAMILY LLC
MA	Worcester	25027	1180427	01	0101	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0011	CLARIANT-MASTERBATCHES DIVISION
MA	Worcester	25027	1180429	01	0101	10200501	3.00	MANEVU2002	0.1760	0.0000	0.0000	ROSENFELD CONCRETE COMPANY
MA	Worcester	25027	1180429	02	0101	10200501	2.00	MANEVU2002	0.1585	0.0000	0.0000	ROSENFELD CONCRETE COMPANY
MA	Worcester	25027	1180445	01	0101	10200501	1.00	MANEVU2002	0.0500	0.0000	0.0001	MODERN DISPERSION
MA	Worcester	25027	1180445	03	0103	10200501	1.00	MANEVU2002	0.0250	0.0000	0.0000	MODERN DISPERSION
MA	Worcester	25027	1180445	04	0103	10200501	1.00	MANEVU2002	0.0250	0.0000	0.0000	MODERN DISPERSION
MA	Worcester	25027	1180455	01	0101	10200602	13.00	MANEVU2002	0.0860	0.0000	0.0002	POLYCLAD LAMINATES
MA	Worcester	25027	1180467	01	0101	10200501	3.00	MANEVU2002	1.0000	0.0000	0.0027	AMERICAN POLYMERS
MA	Worcester	25027	1180467	02	0101	10200501	5.00	MANEVU2002	1.0000	0.0000	0.0027	AMERICAN POLYMERS
MA	Worcester	25027	1180467	03	0101	10200504	3.00	MANEVU2002	1.0000	0.0000	0.0027	AMERICAN POLYMERS
MA	Worcester	25027	1180467	04	0102	10200501	3.00	MANEVU2002	1.0000	0.0000	0.0027	AMERICAN POLYMERS
MA	Worcester	25027	1180501	01	0101	10200501	6.00	MANEVU2002	0.4330	0.0000	0.0023	ADVANCE COATINGS COMPANY
MA	Worcester	25027	1180517	01	0101	10300501	16.00	MANEVU2002	1.0000	0.0000	0.0011	JUNIOR SENIOR HIGH SCHOOL
MA	Worcester	25027	1180519	01	0201	10300602	29.00	MANEVU2002	2.0000	0.0000	0.0044	UMASS MEMORIAL MEDICAL CENTER
MA	Worcester	25027	1180519	02	0201	10300602	29.00	MANEVU2002	2.0000	0.0000	0.0044	UMASS MEMORIAL MEDICAL CENTER
MA	Worcester	25027	1180519	03	0201	10300602	29.00	MANEVU2002	2.0000	0.0000	0.0044	UMASS MEMORIAL MEDICAL CENTER
MA	Worcester	25027	1180519	04	0102	10200603	3.00	MANEVU2002	0.5000	0.0000	0.0014	UMASS MEMORIAL MEDICAL CENTER
MA	Worcester	25027	1180520	01	0101	10300504	21.00	MANEVU2002	2.0000	0.0000	0.0022	BRUSSELS DEVELOPMENT
MA	Worcester	25027	1180533	01	0101	10300401	25.00	MANEVU2002	4.0000	0.0000	0.0044	COMMERCE BUILDING ASSOCIATES
MA	Worcester	25027	1180538	01	0101	10300504	14.00	MANEVU2002	1.0000	0.0000	0.0011	WORCESTER VOCATIONAL TECH HIGH SCHOOL
MA	Worcester	25027	1180538	02	0102	10300504	14.00	MANEVU2002	1.0000	0.0000	0.0011	WORCESTER VOCATIONAL TECH HIGH SCHOOL
MA	Worcester	25027	1180540	01	0201	10200603	8.00	MANEVU2002	1.0000	0.0000	0.0011	CONCORD WIRE COMPANY
MA	Worcester	25027	1180541	01	0101	10200602	15.00	MANEVU2002	2.0000	0.0000	0.0000	WYMAN GORDON COMPANY
MA	Worcester	25027	1180544	01	0101	10200401	21.00	MANEVU2002	1.0000	0.0000	0.0018	WORCESTER MFG INC
MA	Worcester	25027	1180544	01	0201	10200602	21.00	MANEVU2002	0.0590	0.0000	0.0001	WORCESTER MFG INC
MA	Worcester	25027	1180544	02	0102	10200401	30.00	MANEVU2002	4.0000	0.0000	0.0070	WORCESTER MFG INC
MA	Worcester	25027	1180544	02	0202	10200602	30.00	MANEVU2002	1.0000	0.0000	0.0018	WORCESTER MFG INC
MA	Worcester	25027	1180557	01	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0027	BROOKFIELD WIRE COMPANY
MA	Worcester	25027	1180557	02	0102	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0027	BROOKFIELD WIRE COMPANY
MA	Worcester	25027	1180558	01	0101	10300501	8.00	MANEVU2002	1.0000	0.0000	0.0022	BANCROFT BUILDING
MA	Worcester	25027	1180560	01	0101	10300401	12.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER MILLBROOK LLC
MA	Worcester	25027	1180569	01	0101	10300602	5.00	MANEVU2002	1.0000	0.0000	0.0011	KOPIN CORPORATION
MA	Worcester	25027	1180569	02	0101	10300602	5.00	MANEVU2002	1.0000	0.0000	0.0027	KOPIN CORPORATION
MA	Worcester	25027	1180586	01	0101	10200501	3.00	MANEVU2002	1.0000	0.0000	0.0008	VELLUMOID INC
MA	Worcester	25027	1180593	01	0101	10300602	10.00	MANEVU2002	1.0000	0.0000	0.0011	GUARANTY BUILDING
MA	Worcester	25027	1180593	02	0102	10300602	10.00	MANEVU2002	1.0000	0.0000	0.0011	GUARANTY BUILDING
MA	Worcester	25027	1180619	02	0202	10300602	13.00	MANEVU2002	1.1205	0.0000	0.0000	SIMPLEX TIME RECORDED COMPANY
MA	Worcester	25027	1180619	03	0203	10200602	10.00	MANEVU2002	0.2600	0.0000	0.0007	SIMPLEX TIME RECORDED COMPANY
MA	Worcester	25027	1180636	01	0101	10300501	3.00	MANEVU2002	0.1000	0.0000	0.0000	WORCESTER ARMY NATIONAL GUARD
MA	Worcester	25027	1180636	02	0101	10300501	3.00	MANEVU2002	0.1000	0.0000	0.0000	WORCESTER ARMY NATIONAL GUARD
MA	Worcester	25027	1180636	03	0102	10300501	1.00	MANEVU2002	0.0030	0.0000	0.0000	WORCESTER ARMY NATIONAL GUARD
MA	Worcester	25027	1180636	04	0103	10300501	1.00	MANEVU2002	0.0140	0.0000	0.0000	WORCESTER ARMY NATIONAL GUARD
MA	Worcester	25027	1180636	06	0104	10300501	0.00	MANEVU2002	0.0070	0.0000	0.0000	WORCESTER ARMY NATIONAL GUARD
MA	Worcester	25027	1180637	01	0201	10300501	34.00	MANEVU2002	0.8700	0.0000	0.0000	WORCESTER COMMON OUTLETS
MA	Worcester	25027	1180637	02	0201	10300501	34.00	MANEVU2002	0.8700	0.0000	0.0000	WORCESTER COMMON OUTLETS
MA	Worcester	25027	1180637	03	0201	10300501	26.00	MANEVU2002	0.9000	0.0000	0.0000	WORCESTER COMMON OUTLETS
MA	Worcester	25027	1180640	01	0101	10300504	17.00	MANEVU2002	1.0000	0.0000	0.0011	WORCESTER SUPERIOR COURT
MA	Worcester	25027	1180640	02	0101	10300504	16.00	MANEVU2002	0.0005	0.0000	0.0000	WORCESTER SUPERIOR COURT
MA	Worcester	25027	1180640	03	0101	10300603	1.00	MANEVU2002	0.0010	0.0000	0.0000	WORCESTER SUPERIOR COURT

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MA	Worcester	25027	1180644	01	0101	10300504	70.00	MANEVU2002	1.0000	0.0000	0.0011	WORCESTER MEMORIAL AUDITORIUM
MA	Worcester	25027	1180654	01	0101	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0011	ECOTARIUM
MA	Worcester	25027	1180654	02	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0011	ECOTARIUM
MA	Worcester	25027	1180661	02	0102	10200504	6.00	MANEVU2002	1.0000	0.0000	0.0011	WORCESTER COUNTY JAIL
MA	Worcester	25027	1180662	01	0201	10300602	29.00	MANEVU2002	4.0000	0.0000	0.0000	VERNON HILL DEVELOPMENT LLC
MA	Worcester	25027	1180662	02	0202	10300602	29.00	MANEVU2002	2.0000	0.0000	0.0055	VERNON HILL DEVELOPMENT LLC
MA	Worcester	25027	1180677	01	0101	10300501	3.00	MANEVU2002	1.0000	0.0000	0.0011	CITY CLEANERS INCORPORATED
MA	Worcester	25027	1180679	01	0101	10300504	12.00	MANEVU2002	1.0000	0.0000	0.0011	PARKHILL MANUFACTURING CENTER
MA	Worcester	25027	1180689	01	0101	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0011	MSF INCORPORATED COMEPLAY
MA	Worcester	25027	1180693	01	0101	10300501	5.00	MANEVU2002	1.0000	0.0000	0.0011	OAKMONT REGIONAL HIGH SCHOOL
MA	Worcester	25027	1180693	02	0101	10300501	5.00	MANEVU2002	1.0000	0.0000	0.0011	OAKMONT REGIONAL HIGH SCHOOL
MA	Worcester	25027	1180693	03	0101	10300501	5.00	MANEVU2002	1.0000	0.0000	0.0011	OAKMONT REGIONAL HIGH SCHOOL
MA	Worcester	25027	1180695	02	0101	10300501	9.00	MANEVU2002	1.0000	0.0000	0.0011	QUABOAG REGIONAL HIGH SCHOOL
MA	Worcester	25027	1180696	02	0101	10300504	23.00	MANEVU2002	2.0000	0.0000	0.0022	WACHUSETT REGIONAL HIGH SCHOOL
MA	Worcester	25027	1180696	03	0102	10300504	5.00	MANEVU2002	3.0000	0.0000	0.0033	WACHUSETT REGIONAL HIGH SCHOOL
MA	Worcester	25027	1180701	01	0101	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0000	TANTASQUA REG HIGH SCHOOL
MA	Worcester	25027	1180701	02	0101	10300504	3.00	MANEVU2002	1.0000	0.0000	0.0000	TANTASQUA REG HIGH SCHOOL
MA	Worcester	25027	1180710	01	0101	10300602	20.00	MANEVU2002	1.0000	0.0000	0.0011	BURNCOAT SENIOR HIGH
MA	Worcester	25027	1180711	01	0101	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0011	DOHERTY HIGH SCHOOL
MA	Worcester	25027	1180714	01	0101	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0011	BURNCOAT MIDDLE SCHO
MA	Worcester	25027	1180719	01	0101	10301002	8.00	MANEVU2002	1.0000	0.0000	0.0011	NORTH HIGH SCHOOL
MA	Worcester	25027	1180720	01	0101	10300404	14.00	MANEVU2002	1.0000	0.0000	0.0011	VERNON HILL SCHOOL
MA	Worcester	25027	1180720	02	0101	10300404	13.00	MANEVU2002	1.0000	0.0000	0.0011	VERNON HILL SCHOOL
MA	Worcester	25027	1180721	01	0101	10300404	8.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER EAST MIDDLE
MA	Worcester	25027	1180721	02	0101	10300404	11.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER EAST MIDDLE
MA	Worcester	25027	1180763	01	0101	10300401	9.00	MANEVU2002	1.0000	0.0000	0.0027	GODDARD SCHOOL OF SCIENCE + TECHNOLOGY
MA	Worcester	25027	1180763	02	0102	10300401	11.00	MANEVU2002	1.0000	0.0000	0.0011	GODDARD SCHOOL OF SCIENCE + TECHNOLOGY
MA	Worcester	25027	1180779	01	0101	10300602	20.00	MANEVU2002	4.0000	0.0000	0.0044	WORCESTER HOUSING AUTHORITY
MA	Worcester	25027	1180784	01	0101	10300401	11.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER ACADEMY
MA	Worcester	25027	1180784	02	0101	10300401	11.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER ACADEMY
MA	Worcester	25027	1180784	03	0101	10300401	11.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER ACADEMY
MA	Worcester	25027	1180803	01	0101	10200501	17.00	MANEVU2002	0.2070	0.0000	0.0002	SALOOM FURNITURE COMPANY, INC.
MA	Worcester	25027	1180809	01	0101	10300504	4.00	MANEVU2002	2.0000	0.0000	0.0022	NOTRE DAME DULAC INSTITUTE
MA	Worcester	25027	1180809	02	0101	10300504	4.00	MANEVU2002	1.0000	0.0000	0.0011	NOTRE DAME DULAC INSTITUTE
MA	Worcester	25027	1180899	01	0101	10300504	10.00	MANEVU2002	1.0000	0.0000	0.0011	JUNIOR SENIOR HIGH SCHOOL
MA	Worcester	25027	1180899	02	0102	10300504	10.00	MANEVU2002	1.0000	0.0000	0.0011	JUNIOR SENIOR HIGH SCHOOL
MA	Worcester	25027	1180907	01	0101	10200504	6.00	MANEVU2002	1.0000	0.0000	0.0027	WARREN LAUNDRY
MA	Worcester	25027	1180908	01	0101	10200603	4.00	MANEVU2002	0.8045	0.0000	0.0009	ECC CORPORATION
MA	Worcester	25027	1180908	02	0101	10200603	4.00	MANEVU2002	0.3045	0.0000	0.0003	ECC CORPORATION
MA	Worcester	25027	1180908	03	0101	10300603	1.00	MANEVU2002	0.1035	0.0000	0.0001	ECC CORPORATION
MA	Worcester	25027	1180911	01	0101	10200603	8.00	MANEVU2002	0.7600	0.0000	0.0021	CLAREMONT FLOCK CORP
MA	Worcester	25027	1180911	02	0102	10200603	6.00	MANEVU2002	3.0000	0.0000	0.0082	CLAREMONT FLOCK CORP
MA	Worcester	25027	1180913	01	0101	10200603	1.00	MANEVU2002	0.1010	0.0000	0.0003	SPECTRO COATING CORP
MA	Worcester	25027	1180925	03	0203	10200603	3.00	MANEVU2002	0.0925	0.0000	0.0000	RILEY POWER INC
MA	Worcester	25027	1180925	04	0304	10200202	3.00	MANEVU2002	0.0805	0.0000	0.0009	RILEY POWER INC
MA	Worcester	25027	1180925	07	0106	10200603	1.00	MANEVU2002	0.0040	0.0000	0.0000	RILEY POWER INC
MA	Worcester	25027	1180939	02	0101	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0027	FOAM CONCEPTS INC
MA	Worcester	25027	1180944	01	0101	10200401	12.00	MANEVU2002	3.0000	0.0000	0.0082	VOGUE WALLCOVERINGS
MA	Worcester	25027	1181022	02	0101	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0027	FITCHBURG GAS & ELECTRIC-LPGA
MA	Worcester	25027	1181032	01	0101	10300501	6.00	MANEVU2002	1.0000	0.0000	0.0027	CONCRETE BLOCK INSULATION
MA	Worcester	25027	1181059	03	0203	10200603	2.00	MANEVU2002	0.1705	0.0000	0.0005	SHIELD PACKAGING
MA	Worcester	25027	1181081	03	0102	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0027	LINCOLN VILLAGE

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MA	Worcester	25027	1181081	04	0102	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0027	LINCOLN VILLAGE
MA	Worcester	25027	1181081	05	0103	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0027	LINCOLN VILLAGE
MA	Worcester	25027	1181081	06	0103	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0027	LINCOLN VILLAGE
MA	Worcester	25027	1181081	08	0104	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0027	LINCOLN VILLAGE
MA	Worcester	25027	1181258	01	0101	10300903	9.00	MANEVU2002	1.0000	0.0000	0.0011	ST JOSEPHS ABBEY
MA	Worcester	25027	1190916	01	0101	10300602	13.00	MANEVU2002	0.4700	0.0000	0.0015	NEW ENGLAND REGIONAL
MA	Worcester	25027	1190916	02	0101	10300602	13.00	MANEVU2002	1.1800	0.0000	0.0038	NEW ENGLAND REGIONAL
MA	Worcester	25027	1190944	02	0201	10300602	14.00	MANEVU2002	1.0000	0.0000	0.0011	ST MARKS SCHOOL
MA	Worcester	25027	1190992	01	0101	10300501	6.00	MANEVU2002	1.0000	0.0000	0.0011	NASHOBA REGIONAL SCHOOL DISTRICT
MA	Worcester	25027	1191317	01	0101	10300603	1.00	MANEVU2002	0.0500	0.0000	0.0000	MWRA SOUTHBORO SHAFT
MA	Worcester	25027	1191317	02	0102	10300603	1.00	MANEVU2002	0.0190	0.0000	0.0000	MWRA SOUTHBORO SHAFT
MA	Worcester	25027	1194006	07	0107	10200603	8.00	MANEVU2002	0.2165	0.0000	0.0002	NSTAR GAS
MA	Worcester	25027	1200134	01	0101	10200401	8.00	MANEVU2002	3.0000	0.0000	0.0082	ARCHER RUBBER COMPANY
MA	Worcester	25027	1200134	02	0101	10200401	8.00	MANEVU2002	3.0000	0.0000	0.0082	ARCHER RUBBER COMPANY
MA	Worcester	25027	1200135	01	0101	10300504	4.00	MANEVU2002	1.0000	0.0000	0.0044	MILFORD WHITINSVILLE REGIONAL HOSPITAL
MA	Worcester	25027	1200135	01	0201	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0044	MILFORD WHITINSVILLE REGIONAL HOSPITAL
MA	Worcester	25027	1200135	02	0101	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	MILFORD WHITINSVILLE REGIONAL HOSPITAL
MA	Worcester	25027	1200135	03	0101	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	MILFORD WHITINSVILLE REGIONAL HOSPITAL
MA	Worcester	25027	1200135	04	0101	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	MILFORD WHITINSVILLE REGIONAL HOSPITAL
MA	Worcester	25027	1200135	05	0101	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	MILFORD WHITINSVILLE REGIONAL HOSPITAL
MA	Worcester	25027	1200135	06	0101	10300504	13.00	MANEVU2002	1.0000	0.0000	0.0016	MILFORD WHITINSVILLE REGIONAL HOSPITAL
MA	Worcester	25027	1200135	07	0201	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0016	MILFORD WHITINSVILLE REGIONAL HOSPITAL
MA	Worcester	25027	1200280	02	0102	10200501	5.00	MANEVU2002	0.4320	0.0000	0.0005	WATERS CORPORATION
MA	Worcester	25027	1200280	04	0104	10200501	4.00	MANEVU2002	1.0000	0.0000	0.0027	WATERS CORPORATION
MA	Worcester	25027	1200280	06	0106	10200501	3.00	MANEVU2002	0.0290	0.0000	0.0001	WATERS CORPORATION
MA	Worcester	25027	1200280	07	0107	10200501	3.00	MANEVU2002	0.0290	0.0000	0.0001	WATERS CORPORATION
MA	Worcester	25027	1200280	09	0109	10200501	1.00	MANEVU2002	0.0480	0.0000	0.0001	WATERS CORPORATION
MA	Worcester	25027	1200615	01	0101	10300404	13.00	MANEVU2002	1.0000	0.0000	0.0011	MILFORD HIGH SCHOOL
MA	Worcester	25027	1200615	02	0101	10300404	13.00	MANEVU2002	1.0000	0.0000	0.0011	MILFORD HIGH SCHOOL
MA	Worcester	25027	1200615	03	0101	10300404	13.00	MANEVU2002	1.0000	0.0000	0.0011	MILFORD HIGH SCHOOL
MA	Worcester	25027	1200623	01	0101	10300501	8.00	MANEVU2002	0.2100	0.0000	0.0000	EAST MIDDLE SCHOOL
MA	Worcester	25027	1200856	06	0105	10200603	6.00	MANEVU2002	0.4480	0.0000	0.0000	ST GOBAIN CONTAINERS
MA	Worcester	25027	1200856	07	0106	10200602	3.00	MANEVU2002	0.1820	0.0000	0.0003	ST GOBAIN CONTAINERS
NH	Cheshire	33005	3300500003	001	1	10300402	12.50	MANEVU2002	6.2724	0.0706	0.0706	KEENE STATE COLLEGE
NH	Cheshire	33005	3300500003	002	1	10300402	23.50	MANEVU2002	6.2724	0.0806	0.0806	KEENE STATE COLLEGE
NH	Cheshire	33005	3300500003	003	1	10300402	25.10	MANEVU2002	6.2724	0.0706	0.0706	KEENE STATE COLLEGE
NH	Coos	33007	3300700001	001	1	10200401	128.60	MANEVU2002	43.8497	0.2923	0.2923	FRASER NH LLC
NH	Coos	33007	3300700001	002	1	10200401	162.40	MANEVU2002	59.5915	0.3235	0.3235	FRASER NH LLC
NH	Coos	33007	3300700001	003	1	10200402	68.60	MANEVU2002	15.5011	0.1772	0.1772	FRASER NH LLC
NH	Coos	33007	3300700001	009	1	10200401	238.00	MANEVU2002	0.0705	0.0000	0.0000	FRASER NH LLC
NH	Coos	33007	3300700001	012	1	10200401	155.00	MANEVU2002	3.2948	0.0000	0.0000	FRASER NH LLC
NH	Coos	33007	3300700001	014	1	10200901	324.00	MANEVU2002	18.2801	0.0000	0.0000	FRASER NH LLC
NH	Coos	33007	3300700006	001	1	10200403	8.50	MANEVU2002	0.5457	0.0304	0.0304	TILLOTSON RUBBER CORPORATION
NH	Coos	33007	3300700006	002	1	10200403	8.50	MANEVU2002	0.5795	0.0270	0.0270	TILLOTSON RUBBER CORPORATION
NH	Coos	33007	3300700006	003	1	10200905	52.80	MANEVU2002	22.1580	0.1108	0.1108	TILLOTSON RUBBER CORPORATION
NH	Coos	33007	3300700006	004	1	10200402	33.20	MANEVU2002	4.0879	0.0934	0.0934	TILLOTSON RUBBER CORPORATION
NH	Coos	33007	3300700092	002	1	10200401	249.00	MANEVU2002	0.3549	0.0020	0.0020	WAUSAU PAPERS OF NH INC
NH	Coos	33007	3300700092	002	2	10200501	249.00	MANEVU2002	0.2371	0.0013	0.0013	WAUSAU PAPERS OF NH INC
NH	Coos	33007	3300700092	002	3	10200601	249.00	MANEVU2002	11.9396	0.0663	0.0663	WAUSAU PAPERS OF NH INC
NH	Coos	33007	3300700092	012	1	10200601	179.00	MANEVU2002	35.7297	0.1060	0.1060	WAUSAU PAPERS OF NH INC
NH	Coos	33007	3300700093	007	2	10200601	84.50	MANEVU2002	0.3600	0.0000	0.0000	GROVETON PAPER BOARD, INC
NH	Coos	33007	3300700093	008	2	10200601	84.50	MANEVU2002	0.4485	0.0000	0.0000	GROVETON PAPER BOARD, INC

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NH	Grafton	33009	3300900003	001	1	10300402	47.00	MANEVU2002	11.3076	0.0777	0.0777	DARTMOUTH-HITCHCOCK MEDICAL CENTER
NH	Grafton	33009	3300900003	002	1	10300402	47.00	MANEVU2002	17.4349	0.1046	0.1046	DARTMOUTH-HITCHCOCK MEDICAL CENTER
NH	Grafton	33009	3300900003	003	1	10300402	47.00	MANEVU2002	4.5581	0.0617	0.0617	DARTMOUTH-HITCHCOCK MEDICAL CENTER
NH	Grafton	33009	3300900020	001	1	10300401	120.00	MANEVU2002	59.0213	0.3443	0.3443	DARTMOUTH COLLEGE
NH	Grafton	33009	3300900020	002	1	10300402	36.00	MANEVU2002	4.4312	0.0782	0.0782	DARTMOUTH COLLEGE
NH	Grafton	33009	3300900020	003	1	10300402	60.00	MANEVU2002	34.1046	0.2099	0.2099	DARTMOUTH COLLEGE
NH	Grafton	33009	3300900020	004	1	10300402	93.00	MANEVU2002	45.4900	0.2481	0.2481	DARTMOUTH COLLEGE
NH	Grafton	33009	3300900020	006	2	10300502	55.00	SCC Descriptio	0.4320	0.0023	0.0023	DARTMOUTH COLLEGE
NH	Grafton	33009	3300900020	010	1	10300401	85.50	MANEVU2002	2.7029	0.0901	0.0901	DARTMOUTH COLLEGE
NH	Hillsborough	33011	3301100017	001	1	10200401	137.00	MANEVU2002	19.1669	0.0681	0.0681	ANHEUSER-BUSCH INC
NH	Hillsborough	33011	3301100017	001	3	10200601	137.00	MANEVU2002	10.4999	0.0373	0.0373	ANHEUSER-BUSCH INC
NH	Hillsborough	33011	3301100017	002	1	10200401	137.00	MANEVU2002	18.5314	0.0906	0.0906	ANHEUSER-BUSCH INC
NH	Hillsborough	33011	3301100017	002	3	10200601	137.00	MANEVU2002	9.3220	0.0456	0.0456	ANHEUSER-BUSCH INC
NH	Hillsborough	33011	3301100017	003	1	10200401	137.00	MANEVU2002	15.2513	0.0644	0.0644	ANHEUSER-BUSCH INC
NH	Hillsborough	33011	3301100017	003	3	10200601	137.00	MANEVU2002	10.9392	0.0462	0.0462	ANHEUSER-BUSCH INC
NH	Hillsborough	33011	3301100034	001	1	10300501	10.00	MANEVU2002	0.0935	0.0234	0.0234	CROTCHED MOUNTAIN REHAB CENTER
NH	Hillsborough	33011	3301100070	001	1	10200402	37.50	MANEVU2002	26.8372	0.0855	0.0855	MONADNOCK PAPER MILLS INC
NH	Hillsborough	33011	3301100070	002	1	10200402	37.50	MANEVU2002	24.9268	0.0800	0.0800	MONADNOCK PAPER MILLS INC
NH	Hillsborough	33011	3301100072	001	1	10200402	60.00	MANEVU2002	17.7308	0.0869	0.0869	NASHUA CORPORATION
NH	Hillsborough	33011	3301100072	001	3	10200602	60.00	MANEVU2002	2.1950	0.0108	0.0108	NASHUA CORPORATION
NH	Hillsborough	33011	3301100072	003	1	10200402	60.00	MANEVU2002	10.5106	0.0000	0.0000	NASHUA CORPORATION
NH	Hillsborough	33011	3301100072	007	2	10200603	5.00	SCC Descriptio	0.1000	0.0006	0.0006	NASHUA CORPORATION
NH	Hillsborough	33011	3301100072	011	1	10200603	9.00	MANEVU2002	0.0525	0.0013	0.0013	NASHUA CORPORATION
NH	Hillsborough	33011	3301100076	008	1	10200504	5.00	SCC Descriptio	0.2319	0.0012	0.0012	KALWALL PANELS & ACCESSORIES
NH	Hillsborough	33011	3301100076	008	2	10200501	5.00	SCC Descriptio	0.1012	0.0005	0.0005	KALWALL PANELS & ACCESSORIES
NH	Hillsborough	33011	3301100076	008	3	10200603	5.00	SCC Descriptio	0.0011	0.0000	0.0000	KALWALL PANELS & ACCESSORIES
NH	Hillsborough	33011	3301100076	008	4	10201003	5.00	SCC Descriptio	0.4368	0.0022	0.0022	KALWALL PANELS & ACCESSORIES
NH	Hillsborough	33011	3301100093	001	1	10200501	5.00	MANEVU2002	0.4051	0.0000	0.0000	BATESVILLE MANUFACTURING INC
NH	Hillsborough	33011	3301100093	002	1	10200501	5.00	MANEVU2002	0.4051	0.0000	0.0000	BATESVILLE MANUFACTURING INC
NH	Hillsborough	33011	3301100109	001	1	10200905	2.90	MANEVU2002	2.4867	0.0094	0.0094	PETERBORO BASKET COMPANY
NH	Merrimack	33013	3301300032	002	1	10200402	40.00	MANEVU2002	18.8619	0.0251	0.0251	CONCORD STEAM CORPORATION
NH	Merrimack	33013	3301300032	002	3	10200602	40.00	MANEVU2002	14.9052	0.0199	0.0199	CONCORD STEAM CORPORATION
NH	Merrimack	33013	3301300032	003	1	10200402	48.40	MANEVU2002	3.2376	0.0162	0.0162	CONCORD STEAM CORPORATION
NH	Merrimack	33013	3301300032	003	3	10200602	48.40	MANEVU2002	1.6849	0.0084	0.0084	CONCORD STEAM CORPORATION
NH	Merrimack	33013	3301300032	005	1	10200402	40.00	MANEVU2002	0.8346	0.0083	0.0083	CONCORD STEAM CORPORATION
NH	Merrimack	33013	3301300111	009	1	10300501	2.00	MANEVU2002	0.3525	0.0013	0.0013	ELEKTRISOLA INC
NH	Merrimack	33013	3301300125	002	1	10200903	4.10	MANEVU2002	0.4954	0.0024	0.0024	BOYCE HIGHLANDS, INC
NH	Rockingham	33015	3301500004	001	1	10300402	67.50	MANEVU2002	0.1662	0.0000	0.0000	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500004	003	1	10300402	21.00	MANEVU2002	2.9796	0.0489	0.0489	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500004	003	2	10300602	21.00	MANEVU2002	0.8260	0.0135	0.0135	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500004	004	1	10300402	21.00	MANEVU2002	2.9796	0.0489	0.0489	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500004	004	2	10300602	21.00	MANEVU2002	0.8260	0.0135	0.0135	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500004	005	1	10300402	78.00	MANEVU2002	28.2330	0.0000	0.0000	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500004	005	2	10300603	78.00	MANEVU2002	0.1580	0.0000	0.0000	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500004	006	1	10300503	1.00	MANEVU2002	0.2857	0.0023	0.0023	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500004	006	2	10300603	1.00	MANEVU2002	0.2995	0.0024	0.0024	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500041	008	1	10200503	17.90	MANEVU2002	3.6651	0.0147	0.0147	SPRAGUE ENERGY
NH	Rockingham	33015	3301500058	003	2	10200602	15.00	MANEVU2002	1.7700	0.0170	0.0170	VENTURE - SEABROOK
NH	Rockingham	33015	3301500076	009	1	10200602	16.00	MANEVU2002	12.8135	0.0366	0.0366	FOSS MANUFACTURING COMPANY INC
NH	Rockingham	33015	3301500076	010	1	10300603	3.00	MANEVU2002	0.0225	0.0002	0.0002	FOSS MANUFACTURING COMPANY INC
NH	Rockingham	33015	3301500076	011	1	10300602	4.00	MANEVU2002	0.0235	0.0059	0.0059	FOSS MANUFACTURING COMPANY INC
NH	Rockingham	33015	3301500076	013	1	10200602	15.00	MANEVU2002	0.2103	0.0019	0.0019	FOSS MANUFACTURING COMPANY INC

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NH	Rockingham	33015	3301590793	004	1	10200602	25.20	MANEVU2002	0.0010	0.0003	0.0003	NEWINGTON ENERGY LLC
NH	Strafford	33017	3301700003	009	1	10300811	1.50	MANEVU2002	0.1950	0.0000	0.0000	TURNKEY RECYCLING & ENVIRONMENTAL ENTERP
NH	Strafford	33017	3301700003	010	2	10301002	0.00		0.1357	0.0011	0.0011	TURNKEY RECYCLING & ENVIRONMENTAL ENTERP
NH	Strafford	33017	3301700009	001	1	10300402	47.30	MANEVU2002	22.8308	0.0074	0.0074	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	001	2	10300602	47.30	MANEVU2002	0.5460	0.0002	0.0002	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	002	1	10300402	47.30	MANEVU2002	10.2281	0.0311	0.0311	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	002	2	10300602	47.30	MANEVU2002	1.3235	0.0040	0.0040	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	003	1	10300402	47.30	MANEVU2002	16.5158	0.0000	0.0000	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	004	1	10300402	47.30	MANEVU2002	2.0350	0.0000	0.0000	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	005	1	10300402	16.70	MANEVU2002	0.3406	0.0026	0.0026	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	005	2	10300602	16.70	MANEVU2002	0.0210	0.0002	0.0002	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	007	2	10300602	12.60	MANEVU2002	1.0880	0.0080	0.0080	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	015	3	10300603	5.00	SCC Descriptio	2.8750	0.0359	0.0359	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	015	1	10300503	5.00	SCC Descriptio	1.6644	0.0208	0.0208	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	015	2	10301003	5.00	SCC Descriptio	0.6501	0.0081	0.0081	UNIVERSITY OF NEW HAMPSHIRE
NH	Sullivan	33019	3301900001	001	1	10200402	27.00	MANEVU2002	19.5839	0.0563	0.0563	APC PAPER COMPANY INC
NH	Sullivan	33019	3301900001	002	1	10200402	27.00	MANEVU2002	19.5839	0.0563	0.0563	APC PAPER COMPANY INC
NH	Sullivan	33019	3301900030	001	1	10200906	10.00	MANEVU2002	9.6395	0.0328	0.0328	DURGIN & CROWELL LUMBER COMPANY
NH	Sullivan	33019	3301900030	008	1	10200403	9.90	MANEVU2002	0.4979	0.0066	0.0066	DURGIN & CROWELL LUMBER COMPANY
NH	Sullivan	33019	3301900030	009	1	10200403	8.40	MANEVU2002	0.4207	0.0056	0.0056	DURGIN & CROWELL LUMBER COMPANY
NJ	Atlantic	34001	70192	U10	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0000	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U11	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0000	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U2	OS1	10300602	55.00	SCC Descriptio	0.1900	0.0001	0.0001	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U3	OS1	10300602	55.00	SCC Descriptio	0.1900	0.0001	0.0001	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U4	OS1	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0000	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U5	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0000	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U6	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0002	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U7	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0000	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U8	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0000	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U9	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0000	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70324	U5	OS1	10300502	55.00	SCC Descriptio	0.3500	0.0000	0.0010	MASSARELLI'S LAWN ORNAMENTS, INC.
NJ	Atlantic	34001	70491	U7	OS11	10300602	55.00	SCC Descriptio	1.4800	0.0150	0.0150	Resorts Atlantic City
NJ	Atlantic	34001	70491	U7	OS3	10300602	55.00	SCC Descriptio	1.6000	0.0139	0.0139	Resorts Atlantic City
NJ	Atlantic	34001	70491	U7	OS7	10300602	55.00	SCC Descriptio	0.9100	0.0026	0.0026	Resorts Atlantic City
NJ	Atlantic	34001	70491	U7	OS4	10300501	55.00	SCC Descriptio	0.0700	0.0000	0.0002	Resorts Atlantic City
NJ	Atlantic	34001	70491	U7	OS1	10300602	55.00	SCC Descriptio	11.4500	0.0003	0.0003	Resorts Atlantic City
NJ	Atlantic	34001	70496	U14	OS1	10300602	1.67	EU DESCRIPT	0.1700	0.0000	0.0004	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U17	OS1	10300602	1.08	EU DESCRIPT	0.0600	0.0000	0.0001	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U19	OS1	10300602	1.68	EU DESCRIPT	0.0800	0.0000	0.0002	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U20	OS1	10300602	1.50	EU DESCRIPT	0.1200	0.0000	0.0003	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U25	OS1	10300602	12.54	EU DESCRIPT	2.6700	0.0000	0.0066	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U28	OS1	10300602	2.80	EU DESCRIPT	0.0200	0.0000	0.0000	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U29	OS1	10300602	2.80	EU DESCRIPT	0.0200	0.0000	0.0000	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U36	OS1	10300602	4.18	EU DESCRIPT	0.0300	0.0000	0.0001	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U4	OS1	10300602	1.36	EU DESCRIPT	0.0800	0.0000	0.0002	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U5	OS1	10300602	1.25	EU DESCRIPT	0.1100	0.0000	0.0003	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U7	OS1	10300602	2.50	EU DESCRIPT	0.1200	0.0000	0.0003	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U8	OS1	10300502	1.05	EU DESCRIPT	0.0100	0.0000	0.0000	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70497	U1	OS1	10300602	6.57	EU DESCRIPT	0.3200	0.0000	0.0008	Bacharach Institute for Rehabilitation
NJ	Atlantic	34001	70497	U6	OS1	10300602	1.50	EU DESCRIPT	0.1000	0.0001	0.0001	Bacharach Institute for Rehabilitation
NJ	Atlantic	34001	70497	U7	OS1	10300602	1.50	EU DESCRIPT	0.0800	0.0001	0.0001	Bacharach Institute for Rehabilitation
NJ	Atlantic	34001	70497	U8	OS1	10300602	1.50	EU DESCRIPT	0.0800	0.0001	0.0001	Bacharach Institute for Rehabilitation

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NJ	Atlantic	34001	70502	U2	OS5	10300602	29.30	EU DESCRIPT	2.5500	0.0264	0.0264	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS15	10300602	29.30	EU DESCRIPT	0.9600	0.0216	0.0216	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS13	10300602	29.30	EU DESCRIPT	5.7700	0.0205	0.0205	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS7	10300602	29.30	EU DESCRIPT	3.6400	0.0178	0.0178	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS3	10300602	29.30	EU DESCRIPT	0.7800	0.0146	0.0146	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS11	10300602	29.30	EU DESCRIPT	0.6600	0.0134	0.0134	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS1	10300602	29.30	EU DESCRIPT	2.0200	0.0131	0.0131	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS2	10300501	29.30	EU DESCRIPT	0.0500	0.0000	0.0003	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS12	10300501	29.30	EU DESCRIPT	0.0300	0.0000	0.0000	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS14	10300501	29.30	EU DESCRIPT	0.1000	0.0000	0.0000	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS4	10300501	29.30	EU DESCRIPT	0.0800	0.0000	0.0003	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS8	10300501	29.30	EU DESCRIPT	0.0100	0.0000	0.0000	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS9	10300602	29.30	EU DESCRIPT	0.5000	0.0000	0.0000	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70513	U12	OS1	10200602	55.00	SCC Descriptio	0.0200	0.0000	0.0000	South Jersey Gas Company (formerly ID 70109)
NJ	Atlantic	34001	70513	U12	OS2	10200602	55.00	SCC Descriptio	0.0400	0.0000	0.0000	South Jersey Gas Company (formerly ID 70109)
NJ	Atlantic	34001	70513	U9	OS1	10200602	22.00	EU DESCRIPT	0.0200	0.0000	0.0000	South Jersey Gas Company (formerly ID 70109)
NJ	Atlantic	34001	70525	U1	OS1	10300602	55.00	SCC Descriptio	0.0900	0.0000	0.0002	Missouri Avenue Generating Station
NJ	Atlantic	34001	70525	U1	OS5	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0002	Missouri Avenue Generating Station
NJ	Atlantic	34001	70525	U1	OS3	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0001	Missouri Avenue Generating Station
NJ	Atlantic	34001	70539	U12	OS2	10300602	8.37	EU DESCRIPT	0.6300	0.0017	0.0017	Shore Memorial Hospital
NJ	Atlantic	34001	70539	U13	OS2	10300602	5.00	EU DESCRIPT	0.6300	0.0017	0.0017	Shore Memorial Hospital
NJ	Atlantic	34001	70539	U5	OS2	10200602	14.65	EU DESCRIPT	0.0900	0.0003	0.0003	Shore Memorial Hospital
NJ	Atlantic	34001	70539	U5	OS1	10200502	14.65	EU DESCRIPT	0.0400	0.0000	0.0001	Shore Memorial Hospital
NJ	Atlantic	34001	70539	U7	OS2	10300602	1.50	EU DESCRIPT	0.6300	0.0017	0.0017	Shore Memorial Hospital
NJ	Bergen	34003	00004	U32	OS1	10300602	55.00	SCC Descriptio	2.4500	0.0089	0.0089	Honeywell International, Inc.
NJ	Bergen	34003	00004	U8	OS1	10300602	55.00	SCC Descriptio	1.4100	0.0101	0.0101	Honeywell International, Inc.
NJ	Bergen	34003	00009	U67	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0002	0.0002	STEPAN COMPANY
NJ	Bergen	34003	00009	U82	OS1	10300602	55.00	SCC Descriptio	0.6600	0.0017	0.0017	STEPAN COMPANY
NJ	Bergen	34003	00009	U93	OS1	10300602	55.00	SCC Descriptio	0.3300	0.0008	0.0008	STEPAN COMPANY
NJ	Bergen	34003	00009	U95	OS1	10300602	55.00	SCC Descriptio	0.8200	0.0021	0.0021	STEPAN COMPANY
NJ	Bergen	34003	00009	U96	OS1	10300602	55.00	SCC Descriptio	9.5600	0.0238	0.0238	STEPAN COMPANY
NJ	Bergen	34003	00009	U9601	OS1	10300602	55.00	SCC Descriptio	0.7100	0.0053	0.0053	STEPAN COMPANY
NJ	Bergen	34003	00009	U9601	OS2	10300501	55.00	SCC Descriptio	0.0800	0.0000	0.0001	STEPAN COMPANY
NJ	Bergen	34003	00089	U4	OS0	10300402	55.00	SCC Descriptio	4.3300	0.0046	0.0046	Amerada Hess - Edgewater Terminal
NJ	Bergen	34003	00122	U1	OS1	10200602	55.00	SCC Descriptio	3.7500	0.0000	0.0101	BERGEN REGIONAL MEDICAL CENTER
NJ	Bergen	34003	00122	U2	OS1	10200602	55.00	SCC Descriptio	6.2500	0.0000	0.0169	BERGEN REGIONAL MEDICAL CENTER
NJ	Bergen	34003	00122	U3	OS1	10200602	55.00	SCC Descriptio	3.5500	0.0592	0.0592	BERGEN REGIONAL MEDICAL CENTER
NJ	Bergen	34003	00122	U4	OS1	10200602	55.00	SCC Descriptio	4.2500	0.0542	0.0542	BERGEN REGIONAL MEDICAL CENTER
NJ	Bergen	34003	00205	U2	OS2	10300602	55.00	SCC Descriptio	0.1200	0.0000	0.0003	Len-Ron Manufacturing, A Division of Aramis
NJ	Bergen	34003	00205	U3	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0002	Len-Ron Manufacturing, A Division of Aramis
NJ	Bergen	34003	00228	U4	OS1	10300602	55.00	SCC Descriptio	0.1400	0.0025	0.0025	Fisher Scientific Company
NJ	Bergen	34003	00228	U4	OS2	10300602	55.00	SCC Descriptio	1.4700	0.0025	0.0025	Fisher Scientific Company
NJ	Bergen	34003	00228	U4	OS3	10300402	55.00	SCC Descriptio	0.0500	0.0000	0.0000	Fisher Scientific Company
NJ	Bergen	34003	00243	U8	OS1	10200602	19.80	EU DESCRIPT	1.4300	0.0040	0.0040	Novus Fine Chemicals
NJ	Bergen	34003	00243	U9	OS1	10200502	11.55	EU DESCRIPT	0.6200	0.0111	0.0111	Novus Fine Chemicals
NJ	Bergen	34003	00253	U1	OS1	10200602	11.55	EU DESCRIPT	1.6000	0.0334	0.0334	GIBRALTAR PLASTICS CORPORATION
NJ	Bergen	34003	00253	U1	OS2	10200502	11.55	EU DESCRIPT	0.4400	0.0000	0.0012	GIBRALTAR PLASTICS CORPORATION
NJ	Bergen	34003	00263	U1	OS5	10200602	55.00	SCC Descriptio	2.5900	0.0100	0.0100	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U1	OS2	10300602	55.00	SCC Descriptio	1.7200	0.0067	0.0067	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U1	OS3	10300602	55.00	SCC Descriptio	1.7000	0.0066	0.0066	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U1	OS4	10300602	55.00	SCC Descriptio	1.4800	0.0057	0.0057	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U1	OS6	10300402	55.00	SCC Descriptio	1.1800	0.0000	0.0000	HACKENSACK UNIVERSITY MEDICAL CENTER

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NJ	Bergen	34003	00263	U1	OS7	10300402	55.00	SCC Descriptio	1.1800	0.0000	0.0000	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U1	OS8	10300402	55.00	SCC Descriptio	1.0200	0.0000	0.0000	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U1	OS9	10300402	55.00	SCC Descriptio	1.7900	0.0000	0.0000	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS2	10300602	55.00	SCC Descriptio	1.0000	0.0059	0.0059	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS1	10300602	55.00	SCC Descriptio	1.0000	0.0051	0.0051	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS10	10300602	55.00	SCC Descriptio	0.3900	0.0018	0.0018	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS15	10300602	55.00	SCC Descriptio	0.3700	0.0018	0.0018	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS16	10300602	55.00	SCC Descriptio	0.3700	0.0018	0.0018	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS9	10300602	55.00	SCC Descriptio	0.3900	0.0017	0.0017	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS14	10300602	55.00	SCC Descriptio	0.2700	0.0014	0.0014	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS13	10300602	55.00	SCC Descriptio	0.2700	0.0010	0.0010	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS17	10300501	55.00	SCC Descriptio	0.1800	0.0000	0.0000	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS18	10300501	55.00	SCC Descriptio	0.1800	0.0000	0.0005	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS19	10300501	55.00	SCC Descriptio	0.2500	0.0000	0.0000	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS20	10300501	55.00	SCC Descriptio	0.2500	0.0000	0.0007	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U3	OS1	10300602	55.00	SCC Descriptio	0.7200	0.0103	0.0103	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U4	OS5	10300602	55.00	SCC Descriptio	0.1300	0.0032	0.0032	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U4	OS6	10300602	55.00	SCC Descriptio	0.1300	0.0031	0.0031	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U4	OS3	10300602	55.00	SCC Descriptio	0.2900	0.0011	0.0011	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U4	OS4	10300602	55.00	SCC Descriptio	0.2900	0.0011	0.0011	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U4	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0005	0.0005	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U4	OS2	10300602	55.00	SCC Descriptio	0.1000	0.0004	0.0004	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U5	OS3	10300602	55.00	SCC Descriptio	0.3000	0.0009	0.0009	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U5	OS4	10300602	55.00	SCC Descriptio	0.3000	0.0009	0.0009	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U5	OS5	10300602	55.00	SCC Descriptio	0.1500	0.0006	0.0006	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U5	OS2	10300602	55.00	SCC Descriptio	0.0500	0.0002	0.0002	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U5	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U9	OS1	10300602	55.00	SCC Descriptio	0.2300	0.0000	0.0000	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U9	OS2	10300602	55.00	SCC Descriptio	0.2400	0.0000	0.0000	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00381	U53	OS1	10200602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Pfister Chemical, Inc.
NJ	Bergen	34003	00381	U54	OS1	10200504	0.00		0.3800	0.0000	0.0007	Pfister Chemical, Inc.
NJ	Bergen	34003	00430	U3	OS1	10200602	55.00	SCC Descriptio	0.5600	0.0015	0.0015	SIKA CORP
NJ	Bergen	34003	00430	U32	OS1	10300602	55.00	SCC Descriptio	0.3800	0.0011	0.0011	SIKA CORP
NJ	Bergen	34003	00523	U101	OS0	10300402	55.00	SCC Descriptio	1.2900	0.0014	0.0014	Amerada Hess - Bogota Terminal
NJ	Bergen	34003	00649	U6	OS1	10200602	55.00	SCC Descriptio	0.0700	0.0000	0.0002	Advance Fiber Technologies Corp.
NJ	Bergen	34003	00650	U22	OS1	10200602	55.00	SCC Descriptio	0.3200	0.0000	0.0009	WECHSLER COFFEE CORPORATION
NJ	Bergen	34003	01157	U3	OS1	10200602	55.00	SCC Descriptio	0.0500	0.0003	0.0003	CROWN FINISHING CORP.
NJ	Bergen	34003	01498	U2	OS1	10200602	55.00	SCC Descriptio	1.9800	0.0057	0.0057	Weyerhaeuser Company
NJ	Bergen	34003	01498	U2	OS2	10200502	55.00	SCC Descriptio	0.2900	0.0000	0.0008	Weyerhaeuser Company
NJ	Bergen	34003	01521	U3	OS1	10200602	55.00	SCC Descriptio	0.0800	0.0004	0.0004	TUNNEL BARREL & DRUM CO., INC
NJ	Bergen	34003	01600	U7	OS3	10300602	55.00	SCC Descriptio	0.1100	0.0002	0.0002	Solgar Vitamin and Herb
NJ	Bergen	34003	01600	U7	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0001	0.0001	Solgar Vitamin and Herb
NJ	Bergen	34003	01600	U7	OS2	10300602	55.00	SCC Descriptio	0.0700	0.0001	0.0001	Solgar Vitamin and Herb
NJ	Bergen	34003	02101	U1201	OS1	10300602	55.00	SCC Descriptio	15.0200	0.0546	0.0546	Simkins Industries, Inc.
NJ	Bergen	34003	02101	U1201	OS2	10300402	55.00	SCC Descriptio	12.6500	0.0000	0.0000	Simkins Industries, Inc.
NJ	Bergen	34003	02101	U3001	OS2	10300602	55.00	SCC Descriptio	1.6600	0.0055	0.0055	Simkins Industries, Inc.
NJ	Bergen	34003	02102	U1	OS3	10200602	55.00	SCC Descriptio	17.5900	0.0000	0.0155	MARCAL PAPER MILLS, INC.
NJ	Bergen	34003	02102	U1	OS1	10200602	55.00	SCC Descriptio	3.4700	0.0000	0.0031	MARCAL PAPER MILLS, INC.
NJ	Bergen	34003	02102	U1	OS2	10200502	55.00	SCC Descriptio	0.0300	0.0000	0.0000	MARCAL PAPER MILLS, INC.
NJ	Bergen	34003	02102	U1	OS4	10200502	55.00	SCC Descriptio	0.0300	0.0000	0.0000	MARCAL PAPER MILLS, INC.
NJ	Bergen	34003	02102	U18	OS1	10200504	0.00		0.6000	0.0000	0.0001	MARCAL PAPER MILLS, INC.
NJ	Bergen	34003	02102	U18	OS2	10200504	0.00		0.6000	0.0000	0.0001	MARCAL PAPER MILLS, INC.

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NJ	Bergen	34003	02102	U18	OS3	10200504	0.00		0.2400	0.0000	0.0001	MARCAL PAPER MILLS, INC.
NJ	Bergen	34003	02102	U18	OS4	10200504	0.00		0.2400	0.0000	0.0001	MARCAL PAPER MILLS, INC.
NJ	Bergen	34003	02102	U20	OS1	10200502	1.36	EU DESCRIPT	0.0500	0.0000	0.0000	MARCAL PAPER MILLS, INC.
NJ	Bergen	34003	02620	U18	OS1	10300602	55.00	SCC Descriptio	0.0200	0.0003	0.0003	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02620	U18	OS2	10300602	55.00	SCC Descriptio	0.0200	0.0003	0.0003	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02620	U18	OS3	10300602	55.00	SCC Descriptio	0.0500	0.0001	0.0001	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02620	U2	OS1	10300501	0.00		0.0300	0.0000	0.0000	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02620	U35	OS1	10300501	0.00		0.0800	0.0000	0.0000	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02620	U6	OS2	10300799	0.00		4.4400	0.0323	0.0323	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02620	U6	OS1	10300501	0.00		0.0300	0.0000	0.0001	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02620	U7	OS2	10300799	0.00		5.5300	0.0337	0.0337	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02620	U7	OS1	10300501	0.00		0.1100	0.0183	0.0183	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02621	U9	OS1	10300602	55.00	SCC Descriptio	0.4400	0.0010	0.0010	J. Josephson, Inc.
NJ	Bergen	34003	02621	U9	OS2	10300602	55.00	SCC Descriptio	0.4400	0.0010	0.0010	J. Josephson, Inc.
NJ	Bergen	34003	02626	U10	OS14	10200602	83.80	EU DESCRIPT	0.4300	0.0000	0.0004	Transco LNG Plant - Station 240
NJ	Bergen	34003	02626	U13	OS17	10200602	4.28	EU DESCRIPT	1.2500	0.0000	0.0005	Transco LNG Plant - Station 240
NJ	Bergen	34003	02626	U7	OS11	10200602	83.80	EU DESCRIPT	0.4100	0.0000	0.0006	Transco LNG Plant - Station 240
NJ	Bergen	34003	02626	U8	OS12	10200602	83.80	EU DESCRIPT	0.3800	0.0000	0.0005	Transco LNG Plant - Station 240
NJ	Bergen	34003	02626	U9	OS13	10200602	83.80	EU DESCRIPT	0.3400	0.0000	0.0003	Transco LNG Plant - Station 240
NJ	Bergen	34003	02653	U5	OS0	10300602	55.00	SCC Descriptio	0.1200	0.0000	0.0003	FDU - Teaneck/Hackensack Campus
NJ	Burlington	34005	45037	U1001	OS1	10300602	55.00	SCC Descriptio	3.6900	0.0101	0.0101	Stepan Company
NJ	Burlington	34005	45037	U1001	OS3	10300602	55.00	SCC Descriptio	3.6900	0.0101	0.0101	Stepan Company
NJ	Burlington	34005	45037	U1001	OS2	10300501	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Stepan Company
NJ	Burlington	34005	45037	U1001	OS4	10300501	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Stepan Company
NJ	Burlington	34005	45077	U3	OS2	10200602	55.00	SCC Descriptio	1.6300	0.0027	0.0027	LOCKHEED MARTIN COMPANY
NJ	Burlington	34005	45077	U4	OS2	10200602	55.00	SCC Descriptio	1.5200	0.0027	0.0027	LOCKHEED MARTIN COMPANY
NJ	Burlington	34005	45077	U5	OS2	10200602	55.00	SCC Descriptio	1.6300	0.0027	0.0027	LOCKHEED MARTIN COMPANY
NJ	Burlington	34005	45198	U1	OS1	10200602	55.00	SCC Descriptio	6.7600	0.0193	0.0193	OCEAN SPRAY CRANBERRIES INC
NJ	Burlington	34005	45198	U11	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0002	0.0002	OCEAN SPRAY CRANBERRIES INC
NJ	Burlington	34005	45198	U2	OS1	10200602	55.00	SCC Descriptio	1.3600	0.0029	0.0029	OCEAN SPRAY CRANBERRIES INC
NJ	Burlington	34005	45198	U3	OS1	10200602	55.00	SCC Descriptio	0.1500	0.0004	0.0004	OCEAN SPRAY CRANBERRIES INC
NJ	Burlington	34005	45198	U6	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0003	0.0003	OCEAN SPRAY CRANBERRIES INC
NJ	Burlington	34005	45198	U7	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0003	0.0003	OCEAN SPRAY CRANBERRIES INC
NJ	Burlington	34005	45198	U8	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0003	0.0003	OCEAN SPRAY CRANBERRIES INC
NJ	Burlington	34005	45207	U1	OS1	10200602	4.12	EU DESCRIPT	0.2200	0.0168	0.0168	Rancocas Hospital
NJ	Burlington	34005	45207	U2	OS1	10200602	4.95	EU DESCRIPT	0.3200	0.0000	0.0000	Rancocas Hospital
NJ	Burlington	34005	45207	U3	OS1	10200602	4.12	EU DESCRIPT	0.1600	0.0000	0.0000	Rancocas Hospital
NJ	Burlington	34005	45207	U4	OS1	10200602	4.95	EU DESCRIPT	0.5200	0.0000	0.0013	Rancocas Hospital
NJ	Burlington	34005	45835	U1	OS1	10300402	33.90	EU DESCRIPT	0.0200	0.0010	0.0010	NEW LISBON DEVELOPMENTAL CENTER
NJ	Burlington	34005	45835	U2	OS2	10300402	55.00	SCC Descriptio	15.3600	0.0282	0.0282	NEW LISBON DEVELOPMENTAL CENTER
NJ	Burlington	34005	45835	U3	OS3	10300402	19.40	EU DESCRIPT	6.7100	0.0501	0.0501	NEW LISBON DEVELOPMENTAL CENTER
NJ	Burlington	34005	45835	U4	OS4	10300501	1.56	EU DESCRIPT	0.0800	0.0000	0.0000	NEW LISBON DEVELOPMENTAL CENTER
NJ	Burlington	34005	45897	U1	OS1	10300602	50.00	EU DESCRIPT	1.5300	0.0000	0.0038	McGuire Air Force Base
NJ	Burlington	34005	45897	U100	OS106	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U101	OS107	10300602	2.07	EU DESCRIPT	0.2800	0.0000	0.0007	McGuire Air Force Base
NJ	Burlington	34005	45897	U102	OS108	10300602	3.65	EU DESCRIPT	0.1700	0.0000	0.0004	McGuire Air Force Base
NJ	Burlington	34005	45897	U103	OS109	10300602	3.65	EU DESCRIPT	0.2200	0.0000	0.0005	McGuire Air Force Base
NJ	Burlington	34005	45897	U104	OS110	10300602	2.50	EU DESCRIPT	0.1200	0.0000	0.0003	McGuire Air Force Base
NJ	Burlington	34005	45897	U105	OS111	10300602	3.65	EU DESCRIPT	0.2400	0.0000	0.0006	McGuire Air Force Base
NJ	Burlington	34005	45897	U106	OS112	10300602	3.65	EU DESCRIPT	0.1600	0.0000	0.0004	McGuire Air Force Base
NJ	Burlington	34005	45897	U107	OS113	10300602	2.71	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U12	OS16	10300602	5.23	EU DESCRIPT	0.0100	0.0000	0.0000	McGuire Air Force Base

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NJ	Burlington	34005	45897	U14	OS20	10300501	2.73	EU DESCRIPT	0.1700	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U15	OS21	10300501	2.73	EU DESCRIPT	0.1700	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U16	OS22	10300501	1.62	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U17	OS23	10300501	1.62	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U2	OS3	10300602	61.80	EU DESCRIPT	5.1400	0.0275	0.0275	McGuire Air Force Base
NJ	Burlington	34005	45897	U2	OS4	10300501	61.80	EU DESCRIPT	0.2900	0.0000	0.0008	McGuire Air Force Base
NJ	Burlington	34005	45897	U20	OS26	10300501	2.12	EU DESCRIPT	0.2200	0.0000	0.0006	McGuire Air Force Base
NJ	Burlington	34005	45897	U21	OS27	10300501	2.12	EU DESCRIPT	0.2100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U22	OS28	10300501	2.12	EU DESCRIPT	0.2100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U23	OS29	10300501	2.73	EU DESCRIPT	0.2200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U24	OS30	10300501	2.05	EU DESCRIPT	0.1700	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U25	OS31	10300602	6.28	EU DESCRIPT	0.2500	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U26	OS32	10300602	6.28	EU DESCRIPT	0.2500	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U28	OS34	10300602	5.25	EU DESCRIPT	0.0100	0.0000	0.0000	McGuire Air Force Base
NJ	Burlington	34005	45897	U3	OS5	10300602	61.80	EU DESCRIPT	7.8600	0.0300	0.0300	McGuire Air Force Base
NJ	Burlington	34005	45897	U3	OS6	10300501	61.80	EU DESCRIPT	0.5600	0.0000	0.0015	McGuire Air Force Base
NJ	Burlington	34005	45897	U31	OS37	10300602	3.21	EU DESCRIPT	0.1500	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U32	OS38	10300602	3.21	EU DESCRIPT	0.2500	0.0006	0.0006	McGuire Air Force Base
NJ	Burlington	34005	45897	U333	OS339	10300501	2.73	EU DESCRIPT	0.2200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U334	OS340	10300501	2.73	EU DESCRIPT	0.2200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U335	OS341	10300501	2.05	EU DESCRIPT	0.1700	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U336	OS342	10300602	1.36	EU DESCRIPT	0.0600	0.0000	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U339	OS345	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U34	OS40	10300602	2.50	EU DESCRIPT	0.1500	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U35	OS41	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U352	OS358	10300501	1.96	EU DESCRIPT	0.0200	0.0000	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U353	OS359	10300501	1.05	EU DESCRIPT	0.0800	0.0000	0.0002	McGuire Air Force Base
NJ	Burlington	34005	45897	U356	OS362	10300602	2.08	EU DESCRIPT	0.0900	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U357	OS363	10300602	2.08	EU DESCRIPT	0.0900	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U358	OS364	10300602	2.50	EU DESCRIPT	0.0900	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U359	OS365	10300602	3.51	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U360	OS366	10300602	3.51	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U38	OS44	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U385	OS391	10300602	3.50	EU DESCRIPT	0.5100	0.0010	0.0010	McGuire Air Force Base
NJ	Burlington	34005	45897	U386	OS392	10300602	3.50	EU DESCRIPT	0.5100	0.0010	0.0010	McGuire Air Force Base
NJ	Burlington	34005	45897	U39	OS45	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U4	OS7	10300602	61.80	EU DESCRIPT	6.2200	0.0000	0.0154	McGuire Air Force Base
NJ	Burlington	34005	45897	U4	OS8	10300501	61.80	EU DESCRIPT	0.4800	0.0000	0.0013	McGuire Air Force Base
NJ	Burlington	34005	45897	U40	OS46	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U41	OS47	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U43	OS49	10300602	2.38	EU DESCRIPT	0.0600	0.0000	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U44	OS50	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U45	OS51	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U46	OS52	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U47	OS53	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U48	OS54	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U49	OS55	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U50	OS56	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U51	OS57	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U52	OS58	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U53	OS59	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U54	OS60	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base

									2002 NOx Emissions			
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NJ	Burlington	34005	45897	U55	OS61	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U56	OS62	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U57	OS63	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U58	OS64	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U59	OS65	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U60	OS66	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U61	OS67	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U62	OS68	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U63	OS69	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U64	OS70	10300602	2.50	EU DESCRIPT	0.1400	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U65	OS71	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U66	OS72	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U67	OS73	10300602	2.50	EU DESCRIPT	0.1400	0.0002	0.0002	McGuire Air Force Base
NJ	Burlington	34005	45897	U68	OS74	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U69	OS75	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U7	OS13	10300501	1.75	EU DESCRIPT	0.0500	0.0000	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U70	OS76	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U71	OS77	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U72	OS78	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U73	OS79	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U74	OS80	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U75	OS81	10300602	2.50	EU DESCRIPT	0.0900	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U76	OS82	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U77	OS83	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U78	OS84	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U79	OS85	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U80	OS86	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U81	OS87	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U82	OS88	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U83	OS89	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U84	OS90	10300602	2.07	EU DESCRIPT	0.0100	0.0000	0.0000	McGuire Air Force Base
NJ	Burlington	34005	45897	U86	OS92	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U87	OS93	10300602	1.44	EU DESCRIPT	0.1400	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U88	OS94	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U89	OS95	10300602	1.44	EU DESCRIPT	0.2100	0.0003	0.0003	McGuire Air Force Base
NJ	Burlington	34005	45897	U90	OS96	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U91	OS97	10300602	1.44	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U92	OS98	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U93	OS99	10300602	2.50	EU DESCRIPT	0.1500	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U94	OS100	10300602	2.50	EU DESCRIPT	0.1400	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U95	OS101	10300602	2.50	EU DESCRIPT	0.1400	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U96	OS102	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U97	OS103	10300602	2.50	EU DESCRIPT	0.1500	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U98	OS104	10300602	2.50	EU DESCRIPT	0.1300	0.0000	0.0003	McGuire Air Force Base
NJ	Burlington	34005	45897	U99	OS115	10300602	2.50	EU DESCRIPT	0.1400	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45924	U134	OS1	10300501	1.32	EU DESCRIPT	0.0400	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U136	OS1	10300501	1.16	EU DESCRIPT	0.0900	0.0008	0.0008	US Army Fort Dix
NJ	Burlington	34005	45924	U142	OS1	10300602	10.50	EU DESCRIPT	0.1500	0.0005	0.0005	US Army Fort Dix
NJ	Burlington	34005	45924	U143	OS1	10300602	3.50	EU DESCRIPT	0.4900	0.0013	0.0013	US Army Fort Dix
NJ	Burlington	34005	45924	U145	OS1	10300602	1.39	EU DESCRIPT	0.0400	0.0001	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U145	OS2	10300602	1.39	EU DESCRIPT	0.0400	0.0001	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U147	OS1	10300602	1.67	EU DESCRIPT	0.0300	0.0000	0.0000	US Army Fort Dix

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NJ	Burlington	34005	45924	U147	OS2	10300602	1.67	EU DESCRIPT	0.0300	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U147	OS3	10300602	1.67	EU DESCRIPT	0.0300	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U15	OS1	10300602	49.90	EU DESCRIPT	0.7000	0.0000	0.0006	US Army Fort Dix
NJ	Burlington	34005	45924	U150	OS1	10300602	1.40	EU DESCRIPT	0.0300	0.0002	0.0002	US Army Fort Dix
NJ	Burlington	34005	45924	U150	OS2	10300602	1.40	EU DESCRIPT	0.0300	0.0002	0.0002	US Army Fort Dix
NJ	Burlington	34005	45924	U152	OS1	10300602	1.40	EU DESCRIPT	0.0300	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U152	OS2	10300602	1.40	EU DESCRIPT	0.0300	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U154	OS2	10300602	1.40	EU DESCRIPT	0.0200	0.0001	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U154	OS1	10300602	1.40	EU DESCRIPT	0.0200	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U156	OS1	10300602	1.40	EU DESCRIPT	0.0400	0.0001	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U156	OS2	10300602	1.40	EU DESCRIPT	0.0400	0.0001	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U158	OS1	10300602	1.40	EU DESCRIPT	0.0600	0.0002	0.0002	US Army Fort Dix
NJ	Burlington	34005	45924	U158	OS2	10300602	1.40	EU DESCRIPT	0.0600	0.0002	0.0002	US Army Fort Dix
NJ	Burlington	34005	45924	U16	OS1	10300602	49.90	EU DESCRIPT	0.7000	0.0000	0.0006	US Army Fort Dix
NJ	Burlington	34005	45924	U162	OS1	10300602	1.40	EU DESCRIPT	0.0200	0.0001	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U162	OS2	10300602	1.40	EU DESCRIPT	0.0200	0.0001	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U164	OS1	10300602	3.10	EU DESCRIPT	0.0600	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U165	OS1	10300602	3.10	EU DESCRIPT	0.0500	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U17	OS1	10300602	49.90	EU DESCRIPT	0.7000	0.0000	0.0006	US Army Fort Dix
NJ	Burlington	34005	45924	U22	OS1	10300602	45.90	EU DESCRIPT	0.1500	0.0001	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U24	OS1	10300501	2.70	EU DESCRIPT	0.1800	0.0000	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U25	OS1	10300501	3.30	EU DESCRIPT	0.2000	0.0000	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U26	OS1	10300501	3.30	EU DESCRIPT	0.1100	0.0000	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U26	OS2	10300602	3.30	EU DESCRIPT	0.0600	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U27	OS1	10300501	3.30	EU DESCRIPT	0.1800	0.0000	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U33	OS1	10300501	3.00	EU DESCRIPT	0.1200	0.0006	0.0006	US Army Fort Dix
NJ	Burlington	34005	45924	U34	OS1	10300501	3.00	EU DESCRIPT	0.1200	0.0006	0.0006	US Army Fort Dix
NJ	Burlington	34005	45924	U42	OS1	10300501	2.00	EU DESCRIPT	0.2200	0.0000	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U70	OS1	10300501	1.00	EU DESCRIPT	0.0400	0.0007	0.0007	US Army Fort Dix
NJ	Burlington	34005	45924	U75	OS1	10300501	2.39	EU DESCRIPT	0.1300	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U81	OS1	10300501	2.63	EU DESCRIPT	0.2300	0.0000	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U82	OS1	10300501	1.70	EU DESCRIPT	0.1100	0.0012	0.0012	US Army Fort Dix
NJ	Burlington	34005	45924	U87	OS1	10300501	1.70	EU DESCRIPT	0.1000	0.0012	0.0012	US Army Fort Dix
NJ	Burlington	34005	45924	U88	OS1	10300501	1.70	EU DESCRIPT	0.0500	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U89	OS1	10300501	1.08	EU DESCRIPT	0.0600	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U90	OS1	10300501	2.10	EU DESCRIPT	0.4900	0.0015	0.0015	US Army Fort Dix
NJ	Burlington	34005	45924	U91	OS1	10300602	2.70	EU DESCRIPT	0.2200	0.0013	0.0013	US Army Fort Dix
NJ	Burlington	34005	45924	U92	OS1	10300602	2.05	EU DESCRIPT	0.1700	0.0010	0.0010	US Army Fort Dix
NJ	Burlington	34005	45924	U93	OS1	10300501	3.18	EU DESCRIPT	0.1200	0.0000	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U94	OS1	10300501	1.56	EU DESCRIPT	0.0600	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45940	U68	OS2	10200401	55.00	SCC Descriptio	25.5900	0.0501	0.0501	Colorite Specialty Resins
NJ	Burlington	34005	45940	U68	OS1	10200602	55.00	SCC Descriptio	0.1400	0.0006	0.0006	Colorite Specialty Resins
NJ	Burlington	34005	45940	U69	OS2	10200401	55.00	SCC Descriptio	29.8500	0.0583	0.0583	Colorite Specialty Resins
NJ	Burlington	34005	45940	U69	OS1	10200602	55.00	SCC Descriptio	0.2800	0.0018	0.0018	Colorite Specialty Resins
NJ	Burlington	34005	45940	U70	OS2	10200401	55.00	SCC Descriptio	1.2900	0.0000	0.0004	Colorite Specialty Resins
NJ	Burlington	34005	45940	U70	OS1	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Colorite Specialty Resins
NJ	Burlington	34005	45949	U2	OS2	10300799	55.00	SCC Descriptio	0.1500	0.0000	0.0001	Burlington County Resource Recovery Complex
NJ	Burlington	34005	45949	U2	OS3	10300602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Burlington County Resource Recovery Complex
NJ	Burlington	34005	45968	U37	OS1	10200602	55.00	SCC Descriptio	0.1700	0.0008	0.0008	U.S. PIPE & FOUNDRY COMPANY, INC.
NJ	Burlington	34005	45977	U16	OS2	10200401	0.00		9.6400	0.0249	0.0249	Sybron Chemicals Inc.
NJ	Burlington	34005	45977	U16	OS4	10200401	0.00		9.6400	0.0249	0.0249	Sybron Chemicals Inc.
NJ	Burlington	34005	45977	U16	OS6	10200401	0.00		6.4300	0.0166	0.0166	Sybron Chemicals Inc.

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NJ	Burlington	34005	45978	U10	OS1	10200502	55.00	SCC Descriptio	0.5700	0.0000	0.0016	Viking Yacht Company
NJ	Burlington	34005	45978	U11	OS1	10200906	0.00		0.3200	0.0000	0.0009	Viking Yacht Company
NJ	Burlington	34005	45978	U15	OS1	10200502	55.00	SCC Descriptio	0.0800	0.0000	0.0002	Viking Yacht Company
NJ	Burlington	34005	45978	U2	OS1	10200906	0.00		0.2800	0.0000	0.0008	Viking Yacht Company
NJ	Burlington	34005	45978	U4	OS1	10200502	55.00	SCC Descriptio	0.5400	0.0000	0.0015	Viking Yacht Company
NJ	Burlington	34005	45978	U6	OS1	10200502	55.00	SCC Descriptio	0.6100	0.0000	0.0017	Viking Yacht Company
NJ	Burlington	34005	45978	U6	OS2	10200502	55.00	SCC Descriptio	0.3000	0.0000	0.0008	Viking Yacht Company
NJ	Burlington	34005	45979	U3	OS1	10300502	55.00	SCC Descriptio	0.0500	0.0000	0.0000	Burlington Generating Station
NJ	Burlington	34005	45983	U801	O80112	10200401	55.00	SCC Descriptio	6.0300	0.0286	0.0286	PolyOne Corporation
NJ	Burlington	34005	45983	U801	O80122	10200401	55.00	SCC Descriptio	6.0300	0.0286	0.0286	PolyOne Corporation
NJ	Burlington	34005	45983	U801	O80111	10200602	55.00	SCC Descriptio	0.2300	0.0034	0.0034	PolyOne Corporation
NJ	Burlington	34005	45983	U801	O80121	10200602	55.00	SCC Descriptio	0.2300	0.0034	0.0034	PolyOne Corporation
NJ	Burlington	34005	45983	U831	O83111	10200602	55.00	SCC Descriptio	0.1400	0.0005	0.0005	PolyOne Corporation
NJ	Burlington	34005	45983	U831	O83112	10200502	55.00	SCC Descriptio	0.2200	0.0000	0.0000	PolyOne Corporation
NJ	Burlington	34005	45983	U832	O83221	10200602	55.00	SCC Descriptio	0.1200	0.0003	0.0003	PolyOne Corporation
NJ	Burlington	34005	45983	U832	O83222	10200502	55.00	SCC Descriptio	0.2200	0.0000	0.0000	PolyOne Corporation
NJ	Camden	34007	50035	U4	OS1	10200602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	SAR INDUSTRIAL FINISHING
NJ	Camden	34007	50047	U14	OS1	10300602	55.00	SCC Descriptio	3.3000	0.0183	0.0183	ANCORA PSYCHIATRIC HOSPITAL
NJ	Camden	34007	50047	U14	OS2	10300602	55.00	SCC Descriptio	2.6700	0.0135	0.0135	ANCORA PSYCHIATRIC HOSPITAL
NJ	Camden	34007	50047	U15	OS3	10300602	55.00	SCC Descriptio	2.5900	0.0127	0.0127	ANCORA PSYCHIATRIC HOSPITAL
NJ	Camden	34007	50047	U26	OS1	10300602	55.00	SCC Descriptio	1.2800	0.0062	0.0062	ANCORA PSYCHIATRIC HOSPITAL
NJ	Camden	34007	50054	U10	OS1	10200502	55.00	SCC Descriptio	0.1700	0.0005	0.0005	COOK COMPOSITES & POLYMERS CO
NJ	Camden	34007	50054	U9	OS1	10200602	55.00	SCC Descriptio	0.5300	0.0015	0.0015	COOK COMPOSITES & POLYMERS CO
NJ	Camden	34007	50062	U5	OS1	10200602	55.00	SCC Descriptio	1.5300	0.0061	0.0061	Weyerhaeuser INDUSTRIES, INC.
NJ	Camden	34007	50063	U3	OS2	10200401	55.00	SCC Descriptio	7.1000	0.0045	0.0045	Weyerhaeuser Company
NJ	Camden	34007	50063	U3	OS1	10200602	55.00	SCC Descriptio	1.7600	0.0069	0.0069	Weyerhaeuser Company
NJ	Camden	34007	50415	U16	OS1	10200602	2.64	EU DESCRIPT	0.4200	0.0008	0.0008	PRC-DeSoto International, Inc
NJ	Camden	34007	50487	U19	OS1	10200602	4.95	EU DESCRIPT	0.2200	0.0074	0.0074	BARRY CALLEBAUT USA INC
NJ	Camden	34007	50487	U20	OS1	10200602	55.00	SCC Descriptio	0.1400	0.0001	0.0001	BARRY CALLEBAUT USA INC
NJ	Camden	34007	50487	U21	OS1	10200602	55.00	SCC Descriptio	0.1700	0.0003	0.0003	BARRY CALLEBAUT USA INC
NJ	Camden	34007	50487	U22	OS1	10200602	55.00	SCC Descriptio	0.1700	0.0003	0.0003	BARRY CALLEBAUT USA INC
NJ	Camden	34007	50487	U23	OS1	10200602	55.00	SCC Descriptio	0.0600	0.0013	0.0013	BARRY CALLEBAUT USA INC
NJ	Camden	34007	50519	U16	OS1	10300501	5.00	EU DESCRIPT	0.3000	0.0011	0.0011	Koch Materials Company - Gloucester City
NJ	Camden	34007	50519	U2	OS1	10300501	10.00	EU DESCRIPT	0.8100	0.0000	0.0005	Koch Materials Company - Gloucester City
NJ	Camden	34007	50580	U8	OS5	10200502	55.00	SCC Descriptio	1.6800	0.0062	0.0062	KOCH MATERIALS COMPANY
NJ	Camden	34007	50580	U8	OS7	10200502	55.00	SCC Descriptio	1.6800	0.0062	0.0062	KOCH MATERIALS COMPANY
NJ	Camden	34007	50580	U8	OS1	10200502	55.00	SCC Descriptio	0.3200	0.0012	0.0012	KOCH MATERIALS COMPANY
NJ	Camden	34007	50580	U8	OS2	10200502	55.00	SCC Descriptio	0.4200	0.0012	0.0012	KOCH MATERIALS COMPANY
NJ	Camden	34007	50580	U8	OS6	10200502	55.00	SCC Descriptio	0.1100	0.0003	0.0003	KOCH MATERIALS COMPANY
NJ	Camden	34007	50704	U8	OS1	10200502	55.00	SCC Descriptio	0.0700	0.0007	0.0007	Colonial Processing
NJ	Camden	34007	50790	U1	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	MOUNTAIN PRINTING CO INC
NJ	Camden	34007	51486	U3	OS2	10200401	0.00		26.9300	0.1519	0.1519	Pneumo Abex Company D.B.A. - MAFCO Worldwide
NJ	Camden	34007	51486	U3	OS1	10200401	0.00		21.6600	0.1191	0.1191	Pneumo Abex Company D.B.A. - MAFCO Worldwide
NJ	Camden	34007	51486	U5	OS1	10200401	0.00		0.6100	0.0038	0.0038	Pneumo Abex Company D.B.A. - MAFCO Worldwide
NJ	Camden	34007	51595	U10	OS1	10200602	55.00	SCC Descriptio	1.2100	0.0090	0.0090	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U11	OS1	10200602	55.00	SCC Descriptio	0.6300	0.0058	0.0058	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U12	OS1	10200602	55.00	SCC Descriptio	0.3800	0.0004	0.0004	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U13	OS1	10200602	55.00	SCC Descriptio	0.2100	0.0013	0.0013	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U14	OS1	10200602	55.00	SCC Descriptio	0.3000	0.0052	0.0052	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U15	OS1	10200602	55.00	SCC Descriptio	0.5900	0.0057	0.0057	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U19	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0016	0.0016	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U20	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0012	0.0012	CAMPBELL SOUP COMPANY

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NJ	Camden	34007	51595	U25	OS1	10200602	55.00	SCC Descriptio	0.7000	0.0054	0.0054	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U26	OS1	10200602	55.00	SCC Descriptio	0.8400	0.0069	0.0069	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U27	OS1	10200602	55.00	SCC Descriptio	0.8100	0.0078	0.0078	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U28	OS1	10200602	55.00	SCC Descriptio	0.0600	0.0020	0.0020	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U29	OS1	10200602	55.00	SCC Descriptio	0.2300	0.0018	0.0018	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U31	OS1	10200602	55.00	SCC Descriptio	0.0500	0.0003	0.0003	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U9	OS1	10300602	26.40	EU DESCRIPT	0.8400	0.0012	0.0012	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51606	U6	OS0	10300402	55.00	SCC Descriptio	18.2200	0.0248	0.0248	Amerada Hess - Pennsauken Terminal
NJ	Camden	34007	51607	U1	OS2	10300501	55.00	SCC Descriptio	0.0200	0.0117	0.0117	NGC Industries Paperboard Plant
NJ	Camden	34007	51607	U1	OS4	10300501	55.00	SCC Descriptio	0.0200	0.0117	0.0117	NGC Industries Paperboard Plant
NJ	Camden	34007	51607	U1	OS3	10300602	55.00	SCC Descriptio	3.1100	0.0526	0.0526	NGC Industries Paperboard Plant
NJ	Camden	34007	51607	U1	OS1	10300602	55.00	SCC Descriptio	7.1100	0.0349	0.0349	NGC Industries Paperboard Plant
NJ	Camden	34007	51608	U2202	OS1	10200602	55.00	SCC Descriptio	0.9000	0.0001	0.0001	Camden Cogen, L.P.
NJ	Camden	34007	51609	U26	OS4	10200602	55.00	SCC Descriptio	0.5100	0.0012	0.0012	ALUMINUM SHAPES LLC
NJ	Camden	34007	51609	U26	OS5	10200602	55.00	SCC Descriptio	0.4400	0.0011	0.0011	ALUMINUM SHAPES LLC
NJ	Camden	34007	51609	U26	OS1	10200602	55.00	SCC Descriptio	0.1000	0.0000	0.0003	ALUMINUM SHAPES LLC
NJ	Camden	34007	51609	U26	OS2	10200602	55.00	SCC Descriptio	0.5300	0.0000	0.0015	ALUMINUM SHAPES LLC
NJ	Camden	34007	51609	U26	OS6	10200602	55.00	SCC Descriptio	0.1000	0.0000	0.0000	ALUMINUM SHAPES LLC
NJ	Cape May	34009	73236	U1	OS1	10200401	48.00	EU DESCRIPT	3.6000	0.0000	0.0000	USDOT COAST GUARD TRAINING CTR
NJ	Cape May	34009	73236	U2	OS1	10200401	24.00	EU DESCRIPT	7.1300	0.0000	0.0047	USDOT COAST GUARD TRAINING CTR
NJ	Cape May	34009	73236	U21	OS1	10300602	1.00	EU DESCRIPT	0.1100	0.0001	0.0001	USDOT COAST GUARD TRAINING CTR
NJ	Cape May	34009	73236	U3	OS1	10200401	24.00	EU DESCRIPT	5.0700	0.0263	0.0263	USDOT COAST GUARD TRAINING CTR
NJ	Cape May	34009	73236	U5	OS1	10300501	1.46	EU DESCRIPT	0.0300	0.0000	0.0000	USDOT COAST GUARD TRAINING CTR
NJ	Cape May	34009	73236	U6	OS1	10300501	1.45	EU DESCRIPT	0.0300	0.0000	0.0000	USDOT COAST GUARD TRAINING CTR
NJ	Cape May	34009	73241	U1	OS2	10300799	55.00	SCC Descriptio	8.3200	0.0582	0.0582	WOODBINE DEVELOPMENTAL CENTER
NJ	Cape May	34009	73241	U1	OS6	10300799	55.00	SCC Descriptio	3.7600	0.0303	0.0303	WOODBINE DEVELOPMENTAL CENTER
NJ	Cape May	34009	73241	U1	OS5	10300504	55.00	SCC Descriptio	1.3400	0.0084	0.0084	WOODBINE DEVELOPMENTAL CENTER
NJ	Cape May	34009	73241	U1	OS4	10300799	55.00	SCC Descriptio	1.0700	0.0090	0.0090	WOODBINE DEVELOPMENTAL CENTER
NJ	Cape May	34009	73241	U1	OS3	10300504	55.00	SCC Descriptio	0.4500	0.0000	0.0012	WOODBINE DEVELOPMENTAL CENTER
NJ	Cape May	34009	73241	U1	OS1	10300402	55.00	SCC Descriptio	0.3100	0.0162	0.0162	WOODBINE DEVELOPMENTAL CENTER
NJ	Cumberland	34011	75015	U1	OS6	10200502	55.00	SCC Descriptio	1.3500	0.0188	0.0188	SOUTH JERSEY HOSPITAL SYSTEM - NEWCOMB
NJ	Cumberland	34011	75015	U1	OS5	10200502	55.00	SCC Descriptio	1.9800	0.0000	0.0091	SOUTH JERSEY HOSPITAL SYSTEM - NEWCOMB
NJ	Cumberland	34011	75113	U35	OS1	10200602	55.00	SCC Descriptio	0.0200	0.0001	0.0001	DALLAS AIRMOTIVE
NJ	Cumberland	34011	75113	U65	OS1	10200602	55.00	SCC Descriptio	0.1400	0.0000	0.0000	DALLAS AIRMOTIVE
NJ	Cumberland	34011	75113	U66	OS1	10200602	55.00	SCC Descriptio	0.1600	0.0000	0.0003	DALLAS AIRMOTIVE
NJ	Cumberland	34011	75113	U67	OS1	10200602	55.00	SCC Descriptio	0.1600	0.0006	0.0006	DALLAS AIRMOTIVE
NJ	Cumberland	34011	75113	U84	OS1	10200602	55.00	SCC Descriptio	0.0100	0.0001	0.0001	DALLAS AIRMOTIVE
NJ	Cumberland	34011	75262	U10	OS1	10300602	55.00	SCC Descriptio	1.1000	0.0393	0.0393	UNITED STATES GOVERNMENT
NJ	Cumberland	34011	75262	U4	OS1	10300602	55.00	SCC Descriptio	0.5300	0.0179	0.0179	UNITED STATES GOVERNMENT
NJ	Cumberland	34011	75262	U7	OS1	10300602	55.00	SCC Descriptio	0.4700	0.0164	0.0164	UNITED STATES GOVERNMENT
NJ	Cumberland	34011	75478	U1	OS2	10300602	31.00	EU DESCRIPT	0.3100	0.0000	0.0009	Vineland Developmental Center-East Campus
NJ	Cumberland	34011	75478	U3	OS2	10300602	60.00	EU DESCRIPT	0.7300	0.0023	0.0023	Vineland Developmental Center-East Campus
NJ	Cumberland	34011	75487	U15	OS3	10200602	55.00	SCC Descriptio	0.9800	0.0033	0.0033	Casie Ecology Oil Salvage, Inc.
NJ	Cumberland	34011	75487	U9	OS1	10300501	0.00		0.4700	0.0039	0.0039	Casie Ecology Oil Salvage, Inc.
NJ	Cumberland	34011	75499	U1004	OS1502	10300502	33.50	EU DESCRIPT	0.4500	0.0000	0.0011	Bayside and Southern State Prison Complex
NJ	Cumberland	34011	75499	U1004	OS602	10300502	33.50	EU DESCRIPT	0.1300	0.0000	0.0004	Bayside and Southern State Prison Complex
NJ	Cumberland	34011	75499	U1004	OS1501	10300602	33.50	EU DESCRIPT	0.7000	0.0000	0.0017	Bayside and Southern State Prison Complex
NJ	Cumberland	34011	75499	U1004	OS601	10300602	33.50	EU DESCRIPT	0.3300	0.0017	0.0017	Bayside and Southern State Prison Complex
NJ	Cumberland	34011	75499	U901	OS901	10300602	2.50	EU DESCRIPT	8.0900	0.0037	0.0037	Bayside and Southern State Prison Complex
NJ	Cumberland	34011	75503	U17	OS1	10200602	55.00	SCC Descriptio	0.6100	0.0000	0.0000	Kimble Glass Inc.
NJ	Cumberland	34011	75505	U103	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75505	U104	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Wheaton, Inc.

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NJ	Cumberland	34011	75505	U155	OS1	10300602	55.00	SCC Descriptio	0.1400	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75505	U76	OS1	10300602	55.00	SCC Descriptio	0.1200	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75505	U77	OS1	10300602	55.00	SCC Descriptio	0.1200	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75505	U78	OS1	10300602	55.00	SCC Descriptio	0.1200	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75505	U79	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75505	U80	OS1	10300602	55.00	SCC Descriptio	0.1200	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75505	U95	OS1	10300602	55.00	SCC Descriptio	0.2200	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75505	U96	OS1	10300602	55.00	SCC Descriptio	0.1200	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75510	U4	OS1	10300501	1.38	EU DESCRIPT	0.0400	0.0000	0.0000	Cumberland County Solid Waste Facility
NJ	Cumberland	34011	75510	U5	OS1	10300501	1.38	EU DESCRIPT	0.0400	0.0000	0.0000	Cumberland County Solid Waste Facility
NJ	Cumberland	34011	75511	U1	OS0	10200602	55.00	SCC Descriptio	6.8800	0.0190	0.0190	U.S. Silica Company - Newport Plant
NJ	Essex	34013	05031	U15	OS1	10300602	55.00	SCC Descriptio	1.6800	0.0139	0.0139	VA Medical Center, East Orange,
NJ	Essex	34013	05031	U3	OS1	10300602	55.00	SCC Descriptio	1.8400	0.0141	0.0141	VA Medical Center, East Orange,
NJ	Essex	34013	05031	U7	OS1	10300602	55.00	SCC Descriptio	2.1100	0.0148	0.0148	VA Medical Center, East Orange,
NJ	Essex	34013	05031	U8	OS1	10300602	55.00	SCC Descriptio	1.3200	0.0154	0.0154	VA Medical Center, East Orange,
NJ	Essex	34013	05067	U1	OS1	10300504	55.00	SCC Descriptio	0.8000	0.0000	0.0003	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05067	U1	OS2	10300504	55.00	SCC Descriptio	0.8000	0.0000	0.0003	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05067	U1	OS4	10300602	55.00	SCC Descriptio	0.0700	0.0003	0.0003	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05067	U1	OS3	10300602	55.00	SCC Descriptio	0.0200	0.0001	0.0001	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05067	U18	OS1	10300602	55.00	SCC Descriptio	0.3000	0.0011	0.0011	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05067	U19	OS1	10300602	55.00	SCC Descriptio	0.3000	0.0011	0.0011	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05067	U24	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0004	0.0004	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05067	U91	OS1	10300602	55.00	SCC Descriptio	0.1700	0.0000	0.0003	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05067	U92	OS1	10300602	55.00	SCC Descriptio	0.4700	0.0000	0.0004	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05086	U201	OS1	10300501	0.00		1.3200	0.0034	0.0034	BP Products North America Inc.
NJ	Essex	34013	05086	U202	OS1	10300501	0.00		0.0700	0.0000	0.0000	BP Products North America Inc.
NJ	Essex	34013	05111	U100	OS1	10300602	55.00	SCC Descriptio	0.5500	0.0014	0.0014	ELAN CHEMICAL CO., INC.
NJ	Essex	34013	05111	U100	OS2	10300602	55.00	SCC Descriptio	0.5500	0.0014	0.0014	ELAN CHEMICAL CO., INC.
NJ	Essex	34013	05111	U100	OS3	10300602	55.00	SCC Descriptio	0.5500	0.0014	0.0014	ELAN CHEMICAL CO., INC.
NJ	Essex	34013	05111	U22	OS1	10200602	55.00	SCC Descriptio	1.2200	0.0122	0.0122	ELAN CHEMICAL CO., INC.
NJ	Essex	34013	05111	U95	OS1	10200602	55.00	SCC Descriptio	0.6100	0.0057	0.0057	ELAN CHEMICAL CO., INC.
NJ	Essex	34013	05111	U95	OS2	10200504	55.00	SCC Descriptio	0.6100	0.0000	0.0002	ELAN CHEMICAL CO., INC.
NJ	Essex	34013	05111	U96	OS1	10300504	0.00		0.5300	0.0000	0.0004	ELAN CHEMICAL CO., INC.
NJ	Essex	34013	05111	U97	OS1	10300504	0.00		1.3500	0.0000	0.0010	ELAN CHEMICAL CO., INC.
NJ	Essex	34013	05171	U9	OS1	10300602	55.00	SCC Descriptio	0.3800	0.0000	0.0002	NATIONAL LIGHTING COMPANY, INC.
NJ	Essex	34013	05255	U7	OS1	10200602	55.00	SCC Descriptio	0.1100	0.0000	0.0003	ADCO CHEMICAL CO
NJ	Essex	34013	05255	U8	OS1	10200602	55.00	SCC Descriptio	1.0500	0.0046	0.0046	ADCO CHEMICAL CO
NJ	Essex	34013	05255	U8	OS2	10200502	55.00	SCC Descriptio	0.1400	0.0000	0.0004	ADCO CHEMICAL CO
NJ	Essex	34013	05332	U16	OS1	10200402	55.00	SCC Descriptio	0.0500	0.0000	0.0000	Handy Store Fixtures Inc.
NJ	Essex	34013	05392	U1	OS1	10300602	55.00	SCC Descriptio	0.1300	0.0000	0.0000	Newark International Airport
NJ	Essex	34013	05392	U18	OS1	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Newark International Airport
NJ	Essex	34013	05392	U19	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0000	Newark International Airport
NJ	Essex	34013	05392	U2	OS1	10300602	55.00	SCC Descriptio	0.1300	0.0000	0.0000	Newark International Airport
NJ	Essex	34013	05392	U20	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Newark International Airport
NJ	Essex	34013	05392	U21	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0000	Newark International Airport
NJ	Essex	34013	05392	U3	OS1	10300602	55.00	SCC Descriptio	0.1300	0.0000	0.0000	Newark International Airport
NJ	Essex	34013	05392	U34	OS1	10300602	55.00	SCC Descriptio	0.2100	0.0000	0.0002	Newark International Airport
NJ	Essex	34013	05392	U4	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Newark International Airport
NJ	Essex	34013	05392	U41	OS1	10200602	55.00	SCC Descriptio	0.7800	0.0000	0.0002	Newark International Airport
NJ	Essex	34013	05392	U42	OS1	10200602	55.00	SCC Descriptio	0.7800	0.0000	0.0002	Newark International Airport
NJ	Essex	34013	05392	U49	OS1	10200602	55.00	SCC Descriptio	0.7800	0.0000	0.0002	Newark International Airport
NJ	Essex	34013	05392	U5	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Newark International Airport

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NJ	Essex	34013	05392	U50	OS1	10200602	55.00	SCC Descriptio	0.7800	0.0000	0.0002	Newark International Airport
NJ	Essex	34013	05392	U6	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0000	Newark International Airport
NJ	Essex	34013	05393	U1	OS2	10300602	55.00	SCC Descriptio	1.9300	0.0127	0.0127	Newerk Beth Israel Medical Center
NJ	Essex	34013	05393	U1	OS5	10300504	55.00	SCC Descriptio	0.1600	0.0000	0.0004	Newerk Beth Israel Medical Center
NJ	Essex	34013	05393	U1	OS1	10300602	55.00	SCC Descriptio	1.0600	0.0000	0.0029	Newerk Beth Israel Medical Center
NJ	Essex	34013	05393	U3	OS3	10300602	55.00	SCC Descriptio	1.0500	0.0042	0.0042	Newerk Beth Israel Medical Center
NJ	Essex	34013	05393	U3	OS1	10300602	55.00	SCC Descriptio	0.6700	0.0028	0.0028	Newerk Beth Israel Medical Center
NJ	Essex	34013	05393	U3	OS4	10300501	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Newerk Beth Israel Medical Center
NJ	Essex	34013	05393	U3	OS5	10300501	55.00	SCC Descriptio	0.0100	0.0000	0.0001	Newerk Beth Israel Medical Center
NJ	Essex	34013	05393	U3	OS2	10300602	55.00	SCC Descriptio	0.2700	0.0000	0.0020	Newerk Beth Israel Medical Center
NJ	Essex	34013	05393	U3	OS6	10300501	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Newerk Beth Israel Medical Center
NJ	Essex	34013	05442	U1	OS2	10300501	55.00	SCC Descriptio	0.3700	0.0114	0.0114	Saint Michael's Medical Center
NJ	Essex	34013	05442	U1	OS4	10300501	55.00	SCC Descriptio	0.3900	0.0111	0.0111	Saint Michael's Medical Center
NJ	Essex	34013	05442	U1	OS5	10300602	55.00	SCC Descriptio	2.5400	0.0165	0.0165	Saint Michael's Medical Center
NJ	Essex	34013	05442	U1	OS1	10300602	55.00	SCC Descriptio	0.7200	0.0163	0.0163	Saint Michael's Medical Center
NJ	Essex	34013	05442	U1	OS3	10300602	55.00	SCC Descriptio	0.6400	0.0132	0.0132	Saint Michael's Medical Center
NJ	Essex	34013	05442	U1	OS6	10300501	55.00	SCC Descriptio	0.3700	0.0000	0.0000	Saint Michael's Medical Center
NJ	Essex	34013	05459	U3001	OS2	10200602	55.00	SCC Descriptio	1.0500	0.0069	0.0069	TROY CHEMICAL CORP
NJ	Essex	34013	05459	U3001	OS1	10200502	55.00	SCC Descriptio	0.2300	0.0000	0.0005	TROY CHEMICAL CORP
NJ	Essex	34013	05459	U3002	OS2	10200602	55.00	SCC Descriptio	1.1900	0.0067	0.0067	TROY CHEMICAL CORP
NJ	Essex	34013	05459	U3002	OS1	10200502	55.00	SCC Descriptio	0.1300	0.0000	0.0002	TROY CHEMICAL CORP
NJ	Essex	34013	05459	U3603	OS2	10200602	55.00	SCC Descriptio	0.6100	0.0067	0.0067	TROY CHEMICAL CORP
NJ	Essex	34013	05459	U3603	OS1	10200502	55.00	SCC Descriptio	0.1300	0.0000	0.0003	TROY CHEMICAL CORP
NJ	Essex	34013	05467	U32	OS1	10300602	55.00	SCC Descriptio	0.1600	0.0000	0.0001	Equistar Chemicals-Newark Plant
NJ	Essex	34013	05530	U7	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0000	0.0000	C.D.I. DISPERSIONS
NJ	Essex	34013	05530	U8	OS1	10300602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	C.D.I. DISPERSIONS
NJ	Essex	34013	05530	U9	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0000	0.0000	C.D.I. DISPERSIONS
NJ	Essex	34013	05569	U90	OS1	10300501	0.00		0.0400	0.0004	0.0004	WAS Terminals Corporation
NJ	Essex	34013	05588	U101	OS1	10200602	55.00	SCC Descriptio	0.0600	0.0000	0.0000	ESKIMO PIE CORPORATION
NJ	Essex	34013	05620	U2	OS5	10300602	55.00	SCC Descriptio	0.3600	0.0010	0.0010	IRVINGTON GENERAL HOSPITAL
NJ	Essex	34013	05620	U2	OS3	10300602	55.00	SCC Descriptio	0.2700	0.0007	0.0007	IRVINGTON GENERAL HOSPITAL
NJ	Essex	34013	05620	U2	OS4	10300602	55.00	SCC Descriptio	0.2800	0.0003	0.0003	IRVINGTON GENERAL HOSPITAL
NJ	Essex	34013	06104	U2	OS1	10200602	55.00	SCC Descriptio	0.4400	0.0079	0.0079	POLAROME MFG CO INC
NJ	Essex	34013	06104	U801	OS1	10200602	55.00	SCC Descriptio	1.1300	0.0507	0.0507	POLAROME MFG CO INC
NJ	Essex	34013	06236	U1	OS1	10200602	55.00	SCC Descriptio	7.7900	0.0268	0.0268	AMROD CORPORATION
NJ	Essex	34013	06236	U2	OS1	10200602	55.00	SCC Descriptio	1.6500	0.0057	0.0057	AMROD CORPORATION
NJ	Essex	34013	06236	U3	OS1	10200602	55.00	SCC Descriptio	0.6100	0.0021	0.0021	AMROD CORPORATION
NJ	Essex	34013	06236	U5	OS1	10200602	55.00	SCC Descriptio	0.1400	0.0005	0.0005	AMROD CORPORATION
NJ	Essex	34013	06265	U46	OS2	10200602	55.00	SCC Descriptio	7.3100	0.2147	0.2147	PENICK CORP
NJ	Essex	34013	06265	U46	OS1	10200401	55.00	SCC Descriptio	1.7500	0.0000	0.0047	PENICK CORP
NJ	Essex	34013	06265	U86	OS1	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	PENICK CORP
NJ	Essex	34013	06386	U4	OS1	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Newark Industrial Spray, Inc.
NJ	Essex	34013	06563	U14	OS3	10300602	55.00	SCC Descriptio	1.8900	0.0043	0.0043	Lohmann Therapy Systems Corporation
NJ	Essex	34013	06563	U14	OS2	10300602	55.00	SCC Descriptio	0.9700	0.0022	0.0022	Lohmann Therapy Systems Corporation
NJ	Essex	34013	06563	U14	OS1	10300602	55.00	SCC Descriptio	0.8000	0.0018	0.0018	Lohmann Therapy Systems Corporation
NJ	Essex	34013	06563	U15	OS1	10200602	55.00	SCC Descriptio	2.3500	0.0053	0.0053	Lohmann Therapy Systems Corporation
NJ	Essex	34013	06563	U15	OS2	10200602	55.00	SCC Descriptio	0.3900	0.0009	0.0009	Lohmann Therapy Systems Corporation
NJ	Essex	34013	06563	U2	OS1	10300602	55.00	SCC Descriptio	1.0500	0.0024	0.0024	Lohmann Therapy Systems Corporation
NJ	Essex	34013	06563	U3	OS1	10300602	55.00	SCC Descriptio	2.1300	0.0048	0.0048	Lohmann Therapy Systems Corporation
NJ	Essex	34013	06618	U1	OS1	10200602	55.00	SCC Descriptio	9.7300	0.0430	0.0430	Newark Boxboard Company
NJ	Essex	34013	07167	U311	OS1370	10200602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Hoffmann-La Roche
NJ	Essex	34013	07167	U313	OS1373	10200602	55.00	SCC Descriptio	2.4700	0.0097	0.0097	Hoffmann-La Roche

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Plant Name
NJ	Essex	34013	07167	U313	OS1377	10200602	55.00	SCC Descriptio	8.7700	0.0031	0.0031	Hoffmann-La Roche
NJ	Essex	34013	07167	U313	OS1375	10200602	55.00	SCC Descriptio	1.3000	0.0000	0.0000	Hoffmann-La Roche
NJ	Essex	34013	07167	U313	OS1379	10200602	55.00	SCC Descriptio	0.2300	0.0000	0.0000	Hoffmann-La Roche
NJ	Essex	34013	07167	U313	OS1381	10200602	55.00	SCC Descriptio	1.0800	0.0000	0.0024	Hoffmann-La Roche
NJ	Essex	34013	07167	U313	OS1376	10200402	55.00	SCC Descriptio	0.1500	0.0000	0.0001	Hoffmann-La Roche
NJ	Essex	34013	07167	U320	OS1582	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Hoffmann-La Roche
NJ	Essex	34013	07167	U45	OS120	10200602	55.00	SCC Descriptio	1.1800	0.0026	0.0026	Hoffmann-La Roche
NJ	Essex	34013	07331	U4	OS2	10300602	55.00	SCC Descriptio	0.6700	0.0032	0.0032	Sun Chemical Corporation - Pigments Division
NJ	Essex	34013	07331	U4	OS1	10300602	55.00	SCC Descriptio	0.6800	0.0001	0.0001	Sun Chemical Corporation - Pigments Division
NJ	Essex	34013	07349	U1	OS1	10200602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U1	OS3	10200602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U11	OS1	10200602	55.00	SCC Descriptio	0.7300	0.0000	0.0020	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U11	OS3	10200602	55.00	SCC Descriptio	0.7300	0.0000	0.0020	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U11	OS5	10200602	55.00	SCC Descriptio	0.7300	0.0000	0.0020	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U20	OS1	10200602	55.00	SCC Descriptio	4.3800	0.0132	0.0132	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U20	OS2	10200602	55.00	SCC Descriptio	4.3800	0.0132	0.0132	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U20	OS3	10200602	55.00	SCC Descriptio	4.3800	0.0132	0.0132	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U20	OS4	10200602	55.00	SCC Descriptio	4.3800	0.0132	0.0132	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U5	OS1	10200602	55.00	SCC Descriptio	0.1100	0.0003	0.0003	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U5	OS3	10200602	55.00	SCC Descriptio	0.1100	0.0003	0.0003	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U7	OS1	10200602	55.00	SCC Descriptio	0.1600	0.0000	0.0004	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U7	OS2	10200602	55.00	SCC Descriptio	0.1600	0.0000	0.0004	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U8	OS1	10200602	55.00	SCC Descriptio	0.0800	0.0000	0.0002	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U8	OS3	10200602	55.00	SCC Descriptio	0.0800	0.0000	0.0002	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07666	U101	OS103	10300602	55.00	SCC Descriptio	4.4700	0.0088	0.0088	Clara Maass Medical Center
NJ	Essex	34013	07666	U101	OS101	10300501	55.00	SCC Descriptio	0.4200	0.0000	0.0000	Clara Maass Medical Center
NJ	Essex	34013	07666	U101	OS102	10300501	55.00	SCC Descriptio	0.1600	0.0000	0.0005	Clara Maass Medical Center
NJ	Essex	34013	07726	U2107	OS17	10300602	55.00	SCC Descriptio	6.0700	0.0384	0.0384	University of Medicine & Dentistry of NJ
NJ	Essex	34013	07726	U2107	OS13	10300602	55.00	SCC Descriptio	4.2200	0.0382	0.0382	University of Medicine & Dentistry of NJ
NJ	Essex	34013	07726	U2107	OS9	10300602	55.00	SCC Descriptio	2.0500	0.0365	0.0365	University of Medicine & Dentistry of NJ
NJ	Essex	34013	07726	U2203	OS5	10300602	12.60	EU DESCRIPT	0.3700	0.0000	0.0000	University of Medicine & Dentistry of NJ
NJ	Essex	34013	07726	U2203	OS1	10300602	12.60	EU DESCRIPT	0.5400	0.0000	0.0000	University of Medicine & Dentistry of NJ
NJ	Essex	34013	07726	U2203	OS3	10300602	12.60	EU DESCRIPT	0.4600	0.0000	0.0006	University of Medicine & Dentistry of NJ
NJ	Essex	34013	07727	U37	OS1	10200502	9.00	EU DESCRIPT	0.4600	0.0000	0.0000	Continental Airlines, Inc.
NJ	Essex	34013	07727	U37	OS2	10200502	9.00	EU DESCRIPT	0.4600	0.0000	0.0000	Continental Airlines, Inc.
NJ	Essex	34013	07727	U4	OS7	10300602	5.23	EU DESCRIPT	1.1200	0.0028	0.0028	Continental Airlines, Inc.
NJ	Essex	34013	07727	U5	OS8	10300602	5.23	EU DESCRIPT	1.1200	0.0028	0.0028	Continental Airlines, Inc.
NJ	Essex	34013	07727	U7	OS10	10300602	1.60	EU DESCRIPT	0.3500	0.0009	0.0009	Continental Airlines, Inc.
NJ	Essex	34013	07727	U8	OS11	10300602	1.60	EU DESCRIPT	0.3500	0.0009	0.0009	Continental Airlines, Inc.
NJ	Essex	34013	07730	U13	OS1	10200602	1.00	EU DESCRIPT	0.1500	0.0007	0.0007	Seton Company
NJ	Essex	34013	07730	U14	OS1	10200602	1.00	EU DESCRIPT	0.0900	0.0006	0.0006	Seton Company
NJ	Essex	34013	07730	U15	OS1	10200602	1.00	EU DESCRIPT	0.1500	0.0006	0.0006	Seton Company
NJ	Essex	34013	07730	U2	OS1	10200401	8.38	EU DESCRIPT	2.1900	0.0082	0.0082	Seton Company
NJ	Essex	34013	07730	U3	OS1	10200401	20.92	EU DESCRIPT	5.0600	0.0061	0.0061	Seton Company
NJ	Essex	34013	07730	U4	OS1	10200401	20.92	EU DESCRIPT	4.2000	0.0073	0.0073	Seton Company
NJ	Essex	34013	07730	U5	OS1	10200401	27.20	EU DESCRIPT	5.9000	0.0065	0.0065	Seton Company
NJ	Essex	34013	07976	U1	OS2302	10300402	55.00	SCC Descriptio	1.1400	0.0007	0.0007	Ivy Hill Park Apartments
NJ	Essex	34013	07976	U1	OS2502	10300402	55.00	SCC Descriptio	1.1400	0.0007	0.0007	Ivy Hill Park Apartments
NJ	Essex	34013	07976	U1	OS52	10300402	55.00	SCC Descriptio	1.1400	0.0007	0.0007	Ivy Hill Park Apartments
NJ	Essex	34013	07976	U1	OS652	10300402	55.00	SCC Descriptio	1.1400	0.0007	0.0007	Ivy Hill Park Apartments
NJ	Essex	34013	07976	U1	OS352	10300402	55.00	SCC Descriptio	3.6400	0.0008	0.0008	Ivy Hill Park Apartments
NJ	Essex	34013	07976	U1	OS2301	10300402	55.00	SCC Descriptio	4.0900	0.0009	0.0009	Ivy Hill Park Apartments

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NJ	Essex	34013	07976	U1	OS2501	10300402	55.00	SCC Descriptio	4.0900	0.0009	0.0009	Ivy Hill Park Apartments
NJ	Essex	34013	07976	U1	OS351	10300402	55.00	SCC Descriptio	4.0900	0.0009	0.0009	Ivy Hill Park Apartments
NJ	Essex	34013	07976	U1	OS51	10300402	55.00	SCC Descriptio	4.0900	0.0009	0.0009	Ivy Hill Park Apartments
NJ	Essex	34013	07976	U1	OS651	10300402	55.00	SCC Descriptio	4.0900	0.0009	0.0009	Ivy Hill Park Apartments
NJ	Gloucester	34015	55057	U1	OS1	10200502	55.00	SCC Descriptio	0.5400	0.0003	0.0003	EMD Chemicals Inc.
NJ	Gloucester	34015	55057	U2	OS1	10200502	55.00	SCC Descriptio	0.2600	0.0000	0.0001	EMD Chemicals Inc.
NJ	Gloucester	34015	55057	U3	OS1	10200502	55.00	SCC Descriptio	0.1900	0.0005	0.0005	EMD Chemicals Inc.
NJ	Gloucester	34015	55057	U47	OS1	10200502	55.00	SCC Descriptio	0.2000	0.0008	0.0008	EMD Chemicals Inc.
NJ	Gloucester	34015	55102	U11	OS1	10300602	55.00	SCC Descriptio	0.1300	0.0005	0.0005	Gloucester County Utilities Authority
NJ	Gloucester	34015	55102	U12	OS1	10300602	55.00	SCC Descriptio	0.1500	0.0007	0.0007	Gloucester County Utilities Authority
NJ	Gloucester	34015	55457	U2	OS1	10301002	0.00		0.1100	0.0006	0.0006	Superior Barrel & Drum Co., Inc.
NJ	Gloucester	34015	55727	U63	OS4	10200602	55.00	SCC Descriptio	7.8600	0.0161	0.0161	GEO Specialty Chemicals
NJ	Gloucester	34015	55727	U64	OS4	10200602	55.00	SCC Descriptio	0.5800	0.0006	0.0006	GEO Specialty Chemicals
NJ	Gloucester	34015	55727	U64	OS3	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	GEO Specialty Chemicals
NJ	Gloucester	34015	55779	U1	OS1	10200602	55.00	SCC Descriptio	2.3800	0.0161	0.0161	Rowan University
NJ	Gloucester	34015	55779	U3	OS1	10200602	55.00	SCC Descriptio	3.4300	0.0337	0.0337	Rowan University
NJ	Gloucester	34015	55779	U4	OS2	10200602	55.00	SCC Descriptio	4.4000	0.0161	0.0161	Rowan University
NJ	Gloucester	34015	55779	U8	OS1	10200602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Rowan University
NJ	Gloucester	34015	55779	U9	OS1	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Rowan University
NJ	Gloucester	34015	55779	U9	OS2	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Rowan University
NJ	Gloucester	34015	55779	U9	OS3	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Rowan University
NJ	Gloucester	34015	55781	U110	OS3	10200799	55.00	SCC Descriptio	0.6500	0.0000	0.0018	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55781	U110	OS4	10200502	55.00	SCC Descriptio	0.6500	0.0000	0.0018	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55781	U110	OS5	10200799	55.00	SCC Descriptio	0.6800	0.0000	0.0019	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55781	U110	OS6	10200502	55.00	SCC Descriptio	0.6800	0.0000	0.0019	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55781	U110	OS7	10200799	55.00	SCC Descriptio	0.7100	0.0000	0.0020	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55781	U110	OS8	10200502	55.00	SCC Descriptio	0.7100	0.0000	0.0020	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55781	U110	OS1	10200799	55.00	SCC Descriptio	0.7800	0.0000	0.0021	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55781	U110	OS2	10200502	55.00	SCC Descriptio	0.7800	0.0000	0.0021	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55781	U6	OS1	10200799	146.70	Title V Permit	37.9900	0.1328	0.1328	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55788	U2	OS1	10200602	55.00	SCC Descriptio	2.1700	0.0044	0.0044	Johnson Matthey Inc.
NJ	Gloucester	34015	55788	U2	OS2	10200502	55.00	SCC Descriptio	2.1100	0.0000	0.0058	Johnson Matthey Inc.
NJ	Gloucester	34015	55788	U48	OS1	10300602	55.00	SCC Descriptio	0.3200	0.0000	0.0000	Johnson Matthey Inc.
NJ	Gloucester	34015	55796	U1	OS5	10200602	55.00	SCC Descriptio	0.4300	0.0012	0.0012	Revere Industries, LLC; EKCO Products Div.
NJ	Gloucester	34015	55796	U1	OS2	10200602	55.00	SCC Descriptio	0.3400	0.0009	0.0009	Revere Industries, LLC; EKCO Products Div.
NJ	Gloucester	34015	55796	U1	OS3	10200602	55.00	SCC Descriptio	0.3400	0.0009	0.0009	Revere Industries, LLC; EKCO Products Div.
NJ	Gloucester	34015	55796	U1	OS1	10200602	55.00	SCC Descriptio	0.1000	0.0000	0.0000	Revere Industries, LLC; EKCO Products Div.
NJ	Gloucester	34015	55796	U1	OS4	10200602	55.00	SCC Descriptio	0.1000	0.0000	0.0003	Revere Industries, LLC; EKCO Products Div.
NJ	Gloucester	34015	55798	U7000	OS7001	10200602	55.00	SCC Descriptio	9.4300	0.0262	0.0262	Solvay Solexis, Inc.
NJ	Gloucester	34015	55798	U7000	OS7003	10200602	55.00	SCC Descriptio	9.4300	0.0262	0.0262	Solvay Solexis, Inc.
NJ	Gloucester	34015	55800	U1	OS1	10200602	55.00	SCC Descriptio	2.7600	0.0052	0.0052	Repauno Products, LLC
NJ	Gloucester	34015	55800	U1	OS2	10200602	55.00	SCC Descriptio	2.7600	0.0052	0.0052	Repauno Products, LLC
NJ	Gloucester	34015	55826	U15	OS1	10300602	2.40	EU DESCRIPT	0.5000	0.0014	0.0014	Air Products and Chemicals, Inc.
NJ	Gloucester	34015	55826	U4	OS1	10300602	55.00	SCC Descriptio	4.0700	0.0114	0.0114	Air Products and Chemicals, Inc.
NJ	Gloucester	34015	55826	U4	OS2	10300501	55.00	SCC Descriptio	0.2800	0.0000	0.0000	Air Products and Chemicals, Inc.
NJ	Gloucester	34015	55829	U20	OS3	10200799	484.00	Title V Permit	85.3000	0.2578	0.2578	Valero Refining Co.- N.J.
NJ	Gloucester	34015	55829	U20	OS2	10200799	484.00	Title V Permit	75.9000	0.2406	0.2406	Valero Refining Co.- N.J.
NJ	Gloucester	34015	55829	U20	OS1	10200799	484.00	Title V Permit	76.2000	0.2258	0.2258	Valero Refining Co.- N.J.
NJ	Gloucester	34015	55829	U20	OS6	10200502	484.00	Title V Permit	3.5000	0.0000	0.0096	Valero Refining Co.- N.J.
NJ	Gloucester	34015	55829	U20	OS8	10200502	484.00	Title V Permit	5.0000	0.0000	0.0137	Valero Refining Co.- N.J.
NJ	Gloucester	34015	55829	U20	OS7	10200502	484.00	Title V Permit	6.9000	0.0000	0.0190	Valero Refining Co.- N.J.
NJ	Gloucester	34015	55831	U10	OS1	10200502	55.00	SCC Descriptio	0.1000	0.0000	0.0000	CITGO Asphalt Refining Company

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State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NJ	Gloucester	34015	55831	U11	OS1	10200602	55.00	SCC Descriptio	37.7200	0.1266	0.1266	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U11	OS3	10200602	55.00	SCC Descriptio	37.7200	0.1266	0.1266	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U12	OS1	10200602	55.00	SCC Descriptio	22.6300	0.1157	0.1157	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS10	10200602	55.00	SCC Descriptio	7.8400	0.0277	0.0277	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS2	10200602	55.00	SCC Descriptio	4.0300	0.0119	0.0119	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS4	10200602	55.00	SCC Descriptio	3.7200	0.0106	0.0106	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS8	10200602	55.00	SCC Descriptio	5.7700	0.0103	0.0103	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS6	10200602	55.00	SCC Descriptio	4.1300	0.0099	0.0099	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS1	10200502	55.00	SCC Descriptio	0.1100	0.0000	0.0000	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS3	10200502	55.00	SCC Descriptio	0.0900	0.0000	0.0003	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS5	10200502	55.00	SCC Descriptio	0.1400	0.0000	0.0000	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS7	10200502	55.00	SCC Descriptio	0.3300	0.0000	0.0008	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS9	10200502	55.00	SCC Descriptio	0.4200	0.0000	0.0000	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U16	OS2	10200602	55.00	SCC Descriptio	0.2200	0.0441	0.0441	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U16	OS4	10200602	55.00	SCC Descriptio	7.9100	0.0080	0.0080	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U16	OS6	10200602	55.00	SCC Descriptio	7.9100	0.0080	0.0080	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U2	OS1	10200799	55.00	SCC Descriptio	0.2100	0.0224	0.0224	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U2	OS2	10200602	55.00	SCC Descriptio	0.0800	0.0155	0.0155	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U30	OS12	10300602	55.00	SCC Descriptio	0.2800	0.0010	0.0010	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U7	OS3	10200502	55.00	SCC Descriptio	0.7800	0.0000	0.0000	CITGO Asphalt Refining Company
NJ	Hudson	34017	10070	U62	OS1	10200602	55.00	SCC Descriptio	0.0200	0.0001	0.0001	CASCHEM INC
NJ	Hudson	34017	10131	U2	OS1	10300602	55.00	SCC Descriptio	1.1200	0.0067	0.0067	BAYONNE HOSPITAL
NJ	Hudson	34017	10131	U7	OS3	10300602	55.00	SCC Descriptio	0.0800	0.0074	0.0074	BAYONNE HOSPITAL
NJ	Hudson	34017	10131	U7	OS1	10300602	55.00	SCC Descriptio	1.6700	0.0055	0.0055	BAYONNE HOSPITAL
NJ	Hudson	34017	10162	U2	OS59	10200799	0.00		0.8800	0.0024	0.0024	ELEMENTIS SPECIALTIES
NJ	Hudson	34017	10162	U23	OS1	10200602	55.00	SCC Descriptio	0.4400	0.0012	0.0012	ELEMENTIS SPECIALTIES
NJ	Hudson	34017	10162	U3	OS1	10200602	55.00	SCC Descriptio	0.5000	0.0000	0.0007	ELEMENTIS SPECIALTIES
NJ	Hudson	34017	10162	U5	OS1	10200602	55.00	SCC Descriptio	0.8900	0.0000	0.0013	ELEMENTIS SPECIALTIES
NJ	Hudson	34017	10269	U1	OS1	10300602	55.00	SCC Descriptio	0.8900	0.0025	0.0025	New Jersey City University
NJ	Hudson	34017	10269	U2	OS1	10300602	55.00	SCC Descriptio	1.6900	0.0069	0.0069	New Jersey City University
NJ	Hudson	34017	10269	U3	OS1	10300602	55.00	SCC Descriptio	1.2000	0.0042	0.0042	New Jersey City University
NJ	Hudson	34017	10269	U4	OS1	10300602	55.00	SCC Descriptio	1.0000	0.0045	0.0045	New Jersey City University
NJ	Hudson	34017	10358	U1	OS1	10200602	14.85	EU DESCRIPT	1.5900	0.0000	0.0000	St. Francis Hospital
NJ	Hudson	34017	10358	U2	OS1	10200602	14.85	EU DESCRIPT	1.0100	0.0067	0.0067	St. Francis Hospital
NJ	Hudson	34017	10360	U1	OS1	10300602	26.40	EU DESCRIPT	0.8600	0.0009	0.0009	St. Mary's hospital
NJ	Hudson	34017	10360	U2	OS1	10300602	26.40	EU DESCRIPT	0.8200	0.0008	0.0008	St. Mary's hospital
NJ	Hudson	34017	10419	U10	OS1	10200602	55.00	SCC Descriptio	0.1600	0.0009	0.0009	Engelhard Corporation
NJ	Hudson	34017	10419	U6	OS1	10200602	4.95	EU DESCRIPT	1.0200	0.0000	0.0000	Engelhard Corporation
NJ	Hudson	34017	10419	U9	OS1	10200602	6.60	EU DESCRIPT	0.1500	0.0011	0.0011	Engelhard Corporation
NJ	Hudson	34017	10511	U4	OS1	10200602	55.00	SCC Descriptio	0.2000	0.0000	0.0005	W.R. Grace & Co.-Conn., Grace Const. Prod.
NJ	Hudson	34017	10759	U2	OS1	10200602	55.00	SCC Descriptio	0.5500	0.0023	0.0023	FRUTAROM INCORPORATED
NJ	Hudson	34017	11171	U6	OS1	10300602	55.00	SCC Descriptio	0.1200	0.0004	0.0004	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
NJ	Hudson	34017	11248	U4	OS1	10200602	55.00	SCC Descriptio	3.2400	0.0000	0.0014	UNIVERSAL FOLDING BOX CO. INC.
NJ	Hudson	34017	11409	U1	OS1	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	DAILY NEWS LP
NJ	Hudson	34017	11409	U2	OS1	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	DAILY NEWS LP
NJ	Hudson	34017	11409	U3	OS1	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	DAILY NEWS LP
NJ	Hudson	34017	11409	U4	OS1	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	DAILY NEWS LP
NJ	Hudson	34017	11409	U5	OS1	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	DAILY NEWS LP
NJ	Hudson	34017	11409	U6	OS1	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	DAILY NEWS LP
NJ	Hudson	34017	11975	U3000	OS3001	10200602	55.00	SCC Descriptio	0.4100	0.0000	0.0007	Occidental Chemical Corporation
NJ	Hudson	34017	12047	U1	OS1	10300402	8.25	EU DESCRIPT	4.9000	0.0240	0.0240	Jersey City Medical Center
NJ	Hudson	34017	12047	U13	OS1	10300402	13.53	EU DESCRIPT	0.3500	0.0000	0.0000	Jersey City Medical Center

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NJ	Hudson	34017	12047	U2	OS1	10300402	8.25	EU DESCRIPT	4.9000	0.0240	0.0240	Jersey City Medical Center
NJ	Hudson	34017	12047	U3	OS1	10300402	14.85	EU DESCRIPT	9.8100	0.0016	0.0016	Jersey City Medical Center
NJ	Hudson	34017	12047	U4	OS1	10300402	16.83	EU DESCRIPT	14.7100	0.0000	0.0000	Jersey City Medical Center
NJ	Hudson	34017	12047	U5	OS1	10300402	16.83	EU DESCRIPT	14.7100	0.0000	0.0000	Jersey City Medical Center
NJ	Hudson	34017	12070	U1	OS4	10200602	55.00	SCC Descriptio	1.5900	0.0079	0.0079	Summit Plaza Total Energy Plant
NJ	Hudson	34017	12070	U1	OS2	10200602	55.00	SCC Descriptio	0.8500	0.0055	0.0055	Summit Plaza Total Energy Plant
NJ	Hudson	34017	12070	U1	OS1	10200502	55.00	SCC Descriptio	0.1900	0.0000	0.0000	Summit Plaza Total Energy Plant
NJ	Hudson	34017	12070	U1	OS3	10200502	55.00	SCC Descriptio	0.3600	0.0000	0.0014	Summit Plaza Total Energy Plant
NJ	Hudson	34017	12099	U1	OS2	10300602	55.00	SCC Descriptio	1.0300	0.0024	0.0024	Stevens Institute of Technology
NJ	Hudson	34017	12099	U1	OS4	10300602	55.00	SCC Descriptio	1.0300	0.0024	0.0024	Stevens Institute of Technology
NJ	Hudson	34017	12099	U10	OS2	10300602	55.00	SCC Descriptio	0.1400	0.0001	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U11	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U11	OS2	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U12	OS1	10300602	55.00	SCC Descriptio	0.0200	0.0001	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U13	OS1	10300602	55.00	SCC Descriptio	0.0200	0.0001	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U14	OS1	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U15	OS1	10300602	55.00	SCC Descriptio	0.0900	0.0000	0.0002	Stevens Institute of Technology
NJ	Hudson	34017	12099	U16	OS1	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Stevens Institute of Technology
NJ	Hudson	34017	12099	U17	OS1	10300602	55.00	SCC Descriptio	0.0400	0.0000	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U18	OS1	10300602	55.00	SCC Descriptio	0.0900	0.0001	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U19	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0000	0.0003	Stevens Institute of Technology
NJ	Hudson	34017	12099	U2	OS2	10300602	55.00	SCC Descriptio	0.3300	0.0013	0.0013	Stevens Institute of Technology
NJ	Hudson	34017	12099	U2	OS4	10300602	55.00	SCC Descriptio	0.3300	0.0013	0.0013	Stevens Institute of Technology
NJ	Hudson	34017	12099	U2	OS5	10300602	55.00	SCC Descriptio	0.1800	0.0012	0.0012	Stevens Institute of Technology
NJ	Hudson	34017	12099	U20	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0000	0.0003	Stevens Institute of Technology
NJ	Hudson	34017	12099	U6	OS2	10300602	55.00	SCC Descriptio	0.1700	0.0001	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U7	OS2	10300602	55.00	SCC Descriptio	0.0400	0.0000	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U8	OS2	10300602	55.00	SCC Descriptio	0.0700	0.0001	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U9	OS2	10300602	55.00	SCC Descriptio	0.0700	0.0001	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12194	U11	OS1	10200602	55.00	SCC Descriptio	1.7300	0.0055	0.0055	IMTT
NJ	Hudson	34017	12194	U11	OS2	10200602	55.00	SCC Descriptio	3.4700	0.0055	0.0055	IMTT
NJ	Hudson	34017	12195	U4	OS1	10200401	25.20	EU DESCRIPT	6.1800	0.0064	0.0064	COASTAL OIL NEW YORK INC
NJ	Hudson	34017	12195	U4	OS3	10200401	25.20	EU DESCRIPT	6.1800	0.0064	0.0064	COASTAL OIL NEW YORK INC
NJ	Hudson	34017	12197	U10	OS1	10200602	55.00	SCC Descriptio	1.5000	0.0045	0.0045	Owens Corning Kearny Plant
NJ	Hudson	34017	12197	U15	OS1	10300602	55.00	SCC Descriptio	0.6100	0.0017	0.0017	Owens Corning Kearny Plant
NJ	Hudson	34017	12197	U18	OS1	10300402	23.35	EU DESCRIPT	16.0400	0.0483	0.0483	Owens Corning Kearny Plant
NJ	Hudson	34017	12197	U63	OS2	10300602	55.00	SCC Descriptio	0.4100	0.0012	0.0012	Owens Corning Kearny Plant
NJ	Hudson	34017	12197	U65	OS1	10300501	0.00		0.3500	0.0010	0.0010	Owens Corning Kearny Plant
NJ	Hudson	34017	12199	U3	OS0	10300402	55.00	SCC Descriptio	15.8000	0.0179	0.0179	Amerada Hess - Bayonne Terminal
NJ	Hudson	34017	12200	U3	OS2	10300402	55.00	SCC Descriptio	1.1900	0.0000	0.0008	Kearny Generating Station
NJ	Hudson	34017	12201	U12	OS1	10200602	55.00	SCC Descriptio	1.0900	0.0070	0.0070	Cognis Corporation
NJ	Hudson	34017	12201	U15	OS1	10200602	55.00	SCC Descriptio	0.0900	0.0002	0.0002	Cognis Corporation
NJ	Hudson	34017	12201	U24	OS1	10200401	0.00		1.0900	0.0070	0.0070	Cognis Corporation
NJ	Hudson	34017	12201	U3	OS1	10200401	0.00		0.1100	0.0005	0.0005	Cognis Corporation
NJ	Hudson	34017	12202	U3	OS1	10200602	55.00	SCC Descriptio	6.2600	0.0409	0.0409	Hudson Generating Station
NJ	Hudson	34017	12202	U3	OS3	10200602	55.00	SCC Descriptio	3.7200	0.0399	0.0399	Hudson Generating Station
NJ	Hunterdon	34019	80002	U2406	OS1	10200502	55.00	SCC Descriptio	3.6900	0.0151	0.0151	Gilbert Generating Station
NJ	Hunterdon	34019	80002	U2420	OS1	10200502	55.00	SCC Descriptio	0.6200	0.0000	0.0000	Gilbert Generating Station
NJ	Hunterdon	34019	80293	U2	OS5	10300602	55.00	SCC Descriptio	4.2500	0.0099	0.0099	Hunterdon Cogeneration Limited Partnership
NJ	Hunterdon	34019	80293	U2	OS7	10300602	55.00	SCC Descriptio	4.2500	0.0099	0.0099	Hunterdon Cogeneration Limited Partnership
NJ	Hunterdon	34019	80351	U5	OS1	10200602	55.00	SCC Descriptio	41.7200	0.1370	0.1370	Curtis Specialty Paper
NJ	Hunterdon	34019	80351	U5	OS2	10200502	55.00	SCC Descriptio	0.2400	0.0000	0.0000	Curtis Specialty Paper

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NJ	Hunterdon	34019	80351	U6	OS1	10200602	55.00	SCC Descriptio	18.6500	0.0558	0.0558	Curtis Specialty Paper
NJ	Hunterdon	34019	80351	U6	OS2	10200502	55.00	SCC Descriptio	0.1300	0.0000	0.0000	Curtis Specialty Paper
NJ	Hunterdon	34019	80354	U3	OS2	10200602	55.00	SCC Descriptio	38.1600	0.1000	0.1000	Fiber Mark - Warren Glen
NJ	Hunterdon	34019	80354	U3	OS3	10200602	55.00	SCC Descriptio	9.9300	0.0514	0.0514	Fiber Mark - Warren Glen
NJ	Hunterdon	34019	80361	U6	OS1	10200602	55.00	SCC Descriptio	0.3900	0.0015	0.0015	Tekni-Plex Inc.
NJ	Hunterdon	34019	80361	U6	OS2	10200602	55.00	SCC Descriptio	0.3900	0.0015	0.0015	Tekni-Plex Inc.
NJ	Hunterdon	34019	80368	U1	OS2	10200602	55.00	SCC Descriptio	0.1800	0.0103	0.0103	ExxonMobil Research and Engineering Co.
NJ	Hunterdon	34019	80368	U1	OS1	10200602	55.00	SCC Descriptio	0.0800	0.0044	0.0044	ExxonMobil Research and Engineering Co.
NJ	Hunterdon	34019	80368	U25	OS2	10200602	55.00	SCC Descriptio	8.6600	0.0575	0.0575	ExxonMobil Research and Engineering Co.
NJ	Hunterdon	34019	80368	U4	OS1	10300602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	ExxonMobil Research and Engineering Co.
NJ	Mercer	34021	60070	U3	OS4	10300602	55.00	SCC Descriptio	0.1600	0.0063	0.0063	CAPITAL HEALTH SYSTEM @ MERCER
NJ	Mercer	34021	60070	U3	OS3	10300602	55.00	SCC Descriptio	0.0900	0.0032	0.0032	CAPITAL HEALTH SYSTEM @ MERCER
NJ	Mercer	34021	60090	U13	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0000	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U14	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U15	OS1	10300602	55.00	SCC Descriptio	0.1900	0.0002	0.0002	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U16	OS1	10300602	55.00	SCC Descriptio	0.1900	0.0002	0.0002	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U17	OS1	10300602	55.00	SCC Descriptio	0.1200	0.0005	0.0005	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U18	OS1	10300602	55.00	SCC Descriptio	0.1200	0.0005	0.0005	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U7	OS1	10300602	55.00	SCC Descriptio	0.7200	0.0000	0.0002	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U7	OS2	10300501	55.00	SCC Descriptio	0.1200	0.0000	0.0000	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U8	OS1	10300602	55.00	SCC Descriptio	0.7200	0.0000	0.0002	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U8	OS2	10300501	55.00	SCC Descriptio	0.1200	0.0000	0.0000	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60245	U1	OS4	10300602	55.00	SCC Descriptio	0.6000	0.0091	0.0091	St. Francis Medical Center
NJ	Mercer	34021	60245	U1	OS3	10300602	55.00	SCC Descriptio	0.5900	0.0030	0.0030	St. Francis Medical Center
NJ	Mercer	34021	60245	U1	OS1	10300602	55.00	SCC Descriptio	0.5400	0.0000	0.0015	St. Francis Medical Center
NJ	Mercer	34021	60245	U1	OS2	10300602	55.00	SCC Descriptio	0.3600	0.0000	0.0011	St. Francis Medical Center
NJ	Mercer	34021	60579	U10	OS1	10200602	55.00	SCC Descriptio	0.0500	0.0000	0.0000	Demag Delaval Turbomachinery, Inc.
NJ	Mercer	34021	60579	U11	OS1	10200602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Demag Delaval Turbomachinery, Inc.
NJ	Mercer	34021	60579	U4	OS1	10200602	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Demag Delaval Turbomachinery, Inc.
NJ	Mercer	34021	60579	U5	OS1	10200602	55.00	SCC Descriptio	0.4000	0.0001	0.0001	Demag Delaval Turbomachinery, Inc.
NJ	Mercer	34021	60579	U8	OS1	10200602	55.00	SCC Descriptio	0.5400	0.0001	0.0001	Demag Delaval Turbomachinery, Inc.
NJ	Mercer	34021	60623	U2	OS1	10300602	4.20	EU DESCRIPT	0.2400	0.0001	0.0001	THE TIMES OF TRENTON
NJ	Mercer	34021	60623	U3	OS1	10300602	2.52	EU DESCRIPT	0.0600	0.0000	0.0001	THE TIMES OF TRENTON
NJ	Mercer	34021	60976	U15	OS1	10200602	55.00	SCC Descriptio	1.1200	0.0044	0.0044	Homasote Company
NJ	Mercer	34021	60976	U4	OS1	10200401	55.00	SCC Descriptio	31.1400	0.1340	0.1340	Homasote Company
NJ	Mercer	34021	60976	U4	OS3	10200401	55.00	SCC Descriptio	2.8600	0.0000	0.0077	Homasote Company
NJ	Mercer	34021	60976	U4	OS9	10200602	55.00	SCC Descriptio	1.7900	0.0094	0.0094	Homasote Company
NJ	Mercer	34021	60976	U4	OS2	10200602	55.00	SCC Descriptio	2.5000	0.0066	0.0066	Homasote Company
NJ	Mercer	34021	60976	U4	OS4	10200602	55.00	SCC Descriptio	0.0500	0.0000	0.0000	Homasote Company
NJ	Mercer	34021	60976	U4	OS7	10200602	55.00	SCC Descriptio	0.7400	0.0000	0.0025	Homasote Company
NJ	Mercer	34021	60976	U8	OS1	10200502	55.00	SCC Descriptio	0.0100	0.0003	0.0003	Homasote Company
NJ	Mercer	34021	61008	U1	OS1	10300501	49.50	EU DESCRIPT	0.1600	0.0225	0.0225	The College of New Jersey
NJ	Mercer	34021	61008	U1	OS2	10300602	49.50	EU DESCRIPT	0.4300	0.0216	0.0216	The College of New Jersey
NJ	Mercer	34021	61008	U2	OS2	10300501	49.50	EU DESCRIPT	0.5200	0.0395	0.0395	The College of New Jersey
NJ	Mercer	34021	61008	U2	OS1	10300602	49.50	EU DESCRIPT	0.3200	0.0213	0.0213	The College of New Jersey
NJ	Mercer	34021	61008	U3	OS1	10300602	24.75	EU DESCRIPT	0.1400	0.0000	0.0000	The College of New Jersey
NJ	Mercer	34021	61036	U60	OS61	10300501	0.00		0.1000	0.0000	0.0000	Stony Brook Regional Sewerage Authority WWTP
NJ	Mercer	34021	61051	U1	OS1	10200401	38.00	EU DESCRIPT	14.8800	0.0624	0.0624	Trenton Psychiatric Hospital
NJ	Mercer	34021	61051	U2	OS1	10200401	45.00	EU DESCRIPT	25.5800	0.0651	0.0651	Trenton Psychiatric Hospital
NJ	Mercer	34021	61051	U3	OS1	10200401	46.00	EU DESCRIPT	2.1900	0.0000	0.0061	Trenton Psychiatric Hospital
NJ	Mercer	34021	61052	U1	OS16	10200602	55.00	SCC Descriptio	2.3200	0.0308	0.0308	E.R. Squibb and Sons, L.L.C.
NJ	Mercer	34021	61052	U1	OS10	10200602	55.00	SCC Descriptio	1.2000	0.0036	0.0036	E.R. Squibb and Sons, L.L.C.

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NJ	Mercer	34021	61052	U1	OS7	10200602	55.00	SCC Descriptio	2.7400	0.0019	0.0019	E.R. Squibb and Sons, L.L.C.
NJ	Mercer	34021	61053	U1	OS6	10200602	55.00	SCC Descriptio	1.4300	0.0025	0.0025	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U1	OS8	10200602	55.00	SCC Descriptio	1.4300	0.0025	0.0025	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U1	OS5	10200502	55.00	SCC Descriptio	0.7100	0.0037	0.0037	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U1	OS2	10200502	55.00	SCC Descriptio	0.2700	0.0015	0.0015	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U1	OS4	10200502	55.00	SCC Descriptio	0.2200	0.0013	0.0013	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U1	OS1	10200502	55.00	SCC Descriptio	0.2200	0.0011	0.0011	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U1	OS18	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U1	OS20	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U4	OS1	10200602	55.00	SCC Descriptio	1.5400	0.0042	0.0042	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U4	OS7	10200602	55.00	SCC Descriptio	1.5400	0.0042	0.0042	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U4	OS8	10200502	55.00	SCC Descriptio	0.0100	0.0036	0.0036	Bristol-Myers Squibb Company
NJ	Mercer	34021	61055	U13	OS0	10300602	55.00	SCC Descriptio	0.1800	0.0000	0.0004	CONGOLEUM CORPORATION
NJ	Mercer	34021	61055	U14	OS0	10300602	55.00	SCC Descriptio	0.0400	0.0003	0.0003	CONGOLEUM CORPORATION
NJ	Mercer	34021	61055	U15	OS0	10300602	55.00	SCC Descriptio	0.1500	0.0000	0.0004	CONGOLEUM CORPORATION
NJ	Mercer	34021	61055	U20	OS58	10300602	55.00	SCC Descriptio	0.0700	0.0020	0.0020	CONGOLEUM CORPORATION
NJ	Mercer	34021	61055	U29	OS2	10300602	55.00	SCC Descriptio	0.0400	0.0009	0.0009	CONGOLEUM CORPORATION
NJ	Mercer	34021	61055	U4	OS19	10300602	55.00	SCC Descriptio	0.1300	0.0105	0.0105	CONGOLEUM CORPORATION
NJ	Mercer	34021	61055	U4	OS15	10200602	55.00	SCC Descriptio	0.0200	0.0013	0.0013	CONGOLEUM CORPORATION
NJ	Mercer	34021	61055	U5	OS19	10200602	55.00	SCC Descriptio	0.5900	0.0000	0.0002	CONGOLEUM CORPORATION
NJ	Mercer	34021	61055	U6	OS21	10300602	55.00	SCC Descriptio	0.0300	0.0015	0.0015	CONGOLEUM CORPORATION
NJ	Mercer	34021	61057	U3	OS1	10200602	55.00	SCC Descriptio	0.5000	0.0051	0.0051	Mercer Generating Station
NJ	Mercer	34021	61057	U4	OS1	10200602	55.00	SCC Descriptio	0.4100	0.0057	0.0057	Mercer Generating Station
NJ	Mercer	34021	61058	U6	OS1	10200602	55.00	SCC Descriptio	0.1200	0.0001	0.0001	Kayline Processing, Inc.
NJ	Mercer	34021	61059	U47	OS76	10300602	55.00	SCC Descriptio	16.8500	0.0000	0.0074	American Standard, Inc.
NJ	Mercer	34021	61059	U47	OS78	10300602	55.00	SCC Descriptio	16.8500	0.0000	0.0074	American Standard, Inc.
NJ	Mercer	34021	61088	U1	OS4	10300501	29.30	EU DESCRIPT	1.4600	0.0000	0.0036	The Lawrenceville School
NJ	Mercer	34021	61088	U1	OS6	10300501	29.30	EU DESCRIPT	0.7900	0.0000	0.0021	The Lawrenceville School
NJ	Mercer	34021	61088	U1	OS2	10300501	29.30	EU DESCRIPT	0.4100	0.0000	0.0010	The Lawrenceville School
NJ	Mercer	34021	61088	U1	OS1	10300602	29.30	EU DESCRIPT	0.3100	0.0000	0.0008	The Lawrenceville School
NJ	Mercer	34021	61088	U1	OS3	10300602	29.30	EU DESCRIPT	0.2200	0.0000	0.0005	The Lawrenceville School
NJ	Mercer	34021	61088	U1	OS5	10300602	29.30	EU DESCRIPT	0.1100	0.0000	0.0003	The Lawrenceville School
NJ	Mercer	34021	61088	U3	OS1	10300602	3.00	EU DESCRIPT	0.1800	0.0004	0.0004	The Lawrenceville School
NJ	Mercer	34021	61088	U4	OS1	10300602	1.35	EU DESCRIPT	0.0600	0.0000	0.0001	The Lawrenceville School
NJ	Mercer	34021	61096	U7	OS1	10200602	14.70	EU DESCRIPT	1.6100	0.0043	0.0043	Capital Health Systems at Fuld Campus
NJ	Mercer	34021	61096	U7	OS3	10200602	14.70	EU DESCRIPT	1.6100	0.0043	0.0043	Capital Health Systems at Fuld Campus
NJ	Mercer	34021	61096	U7	OS5	10200602	14.70	EU DESCRIPT	1.6100	0.0043	0.0043	Capital Health Systems at Fuld Campus
NJ	Middlesex	34023	15020	U32	OS1	10300602	16.00	EU DESCRIPT	1.7400	0.0025	0.0025	PQ Corporation
NJ	Middlesex	34023	15079	U55	OS1	10300602	55.00	SCC Descriptio	0.4300	0.0009	0.0009	Degussa Corporation
NJ	Middlesex	34023	15079	U55	OS2	10300602	55.00	SCC Descriptio	0.4300	0.0009	0.0009	Degussa Corporation
NJ	Middlesex	34023	15079	U55	OS3	10300602	55.00	SCC Descriptio	0.4300	0.0009	0.0009	Degussa Corporation
NJ	Middlesex	34023	15079	U55	OS4	10300602	55.00	SCC Descriptio	0.4300	0.0009	0.0009	Degussa Corporation
NJ	Middlesex	34023	15079	U55	OS5	10300602	55.00	SCC Descriptio	0.4300	0.0009	0.0009	Degussa Corporation
NJ	Middlesex	34023	15079	U55	OS6	10300602	55.00	SCC Descriptio	0.4300	0.0009	0.0009	Degussa Corporation
NJ	Middlesex	34023	15079	U55	OS7	10300602	55.00	SCC Descriptio	0.4300	0.0009	0.0009	Degussa Corporation
NJ	Middlesex	34023	15079	U55	OS8	10300602	55.00	SCC Descriptio	0.4300	0.0009	0.0009	Degussa Corporation
NJ	Middlesex	34023	15079	U61	OS1	10300602	55.00	SCC Descriptio	0.2900	0.0013	0.0013	Degussa Corporation
NJ	Middlesex	34023	15079	U62	OS1	10300602	55.00	SCC Descriptio	0.2900	0.0013	0.0013	Degussa Corporation
NJ	Middlesex	34023	15088	U14	OS1	10200602	6.60	EU DESCRIPT	1.6300	0.0041	0.0041	ALPHA ASSOCIATES INC
NJ	Middlesex	34023	15130	U1	OS1	10300602	55.00	SCC Descriptio	0.2500	0.0000	0.0007	NEWARK MORNING LEDGER CO
NJ	Middlesex	34023	15130	U5	OS1	10300602	55.00	SCC Descriptio	0.6100	0.0000	0.0005	NEWARK MORNING LEDGER CO
NJ	Middlesex	34023	15130	U9	OS1	10300602	55.00	SCC Descriptio	0.2500	0.0004	0.0004	NEWARK MORNING LEDGER CO

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NJ	Middlesex	34023	15134	U10	OS1	10200602	55.00	SCC Descriptio	1.6200	0.0032	0.0032	AIR PRODUCTS POLYMERS LP
NJ	Middlesex	34023	15134	U10	OS3	10200602	55.00	SCC Descriptio	1.6200	0.0032	0.0032	AIR PRODUCTS POLYMERS LP
NJ	Middlesex	34023	15134	U10	OS2	10200502	55.00	SCC Descriptio	0.0900	0.0000	0.0002	AIR PRODUCTS POLYMERS LP
NJ	Middlesex	34023	15134	U10	OS4	10200502	55.00	SCC Descriptio	0.0900	0.0000	0.0002	AIR PRODUCTS POLYMERS LP
NJ	Middlesex	34023	15194	U1	OS1	10200602	55.00	SCC Descriptio	1.5800	0.0055	0.0055	Armkel, LLC.
NJ	Middlesex	34023	15194	U2	OS1	10200602	55.00	SCC Descriptio	0.4400	0.0243	0.0243	Armkel, LLC.
NJ	Middlesex	34023	15194	U23	OS1	10200602	55.00	SCC Descriptio	0.0400	0.0000	0.0000	Armkel, LLC.
NJ	Middlesex	34023	15194	U3	OS1	10200602	55.00	SCC Descriptio	0.5600	0.0056	0.0056	Armkel, LLC.
NJ	Middlesex	34023	15194	U4	OS1	10200602	55.00	SCC Descriptio	0.3800	0.0006	0.0006	Armkel, LLC.
NJ	Middlesex	34023	15203	U10	OS1	10200602	55.00	SCC Descriptio	0.1700	0.0002	0.0002	DOLPH CO.,JOHN C.
NJ	Middlesex	34023	15203	U8	OS1	10200602	55.00	SCC Descriptio	0.4400	0.0000	0.0004	DOLPH CO.,JOHN C.
NJ	Middlesex	34023	15203	U9	OS1	10200602	55.00	SCC Descriptio	0.2500	0.0003	0.0003	DOLPH CO.,JOHN C.
NJ	Middlesex	34023	15207	U43	OS1	10200602	55.00	SCC Descriptio	0.2500	0.0090	0.0090	FLINT INK NORTH AMERICA CORPORATION
NJ	Middlesex	34023	15229	U16	OS1	10200602	1.19	EU DESCRIPT	0.1500	0.0002	0.0002	MOHAWK LABORATORIES OF NEW JERSEY
NJ	Middlesex	34023	15229	U17	OS1	10200602	5.18	EU DESCRIPT	0.1000	0.0000	0.0001	MOHAWK LABORATORIES OF NEW JERSEY
NJ	Middlesex	34023	15244	U2	OS1	10300602	1.32	EU DESCRIPT	0.1200	0.0003	0.0003	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	O40999	10300602	55.00	SCC Descriptio	0.8200	0.0026	0.0026	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	O40998	10300602	55.00	SCC Descriptio	0.7300	0.0024	0.0024	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4033	10300602	55.00	SCC Descriptio	0.3500	0.0011	0.0011	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4023	10300602	55.00	SCC Descriptio	0.2100	0.0007	0.0007	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4021	10300602	55.00	SCC Descriptio	0.1900	0.0006	0.0006	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4013	10300602	55.00	SCC Descriptio	0.1700	0.0005	0.0005	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4022	10300602	55.00	SCC Descriptio	0.1400	0.0004	0.0004	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4031	10300602	55.00	SCC Descriptio	0.1100	0.0004	0.0004	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4011	10300602	55.00	SCC Descriptio	0.1100	0.0003	0.0003	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4032	10300602	55.00	SCC Descriptio	0.0800	0.0003	0.0003	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4012	10300602	55.00	SCC Descriptio	0.0800	0.0002	0.0002	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4041	10300602	55.00	SCC Descriptio	0.0800	0.0002	0.0002	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4043	10300602	55.00	SCC Descriptio	0.0700	0.0002	0.0002	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4042	10300602	55.00	SCC Descriptio	0.0500	0.0001	0.0001	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U5	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0002	0.0002	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U8	OS1	10300602	0.99	EU DESCRIPT	0.0200	0.0000	0.0000	Spray-Tek, Inc.
NJ	Middlesex	34023	15280	U14	OS17	10200602	55.00	SCC Descriptio	0.1700	0.0001	0.0001	Ronpak, Inc.
NJ	Middlesex	34023	15299	U11	OS1	10200602	55.00	SCC Descriptio	1.9000	0.0024	0.0024	ENGELHARD CORP
NJ	Middlesex	34023	15299	U12	OS1	10200602	55.00	SCC Descriptio	2.2500	0.0048	0.0048	ENGELHARD CORP
NJ	Middlesex	34023	15299	U13	OS1	10200602	55.00	SCC Descriptio	3.0100	0.0024	0.0024	ENGELHARD CORP
NJ	Middlesex	34023	15312	U5	OS1	10300602	55.00	SCC Descriptio	1.3200	0.0053	0.0053	Henry Heide, Inc.
NJ	Middlesex	34023	15312	U5	OS2	10300602	55.00	SCC Descriptio	1.3200	0.0053	0.0053	Henry Heide, Inc.
NJ	Middlesex	34023	15312	U5	OS4	10300501	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Henry Heide, Inc.
NJ	Middlesex	34023	15326	U1	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0002	0.0002	OHM Laboratories Inc. - Black Horse Lane
NJ	Middlesex	34023	15343	U52	OS1	10200602	55.00	SCC Descriptio	1.3200	0.0032	0.0032	AMERCHOL CORPORATION
NJ	Middlesex	34023	15343	U65	OS1	10200602	55.00	SCC Descriptio	1.3200	0.0032	0.0032	AMERCHOL CORPORATION
NJ	Middlesex	34023	15343	U66	OS1	10200602	55.00	SCC Descriptio	0.5700	0.0000	0.0000	AMERCHOL CORPORATION
NJ	Middlesex	34023	15344	U14	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0001	0.0001	Northeast Products Company
NJ	Middlesex	34023	15344	U8	OS1	10300602	55.00	SCC Descriptio	2.3200	0.0067	0.0067	Northeast Products Company
NJ	Middlesex	34023	15414	U2401	OS1	10200602	55.00	SCC Descriptio	0.8700	0.0018	0.0018	Akcros Chemicals America
NJ	Middlesex	34023	15414	U2401	OS3	10200602	55.00	SCC Descriptio	0.8700	0.0018	0.0018	Akcros Chemicals America
NJ	Middlesex	34023	15414	U2401	OS2	10200502	55.00	SCC Descriptio	0.0500	0.0000	0.0001	Akcros Chemicals America
NJ	Middlesex	34023	15414	U2401	OS4	10200502	55.00	SCC Descriptio	0.0500	0.0000	0.0000	Akcros Chemicals America
NJ	Middlesex	34023	15436	U56	OS1	10200502	55.00	SCC Descriptio	0.6500	0.0017	0.0017	MARISOL INC
NJ	Middlesex	34023	15446	U10	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0001	0.0001	MIELACH COMPANY
NJ	Middlesex	34023	15446	U11	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0000	0.0001	MIELACH COMPANY

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NJ	Middlesex	34023	15446	U13	OS1	10300602	55.00	SCC Descriptio	0.0200	0.0001	0.0001	MIELACH COMPANY
NJ	Middlesex	34023	15486	U1	OS1	10300602	55.00	SCC Descriptio	0.1800	0.0000	0.0004	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U2	OS1	10300602	55.00	SCC Descriptio	0.1700	0.0000	0.0004	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U22	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0000	0.0000	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U23	OS1	10300602	55.00	SCC Descriptio	0.2300	0.0000	0.0001	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U24	OS1	10300602	55.00	SCC Descriptio	0.1900	0.0000	0.0001	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U3	OS1	10300602	55.00	SCC Descriptio	0.1500	0.0000	0.0004	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U4	OS1	10300602	55.00	SCC Descriptio	0.0900	0.0014	0.0014	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U5	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0000	0.0002	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U6	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0002	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U7	OS1	10300602	55.00	SCC Descriptio	0.0400	0.0000	0.0000	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U8	OS1	10300602	55.00	SCC Descriptio	0.2800	0.0170	0.0170	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15524	U21	OS1	10300602	6.60	EU DESCRIPT	0.0800	0.0002	0.0002	ZIEGLER CHEMICAL & MINERAL CORP
NJ	Middlesex	34023	15538	U12	OS1	10200602	55.00	SCC Descriptio	1.6700	0.0067	0.0067	FERRO INDUSTRIES, INC.
NJ	Middlesex	34023	15597	U18	OS1	10200602	55.00	SCC Descriptio	0.1200	0.0004	0.0004	Colgate Palmolive Company
NJ	Middlesex	34023	15597	U3	OS1	10200602	55.00	SCC Descriptio	1.1900	0.0023	0.0023	Colgate Palmolive Company
NJ	Middlesex	34023	15597	U4	OS1	10200602	55.00	SCC Descriptio	1.1900	0.0023	0.0023	Colgate Palmolive Company
NJ	Middlesex	34023	15715	U3	OS3	10300602	55.00	SCC Descriptio	0.0400	0.0000	0.0001	T/A VCT/QUALTEQ Division
NJ	Middlesex	34023	15760	U3	OS1	10200602	55.00	SCC Descriptio	0.9500	0.0030	0.0030	ADM CORPORATION
NJ	Middlesex	34023	15931	U5000	OS1	10300602	55.00	SCC Descriptio	0.2300	0.0000	0.0002	OLD BRIDGE CHEMICALS INC
NJ	Middlesex	34023	15931	U5000	OS2	10300602	55.00	SCC Descriptio	0.2300	0.0000	0.0002	OLD BRIDGE CHEMICALS INC
NJ	Middlesex	34023	16022	U1	OS1	10200602	55.00	SCC Descriptio	1.7400	0.0027	0.0027	NEW YORK TIMES, THE
NJ	Middlesex	34023	16022	U1	OS2	10200602	55.00	SCC Descriptio	1.7400	0.0027	0.0027	NEW YORK TIMES, THE
NJ	Middlesex	34023	16311	U13	OS3	10300602	55.00	SCC Descriptio	0.3000	0.0005	0.0005	Rutgers, The State University of New Jersey
NJ	Middlesex	34023	16311	U13	OS2	10300602	55.00	SCC Descriptio	0.3000	0.0002	0.0002	Rutgers, The State University of New Jersey
NJ	Middlesex	34023	16311	U13	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0001	Rutgers, The State University of New Jersey
NJ	Middlesex	34023	16311	U18	OS1	10300602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Rutgers, The State University of New Jersey
NJ	Middlesex	34023	16311	U7	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0000	Rutgers, The State University of New Jersey
NJ	Middlesex	34023	16313	U2	OS5	10300602	20.00	EU DESCRIPT	0.7400	0.0016	0.0016	Cook - Douglass Campuses
NJ	Middlesex	34023	16313	U2	OS6	10300602	20.00	EU DESCRIPT	0.7400	0.0016	0.0016	Cook - Douglass Campuses
NJ	Middlesex	34023	16313	U2	OS7	10300602	20.00	EU DESCRIPT	0.7400	0.0016	0.0016	Cook - Douglass Campuses
NJ	Middlesex	34023	16313	U2	OS1	10300602	20.00	EU DESCRIPT	0.7100	0.0000	0.0016	Cook - Douglass Campuses
NJ	Middlesex	34023	16313	U2	OS2	10300602	20.00	EU DESCRIPT	0.7100	0.0000	0.0016	Cook - Douglass Campuses
NJ	Middlesex	34023	16392	U1	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	OHM Laboratories Inc. North Brunswick Facilit
NJ	Middlesex	34023	17699	U3	OS124	10200602	55.00	SCC Descriptio	3.5300	0.0131	0.0131	Crompton Corporation
NJ	Middlesex	34023	17699	U3	OS122	10200502	55.00	SCC Descriptio	9.5900	0.0000	0.0263	Crompton Corporation
NJ	Middlesex	34023	17699	U4	OS125	10200602	55.00	SCC Descriptio	1.3000	0.0473	0.0473	Crompton Corporation
NJ	Middlesex	34023	17699	U4	OS123	10200502	55.00	SCC Descriptio	1.0700	0.0000	0.0039	Crompton Corporation
NJ	Middlesex	34023	17719	U25	OS2	10200602	12.00	EU DESCRIPT	2.9800	0.0079	0.0079	PERMACEL
NJ	Middlesex	34023	17719	U25	OS4	10201002	12.00	EU DESCRIPT	0.0100	0.0084	0.0084	PERMACEL
NJ	Middlesex	34023	17739	U1	OS13	10200602	55.00	SCC Descriptio	0.7000	0.0070	0.0070	E. R. Squibb and Sons, L.L.C.
NJ	Middlesex	34023	17739	U1	OS8	10200602	55.00	SCC Descriptio	3.3500	0.0001	0.0001	E. R. Squibb and Sons, L.L.C.
NJ	Middlesex	34023	17766	U7	OS1	10200602	55.00	SCC Descriptio	4.2900	0.0133	0.0133	Astaris LLC - Carteret Plant
NJ	Middlesex	34023	17766	U7	OS4	10200602	55.00	SCC Descriptio	4.1200	0.0133	0.0133	Astaris LLC - Carteret Plant
NJ	Middlesex	34023	17766	U8	OS1	10200602	55.00	SCC Descriptio	4.5200	0.0330	0.0330	Astaris LLC - Carteret Plant
NJ	Middlesex	34023	17818	U15	OS2	10200401	55.00	SCC Descriptio	9.3100	0.0255	0.0255	BASF Corporation - South Brunswick Plant
NJ	Middlesex	34023	17818	U15	OS1	10200602	55.00	SCC Descriptio	3.5200	0.0096	0.0096	BASF Corporation - South Brunswick Plant
NJ	Middlesex	34023	17818	U9	OS1	10200401	55.00	SCC Descriptio	5.4900	0.0150	0.0150	BASF Corporation - South Brunswick Plant
NJ	Middlesex	34023	17818	U9	OS2	10200602	55.00	SCC Descriptio	3.0200	0.0083	0.0083	BASF Corporation - South Brunswick Plant
NJ	Middlesex	34023	17853	U55	OS1	10300602	4.25	EU DESCRIPT	0.1900	0.0004	0.0004	Kinder Morgan Liquids Terminals LLC
NJ	Middlesex	34023	17853	U57	OS1	10300602	1.40	EU DESCRIPT	0.0900	0.0001	0.0001	Kinder Morgan Liquids Terminals LLC
NJ	Middlesex	34023	17853	U95	OS1	10300602	4.00	EU DESCRIPT	0.2300	0.0005	0.0005	Kinder Morgan Liquids Terminals LLC

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NJ	Middlesex	34023	17867	U4	OS1	10300602	55.00	SCC Descriptio	0.5900	0.0021	0.0021	Electrolux Home Products
NJ	Middlesex	34023	17867	U5	OS1	10300602	55.00	SCC Descriptio	0.1900	0.0007	0.0007	Electrolux Home Products
NJ	Middlesex	34023	17867	U5	OS2	10300602	55.00	SCC Descriptio	0.1900	0.0007	0.0007	Electrolux Home Products
NJ	Middlesex	34023	17867	U6	OS1	10301002	0.00		0.0100	0.0000	0.0000	Electrolux Home Products
NJ	Middlesex	34023	17867	U8	OS1	10300602	55.00	SCC Descriptio	4.3100	0.0000	0.0107	Electrolux Home Products
NJ	Middlesex	34023	17867	U8	OS3	10300602	55.00	SCC Descriptio	5.3800	0.0001	0.0001	Electrolux Home Products
NJ	Middlesex	34023	17884	U4422	OS2	10200602	55.00	SCC Descriptio	1.0000	0.0000	0.0000	Sayreville Generating Station (JCP&L)
NJ	Middlesex	34023	17885	U14	OS1	10200602	55.00	SCC Descriptio	3.3700	0.0107	0.0107	Union Carbide Corporation
NJ	Middlesex	34023	17885	U14	OS7	10200602	55.00	SCC Descriptio	3.8000	0.0026	0.0026	Union Carbide Corporation
NJ	Middlesex	34023	17885	U14	OS8	10200502	55.00	SCC Descriptio	0.1800	0.0001	0.0001	Union Carbide Corporation
NJ	Middlesex	34023	17912	U4	OS1	10300602	55.00	SCC Descriptio	0.7700	0.0016	0.0016	SILGAN CONTAINERS CORPORATION
NJ	Middlesex	34023	17912	U5	OS1	10300602	55.00	SCC Descriptio	0.7700	0.0016	0.0016	SILGAN CONTAINERS CORPORATION
NJ	Middlesex	34023	17912	U6	OS1	10300602	55.00	SCC Descriptio	0.7700	0.0016	0.0016	SILGAN CONTAINERS CORPORATION
NJ	Middlesex	34023	17912	U7	OS1	10300602	55.00	SCC Descriptio	0.1500	0.0003	0.0003	SILGAN CONTAINERS CORPORATION
NJ	Middlesex	34023	17913	U1	OS1	10200602	53.00	EU DESCRIPT	3.9900	0.0219	0.0219	St. Peter"s Medical Center
NJ	Middlesex	34023	17913	U1	OS2	10200602	53.00	EU DESCRIPT	3.9900	0.0219	0.0219	St. Peter"s Medical Center
NJ	Middlesex	34023	17913	U1	OS3	10200602	53.00	EU DESCRIPT	0.0300	0.0000	0.0000	St. Peter"s Medical Center
NJ	Middlesex	34023	17913	U1	OS4	10200602	53.00	EU DESCRIPT	0.0300	0.0000	0.0000	St. Peter"s Medical Center
NJ	Middlesex	34023	17913	U10	OS1	10300602	5.10	EU DESCRIPT	0.1800	0.0007	0.0007	St. Peter"s Medical Center
NJ	Middlesex	34023	17913	U10	OS2	10300602	5.10	EU DESCRIPT	0.1800	0.0007	0.0007	St. Peter"s Medical Center
NJ	Middlesex	34023	17913	U2	OS1	10300602	2.40	EU DESCRIPT	0.4800	0.0010	0.0010	St. Peter"s Medical Center
NJ	Middlesex	34023	17913	U2	OS2	10300602	2.40	EU DESCRIPT	0.4800	0.0010	0.0010	St. Peter"s Medical Center
NJ	Middlesex	34023	17913	U8	OS1	10300602	55.00	SCC Descriptio	0.3200	0.0010	0.0010	St. Peter"s Medical Center
NJ	Middlesex	34023	17914	U3001	OS3001	10300602	1.00	EU DESCRIPT	0.1000	0.0000	0.0002	Gentek Building Products
NJ	Middlesex	34023	17958	U1	OS5	10300602	55.00	SCC Descriptio	3.6800	0.0018	0.0018	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U1	OS6	10300602	55.00	SCC Descriptio	3.0200	0.0008	0.0008	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U1	OS8	10300602	55.00	SCC Descriptio	0.9100	0.0005	0.0005	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U1	OS4	10300602	55.00	SCC Descriptio	4.3400	0.0002	0.0002	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U1	OS7	10300602	55.00	SCC Descriptio	0.6800	0.0001	0.0001	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U10	OS1	10300602	1.76	EU DESCRIPT	0.0400	0.0000	0.0000	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U11	OS1	10300602	1.70	EU DESCRIPT	0.0500	0.0000	0.0000	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U12	OS1	10300602	1.00	EU DESCRIPT	0.0300	0.0000	0.0000	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U18	OS1	10300602	4.10	EU DESCRIPT	0.1400	0.0000	0.0000	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U2	OS2	10300602	10.00	EU DESCRIPT	0.2200	0.0000	0.0004	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U2	OS1	10300602	10.00	EU DESCRIPT	0.2200	0.0004	0.0004	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U3	OS1	10300602	1.87	EU DESCRIPT	0.2700	0.0001	0.0001	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U3	OS2	10300602	1.87	EU DESCRIPT	0.2700	0.0001	0.0001	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U4	OS1	10300602	1.56	EU DESCRIPT	0.2200	0.0002	0.0002	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U6	OS1	10300602	4.50	EU DESCRIPT	0.2100	0.0001	0.0001	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U6	OS2	10300602	4.50	EU DESCRIPT	0.2100	0.0001	0.0001	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U7	OS1	10300602	10.00	EU DESCRIPT	0.1800	0.0001	0.0001	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U7	OS2	10300602	10.00	EU DESCRIPT	0.2800	0.0001	0.0001	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U8	OS1	10300602	2.01	EU DESCRIPT	0.0300	0.0000	0.0000	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U9	OS1	10300602	1.60	EU DESCRIPT	0.0300	0.0000	0.0000	Busch/Livington Campuses
NJ	Middlesex	34023	17965	U7	OS1	10200602	55.00	SCC Descriptio	0.6700	0.0166	0.0166	AES Red Oak Power Generating Facility
NJ	Middlesex	34023	17994	U1	OS1	10300602	64.40	EU DESCRIPT	35.1700	0.0407	0.0407	Woodbridge Developmental Center
NJ	Middlesex	34023	17994	U2	OS1	10300602	64.40	EU DESCRIPT	6.9600	0.0481	0.0481	Woodbridge Developmental Center
NJ	Middlesex	34023	17994	U3	OS1	10300602	64.40	EU DESCRIPT	9.5500	0.0479	0.0479	Woodbridge Developmental Center
NJ	Middlesex	34023	17994	U4	OS1	10300602	64.40	EU DESCRIPT	9.6400	0.0418	0.0418	Woodbridge Developmental Center
NJ	Middlesex	34023	18003	U1	OS3	10300602	55.00	SCC Descriptio	0.3100	0.0016	0.0016	Webcraft, LLC.
NJ	Middlesex	34023	18003	U1	OS9	10300602	55.00	SCC Descriptio	0.3100	0.0007	0.0007	Webcraft, LLC.
NJ	Middlesex	34023	18003	U1	OS6	10300602	55.00	SCC Descriptio	0.3100	0.0006	0.0006	Webcraft, LLC.

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NJ	Middlesex	34023	18003	U2	OS9	10300602	55.00	SCC Descriptio	0.3100	0.0018	0.0018	Webcraft, LLC.
NJ	Middlesex	34023	18003	U2	OS12	10300602	55.00	SCC Descriptio	0.3100	0.0006	0.0006	Webcraft, LLC.
NJ	Middlesex	34023	18003	U2	OS15	10300602	55.00	SCC Descriptio	0.3100	0.0006	0.0006	Webcraft, LLC.
NJ	Middlesex	34023	18003	U2	OS18	10300602	55.00	SCC Descriptio	0.3100	0.0006	0.0006	Webcraft, LLC.
NJ	Middlesex	34023	18003	U2	OS3	10300602	55.00	SCC Descriptio	0.3100	0.0006	0.0006	Webcraft, LLC.
NJ	Middlesex	34023	18003	U2	OS6	10300602	55.00	SCC Descriptio	0.3100	0.0006	0.0006	Webcraft, LLC.
NJ	Middlesex	34023	18044	U1	OS1	10200602	55.00	SCC Descriptio	11.4300	0.0298	0.0298	Wincup
NJ	Middlesex	34023	18044	U1	OS2	10200602	55.00	SCC Descriptio	7.6200	0.0199	0.0199	Wincup
NJ	Middlesex	34023	18045	U1	OS7	10200602	55.00	SCC Descriptio	14.1000	0.0040	0.0040	Gerdau Ameristeel-Perth Amboy
NJ	Middlesex	34023	18045	U1	OS8	10200602	55.00	SCC Descriptio	13.5000	0.0027	0.0027	Gerdau Ameristeel-Perth Amboy
NJ	Middlesex	34023	18045	U1	OS6	10200602	55.00	SCC Descriptio	6.2000	0.0013	0.0013	Gerdau Ameristeel-Perth Amboy
NJ	Middlesex	34023	18050	U8243	OS1	10300602	97.70	EU DESCRIPT	4.2800	0.1872	0.1872	Hatco Corporation
NJ	Middlesex	34023	18050	U8243	OS2	10300402	97.70	EU DESCRIPT	0.0500	0.0000	0.0002	Hatco Corporation
NJ	Middlesex	34023	18050	U8260	OS1	10300602	97.70	EU DESCRIPT	5.8300	0.0145	0.0145	Hatco Corporation
NJ	Middlesex	34023	18054	U5	OS0	10300402	55.00	SCC Descriptio	10.7100	0.0055	0.0055	Amerada Hess - First Reserve Terminal
NJ	Middlesex	34023	18058	U8	OS1	10200602	55.00	SCC Descriptio	0.9600	0.0256	0.0256	Chevron Products Company
NJ	Middlesex	34023	18058	U8	OS4	10200602	55.00	SCC Descriptio	11.7900	0.0237	0.0237	Chevron Products Company
NJ	Middlesex	34023	18060	U2000	OS4	10200602	55.00	SCC Descriptio	0.2100	0.0025	0.0025	Ferro Corporation
NJ	Middlesex	34023	18060	U2000	OS1	10200602	55.00	SCC Descriptio	0.0400	0.0002	0.0002	Ferro Corporation
NJ	Middlesex	34023	18060	U2000	OS3	10200602	55.00	SCC Descriptio	0.0800	0.0002	0.0002	Ferro Corporation
NJ	Middlesex	34023	18060	U2000	OS2	10200602	55.00	SCC Descriptio	0.0100	0.0001	0.0001	Ferro Corporation
NJ	Middlesex	34023	18065	U5	OS1	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Tyco Adhesives, Betham Plant
NJ	Middlesex	34023	18067	U1	OS2	10200602	55.00	SCC Descriptio	3.6000	0.0108	0.0108	AKZO NOBEL POLYMER CHEMICALS LLC
NJ	Middlesex	34023	18067	U1	OS1	10200602	55.00	SCC Descriptio	3.5500	0.0083	0.0083	AKZO NOBEL POLYMER CHEMICALS LLC
NJ	Middlesex	34023	18068	U5	OS1	10200602	55.00	SCC Descriptio	1.6100	0.0572	0.0572	Sewaren Generating Station
NJ	Middlesex	34023	18068	U6	OS1	10200602	55.00	SCC Descriptio	2.8700	0.0140	0.0140	Sewaren Generating Station
NJ	Middlesex	34023	18069	U11	OS1	10200602	55.00	SCC Descriptio	0.1400	0.0005	0.0005	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U12	OS1	10200602	55.00	SCC Descriptio	0.1700	0.0005	0.0005	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U13	OS1	10200602	55.00	SCC Descriptio	0.2800	0.0009	0.0009	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U18	OS1	10200602	55.00	SCC Descriptio	0.3700	0.0012	0.0012	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U19	OS1	10200602	55.00	SCC Descriptio	0.1200	0.0005	0.0005	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U19	OS2	10200602	55.00	SCC Descriptio	0.1000	0.0003	0.0003	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U20	OS2	10200602	55.00	SCC Descriptio	0.3400	0.0011	0.0011	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U20	OS1	10200602	55.00	SCC Descriptio	0.1000	0.0005	0.0005	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U21	OS4	10200602	55.00	SCC Descriptio	1.0800	0.0034	0.0034	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U22	OS3	10200602	55.00	SCC Descriptio	2.7900	0.0086	0.0086	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U22	OS6	10200602	55.00	SCC Descriptio	1.4900	0.0046	0.0046	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U23	OS9	10200602	55.00	SCC Descriptio	4.0100	0.0124	0.0124	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U23	OS5	10200602	55.00	SCC Descriptio	3.5900	0.0111	0.0111	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U23	OS8	10200602	55.00	SCC Descriptio	3.5900	0.0111	0.0111	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U23	OS10	10200602	55.00	SCC Descriptio	2.1000	0.0065	0.0065	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U23	OS11	10200602	55.00	SCC Descriptio	0.1700	0.0005	0.0005	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U24	OS2	10200602	55.00	SCC Descriptio	0.4400	0.0014	0.0014	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U25	OS2	10200602	55.00	SCC Descriptio	0.2600	0.0008	0.0008	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U26	OS2	10200602	55.00	SCC Descriptio	0.3800	0.0012	0.0012	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U34	OS1	10200602	55.00	SCC Descriptio	0.2700	0.0009	0.0009	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U35	OS1	10200602	55.00	SCC Descriptio	0.2700	0.0009	0.0009	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U37	OS3	10200602	55.00	SCC Descriptio	0.3400	0.0011	0.0011	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U39	OS1	10200602	55.00	SCC Descriptio	0.3700	0.0012	0.0012	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18071	U2	OS1	10300602	55.00	SCC Descriptio	0.2800	0.0006	0.0006	TRANSFER PRINT FOILS, INC.
NJ	Middlesex	34023	18071	U2	OS3	10300602	55.00	SCC Descriptio	0.3000	0.0006	0.0006	TRANSFER PRINT FOILS, INC.
NJ	Middlesex	34023	18071	U2	OS2	10300602	55.00	SCC Descriptio	0.1300	0.0003	0.0003	TRANSFER PRINT FOILS, INC.

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NJ	Middlesex	34023	18071	U20	OS9999	10300602	55.00	SCC Descriptio	7.9500	0.0235	0.0235	TRANSFER PRINT FOILS, INC.
NJ	Middlesex	34023	18093	U3	OS1	10200502	55.00	SCC Descriptio	0.0700	0.0000	0.0002	Middlesex County Utilities Authority
NJ	Middlesex	34023	18093	U4	OS1	10300501	0.00		0.0900	0.0000	0.0002	Middlesex County Utilities Authority
NJ	Middlesex	34023	18093	U5	OS1	10300501	0.00		0.0900	0.0000	0.0002	Middlesex County Utilities Authority
NJ	Monmouth	34025	20025	U20	OS1	10200602	55.00	SCC Descriptio	0.1700	0.0008	0.0008	STAVOLA ASPHALT CO INC
NJ	Monmouth	34025	20025	U21	OS1	10200602	55.00	SCC Descriptio	0.1700	0.0008	0.0008	STAVOLA ASPHALT CO INC
NJ	Monmouth	34025	20085	U1	OS1	10300602	55.00	SCC Descriptio	0.5500	0.0063	0.0063	Jersey Shore Medical Center
NJ	Monmouth	34025	20085	U2	OS1	10300602	55.00	SCC Descriptio	1.1400	0.0080	0.0080	Jersey Shore Medical Center
NJ	Monmouth	34025	20085	U3	OS1	10300602	55.00	SCC Descriptio	0.6200	0.0111	0.0111	Jersey Shore Medical Center
NJ	Monmouth	34025	20148	U10	OS1	10300602	3.05	EU DESCRIPT	0.1500	0.0004	0.0004	AIR CRUISERS COMPANY
NJ	Monmouth	34025	20148	U11	OS1	10300602	1.18	EU DESCRIPT	0.0600	0.0001	0.0001	AIR CRUISERS COMPANY
NJ	Monmouth	34025	20148	U9	OS1	10300602	3.50	EU DESCRIPT	0.1700	0.0004	0.0004	AIR CRUISERS COMPANY
NJ	Monmouth	34025	20171	U2	OS1	10300602	55.00	SCC Descriptio	0.3800	0.0005	0.0005	Asbury Park Press--Neptune
NJ	Monmouth	34025	20198	U1	OS1	10300602	55.00	SCC Descriptio	0.2500	0.0021	0.0021	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1	OS2	10300602	55.00	SCC Descriptio	0.2500	0.0021	0.0021	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1001	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0001	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U101	OS1	10300602	55.00	SCC Descriptio	0.1300	0.0000	0.0000	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1101	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0019	0.0019	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1201	OS1	10300602	55.00	SCC Descriptio	0.0400	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1401	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1501	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1601	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0000	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1701	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0002	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1801	OS1	10300602	55.00	SCC Descriptio	0.0400	0.0000	0.0000	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U2	OS1	10300501	0.00		0.1500	0.0000	0.0002	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U2	OS2	10300501	0.00		0.1500	0.0000	0.0002	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U2	OS3	10300501	0.00		0.1500	0.0000	0.0002	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U201	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0000	0.0002	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS6	10300602	55.00	SCC Descriptio	0.0500	0.0001	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS3	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS4	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS12	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS13	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS14	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS2	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS5	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS7	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS8	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS10	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS9	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS11	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U26	OS1	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U26	OS2	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U26	OS3	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U26	OS4	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U3	OS5	10300501	55.00	SCC Descriptio	0.2500	0.0000	0.0010	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U3	OS4	10300501	55.00	SCC Descriptio	0.2500	0.0002	0.0002	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U3	OS6	10300501	55.00	SCC Descriptio	0.0900	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U301	OS1	10300602	55.00	SCC Descriptio	0.1300	0.0000	0.0003	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U4	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0000	0.0002	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U4	OS2	10300602	55.00	SCC Descriptio	0.1000	0.0000	0.0001	MONMOUTH UNIVERSITY

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NJ	Monmouth	34025	20198	U4	OS3	10300602	55.00	SCC Descriptio	0.1000	0.0000	0.0000	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U401	OS1	10300602	55.00	SCC Descriptio	0.0900	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U601	OS1	10300602	55.00	SCC Descriptio	0.0900	0.0002	0.0002	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U7	OS3	10300501	55.00	SCC Descriptio	0.4400	0.0008	0.0008	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U7	OS4	10300501	55.00	SCC Descriptio	0.4400	0.0000	0.0003	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20390	U4	OS1	10300602	55.00	SCC Descriptio	0.7200	0.0015	0.0015	CPI Packaging Inc.
NJ	Monmouth	34025	20597	U9	OS1	10200502	55.00	SCC Descriptio	0.1000	0.0000	0.0003	Monmouth County Reclamation Center
NJ	Monmouth	34025	20674	U3	OS1	10300602	55.00	SCC Descriptio	0.0100	0.0001	0.0001	Asbury Park Press Freehold
NJ	Monmouth	34025	21138	U1	OS1	10300602	10.50	EU DESCRIPT	0.2100	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U10	OS1	10300602	2.50	EU DESCRIPT	0.0700	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U11	OS1	10300602	3.20	EU DESCRIPT	0.0400	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U12	OS1	10300602	6.30	EU DESCRIPT	0.1100	0.0003	0.0003	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U12	OS2	10300602	6.30	EU DESCRIPT	0.1100	0.0003	0.0003	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U13	OS1	10300602	5.30	EU DESCRIPT	0.1100	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U13	OS2	10300602	5.30	EU DESCRIPT	0.1100	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U15	OS1	10300602	2.10	EU DESCRIPT	0.0800	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U15	OS2	10300602	2.10	EU DESCRIPT	0.0800	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U16	OS1	10300602	3.40	EU DESCRIPT	0.1000	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U17	OS1	10300602	1.70	EU DESCRIPT	0.1000	0.0000	0.0000	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U18	OS1	10300602	2.10	EU DESCRIPT	0.0900	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U19	OS1	10300602	2.10	EU DESCRIPT	0.0100	0.0000	0.0000	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U2	OS1	10300602	1.40	EU DESCRIPT	0.0700	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U20	OS1	10300501	20.90	EU DESCRIPT	0.3900	0.0015	0.0015	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U21	OS1	10300501	20.90	EU DESCRIPT	1.5100	0.0013	0.0013	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U22	OS1	10300501	19.18	EU DESCRIPT	0.0100	0.0016	0.0016	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U23	OS1	10300501	14.58	EU DESCRIPT	1.0100	0.0021	0.0021	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U24	OS1	10300501	14.58	EU DESCRIPT	0.0400	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U25	OS1	10300501	6.28	EU DESCRIPT	0.0800	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U28	OS1	10300501	2.10	EU DESCRIPT	0.1700	0.0000	0.0002	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U3	OS1	10300602	6.60	EU DESCRIPT	0.1800	0.0002	0.0002	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U34	OS1	10300501	6.60	EU DESCRIPT	0.1200	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U4	OS1	10300602	5.03	EU DESCRIPT	0.1800	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U5	OS1	10300602	2.20	EU DESCRIPT	0.0800	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U6	OS1	10300602	1.22	EU DESCRIPT	0.0400	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U8	OS1	10300602	2.52	EU DESCRIPT	0.0400	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U8	OS2	10300602	2.52	EU DESCRIPT	0.0400	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U9	OS1	10300602	3.20	EU DESCRIPT	0.0900	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U92	OS1	10300502	55.00	SCC Descriptio	0.0800	0.0000	0.0000	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U96	OS1	10300602	2.20	EU DESCRIPT	0.1600	0.0007	0.0007	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U97	OS1	10300602	1.40	EU DESCRIPT	0.0600	0.0000	0.0000	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U98	OS1	10300501	1.30	EU DESCRIPT	0.0700	0.0000	0.0000	Naval Weapons Station Earle
NJ	Monmouth	34025	21140	U1	OS1	10300602	4.47	EU DESCRIPT	0.0900	0.0004	0.0004	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U10	OS1	10300602	1.48	EU DESCRIPT	0.0600	0.0002	0.0002	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U11	OS1	10300602	2.16	EU DESCRIPT	0.0400	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U11	OS2	10300602	2.16	EU DESCRIPT	0.0400	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U13	OS1	10300602	2.87	EU DESCRIPT	0.1000	0.0002	0.0002	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U14	OS1	10300602	2.75	EU DESCRIPT	0.0400	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U15	OS1	10300602	1.57	EU DESCRIPT	0.0300	0.0004	0.0004	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U16	OS1	10300602	1.48	EU DESCRIPT	0.0300	0.0005	0.0005	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U17	OS1	10300602	3.10	EU DESCRIPT	0.0300	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U18	OS1	10300602	2.20	EU DESCRIPT	0.0200	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U19	OS1	10300602	1.08	EU DESCRIPT	0.1700	0.0009	0.0009	U.S. Army - Fort Monmouth, Main Post

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NJ	Monmouth	34025	21140	U2	OS1	10300602	4.47	EU DESCRIPT	0.0900	0.0004	0.0004	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U21	OS1	10300602	1.63	EU DESCRIPT	0.0200	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U21	OS2	10300602	1.63	EU DESCRIPT	0.0200	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U24	OS1	10300602	1.48	EU DESCRIPT	0.0200	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U25	OS1	10300602	1.00	EU DESCRIPT	0.0400	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U26	OS1	10300602	1.13	EU DESCRIPT	0.0100	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U27	OS1	10300602	1.60	EU DESCRIPT	0.0200	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U27	OS2	10300602	1.60	EU DESCRIPT	0.0200	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U29	OS1	10300602	1.80	EU DESCRIPT	0.0200	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U3	OS1	10300602	2.30	EU DESCRIPT	0.0800	0.0002	0.0002	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U30	OS1	10300602	1.15	EU DESCRIPT	0.0100	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U31	OS1	10300602	1.15	EU DESCRIPT	0.0100	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U35	OS1	10300602	1.10	EU DESCRIPT	0.0300	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U36	OS1	10300602	1.10	EU DESCRIPT	0.0300	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U37	OS1	10300602	20.06	EU DESCRIPT	0.1000	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U38	OS1	10300602	20.06	EU DESCRIPT	0.0700	0.0000	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U39	OS1	10300602	7.90	EU DESCRIPT	0.0800	0.0004	0.0004	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U4	OS1	10300602	1.37	EU DESCRIPT	0.0200	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U5	OS1	10300602	1.37	EU DESCRIPT	0.0200	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U6	OS1	10300602	1.85	EU DESCRIPT	0.0400	0.0023	0.0023	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U68	OS1	10300602	1.22	EU DESCRIPT	0.0600	0.0002	0.0002	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U71	OS1	10300602	4.00	EU DESCRIPT	0.3500	0.0002	0.0002	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U72	OS1	10300602	4.00	EU DESCRIPT	0.1400	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U73	OS1	10300602	1.92	EU DESCRIPT	0.3100	0.0017	0.0017	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U74	OS1	10300602	1.92	EU DESCRIPT	0.1300	0.0007	0.0007	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U75	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0000	0.0003	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U78	OS1	10300602	7.30	EU DESCRIPT	0.0100	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U79	OS1	10300602	7.30	EU DESCRIPT	0.0100	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U8	OS1	10300602	2.00	EU DESCRIPT	0.0400	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U9	OS1	10300602	1.20	EU DESCRIPT	0.0500	0.0002	0.0002	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21141	U2	OS1	10300602	4.52	EU DESCRIPT	0.0300	0.0001	0.0001	U.S. Army Fort Monmouth -Charles Wood Area
NJ	Monmouth	34025	21141	U21	OS1	10300602	9.96	EU DESCRIPT	0.1000	0.0010	0.0010	U.S. Army Fort Monmouth -Charles Wood Area
NJ	Monmouth	34025	21141	U22	OS1	10300602	9.96	EU DESCRIPT	0.4200	0.0000	0.0002	U.S. Army Fort Monmouth -Charles Wood Area
NJ	Monmouth	34025	21141	U24	OS1	10300602	1.92	EU DESCRIPT	0.0600	0.0003	0.0003	U.S. Army Fort Monmouth -Charles Wood Area
NJ	Monmouth	34025	21141	U31	OS1	10300602	1.21	EU DESCRIPT	0.0100	0.0000	0.0000	U.S. Army Fort Monmouth -Charles Wood Area
NJ	Monmouth	34025	21141	U8	OS1	10300602	1.67	EU DESCRIPT	0.1200	0.0002	0.0002	U.S. Army Fort Monmouth -Charles Wood Area
NJ	Monmouth	34025	21146	U12	OS5	10200602	55.00	SCC Descriptio	30.2800	0.0713	0.0713	Nestle USA - Beverage Division, Inc.
NJ	Monmouth	34025	21146	U12	OS3	10200602	55.00	SCC Descriptio	30.2800	0.0552	0.0552	Nestle USA - Beverage Division, Inc.
NJ	Monmouth	34025	21146	U12	OS1	10200602	55.00	SCC Descriptio	4.3700	0.0000	0.0106	Nestle USA - Beverage Division, Inc.
NJ	Monmouth	34025	21146	U2	OS13	10300602	55.00	SCC Descriptio	0.3900	0.0020	0.0020	Nestle USA - Beverage Division, Inc.
NJ	Monmouth	34025	21146	U2	OS15	10300602	55.00	SCC Descriptio	0.3900	0.0010	0.0010	Nestle USA - Beverage Division, Inc.
NJ	Monmouth	34025	21146	U7	OS1	10200602	55.00	SCC Descriptio	1.7000	0.0040	0.0040	Nestle USA - Beverage Division, Inc.
NJ	Morris	34027	25019	U200	OS1	10200502	55.00	SCC Descriptio	1.5500	0.0139	0.0139	Adron-Boonton Plant
NJ	Morris	34027	25056	U100	OS122	10300602	55.00	SCC Descriptio	0.4200	0.0017	0.0017	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS119	10300602	55.00	SCC Descriptio	0.4200	0.0013	0.0013	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS116	10300602	55.00	SCC Descriptio	0.2400	0.0010	0.0010	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS118	10300602	55.00	SCC Descriptio	0.2500	0.0010	0.0010	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS100	10300602	55.00	SCC Descriptio	0.1800	0.0007	0.0007	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS102	10300602	55.00	SCC Descriptio	0.1800	0.0007	0.0007	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS108	10300602	55.00	SCC Descriptio	0.1800	0.0007	0.0007	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS123	10300602	55.00	SCC Descriptio	0.2500	0.0000	0.0007	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS104	10300602	55.00	SCC Descriptio	0.1500	0.0006	0.0006	MCWILLIAMS FORGE CO.

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NJ	Morris	34027	25056	U100	OS106	10300602	55.00	SCC Descriptio	0.1500	0.0006	0.0006	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS120	10300602	55.00	SCC Descriptio	0.1400	0.0005	0.0005	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS121	10300602	55.00	SCC Descriptio	0.0900	0.0005	0.0005	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS110	10300602	55.00	SCC Descriptio	0.1800	0.0002	0.0002	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS112	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS114	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS124	10300402	55.00	SCC Descriptio	3.0000	0.0120	0.0120	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25078	U32	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0000	0.0003	KOP-COAT, INC. AN OHIO CORPORATION
NJ	Morris	34027	25125	U5000	O50011	10200602	55.00	SCC Descriptio	0.4800	0.0017	0.0017	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50012	10200502	55.00	SCC Descriptio	0.0100	0.0031	0.0031	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50021	10200602	55.00	SCC Descriptio	2.0500	0.0046	0.0046	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50022	10200502	55.00	SCC Descriptio	0.0200	0.0026	0.0026	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50031	10200502	55.00	SCC Descriptio	1.0300	0.0020	0.0020	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50032	10200502	55.00	SCC Descriptio	0.0100	0.0013	0.0013	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50041	10200602	55.00	SCC Descriptio	0.1000	0.0002	0.0002	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50051	10200602	55.00	SCC Descriptio	0.1000	0.0002	0.0002	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50061	10200602	55.00	SCC Descriptio	0.6300	0.0012	0.0012	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50071	10200602	55.00	SCC Descriptio	0.6300	0.0012	0.0012	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50081	10200602	55.00	SCC Descriptio	0.6300	0.0012	0.0012	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50091	10200602	55.00	SCC Descriptio	0.3200	0.0007	0.0007	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50101	10200602	55.00	SCC Descriptio	0.3200	0.0007	0.0007	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50111	10200602	55.00	SCC Descriptio	0.3200	0.0007	0.0007	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50121	10200602	55.00	SCC Descriptio	0.3200	0.0007	0.0007	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50151	10200502	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50191	10200602	55.00	SCC Descriptio	0.0700	0.0000	0.0000	Warner-Lambert of Pfizer
NJ	Morris	34027	25142	U10	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0002	0.0002	ISP Chemicals Inc., Sutton Laboratories
NJ	Morris	34027	25142	U9	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0002	0.0002	ISP Chemicals Inc., Sutton Laboratories
NJ	Morris	34027	25165	U100	OS3502	10300602	55.00	SCC Descriptio	0.3000	0.0014	0.0014	Pfizer Inc
NJ	Morris	34027	25165	U100	OS3501	10300602	55.00	SCC Descriptio	0.3100	0.0012	0.0012	Pfizer Inc
NJ	Morris	34027	25165	U100	OS3503	10300502	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Pfizer Inc
NJ	Morris	34027	25165	U100	OS2901	10300602	55.00	SCC Descriptio	0.2400	0.0010	0.0010	Pfizer Inc
NJ	Morris	34027	25165	U100	OS301	10300501	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Pfizer Inc
NJ	Morris	34027	25165	U100	OS2301	10300602	55.00	SCC Descriptio	0.1600	0.0003	0.0003	Pfizer Inc
NJ	Morris	34027	25165	U100	OS2401	10300602	55.00	SCC Descriptio	0.0500	0.0001	0.0001	Pfizer Inc
NJ	Morris	34027	25219	U3	OS4	10200402	55.00	SCC Descriptio	1.3600	0.0136	0.0136	GIVAUDAN FLAVORS CORPORATION
NJ	Morris	34027	25219	U3	OS3	10200602	55.00	SCC Descriptio	2.6300	0.0435	0.0435	GIVAUDAN FLAVORS CORPORATION
NJ	Morris	34027	25219	U3	OS1	10200602	55.00	SCC Descriptio	2.5500	0.0330	0.0330	GIVAUDAN FLAVORS CORPORATION
NJ	Morris	34027	25219	U3	OS2	10200402	55.00	SCC Descriptio	1.0800	0.0000	0.0026	GIVAUDAN FLAVORS CORPORATION
NJ	Morris	34027	25315	U88	OS1	10300602	55.00	SCC Descriptio	0.2700	0.0006	0.0006	ROYAL LUBRICANTS INC
NJ	Morris	34027	25315	U97	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0005	0.0005	ROYAL LUBRICANTS INC
NJ	Morris	34027	25441	U4	OS1	10300501	0.00		0.2100	0.0004	0.0004	NATIONAL MANUFACTURING CO INC
NJ	Morris	34027	25441	U5	OS1	10300602	55.00	SCC Descriptio	0.1400	0.0004	0.0004	NATIONAL MANUFACTURING CO INC
NJ	Morris	34027	25669	U1	OS1	10300602	55.00	SCC Descriptio	0.3200	0.0004	0.0004	NEWARK STAR LEDGER
NJ	Morris	34027	25669	U7	OS1	10300602	55.00	SCC Descriptio	0.5300	0.0007	0.0007	NEWARK STAR LEDGER
NJ	Morris	34027	25669	U8	OS1	10300602	55.00	SCC Descriptio	0.5300	0.0007	0.0007	NEWARK STAR LEDGER
NJ	Morris	34027	25683	U1	OS1	10300602	55.00	SCC Descriptio	0.3600	0.0004	0.0004	Deluxe Financial Services, Inc.
NJ	Morris	34027	26173	U11201	O11201	10200602	55.00	SCC Descriptio	0.2400	0.0007	0.0007	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U11201	O11202	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U121	O12101	10200602	55.00	SCC Descriptio	0.4100	0.0000	0.0000	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U121	O12102	10200502	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U3401	OS3402	10200602	55.00	SCC Descriptio	0.8300	0.0044	0.0044	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U9401	OS9401	10200602	55.00	SCC Descriptio	6.9200	0.0235	0.0235	Novartis Pharmaceuticals Corporation

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NJ	Morris	34027	26173	U9401	OS9402	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U9596	OS9601	10200602	55.00	SCC Descriptio	0.1600	0.0005	0.0005	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U9596	OS9501	10200602	55.00	SCC Descriptio	0.1100	0.0000	0.0003	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U9801	OS9801	10200602	55.00	SCC Descriptio	6.1300	0.0100	0.0100	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U9801	OS9802	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26198	U1	OS5	10200602	55.00	SCC Descriptio	0.2900	0.0012	0.0012	Roysons Corporation
NJ	Morris	34027	26198	U7	OS1	10300602	55.00	SCC Descriptio	0.1400	0.0006	0.0006	Roysons Corporation
NJ	Morris	34027	26198	U8	OS1	10300602	55.00	SCC Descriptio	0.1900	0.0008	0.0008	Roysons Corporation
NJ	Morris	34027	26198	U9	OS1	10300602	55.00	SCC Descriptio	0.3000	0.0012	0.0012	Roysons Corporation
NJ	Morris	34027	26215	U9	OS1	10300602	55.00	SCC Descriptio	5.8900	0.0215	0.0215	Morristown Memorial Hospital
NJ	Morris	34027	26215	U9	OS3	10300602	55.00	SCC Descriptio	5.2600	0.0122	0.0122	Morristown Memorial Hospital
NJ	Morris	34027	26218	U17	OS1	10300402	55.00	SCC Descriptio	10.9800	0.1510	0.1510	GREYSTONE PARK PSYCHIATRIC HOSPITAL
NJ	Morris	34027	26218	U7	OS1	10300402	55.00	SCC Descriptio	10.9200	0.0000	0.0048	GREYSTONE PARK PSYCHIATRIC HOSPITAL
NJ	Morris	34027	26218	U7	OS2	10300402	55.00	SCC Descriptio	3.7700	0.0000	0.0120	GREYSTONE PARK PSYCHIATRIC HOSPITAL
NJ	Morris	34027	26233	U1	OS2	10300602	24.90	EU DESCRIPT	1.3200	0.0047	0.0047	Kraft Foods North America, Inc.
NJ	Morris	34027	26233	U1	OS1	10300501	24.90	EU DESCRIPT	0.0200	0.0006	0.0006	Kraft Foods North America, Inc.
NJ	Morris	34027	26233	U2	OS1	10300501	24.90	EU DESCRIPT	0.0200	0.0029	0.0029	Kraft Foods North America, Inc.
NJ	Morris	34027	26233	U2	OS2	10300602	24.90	EU DESCRIPT	1.4200	0.0046	0.0046	Kraft Foods North America, Inc.
NJ	Morris	34027	26234	U2	OS3	10200602	55.00	SCC Descriptio	0.6000	0.0000	0.0016	Sidmak Laboratories, Inc.
NJ	Morris	34027	26234	U2	OS5	10200602	55.00	SCC Descriptio	0.5000	0.0008	0.0008	Sidmak Laboratories, Inc.
NJ	Morris	34027	26234	U2	OS4	10200602	55.00	SCC Descriptio	0.1000	0.0003	0.0003	Sidmak Laboratories, Inc.
NJ	Morris	34027	26234	U2	OS1	10200602	55.00	SCC Descriptio	0.0400	0.0000	0.0001	Sidmak Laboratories, Inc.
NJ	Morris	34027	26234	U2	OS2	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Sidmak Laboratories, Inc.
NJ	Morris	34027	26236	U13	OS13	10200602	55.00	SCC Descriptio	0.8900	0.0004	0.0004	Butler Printing & Laminating, Inc.
NJ	Morris	34027	26236	U14	OS14	10200602	55.00	SCC Descriptio	0.1300	0.0000	0.0001	Butler Printing & Laminating, Inc.
NJ	Morris	34027	26237	U11	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Blue Ridge Paper Products - DairyPak
NJ	Morris	34027	26237	U3	OS1	10300602	55.00	SCC Descriptio	0.3600	0.0000	0.0000	Blue Ridge Paper Products - DairyPak
NJ	Morris	34027	26237	U4	OS1	10300602	55.00	SCC Descriptio	0.3600	0.0000	0.0000	Blue Ridge Paper Products - DairyPak
NJ	Morris	34027	26263	U6	OS1	10300501	0.00		0.3700	0.0000	0.0001	Elm Manufacturing
NJ	Morris	34027	26263	U7	OS1	10300903	0.00		0.1300	0.0000	0.0000	Elm Manufacturing
NJ	Ocean	34029	78022	U10	OS1	10300602	55.00	SCC Descriptio	0.1300	0.0002	0.0002	DPT Lakewood, Inc.
NJ	Ocean	34029	78022	U18	OS1	10300602	55.00	SCC Descriptio	0.4900	0.0006	0.0006	DPT Lakewood, Inc.
NJ	Ocean	34029	78022	U19	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0002	0.0002	DPT Lakewood, Inc.
NJ	Ocean	34029	78244	U2	OS204	10300602	55.00	SCC Descriptio	3.6000	0.0104	0.0104	Kimball Medical Center
NJ	Ocean	34029	78244	U2	OS202	10300602	55.00	SCC Descriptio	3.3700	0.0082	0.0082	Kimball Medical Center
NJ	Ocean	34029	78244	U2	OS206	10300602	55.00	SCC Descriptio	2.7300	0.0072	0.0072	Kimball Medical Center
NJ	Ocean	34029	78268	U4	OS2	10200602	55.00	SCC Descriptio	0.0500	0.0021	0.0021	PERMACEL, A NITTO DENKO COMPANY
NJ	Ocean	34029	78268	U4	OS1	10200602	55.00	SCC Descriptio	0.2400	0.0016	0.0016	PERMACEL, A NITTO DENKO COMPANY
NJ	Ocean	34029	78896	U3	OS1	10200602	131.00	EU DESCRIPT	0.4200	0.0030	0.0030	Lakewood Cogeneration, L.P.
NJ	Ocean	34029	78897	U102	OS1	10300602	1.83	EU DESCRIPT	0.0600	0.0005	0.0005	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U104	OS1	10300602	3.17	EU DESCRIPT	0.0900	0.0008	0.0008	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U13	OS1	10300602	55.00	SCC Descriptio	0.1400	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U13	OS2	10300602	55.00	SCC Descriptio	0.1400	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U14	OS2	10300602	55.00	SCC Descriptio	0.0700	0.0007	0.0007	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U14	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0006	0.0006	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U15	OS1	10300501	0.00		0.5000	0.0000	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U16	OS1	10300402	55.00	SCC Descriptio	3.6400	0.0051	0.0051	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U17	OS1	10300402	55.00	SCC Descriptio	3.2500	0.0046	0.0046	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U2	OS1	10300602	16.33	EU DESCRIPT	1.1600	0.0003	0.0003	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U22	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0000	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U23	OS1	10300402	55.00	SCC Descriptio	2.6700	0.0558	0.0558	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U25	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	NAVAL AIR ENGINEERING STATION

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NJ	Ocean	34029	78897	U3	OS1	10301002	0.00		0.0400	0.0000	0.0000	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U303	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0003	0.0003	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U305	OS1	10300602	2.20	EU DESCRIPT	0.0600	0.0000	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U36	OS1	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U36	OS2	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U4	OS1	10301002	0.00		0.0600	0.0000	0.0000	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U45	OS2	10300602	55.00	SCC Descriptio	0.0300	0.0002	0.0002	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U46	OS2	10300602	55.00	SCC Descriptio	0.0300	0.0002	0.0002	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U6	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0006	0.0006	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U6	OS2	10300602	55.00	SCC Descriptio	0.0500	0.0005	0.0005	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U64	OS1	10300501	0.00		0.1300	0.0000	0.0000	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U7	OS3	10300602	55.00	SCC Descriptio	0.0500	0.0005	0.0005	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U80	OS1	10200401	57.50	EU DESCRIPT	0.9600	0.0055	0.0055	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U83	OS1	10300602	1.51	EU DESCRIPT	0.0200	0.0002	0.0002	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U84	OS1	10300602	1.51	EU DESCRIPT	0.1200	0.0000	0.0000	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U85	OS1	10300602	1.51	EU DESCRIPT	0.1600	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U86	OS1	10300602	1.51	EU DESCRIPT	0.3200	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U87	OS1	10300602	5.50	EU DESCRIPT	0.2100	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U88	OS1	10300602	2.10	EU DESCRIPT	0.0700	0.0000	0.0000	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U89	OS1	10300602	2.10	EU DESCRIPT	0.0800	0.0000	0.0000	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U9	OS1	10300602	55.00	SCC Descriptio	0.0900	0.0008	0.0008	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U90	OS1	10300602	55.00	SCC Descriptio	0.2700	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U90	OS2	10300602	55.00	SCC Descriptio	0.2700	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U92	OS1	10300602	55.00	SCC Descriptio	0.2700	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U92	OS2	10300602	55.00	SCC Descriptio	0.2700	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U94	OS1	10300602	55.00	SCC Descriptio	0.1800	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U94	OS2	10300602	55.00	SCC Descriptio	0.1800	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U96	OS1	10300602	55.00	SCC Descriptio	0.1800	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U96	OS2	10300602	55.00	SCC Descriptio	0.1800	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U98	OS1	10300602	2.70	EU DESCRIPT	0.1200	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U99	OS1	10300602	1.50	EU DESCRIPT	0.0500	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78909	U1	OS16	10300501	0.00		1.5300	0.0060	0.0060	Ocean County Utilities Authority - CWPCF
NJ	Ocean	34029	78909	U1	OS17	10300501	0.00		0.6000	0.0060	0.0060	Ocean County Utilities Authority - CWPCF
NJ	Ocean	34029	78909	U1	OS14	10300799	0.00		0.0900	0.0015	0.0015	Ocean County Utilities Authority - CWPCF
NJ	Ocean	34029	78909	U1	OS15	10300799	0.00		0.0600	0.0015	0.0015	Ocean County Utilities Authority - CWPCF
NJ	Ocean	34029	78931	U3	OS1	10300502	55.00	SCC Descriptio	0.2000	0.0000	0.0005	Ocean County Landfill Corporation
NJ	Passaic	34031	30053	U3	OS1	10200602	55.00	SCC Descriptio	0.2200	0.0003	0.0003	CONGRESS INDUSTRIES, INC.
NJ	Passaic	34031	30345	U25	OS1	10200602	55.00	SCC Descriptio	0.2600	0.0000	0.0001	ALPHA PROCESSING CO, INC.
NJ	Passaic	34031	30355	U4	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	PASSAIC, COUNTY OF, BOARD EDUCATION
NJ	Passaic	34031	30355	U5	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	PASSAIC, COUNTY OF, BOARD EDUCATION
NJ	Passaic	34031	30355	U7	OS4	10300602	55.00	SCC Descriptio	0.0100	0.0001	0.0001	PASSAIC, COUNTY OF, BOARD EDUCATION
NJ	Passaic	34031	30355	U7	OS5	10300602	55.00	SCC Descriptio	0.0100	0.0001	0.0001	PASSAIC, COUNTY OF, BOARD EDUCATION
NJ	Passaic	34031	30355	U7	OS1	10300602	55.00	SCC Descriptio	0.2400	0.0000	0.0001	PASSAIC, COUNTY OF, BOARD EDUCATION
NJ	Passaic	34031	30355	U7	OS2	10300602	55.00	SCC Descriptio	0.2400	0.0000	0.0007	PASSAIC, COUNTY OF, BOARD EDUCATION
NJ	Passaic	34031	30355	U7	OS3	10300602	55.00	SCC Descriptio	0.1200	0.0000	0.0003	PASSAIC, COUNTY OF, BOARD EDUCATION
NJ	Passaic	34031	31074	U1	OS1	10300602	55.00	SCC Descriptio	0.3600	0.0084	0.0084	PASSAIC PIONEER PROPERTIES CO.
NJ	Passaic	34031	31074	U3	OS1	10300602	55.00	SCC Descriptio	0.6300	0.0093	0.0093	PASSAIC PIONEER PROPERTIES CO.
NJ	Passaic	34031	31074	U8	OS1	10300602	55.00	SCC Descriptio	1.4300	0.0132	0.0132	PASSAIC PIONEER PROPERTIES CO.
NJ	Passaic	34031	31439	U13	OS1	10300602	55.00	SCC Descriptio	0.2700	0.0013	0.0013	Crown Roll Leaf, Inc.
NJ	Passaic	34031	31439	U14	OS1	10300602	55.00	SCC Descriptio	0.2500	0.0012	0.0012	Crown Roll Leaf, Inc.
NJ	Passaic	34031	31439	U15	OS1	10300602	55.00	SCC Descriptio	0.2500	0.0012	0.0012	Crown Roll Leaf, Inc.
NJ	Passaic	34031	31440	U5	OS1	10300602	91.60	EU DESCRIPT	0.9600	0.0000	0.0000	Recycled Paperboard, Inc. of Clifton

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NJ	Passaic	34031	31440	U5	OS2	10300501	91.60	EU DESCRIPT	0.0400	0.0000	0.0000	Recycled Paperboard, Inc. of Clifton
NJ	Passaic	34031	31440	U6	OS2	10200602	55.00	SCC Descriptio	10.8900	0.0347	0.0347	Recycled Paperboard, Inc. of Clifton
NJ	Passaic	34031	31440	U6	OS3	10200602	55.00	SCC Descriptio	3.3800	0.0086	0.0086	Recycled Paperboard, Inc. of Clifton
NJ	Passaic	34031	31440	U6	OS4	10200502	55.00	SCC Descriptio	1.8800	0.0000	0.0000	Recycled Paperboard, Inc. of Clifton
NJ	Passaic	34031	31499	U1	OS1	10200602	55.00	SCC Descriptio	1.0000	0.0005	0.0005	Morton International
NJ	Passaic	34031	31499	U1	OS2	10200602	55.00	SCC Descriptio	1.0000	0.0005	0.0005	Morton International
NJ	Passaic	34031	31544	U101	OS1	10200502	26.40	EU DESCRIPT	10.1700	0.0148	0.0148	North Jersey Development Center
NJ	Passaic	34031	31544	U102	OS1	10200502	8.25	EU DESCRIPT	0.7700	0.0000	0.0021	North Jersey Development Center
NJ	Passaic	34031	31544	U2	OS1	10200401	0.00		0.6100	0.0000	0.0017	North Jersey Development Center
NJ	Passaic	34031	31564	U1	OS6	10300602	55.00	SCC Descriptio	0.4900	0.0015	0.0015	Chase Facile Inc.
NJ	Passaic	34031	31670	U2	OS1	10300602	55.00	SCC Descriptio	0.1500	0.0005	0.0005	Poly Molding Corp.
NJ	Passaic	34031	31670	U3	OS1	10300602	55.00	SCC Descriptio	0.1500	0.0005	0.0005	Poly Molding Corp.
NJ	Passaic	34031	31670	U4	OS1	10300602	55.00	SCC Descriptio	0.1500	0.0005	0.0005	Poly Molding Corp.
NJ	Salem	34033	65024	U18	OS1	10300602	55.00	SCC Descriptio	0.7700	0.0016	0.0016	Budd Chemical Company
NJ	Salem	34033	65047	U1	OS1	10200602	4.95	EU DESCRIPT	0.0600	0.0006	0.0006	Memorial Hospital of Salem County
NJ	Salem	34033	65047	U1	OS2	10200502	4.95	EU DESCRIPT	0.2300	0.0022	0.0022	Memorial Hospital of Salem County
NJ	Salem	34033	65047	U2	OS2	10200502	9.90	EU DESCRIPT	0.7400	0.0000	0.0004	Memorial Hospital of Salem County
NJ	Salem	34033	65047	U2	OS1	10200602	9.90	EU DESCRIPT	0.0700	0.0000	0.0001	Memorial Hospital of Salem County
NJ	Salem	34033	65047	U3	OS1	10200602	9.90	EU DESCRIPT	0.2900	0.0000	0.0004	Memorial Hospital of Salem County
NJ	Salem	34033	65047	U3	OS2	10200502	9.90	EU DESCRIPT	0.4800	0.0000	0.0003	Memorial Hospital of Salem County
NJ	Salem	34033	65482	U1	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0002	Praxair, Inc.
NJ	Salem	34033	65485	U12	OS1	10200602	55.00	SCC Descriptio	0.0400	0.0000	0.0001	Siegfried (USA), Inc.
NJ	Salem	34033	65485	U26	OS1	10200602	29.40	EU DESCRIPT	0.5600	0.0016	0.0016	Siegfried (USA), Inc.
NJ	Salem	34033	65485	U6	OS2	10200602	23.10	EU DESCRIPT	1.1700	0.0053	0.0053	Siegfried (USA), Inc.
NJ	Salem	34033	65493	U131	OS1	10200602	55.00	SCC Descriptio	0.3500	0.0000	0.0001	Mannington Mills, Inc
NJ	Salem	34033	65493	U131	OS2	10200602	55.00	SCC Descriptio	0.2500	0.0000	0.0001	Mannington Mills, Inc
NJ	Salem	34033	65493	U37	OS1	10200602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Mannington Mills, Inc
NJ	Salem	34033	65493	U38	OS1	10200602	55.00	SCC Descriptio	0.0400	0.0000	0.0000	Mannington Mills, Inc
NJ	Salem	34033	65493	U39	OS1	10200602	55.00	SCC Descriptio	0.8100	0.0000	0.0019	Mannington Mills, Inc
NJ	Salem	34033	65493	U39	OS2	10200502	55.00	SCC Descriptio	0.9300	0.0000	0.0004	Mannington Mills, Inc
NJ	Salem	34033	65493	U40	OS1	10200602	55.00	SCC Descriptio	0.8600	0.0000	0.0020	Mannington Mills, Inc
NJ	Salem	34033	65493	U40	OS2	10200502	55.00	SCC Descriptio	3.2000	0.0000	0.0018	Mannington Mills, Inc
NJ	Salem	34033	65493	U46	OS1	10200602	55.00	SCC Descriptio	0.0600	0.0000	0.0001	Mannington Mills, Inc
NJ	Salem	34033	65493	U46	OS2	10200602	55.00	SCC Descriptio	0.0600	0.0000	0.0001	Mannington Mills, Inc
NJ	Salem	34033	65495	U4	OS2	10200502	55.00	SCC Descriptio	0.1700	0.0000	0.0000	Deepwater Generating Station
NJ	Salem	34033	65496	U15	OS1	10200502	55.00	SCC Descriptio	3.9700	0.0000	0.0000	Hope Creek Generating Station
NJ	Salem	34033	65496	U16	OS1	10200502	55.00	SCC Descriptio	3.6800	0.0000	0.0000	Hope Creek Generating Station
NJ	Salem	34033	65496	U17	OS1	10200502	55.00	SCC Descriptio	5.7200	0.0000	0.0000	Hope Creek Generating Station
NJ	Salem	34033	65499	U8	OS1	10300602	1.60	EU DESCRIPT	0.3500	0.0000	0.0009	Anchor Glass Container Corporation
NJ	Salem	34033	65500	U11	OS1	10200502	55.00	SCC Descriptio	0.4400	0.0000	0.0000	Salem Generating Station
NJ	Salem	34033	65500	U2	OS1	10200502	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Salem Generating Station
NJ	Somerset	34035	35004	U501	OS1	10300602	55.00	SCC Descriptio	3.2200	0.0087	0.0087	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS3	10300602	55.00	SCC Descriptio	2.1200	0.0058	0.0058	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS20	10200602	55.00	SCC Descriptio	0.3300	0.0009	0.0009	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS5	10300602	55.00	SCC Descriptio	2.5900	0.0018	0.0018	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS10	10300602	55.00	SCC Descriptio	0.5600	0.0015	0.0015	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS9	10300602	55.00	SCC Descriptio	0.5600	0.0015	0.0015	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS6	10300501	55.00	SCC Descriptio	0.2800	0.0002	0.0002	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS7	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS8	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS2	10300402	55.00	SCC Descriptio	0.2300	0.0000	0.0006	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35011	U17	OS1	10200602	55.00	SCC Descriptio	2.4700	0.0171	0.0171	Veterans Affairs Medical Center, Lyons

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NJ	Somerset	34035	35011	U17	OS2	10200502	55.00	SCC Descriptio	0.0600	0.0064	0.0064	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35011	U18	OS1	10200602	55.00	SCC Descriptio	1.8100	0.0014	0.0014	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35011	U18	OS2	10200502	55.00	SCC Descriptio	0.1500	0.0060	0.0060	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35011	U19	OS1	10200602	55.00	SCC Descriptio	0.7200	0.0003	0.0003	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35011	U19	OS2	10200502	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35011	U20	OS1	10200602	55.00	SCC Descriptio	2.3900	0.0002	0.0002	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35011	U20	OS2	10200502	55.00	SCC Descriptio	0.0600	0.0006	0.0006	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35011	U21	OS1	10200602	55.00	SCC Descriptio	1.8400	0.0086	0.0086	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35011	U21	OS2	10200502	55.00	SCC Descriptio	0.0900	0.0065	0.0065	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35040	U110	OS1	10300602	55.00	SCC Descriptio	1.3100	0.0019	0.0019	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS11	10300602	55.00	SCC Descriptio	0.0200	0.0001	0.0001	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS5	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS9	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS7	10300602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS10	10300501	55.00	SCC Descriptio	0.0400	0.0000	0.0001	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS12	10300501	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS2	10300402	55.00	SCC Descriptio	0.1400	0.0000	0.0002	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS6	10300501	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS8	10300501	55.00	SCC Descriptio	0.0600	0.0000	0.0001	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35046	U68	OS1	10300602	55.00	SCC Descriptio	4.4200	0.0125	0.0125	ORTHO CLINICAL DIAGNOSTICS, INC.
NJ	Somerset	34035	35046	U68	OS3	10300504	55.00	SCC Descriptio	0.5700	0.0000	0.0000	ORTHO CLINICAL DIAGNOSTICS, INC.
NJ	Somerset	34035	35046	U68	OS2	10300501	55.00	SCC Descriptio	0.2000	0.0000	0.0001	ORTHO CLINICAL DIAGNOSTICS, INC.
NJ	Somerset	34035	35052	U47	OS501	10200602	55.00	SCC Descriptio	0.6500	0.0033	0.0033	Reckitt Benckiser
NJ	Somerset	34035	35052	U47	OS502	10200602	55.00	SCC Descriptio	0.6500	0.0033	0.0033	Reckitt Benckiser
NJ	Somerset	34035	35052	U47	OS503	10300602	55.00	SCC Descriptio	0.4700	0.0012	0.0012	Reckitt Benckiser
NJ	Somerset	34035	35052	U47	OS504	10300602	55.00	SCC Descriptio	0.1300	0.0000	0.0001	Reckitt Benckiser
NJ	Somerset	34035	35052	U47	OS505	10300602	55.00	SCC Descriptio	0.1200	0.0000	0.0001	Reckitt Benckiser
NJ	Somerset	34035	35052	U47	OS506	10300602	55.00	SCC Descriptio	0.1100	0.0000	0.0001	Reckitt Benckiser
NJ	Somerset	34035	35054	U9901	OS4	10200602	55.00	SCC Descriptio	3.1200	0.0139	0.0139	NATIONAL STARCH & CHEMICAL CORP
NJ	Somerset	34035	35054	U9901	OS3	10200602	55.00	SCC Descriptio	0.7600	0.0119	0.0119	NATIONAL STARCH & CHEMICAL CORP
NJ	Somerset	34035	35054	U9901	OS2	10200602	55.00	SCC Descriptio	0.4200	0.0109	0.0109	NATIONAL STARCH & CHEMICAL CORP
NJ	Somerset	34035	35054	U9901	OS1	10200602	55.00	SCC Descriptio	0.4300	0.0096	0.0096	NATIONAL STARCH & CHEMICAL CORP
NJ	Somerset	34035	35054	U9901	OS28	10300501	55.00	SCC Descriptio	0.0400	0.0000	0.0001	NATIONAL STARCH & CHEMICAL CORP
NJ	Somerset	34035	35054	U9901	OS29	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0000	NATIONAL STARCH & CHEMICAL CORP
NJ	Somerset	34035	35091	U1	OS1	10300602	55.00	SCC Descriptio	0.2100	0.0004	0.0004	Haarmann & Reimer
NJ	Somerset	34035	35091	U2	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0003	0.0003	Haarmann & Reimer
NJ	Somerset	34035	35091	U20	OS1	10300602	55.00	SCC Descriptio	0.7100	0.0013	0.0013	Haarmann & Reimer
NJ	Somerset	34035	35091	U6	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0003	0.0003	Haarmann & Reimer
NJ	Somerset	34035	35211	U1	OS1	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U2	OS2	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U3	OS3	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U300	OS9	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U301	OS10	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U303	OS11	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U304	OS12	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U306	OS13	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U307	OS14	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U308	OS15	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U4	OS4	10300602	55.00	SCC Descriptio	0.0700	0.0001	0.0001	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U5	OS5	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U6	OS6	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U7	OS7	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Huntingdon Life Sceinces Inc.

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NJ	Somerset	34035	35328	U101	OS2	10200602	55.00	SCC Descriptio	2.6800	0.0068	0.0068	REBTEX, INC
NJ	Somerset	34035	35328	U101	OS1	10200402	55.00	SCC Descriptio	0.0600	0.0000	0.0002	REBTEX, INC
NJ	Somerset	34035	35328	U102	OS1	10300602	55.00	SCC Descriptio	2.4400	0.0123	0.0123	REBTEX, INC
NJ	Somerset	34035	35328	U102	OS2	10300402	55.00	SCC Descriptio	0.4600	0.0000	0.0010	REBTEX, INC
NJ	Somerset	34035	35742	U10	OS10	10200602	3.50	EU DESCRIPT	0.7900	0.0000	0.0002	Transco Compressor Station 505
NJ	Somerset	34035	35827	U2	OS1	10200602	55.00	SCC Descriptio	0.5200	0.0000	0.0014	Clariant Corporation
NJ	Somerset	34035	35827	U2	OS3	10200602	55.00	SCC Descriptio	0.7700	0.0008	0.0008	Clariant Corporation
NJ	Somerset	34035	35827	U2	OS4	10200602	55.00	SCC Descriptio	0.7700	0.0008	0.0008	Clariant Corporation
NJ	Somerset	34035	35827	U2	OS2	10200602	55.00	SCC Descriptio	0.0800	0.0000	0.0002	Clariant Corporation
NJ	Somerset	34035	35832	U1	OS1	10200602	55.00	SCC Descriptio	2.3800	0.0237	0.0237	Aventis Pharmaceuticals, Inc.
NJ	Somerset	34035	35832	U1	OS5	10200602	55.00	SCC Descriptio	2.6100	0.0168	0.0168	Aventis Pharmaceuticals, Inc.
NJ	Somerset	34035	35832	U1	OS3	10200602	55.00	SCC Descriptio	1.7200	0.0152	0.0152	Aventis Pharmaceuticals, Inc.
NJ	Somerset	34035	35832	U1	OS4	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Aventis Pharmaceuticals, Inc.
NJ	Somerset	34035	35832	U18	OS1	10200602	55.00	SCC Descriptio	1.4200	0.0078	0.0078	Aventis Pharmaceuticals, Inc.
NJ	Somerset	34035	35832	U18	OS2	10200502	55.00	SCC Descriptio	0.1900	0.0208	0.0208	Aventis Pharmaceuticals, Inc.
NJ	Somerset	34035	35862	U201	OS1	10300402	2.70	EU DESCRIPT	0.0500	0.0000	0.0000	Elizabethtown Water Company
NJ	Somerset	34035	35862	U501	OS1	10300501	0.00		0.3200	0.0000	0.0001	Elizabethtown Water Company
NJ	Somerset	34035	35873	U10	OS1	10200602	55.00	SCC Descriptio	0.3200	0.0009	0.0009	Tekni-Plex, Inc. Somerville Facility
NJ	Somerset	34035	35873	U15	OS1	10200602	55.00	SCC Descriptio	0.0500	0.0000	0.0000	Tekni-Plex, Inc. Somerville Facility
NJ	Somerset	34035	35886	U10	OS1	10300602	8.25	EU DESCRIPT	0.1900	0.0003	0.0003	Agfa Corporation
NJ	Somerset	34035	35886	U11	OS1	10300602	6.60	EU DESCRIPT	0.1600	0.0003	0.0003	Agfa Corporation
NJ	Somerset	34035	35886	U13	OS1	10300602	1.25	EU DESCRIPT	0.5100	0.0006	0.0006	Agfa Corporation
NJ	Somerset	34035	35886	U14	OS1	10300602	1.25	EU DESCRIPT	0.5100	0.0006	0.0006	Agfa Corporation
NJ	Somerset	34035	35886	U15	OS1	10300602	1.25	EU DESCRIPT	0.5100	0.0006	0.0006	Agfa Corporation
NJ	Somerset	34035	35886	U16	OS1	10300602	1.25	EU DESCRIPT	0.5100	0.0006	0.0006	Agfa Corporation
NJ	Somerset	34035	35886	U17	OS1	10300602	1.25	EU DESCRIPT	0.5100	0.0006	0.0006	Agfa Corporation
NJ	Somerset	34035	35886	U18	OS1	10300602	1.25	EU DESCRIPT	0.5100	0.0006	0.0006	Agfa Corporation
NJ	Somerset	34035	35886	U8	OS1	10300602	4.95	EU DESCRIPT	0.1200	0.0002	0.0002	Agfa Corporation
NJ	Somerset	34035	35886	U9	OS1	10300602	6.60	EU DESCRIPT	0.1600	0.0003	0.0003	Agfa Corporation
NJ	Somerset	34035	35897	U9	OS1	10300602	55.00	SCC Descriptio	0.4500	0.0118	0.0118	Pharmacia & Upjohn - Peapack Campus
NJ	Somerset	34035	35897	U9	OS2	10300602	55.00	SCC Descriptio	0.5600	0.0118	0.0118	Pharmacia & Upjohn - Peapack Campus
NJ	Somerset	34035	35933	U10	OS10	10200602	55.00	SCC Descriptio	1.5700	0.0070	0.0070	Cardinal Health Pharm Tech Services Center
NJ	Somerset	34035	35933	U11	OS11	10200602	55.00	SCC Descriptio	1.9400	0.0024	0.0024	Cardinal Health Pharm Tech Services Center
NJ	Somerset	34035	35933	U20	OS20	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Cardinal Health Pharm Tech Services Center
NJ	Somerset	34035	35933	U21	OS21	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Cardinal Health Pharm Tech Services Center
NJ	Somerset	34035	35967	U8	OS1	10200602	55.00	SCC Descriptio	0.5100	0.0005	0.0005	Anadigics, Inc.
NJ	Somerset	34035	35967	U8	OS2	10200602	55.00	SCC Descriptio	0.5100	0.0005	0.0005	Anadigics, Inc.
NJ	Sussex	34037	83404	U12	OS12	10300602	55.00	SCC Descriptio	0.8700	0.0000	0.0016	NEWCO INC.
NJ	Sussex	34037	83404	U13	OS13	10300602	55.00	SCC Descriptio	0.8700	0.0040	0.0040	NEWCO INC.
NJ	Sussex	34037	83405	U3	OS1	10200602	55.00	SCC Descriptio	0.4100	0.0023	0.0023	Tennessee Gas Pipeline Company
NJ	Union	34039	40059	U25	OS1	10200602	55.00	SCC Descriptio	0.4700	0.0008	0.0008	DOCK RESINS CORP
NJ	Union	34039	40160	U5	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0004	0.0004	Mulberry Metal Products, Inc.
NJ	Union	34039	40160	U6	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0004	0.0004	Mulberry Metal Products, Inc.
NJ	Union	34039	40177	U4	OS1	10200502	55.00	SCC Descriptio	0.7000	0.0013	0.0013	SYNRAY CORPORATION
NJ	Union	34039	40177	U5	OS1	10200502	55.00	SCC Descriptio	0.2700	0.0013	0.0013	SYNRAY CORPORATION
NJ	Union	34039	40177	U6	OS1	10200502	55.00	SCC Descriptio	0.1700	0.0003	0.0003	SYNRAY CORPORATION
NJ	Union	34039	40213	U4	OS1	10200602	55.00	SCC Descriptio	0.7300	0.0036	0.0036	Trinitas New Point Campus
NJ	Union	34039	40213	U5	OS1	10200602	55.00	SCC Descriptio	0.6200	0.0036	0.0036	Trinitas New Point Campus
NJ	Union	34039	40213	U6	OS1	10200602	55.00	SCC Descriptio	0.1600	0.0035	0.0035	Trinitas New Point Campus
NJ	Union	34039	40213	U7	OS1	10200602	55.00	SCC Descriptio	0.1900	0.0033	0.0033	Trinitas New Point Campus
NJ	Union	34039	40263	U11	OS2	10200602	55.00	SCC Descriptio	0.1300	0.0000	0.0004	DUREX INC.
NJ	Union	34039	40263	U21	OS1	10300501	0.00		0.4500	0.0034	0.0034	DUREX INC.

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NJ	Union	34039	40271	U2	OS1	10200602	11.55	EU DESCRIPT	0.5500	0.0030	0.0030	Trinitas Hospital Jersey Street
NJ	Union	34039	40271	U3	OS1	10200602	11.55	EU DESCRIPT	0.5500	0.0030	0.0030	Trinitas Hospital Jersey Street
NJ	Union	34039	40295	U23	OS1	10200602	55.00	SCC Descriptio	2.9800	0.0146	0.0146	PUREPAC PHARMACEUTICAL COMPANY
NJ	Union	34039	40295	U24	OS1	10200602	55.00	SCC Descriptio	1.7000	0.0000	0.0046	PUREPAC PHARMACEUTICAL COMPANY
NJ	Union	34039	40326	U1	OS1	10200602	55.00	SCC Descriptio	0.1400	0.0070	0.0070	Duro Bag Manufacturing
NJ	Union	34039	40326	U2	OS1	10200602	55.00	SCC Descriptio	0.1400	0.0070	0.0070	Duro Bag Manufacturing
NJ	Union	34039	40326	U3	OS1	10200602	55.00	SCC Descriptio	0.0900	0.0000	0.0000	Duro Bag Manufacturing
NJ	Union	34039	40383	U1	OS1	10300602	13.20	EU DESCRIPT	2.2700	0.0059	0.0059	Trinitas Williamson Street
NJ	Union	34039	40383	U2	OS1	10300602	13.20	EU DESCRIPT	2.2700	0.0059	0.0059	Trinitas Williamson Street
NJ	Union	34039	40383	U3	OS1	10300602	6.60	EU DESCRIPT	0.9100	0.0029	0.0029	Trinitas Williamson Street
NJ	Union	34039	40543	U1	OS1	10200602	55.00	SCC Descriptio	0.3000	0.0000	0.0001	PLYMOUTH PRINTING CO, INC.
NJ	Union	34039	40543	U7	OS1	10200602	55.00	SCC Descriptio	0.0600	0.0000	0.0000	PLYMOUTH PRINTING CO, INC.
NJ	Union	34039	40668	U2	OS1	10300602	55.00	SCC Descriptio	1.6600	0.0116	0.0116	OVERLOOK HOSPITAL
NJ	Union	34039	40668	U2	OS3	10300602	55.00	SCC Descriptio	1.1100	0.0114	0.0114	OVERLOOK HOSPITAL
NJ	Union	34039	40668	U2	OS2	10300602	55.00	SCC Descriptio	2.1500	0.0000	0.0000	OVERLOOK HOSPITAL
NJ	Union	34039	40668	U2	OS202	10300501	55.00	SCC Descriptio	0.7300	0.0000	0.0048	OVERLOOK HOSPITAL
NJ	Union	34039	41682	U1	OS1	10200602	62.64	EU DESCRIPT	4.6300	0.0232	0.0232	Lucent Technologies Inc.
NJ	Union	34039	41682	U1	OS2	10200401	62.64	EU DESCRIPT	2.3500	0.0000	0.0000	Lucent Technologies Inc.
NJ	Union	34039	41682	U2	OS1	10200602	62.64	EU DESCRIPT	1.4400	0.0055	0.0055	Lucent Technologies Inc.
NJ	Union	34039	41682	U2	OS2	10200401	62.64	EU DESCRIPT	3.6100	0.0000	0.0000	Lucent Technologies Inc.
NJ	Union	34039	41682	U3	OS2	10200401	88.74	EU DESCRIPT	9.5100	0.0017	0.0017	Lucent Technologies Inc.
NJ	Union	34039	41682	U3	OS1	10200602	88.74	EU DESCRIPT	5.9800	0.0035	0.0035	Lucent Technologies Inc.
NJ	Union	34039	41682	U4	OS2	10200401	88.74	EU DESCRIPT	6.8900	0.0952	0.0952	Lucent Technologies Inc.
NJ	Union	34039	41682	U4	OS1	10200602	88.74	EU DESCRIPT	3.5500	0.0191	0.0191	Lucent Technologies Inc.
NJ	Union	34039	41702	U13001	O13001	10300602	55.00	SCC Descriptio	0.2400	0.0000	0.0001	Rahway Valley Sewerage Authority
NJ	Union	34039	41702	U60001	O60001	10200602	55.00	SCC Descriptio	0.3400	0.0012	0.0012	Rahway Valley Sewerage Authority
NJ	Union	34039	41702	U60002	O60003	10300602	55.00	SCC Descriptio	0.8200	0.0032	0.0032	Rahway Valley Sewerage Authority
NJ	Union	34039	41702	U80001	O80001	10200799	0.00		1.0300	0.0035	0.0035	Rahway Valley Sewerage Authority
NJ	Union	34039	41708	U2	OS1	10300602	76.70	EU DESCRIPT	0.1300	0.0003	0.0003	Schering Corporation-Union
NJ	Union	34039	41712	U116	OS11	10200602	55.00	SCC Descriptio	1.5600	0.0062	0.0062	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U116	OS1	10200602	55.00	SCC Descriptio	0.4700	0.0050	0.0050	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U116	OS12	10200502	55.00	SCC Descriptio	0.0900	0.0210	0.0210	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U116	OS2	10200502	55.00	SCC Descriptio	0.0700	0.0086	0.0086	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U116	OS21	10200602	55.00	SCC Descriptio	0.3900	0.0000	0.0000	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U116	OS22	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75004	OS1	10200602	81.20	EU DESCRIPT	10.5000	0.0823	0.0823	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75004	OS2	10200502	81.20	EU DESCRIPT	0.0500	0.0077	0.0077	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75006	OS1	10200602	108.60	EU DESCRIPT	14.0400	0.0848	0.0848	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75006	OS2	10200502	108.60	EU DESCRIPT	0.1800	0.0609	0.0609	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75007	OS1	10200602	133.70	EU DESCRIPT	30.2500	0.1062	0.1062	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75007	OS2	10200502	133.70	EU DESCRIPT	1.3300	0.0110	0.0110	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75008	OS1	10200602	155.60	EU DESCRIPT	42.4700	0.1745	0.1745	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75008	OS2	10200502	155.60	EU DESCRIPT	0.6900	0.1287	0.1287	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75010	OS11	10200602	55.00	SCC Descriptio	0.0800	0.0035	0.0035	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75010	OS7	10200502	55.00	SCC Descriptio	0.0400	0.0150	0.0150	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75010	OS6	10200602	55.00	SCC Descriptio	0.0300	0.0024	0.0024	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75010	OS12	10200502	55.00	SCC Descriptio	0.1900	0.0000	0.0007	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41716	U3	OS1	10200502	55.00	SCC Descriptio	0.0600	0.0000	0.0000	HOWARD PRESS INC. 1101/1107 DIVISION
NJ	Union	34039	41724	U1	OS13	10200602	55.00	SCC Descriptio	1.0300	0.0051	0.0051	COUNTY OF UNION
NJ	Union	34039	41724	U1	OS4	10200602	55.00	SCC Descriptio	1.3100	0.0035	0.0035	COUNTY OF UNION
NJ	Union	34039	41724	U1	OS3	10200602	55.00	SCC Descriptio	1.5600	0.0000	0.0046	COUNTY OF UNION
NJ	Union	34039	41724	U8	OS1	10300602	55.00	SCC Descriptio	0.1300	0.0023	0.0023	COUNTY OF UNION

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NJ	Union	34039	41724	U8	OS2	10300602	55.00	SCC Descriptio	0.1300	0.0023	0.0023	COUNTY OF UNION
NJ	Union	34039	41735	U1	OS2	10300501	55.00	SCC Descriptio	0.0100	0.0040	0.0040	Kean College of New Jersey
NJ	Union	34039	41735	U1	OS1	10300602	55.00	SCC Descriptio	0.8400	0.0127	0.0127	Kean College of New Jersey
NJ	Union	34039	41735	U2	OS1	10300602	55.00	SCC Descriptio	0.7500	0.0066	0.0066	Kean College of New Jersey
NJ	Union	34039	41735	U21	OS1	10300602	8.40	EU DESCRIPT	0.0500	0.0017	0.0017	Kean College of New Jersey
NJ	Union	34039	41735	U22	OS1	10300602	8.40	EU DESCRIPT	0.0400	0.0011	0.0011	Kean College of New Jersey
NJ	Union	34039	41735	U3	OS1	10300602	55.00	SCC Descriptio	0.8600	0.0134	0.0134	Kean College of New Jersey
NJ	Union	34039	41735	U8	OS1	10300501	0.00		0.1800	0.0000	0.0003	Kean College of New Jersey
NJ	Union	34039	41735	U9	OS1	10300501	0.00		0.1200	0.0000	0.0002	Kean College of New Jersey
NJ	Union	34039	41766	U11	OS2	10200602	12.55	EU DESCRIPT	0.5600	0.0010	0.0010	Tuscan/Lehigh Dairies
NJ	Union	34039	41766	U11	OS1	10200401	12.55	EU DESCRIPT	0.2700	0.0000	0.0006	Tuscan/Lehigh Dairies
NJ	Union	34039	41766	U12	OS1	10200401	12.55	EU DESCRIPT	0.7100	0.0000	0.0015	Tuscan/Lehigh Dairies
NJ	Union	34039	41766	U13	OS2	10200602	20.92	EU DESCRIPT	1.3700	0.0010	0.0010	Tuscan/Lehigh Dairies
NJ	Union	34039	41766	U13	OS1	10200401	20.92	EU DESCRIPT	1.0300	0.0000	0.0019	Tuscan/Lehigh Dairies
NJ	Union	34039	41785	U10	OS1	10300602	55.00	SCC Descriptio	2.6100	0.0043	0.0043	Muhlenberg Regional Medical Center
NJ	Union	34039	41785	U10	OS3	10300602	55.00	SCC Descriptio	2.6100	0.0043	0.0043	Muhlenberg Regional Medical Center
NJ	Union	34039	41795	U8	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Inter City Tire
NJ	Union	34039	41798	U3	OS1	10200602	3.00	EU DESCRIPT	0.0200	0.0000	0.0000	Andre Originals Manufacturing Company
NJ	Union	34039	41798	U4	OS1	10300504	6.20	EU DESCRIPT	0.1800	0.0000	0.0001	Andre Originals Manufacturing Company
NJ	Union	34039	41800	U13	OS1	10200401	0.00		5.1400	0.0097	0.0097	ST Linden Terminal, LLC
NJ	Union	34039	41800	U14	OS1	10200401	0.00		6.1000	0.0080	0.0080	ST Linden Terminal, LLC
NJ	Union	34039	41802	U12	OS142	10200602	55.00	SCC Descriptio	3.5500	0.0044	0.0044	INTERBAKE FOODS, INC.
NJ	Union	34039	41802	U12	OS132	10200502	55.00	SCC Descriptio	4.4400	0.0123	0.0123	INTERBAKE FOODS, INC.
NJ	Union	34039	41802	U12	OS122	10200502	55.00	SCC Descriptio	0.0900	0.0000	0.0002	INTERBAKE FOODS, INC.
NJ	Union	34039	41804	U9	OS1	10300602	55.00	SCC Descriptio	0.1900	0.0000	0.0000	Sun Chemical Corporation
NJ	Union	34039	41805	U2	OS6	10200799	0.00		14.2200	0.0388	0.0388	Bayway Refinery
NJ	Union	34039	41805	U2	OS4	10200799	0.00		1.8100	0.0117	0.0117	Bayway Refinery
NJ	Union	34039	41805	U2	OS2	10200799	0.00		0.2200	0.0011	0.0011	Bayway Refinery
NJ	Union	34039	41805	U2	OS3	10200799	0.00		0.0500	0.0003	0.0003	Bayway Refinery
NJ	Union	34039	41805	U3	OS17	10200799	251.00	Title V Permit	572.6000	1.5720	1.5720	Bayway Refinery
NJ	Union	34039	41805	U3	OS16	10200799	251.00	Title V Permit	309.5900	0.8760	0.8760	Bayway Refinery
NJ	Union	34039	41805	U3	OS15	10200799	251.00	Title V Permit	90.3400	0.2540	0.2540	Bayway Refinery
NJ	Union	34039	41805	U3	OS9	10200799	251.00	Title V Permit	41.9600	0.1313	0.1313	Bayway Refinery
NJ	Union	34039	41805	U3	OS6	10200799	251.00	Title V Permit	11.8400	0.0378	0.0378	Bayway Refinery
NJ	Union	34039	41805	U3	OS2	10200799	251.00	Title V Permit	14.0900	0.0360	0.0360	Bayway Refinery
NJ	Union	34039	41805	U3	OS4	10200799	251.00	Title V Permit	10.6900	0.0346	0.0346	Bayway Refinery
NJ	Union	34039	41805	U3	OS3	10200799	251.00	Title V Permit	9.5100	0.0312	0.0312	Bayway Refinery
NJ	Union	34039	41805	U3	OS13	10200799	251.00	Title V Permit	11.2300	0.0306	0.0306	Bayway Refinery
NJ	Union	34039	41805	U3	OS1	10200799	251.00	Title V Permit	7.8300	0.0241	0.0241	Bayway Refinery
NJ	Union	34039	41805	U3	OS8	10200799	251.00	Title V Permit	8.1100	0.0240	0.0240	Bayway Refinery
NJ	Union	34039	41805	U3	OS5	10200799	251.00	Title V Permit	6.7700	0.0207	0.0207	Bayway Refinery
NJ	Union	34039	41805	U3	OS12	10200799	251.00	Title V Permit	6.3200	0.0194	0.0194	Bayway Refinery
NJ	Union	34039	41805	U3	OS7	10200799	251.00	Title V Permit	1.9300	0.0124	0.0124	Bayway Refinery
NJ	Union	34039	41805	U3	OS11	10200799	251.00	Title V Permit	4.2300	0.0113	0.0113	Bayway Refinery
NJ	Union	34039	41805	U3	OS10	10200799	251.00	Title V Permit	0.0600	0.0000	0.0002	Bayway Refinery
NJ	Union	34039	41806	U16	OS2	10200602	55.00	SCC Descriptio	1.4000	0.0056	0.0056	Schering Corporation
NJ	Union	34039	41806	U16	OS1	10200502	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Schering Corporation
NJ	Union	34039	41806	U17	OS2	10200602	55.00	SCC Descriptio	3.1400	0.0180	0.0180	Schering Corporation
NJ	Union	34039	41806	U17	OS1	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Schering Corporation
NJ	Union	34039	41806	U18	OS2	10200602	55.00	SCC Descriptio	2.4400	0.0101	0.0101	Schering Corporation
NJ	Union	34039	41806	U18	OS1	10200502	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Schering Corporation
NJ	Union	34039	41807	U6	OS2	10200602	55.00	SCC Descriptio	2.1000	0.0049	0.0049	API Foils, Inc.

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NJ	Union	34039	41808	U1	OS1	10200602	55.00	SCC Descriptio	7.6600	0.0371	0.0371	Garwood Paperboard - Div. of Millen Ind. Inc.
NJ	Union	34039	41808	U1	OS3	10200602	55.00	SCC Descriptio	5.9500	0.0371	0.0371	Garwood Paperboard - Div. of Millen Ind. Inc.
NJ	Union	34039	41808	U1	OS2	10200401	55.00	SCC Descriptio	0.0600	0.0000	0.0002	Garwood Paperboard - Div. of Millen Ind. Inc.
NJ	Union	34039	41808	U1	OS4	10200401	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Garwood Paperboard - Div. of Millen Ind. Inc.
NJ	Union	34039	41811	U11	OS1	10200602	55.00	SCC Descriptio	2.9300	0.0164	0.0164	Safety-Kleen Systems, Inc.
NJ	Union	34039	41811	U11	OS3	10200602	55.00	SCC Descriptio	0.7800	0.0000	0.0006	Safety-Kleen Systems, Inc.
NJ	Union	34039	41813	U16	OS2	10300501	55.00	SCC Descriptio	0.7900	0.0000	0.0021	JOINT MEETING OF ESSEX AND UNION COUNTIES
NJ	Union	34039	41813	U16	OS4	10300501	55.00	SCC Descriptio	0.3500	0.0000	0.0009	JOINT MEETING OF ESSEX AND UNION COUNTIES
NJ	Union	34039	41813	U16	OS3	10300602	55.00	SCC Descriptio	0.1000	0.0000	0.0003	JOINT MEETING OF ESSEX AND UNION COUNTIES
NJ	Union	34039	41813	U3	OS4	10300799	0.00		1.6700	0.0040	0.0040	JOINT MEETING OF ESSEX AND UNION COUNTIES
NJ	Union	34039	41813	U3	OS2	10300799	0.00		1.1900	0.0037	0.0037	JOINT MEETING OF ESSEX AND UNION COUNTIES
NJ	Union	34039	41813	U3	OS1	10300501	0.00		0.8300	0.0000	0.0022	JOINT MEETING OF ESSEX AND UNION COUNTIES
NJ	Union	34039	41813	U3	OS3	10300501	0.00		0.1000	0.0000	0.0003	JOINT MEETING OF ESSEX AND UNION COUNTIES
NJ	Union	34039	41813	U37	OS1	10300799	0.00		0.0200	0.0001	0.0001	JOINT MEETING OF ESSEX AND UNION COUNTIES
NJ	Union	34039	41959	U1	O14503	10200602	55.00	SCC Descriptio	0.5800	0.0010	0.0010	Summit Property Company L.L.C.
NJ	Union	34039	41959	U2	OS1	10200602	55.00	SCC Descriptio	6.5000	0.0393	0.0393	Summit Property Company L.L.C.
NJ	Union	34039	41959	U3	OS1	10200602	55.00	SCC Descriptio	7.7100	0.0469	0.0469	Summit Property Company L.L.C.
NJ	Union	34039	41959	U4	OS1	10200602	55.00	SCC Descriptio	0.8100	0.0292	0.0292	Summit Property Company L.L.C.
NJ	Union	34039	41959	U4	OS2	10200502	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Summit Property Company L.L.C.
NJ	Warren	34041	85003	U60102	O60102	10300602	55.00	SCC Descriptio	2.2900	0.0000	0.0010	BASF Corporation
NJ	Warren	34041	85003	U60102	O60103	10300502	55.00	SCC Descriptio	0.0900	0.0000	0.0000	BASF Corporation
NJ	Warren	34041	85005	U38	OS1	10200602	55.00	SCC Descriptio	0.8200	0.0000	0.0006	Pechiney Plastic Packaging, Inc.
NJ	Warren	34041	85005	U39	OS1	10200602	55.00	SCC Descriptio	0.1100	0.0000	0.0001	Pechiney Plastic Packaging, Inc.
NJ	Warren	34041	85442	U42	OS3	10200401	55.00	SCC Descriptio	18.3500	0.0000	0.0282	Mallinckrodt Baker, Incorporated
NJ	Warren	34041	85442	U42	OS1	10200602	55.00	SCC Descriptio	0.8700	0.0079	0.0079	Mallinckrodt Baker, Incorporated
NJ	Warren	34041	85442	U43	OS1	10200602	55.00	SCC Descriptio	3.0400	0.0172	0.0172	Mallinckrodt Baker, Incorporated
NJ	Warren	34041	85442	U43	OS3	10200401	55.00	SCC Descriptio	4.8800	0.0000	0.0027	Mallinckrodt Baker, Incorporated
NJ	Warren	34041	85442	U44	OS1	10200602	55.00	SCC Descriptio	0.3000	0.0031	0.0031	Mallinckrodt Baker, Incorporated
NJ	Warren	34041	85442	U44	OS3	10200401	55.00	SCC Descriptio	1.5500	0.0000	0.0000	Mallinckrodt Baker, Incorporated
NJ	Warren	34041	85443	U48	OS1	10300602	55.00	SCC Descriptio	0.9600	0.0020	0.0020	M & M / MARS
NJ	Warren	34041	85443	U48	OS3	10300602	55.00	SCC Descriptio	0.8600	0.0013	0.0013	M & M / MARS
NJ	Warren	34041	85443	U48	OS5	10300602	55.00	SCC Descriptio	0.0100	0.0001	0.0001	M & M / MARS
NJ	Warren	34041	85453	U7	OS3	10200602	55.00	SCC Descriptio	16.2000	0.0710	0.0710	Oxford Textile Facility
NJ	Warren	34041	85453	U7	OS5	10200602	55.00	SCC Descriptio	5.1500	0.0102	0.0102	Oxford Textile Facility
NJ	Warren	34041	85453	U7	OS6	10200502	55.00	SCC Descriptio	0.3300	0.0000	0.0004	Oxford Textile Facility
NY	Albany	36001	4010100112	EI0001	E06EI	10200501	0.00		0.0180	0.0000	0.0000	MOBIL OIL ALBANY TERMINAL #31-001
NY	Albany	36001	4010100122	00MAIN	GASFP	10200602	55.00	SCC Descriptio	69.7000	0.0000	0.1884	NYS OGS SHERIDAN STEAM PLT
NY	Albany	36001	4010100122	00MAIN	OILFP	10200502	55.00	SCC Descriptio	10.5300	0.0000	0.0289	NYS OGS SHERIDAN STEAM PLT
NY	Albany	36001	4010100153	EI0001	E02EI	10300603	5.00	SCC Descriptio	4.0282	0.0000	0.0106	SUNY AT ALBANY
NY	Albany	36001	4010100153	U10001	100FP	10300602	55.00	SCC Descriptio	14.4718	0.0000	0.0358	SUNY AT ALBANY
NY	Albany	36001	4010100153	U10001	201FP	10300502	55.00	SCC Descriptio	0.0136	0.0000	0.0000	SUNY AT ALBANY
NY	Albany	36001	4010100153	U10001	200FP	10300402	55.00	SCC Descriptio	4.6376	0.0000	0.0127	SUNY AT ALBANY
NY	Albany	36001	4012200007	APAREA	NTGFP	10200601	150.00	SCC Descriptio	51.0000	0.0000	0.1407	GENERAL ELECTRIC SELKIRK PLASTICS PLT
NY	Albany	36001	4012200007	APAREA	OFFFP	10200799	150.00	SCC Descriptio	14.8551	0.0000	0.0410	GENERAL ELECTRIC SELKIRK PLASTICS PLT
NY	Albany	36001	4012200007	EIC001	E01EI	10200602	55.00	SCC Descriptio	0.1620	0.0000	0.0004	GENERAL ELECTRIC SELKIRK PLASTICS PLT
NY	Albany	36001	4012200027	EI0001	E06EI	10200503	5.00	SCC Descriptio	0.0328	0.0000	0.0001	CITGO PETROLEUM GLENMONT TERMINAL
NY	Albany	36001	4012600160	BOILER	NG1FP	10200602	55.00	SCC Descriptio	6.6900	0.0000	0.0181	SAINT-GOBAIN ABRASIVES INC
NY	Allegany	36003	9026000009	UFAC01	X05EI	10200603	5.00	SCC Descriptio	2.1900	0.0000	0.0056	INDEPENDENCE STATION
NY	Allegany	36003	9026000009	UFAC01	X04EI	10200603	5.00	SCC Descriptio	1.7520	0.0000	0.0045	INDEPENDENCE STATION
NY	Allegany	36003	9026000009	UFAC01	X01EI	10200603	5.00	SCC Descriptio	0.7340	0.0000	0.0019	INDEPENDENCE STATION
NY	Allegany	36003	9026000009	UFAC01	X03EI	10200603	5.00	SCC Descriptio	0.1095	0.0000	0.0003	INDEPENDENCE STATION
NY	Allegany	36003	9026000009	UFAC01	X06EI	10200603	5.00	SCC Descriptio	0.0265	0.0000	0.0001	INDEPENDENCE STATION

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NY	Bronx	36005	2600100028	UC0001	001FP	10300401	0.00		21.9422	0.0000	0.0603	TRACEY TOWERS
NY	Bronx	36005	2600100031	A00001	NG1FP	10300602	55.00	SCC Descriptio	0.7700	0.0000	0.0019	AMALGAMATED HOUSING-130 GALE PLACE
NY	Bronx	36005	2600100031	A00001	RF6FP	10300402	55.00	SCC Descriptio	27.0050	0.0000	0.0742	AMALGAMATED HOUSING-130 GALE PLACE
NY	Bronx	36005	2600200055	U00001	BNGFP	10300602	55.00	SCC Descriptio	6.6200	0.0000	0.0182	NYC-HH - N CENTRAL BX HOSP-3424 KOSSUTH
NY	Bronx	36005	2600200055	U00001	B02FP	10300502	55.00	SCC Descriptio	0.0170	0.0000	0.0000	NYC-HH - N CENTRAL BX HOSP-3424 KOSSUTH
NY	Bronx	36005	2600200105	U00001	BNGFP	10300601	55.00	SCC Descriptio	33.0315	0.0000	0.0907	MONTEFIORE MEDICAL CTR-111 E 210TH ST
NY	Bronx	36005	2600200105	U00001	002EI	10300502	55.00	SCC Descriptio	2.6507	0.0000	0.0072	MONTEFIORE MEDICAL CTR-111 E 210TH ST
NY	Bronx	36005	2600200105	U00001	E07EI	10300501	55.00	SCC Descriptio	0.5770	0.0000	0.0015	MONTEFIORE MEDICAL CTR-111 E 210TH ST
NY	Bronx	36005	2600300038	U00001	002FP	10300601	377.00	Title V Permit	0.2431	0.0000	0.0007	RIVERBAY CORP-CO-OP CITY
NY	Bronx	36005	2600300038	U00001	001FP	10300401	377.00	Title V Permit	106.6118	0.0000	0.2882	RIVERBAY CORP-CO-OP CITY
NY	Bronx	36005	2600300038	U00002	004FP	10300601	377.00	Title V Permit	0.1607	0.0000	0.0004	RIVERBAY CORP-CO-OP CITY
NY	Bronx	36005	2600300038	U00002	003FP	10300401	377.00	Title V Permit	53.8204	0.0000	0.1455	RIVERBAY CORP-CO-OP CITY
NY	Bronx	36005	2600500011	U00001	BOIFP	10300401	30.00	Title V Permit	51.3354	0.0000	0.1410	NYC-HH - JACOBI MEDICAL CTR
NY	Bronx	36005	2600500115	EIC001	E01EI	10300503	5.00	SCC Descriptio	0.7183	0.0000	0.0019	BRONX PSYCHIATRIC CENTER
NY	Bronx	36005	2600500115	EIC001	001EI	10300603	5.00	SCC Descriptio	0.0689	0.0000	0.0002	BRONX PSYCHIATRIC CENTER
NY	Bronx	36005	2600500115	UEU001	PR1FP	10300402	55.00	SCC Descriptio	29.2468	0.0000	0.0803	BRONX PSYCHIATRIC CENTER
NY	Bronx	36005	2600500125	U01B01	001EI	10300501	5.00	SCC Descriptio	0.5820	0.0000	0.0016	BRONX ZOO
NY	Bronx	36005	2600500125	U01B01	002EI	10300603	5.00	SCC Descriptio	2.5918	0.0000	0.0068	BRONX ZOO
NY	Bronx	36005	2600500133	U00001	1AGFP	10300602	55.00	SCC Descriptio	14.9250	0.0000	0.0369	ALBERT EINSTEIN COLLEGE OF MEDICINE
NY	Bronx	36005	2600500133	U00001	1DRFP	10300401	55.00	SCC Descriptio	3.0023	0.0000	0.0082	ALBERT EINSTEIN COLLEGE OF MEDICINE
NY	Bronx	36005	2600500133	U00001	1CRFP	10300401	55.00	SCC Descriptio	3.0891	0.0000	0.0085	ALBERT EINSTEIN COLLEGE OF MEDICINE
NY	Bronx	36005	2600500133	U00001	1BRFP	10300401	55.00	SCC Descriptio	7.3951	0.0000	0.0203	ALBERT EINSTEIN COLLEGE OF MEDICINE
NY	Bronx	36005	2600500133	U00001	1ARFP	10300401	55.00	SCC Descriptio	19.2241	0.0000	0.0528	ALBERT EINSTEIN COLLEGE OF MEDICINE
NY	Bronx	36005	2600500139	U00001	001FP	10300602	55.00	SCC Descriptio	37.9390	0.0000	0.0938	PARKCHESTER SOUTH CONDOMINIUM
NY	Bronx	36005	2600500139	U00001	002FP	10300401	55.00	SCC Descriptio	22.9865	0.0000	0.0631	PARKCHESTER SOUTH CONDOMINIUM
NY	Bronx	36005	2600500148	UC0000	C01FP	10300401	0.00		4.8249	0.0000	0.0133	BRONX LEBANON HOSPITAL
NY	Bronx	36005	2600500148	UC0001	002EI	10300502	55.00	SCC Descriptio	1.0325	0.0000	0.0028	BRONX LEBANON HOSPITAL
NY	Bronx	36005	2600500179	UFR001	FR4EI	10300502	55.00	SCC Descriptio	0.1000	0.0000	0.0002	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFR001	FR1FP	10300602	55.00	SCC Descriptio	0.4667	0.0000	0.0013	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFR002	FR2FP	10300602	55.00	SCC Descriptio	0.4667	0.0000	0.0012	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFR003	FR3FP	10300602	55.00	SCC Descriptio	0.4667	0.0000	0.0012	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFT000	FT6EI	10300602	55.00	SCC Descriptio	1.6150	0.0000	0.0044	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFT000	FT1FP	10300502	55.00	SCC Descriptio	0.0750	0.0000	0.0002	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFT000	FT2FP	10300502	55.00	SCC Descriptio	0.0750	0.0000	0.0002	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFT000	FT3FP	10300603	55.00	SCC Descriptio	0.0433	0.0000	0.0001	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFT000	FT4FP	10300603	55.00	SCC Descriptio	0.0433	0.0000	0.0001	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFT000	FT5FP	10300603	55.00	SCC Descriptio	0.0433	0.0000	0.0001	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500232	U00001	001FP	10200402	55.00	SCC Descriptio	14.4467	0.0000	0.0397	ST BARNABAS HOSPITAL
NY	Bronx	36005	2600500556	1THBLR	101FP	10200402	55.00	SCC Descriptio	16.1625	0.0000	0.0444	FORDHAM UNIVERSITY
NY	Bronx	36005	2600500556	2MCBLR	202FP	10200602	5.00	SCC Descriptio	0.8851	0.0000	0.0024	FORDHAM UNIVERSITY
NY	Bronx	36005	2600500556	2MCBLR	E02EI	10300504	5.00	SCC Descriptio	0.3613	0.0000	0.0010	FORDHAM UNIVERSITY
NY	Bronx	36005	2600500556	2MCBLR	E05EI	10300603	5.00	SCC Descriptio	0.9564	0.0000	0.0026	FORDHAM UNIVERSITY
NY	Bronx	36005	2600500556	2MCBLR	E07EI	10300603	5.00	SCC Descriptio	0.4610	0.0000	0.0012	FORDHAM UNIVERSITY
NY	Bronx	36005	2600500556	2MCBLR	E06EI	10300603	5.00	SCC Descriptio	0.4269	0.0000	0.0011	FORDHAM UNIVERSITY
NY	Bronx	36005	2600500556	2MCBLR	E04EI	10300603	5.00	SCC Descriptio	0.2888	0.0000	0.0008	FORDHAM UNIVERSITY
NY	Bronx	36005	2600500556	2MCBLR	E03EI	10300603	5.00	SCC Descriptio	0.2656	0.0000	0.0007	FORDHAM UNIVERSITY
NY	Bronx	36005	2600500556	2MCBLR	E01EI	10300603	5.00	SCC Descriptio	0.0843	0.0000	0.0002	FORDHAM UNIVERSITY
NY	Bronx	36005	2600700183	UC0001	001EI	10300401	0.00		13.8509	0.0000	0.0381	LAFAYETTE MORRISON HOUSING CORP
NY	Bronx	36005	2600700189	UC0001	E01EI	10300401	0.00		16.5748	0.0000	0.0455	LAFAYETTE BOYNTON HOUSES INC
NY	Bronx	36005	2600700190	EI0001	E02EI	10200603	5.00	SCC Descriptio	0.1467	0.0000	0.0004	HUNTS POINT AVENUE COMPRESSOR STATION
NY	Bronx	36005	2600700245	UC0001	001FP	10300401	0.00		7.7078	0.0000	0.0212	JAMIE TOWERS
NY	Bronx	36005	2600700259	U00001	001FP	10300602	55.00	SCC Descriptio	20.6579	0.0000	0.0511	NYC-DOC - RIKERS ISLAND

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NY	Bronx	36005	2600700259	U00001	002FP	10300502	55.00	SCC Descriptio	1.0883	0.0000	0.0030	NYC-DOC - RIKERS ISLAND
NY	Bronx	36005	2600700259	U00002	003FP	10300602	55.00	SCC Descriptio	14.9188	0.0000	0.0369	NYC-DOC - RIKERS ISLAND
NY	Bronx	36005	2600700259	U00002	004FP	10300502	55.00	SCC Descriptio	0.6069	0.0000	0.0017	NYC-DOC - RIKERS ISLAND
NY	Bronx	36005	2600700259	U00003	005FP	10300602	55.00	SCC Descriptio	10.5565	0.0000	0.0261	NYC-DOC - RIKERS ISLAND
NY	Bronx	36005	2600700259	U00003	006FP	10300502	55.00	SCC Descriptio	0.0003	0.0000	0.0000	NYC-DOC - RIKERS ISLAND
NY	Broome	36007	7034600032	B39000	GASFP	10200601	150.00	SCC Descriptio	73.5500	0.0000	0.2029	ENDICOTT INTERCONNECT TECHNOLOGIES INC
NY	Broome	36007	7034600032	B39000	OILFP	10200401	150.00	SCC Descriptio	0.1289	0.0000	0.0004	ENDICOTT INTERCONNECT TECHNOLOGIES INC
NY	Broome	36007	7034600032	EI0001	E14EI	10200602	55.00	SCC Descriptio	0.7347	0.0000	0.0020	ENDICOTT INTERCONNECT TECHNOLOGIES INC
NY	Broome	36007	7034600032	U10105	E05EI	10200603	5.00	SCC Descriptio	0.5100	0.0000	0.0013	ENDICOTT INTERCONNECT TECHNOLOGIES INC
NY	Broome	36007	7034600032	U10401	E06EI	10200603	5.00	SCC Descriptio	0.0690	0.0000	0.0002	ENDICOTT INTERCONNECT TECHNOLOGIES INC
NY	Broome	36007	7034800027	U0001A	E04EI	10200603	5.00	SCC Descriptio	5.1250	0.0000	0.0127	SUNY AT BINGHAMTON
NY	Broome	36007	7034800027	U0001A	003FP	10300602	5.00	SCC Descriptio	3.9060	0.0000	0.0100	SUNY AT BINGHAMTON
NY	Broome	36007	7034800027	U0003A	007FP	10300602	55.00	SCC Descriptio	1.4469	0.0000	0.0036	SUNY AT BINGHAMTON
NY	Broome	36007	7034800027	U0004A	009FP	10300602	55.00	SCC Descriptio	0.7392	0.0000	0.0018	SUNY AT BINGHAMTON
NY	Cayuga	36011	7055200004	UFAC01	999EI	10200602	55.00	SCC Descriptio	7.3500	0.0000	0.0199	OWENS-BROCKWAY AUBURN PLANT 35
NY	Chautauqua	36013	9060300001	EIC001	E09EI	10300603	5.00	SCC Descriptio	0.2430	0.0000	0.0006	DUNKIRK SPECIALTY STEEL LLC
NY	Chautauqua	36013	9060800023	6UTILT	P07FP	10300602	55.00	SCC Descriptio	1.1550	0.0000	0.0029	CHAUTAUQUA HARDWARE CORP
NY	Chautauqua	36013	9060800023	EI0001	X10EI	10200603	5.00	SCC Descriptio	0.4820	0.0000	0.0012	CHAUTAUQUA HARDWARE CORP
NY	Chautauqua	36013	9060800027	00000B	0F2FP	10300903	0.00		0.0412	0.0000	0.0001	CRAWFORD FURNITURE MFG CORP
NY	Chautauqua	36013	9060800027	00000B	0F1FP	10300903	0.00		2.5457	0.0000	0.0070	CRAWFORD FURNITURE MFG CORP
NY	Chautauqua	36013	9060800089	EI0001	X03EI	10300603	5.00	SCC Descriptio	1.0300	0.0000	0.0027	WOMEN'S CHRISTIAN ASSOC HOSPITAL
NY	Chautauqua	36013	9062200003	5HEATG	R01FP	10300602	55.00	SCC Descriptio	2.5500	0.0000	0.0063	CUMMINS ENGINE-JAMESTOWN PLANT
NY	Chautauqua	36013	9062800018	B00404	004FP	10300903	0.00		9.5477	0.0000	0.0262	ETHAN ALLEN, INC., MAYVILLE DIVISION
NY	Chautauqua	36013	9062800018	B00404	E99EI	10300901	0.00		17.4000	0.0000	0.0478	ETHAN ALLEN, INC., MAYVILLE DIVISION
NY	Chautauqua	36013	9062800018	B00505	005FP	10200602	55.00	SCC Descriptio	0.1496	0.0000	0.0004	ETHAN ALLEN, INC., MAYVILLE DIVISION
NY	Chemung	36015	8070400029	00MAIN	GASFP	10300602	55.00	SCC Descriptio	9.4965	0.0000	0.0235	NYS ELMIRA CORRECTIONAL FACILITY
NY	Chemung	36015	8070400029	00MAIN	OILFP	10300402	55.00	SCC Descriptio	0.5515	0.0000	0.0015	NYS ELMIRA CORRECTIONAL FACILITY
NY	Chemung	36015	8070400036	EI0001	999EI	10200602	55.00	SCC Descriptio	0.1499	0.0000	0.0004	ANCHOR GLASS CONTAINER CORP
NY	Chenango	36017	7083000037	U41202	00AEP	10200401	0.00		1.7108	0.0000	0.0047	RAYMOND CORPORATION
NY	Chenango	36017	7083000037	U41203	00BEP	10200401	0.00		1.5604	0.0000	0.0043	RAYMOND CORPORATION
NY	Chenango	36017	7083000037	U41204	E09EI	10200501	0.00		0.1848	0.0000	0.0005	RAYMOND CORPORATION
NY	Chenango	36017	7084200017	U00001	E03EI	10200602	55.00	SCC Descriptio	3.2350	0.0000	0.0087	QUEST INTERNATIONAL
NY	Chenango	36017	7084200017	U00002	00AEP	10200602	55.00	SCC Descriptio	3.0400	0.0000	0.0082	QUEST INTERNATIONAL
NY	Chenango	36017	7084200017	U00003	00BEP	10200602	55.00	SCC Descriptio	0.7500	0.0000	0.0020	QUEST INTERNATIONAL
NY	Clinton	36019	5092800017	000001	001FP	10200601	150.00	SCC Descriptio	55.4800	0.0000	0.1530	WYETH PHARMACEUTICALS
NY	Clinton	36019	5092800017	000001	01CFP	10200501	150.00	SCC Descriptio	1.5528	0.0000	0.0040	WYETH PHARMACEUTICALS
NY	Columbia	36021	4100600017	EI0001	E12EI	10200603	5.00	SCC Descriptio	0.0975	0.0000	0.0003	LB FURNITURE INDUSTRIES LLC
NY	Columbia	36021	4100600017	EI0001	E03EI	10300603	5.00	SCC Descriptio	0.3050	0.0000	0.0008	LB FURNITURE INDUSTRIES LLC
NY	Columbia	36021	4100600026	EI0001	E02EI	10200603	5.00	SCC Descriptio	0.6265	0.0000	0.0016	W B MCGUIRE CO INC
NY	Cortland	36023	7110200043	EI0001	E01EI	10200603	5.00	SCC Descriptio	0.1720	0.0000	0.0004	TUSCARORA INC
NY	Delaware	36025	4122800027	1BOILR	B02FP	10200504	0.00		11.2941	0.0000	0.0310	DMV INTERNATIONAL NUTRITIONALS
NY	Delaware	36025	4122800027	1BOILR	B01FP	10200504	0.00		6.1570	0.0000	0.0169	DMV INTERNATIONAL NUTRITIONALS
NY	Delaware	36025	4123000019	1BOILR	B01FP	10200905	55.00	SCC Descriptio	57.6870	0.0000	0.1559	NORBORD INDUSTRIES
NY	Delaware	36025	4123000019	1BOILR	B02FP	10200602	55.00	SCC Descriptio	1.7490	0.0000	0.0048	NORBORD INDUSTRIES
NY	Delaware	36025	4123000019	1BOILR	022EI	10200602	55.00	SCC Descriptio	1.1870	0.0000	0.0032	NORBORD INDUSTRIES
NY	Delaware	36025	4125000018	BOILRS	BLSFP	10300401	0.00		12.1072	0.0000	0.0333	AMPHENOL CORP - BENDIX CONNECTOR OPERS
NY	Dutchess	36027	3132800025	A00001	MBNFP	10200602	55.00	SCC Descriptio	24.5800	0.0000	0.0664	IBM EAST FISHKILL FACILITY
NY	Dutchess	36027	3132800025	A00001	SBNFP	10200602	55.00	SCC Descriptio	4.4500	0.0000	0.0122	IBM EAST FISHKILL FACILITY
NY	Dutchess	36027	3132800025	A00001	MB6FP	10200402	55.00	SCC Descriptio	0.7450	0.0000	0.0020	IBM EAST FISHKILL FACILITY
NY	Dutchess	36027	3132800025	A00001	E07EI	10200602	55.00	SCC Descriptio	2.7093	0.0000	0.0070	IBM EAST FISHKILL FACILITY
NY	Dutchess	36027	3132800025	A00001	SB2FP	10200501	55.00	SCC Descriptio	0.0650	0.0000	0.0002	IBM EAST FISHKILL FACILITY
NY	Dutchess	36027	3132800025	EI0001	E09EI	10200503	5.00	SCC Descriptio	1.3030	0.0000	0.0034	IBM EAST FISHKILL FACILITY

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NY	Dutchess	36027	3132800025	EI0001	E08EI	10200603	5.00	SCC Descriptio	0.0697	0.0000	0.0002	IBM EAST FISHKILL FACILITY
NY	Erie	36029	9140200021	1BOILR	NGSFP	10200602	55.00	SCC Descriptio	1.4953	0.0000	0.0040	OUTOKUMPU AMERICAN BRASS BUFFALO PLANT
NY	Erie	36029	9140200076	5BOILR	501FP	10200401	55.00	SCC Descriptio	67.5360	0.0000	0.1870	BUFFALO COLOR CORP - LEE ST PLANT
NY	Erie	36029	9140200076	5BOILR	502FP	10200602	55.00	SCC Descriptio	2.9660	0.0000	0.0080	BUFFALO COLOR CORP - LEE ST PLANT
NY	Erie	36029	9140200089	B00001	B01FP	10300602	55.00	SCC Descriptio	3.9400	0.0000	0.0097	BUFFALO GENERAL HOSPITAL
NY	Erie	36029	9140200089	B00001	B02FP	10300401	55.00	SCC Descriptio	8.7514	0.0000	0.0240	BUFFALO GENERAL HOSPITAL
NY	Erie	36029	9140200154	U00002	BOIFP	10300602	55.00	SCC Descriptio	4.6000	0.0000	0.0114	BIRD ISLAND STP
NY	Erie	36029	9140200421	EI0001	E01EI	10200603	5.00	SCC Descriptio	0.7000	0.0000	0.0018	SOVEREIGN PACKAGING GROUP INC
NY	Erie	36029	9140200421	EI0001	E02EI	10200603	5.00	SCC Descriptio	0.1000	0.0000	0.0003	SOVEREIGN PACKAGING GROUP INC
NY	Erie	36029	9140200435	U00090	017FP	10200602	55.00	SCC Descriptio	1.9700	0.0000	0.0053	PVS CHEMICALS
NY	Erie	36029	9140200465	3BOILR	B3CFP	10300203	55.00	SCC Descriptio	2.3491	0.0000	0.0065	SISTERS OF CHARITY HOSPITAL
NY	Erie	36029	9140200465	3BOILR	B3EFP	10300602	55.00	SCC Descriptio	2.2988	0.0000	0.0057	SISTERS OF CHARITY HOSPITAL
NY	Erie	36029	9140200465	3BOILR	B2EFP	10300602	55.00	SCC Descriptio	1.8265	0.0000	0.0050	SISTERS OF CHARITY HOSPITAL
NY	Erie	36029	9140200465	3BOILR	B20FP	10300502	55.00	SCC Descriptio	0.0015	0.0000	0.0000	SISTERS OF CHARITY HOSPITAL
NY	Erie	36029	9140200465	EI0001	E06EI	10300502	55.00	SCC Descriptio	0.0106	0.0000	0.0000	SISTERS OF CHARITY HOSPITAL
NY	Erie	36029	9140200465	EI0001	E05EI	10300502	55.00	SCC Descriptio	0.0093	0.0000	0.0000	SISTERS OF CHARITY HOSPITAL
NY	Erie	36029	9140200573	EI0001	E01EI	10300603	5.00	SCC Descriptio	0.4500	0.0000	0.0012	BUFFALO STATE COLLEGE
NY	Erie	36029	9140200573	U00001	200FP	10300602	55.00	SCC Descriptio	4.7900	0.0000	0.0132	BUFFALO STATE COLLEGE
NY	Erie	36029	9140200573	U00001	20XEI	10300602	55.00	SCC Descriptio	0.6200	0.0000	0.0015	BUFFALO STATE COLLEGE
NY	Erie	36029	9140200573	U00001	100FP	10300402	55.00	SCC Descriptio	42.6050	0.0000	0.1053	BUFFALO STATE COLLEGE
NY	Erie	36029	9142200093	1BOILR	B20FP	10300602	55.00	SCC Descriptio	0.7750	0.0000	0.0019	INTERNATIONAL IMAGING
NY	Erie	36029	9142200093	1BOILR	B21FP	10300602	55.00	SCC Descriptio	0.7750	0.0000	0.0019	INTERNATIONAL IMAGING
NY	Erie	36029	9142200093	U78635	010EI	10300602	55.00	SCC Descriptio	1.3000	0.0000	0.0032	INTERNATIONAL IMAGING
NY	Erie	36029	9143000213	EG0003	03AFP	10200402	55.00	SCC Descriptio	18.8100	0.0000	0.0517	QUEBECOR WORLD BUFFALO INC
NY	Erie	36029	9143000213	EG0003	03BFP	10300602	55.00	SCC Descriptio	3.0000	0.0000	0.0074	QUEBECOR WORLD BUFFALO INC
NY	Erie	36029	9143000213	EIC001	E02EI	10200602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	QUEBECOR WORLD BUFFALO INC
NY	Erie	36029	9144800178	00EU02	X01EI	10200601	150.00	SCC Descriptio	56.8189	0.0000	0.1567	LACKAWANNA PLANT- REPUBLIC ENG PROD INC
NY	Erie	36029	9145600017	EIC001	E01EI	10200603	5.00	SCC Descriptio	0.8350	0.0000	0.0021	WHITING ROLL-UP DOOR MFG CORP
NY	Erie	36029	9145600017	EIC001	E05EI	10200603	5.00	SCC Descriptio	0.0500	0.0000	0.0001	WHITING ROLL-UP DOOR MFG CORP
NY	Erie	36029	9146400030	00EU01	002FP	10200402	55.00	SCC Descriptio	69.1085	0.0000	0.1868	GOODYEAR DUNLOP TIRES NORTH AMERICA LTD
NY	Erie	36029	9146400030	00EU01	001FP	10200602	55.00	SCC Descriptio	15.4980	0.0000	0.0426	GOODYEAR DUNLOP TIRES NORTH AMERICA LTD
NY	Erie	36029	9146400048	EIC001	X09EI	10200602	55.00	SCC Descriptio	1.3700	0.0000	0.0037	GM POWERTRAIN - TONAWANDA ENGINE PLANT
NY	Erie	36029	9146400090	1CMBST	NO2FP	10300501	5.00	SCC Descriptio	0.2289	0.0000	0.0006	NOCO ENERGY CORP
NY	Erie	36029	9146400090	1CMBST	GASFP	10300603	5.00	SCC Descriptio	0.1778	0.0000	0.0005	NOCO ENERGY CORP
NY	Erie	36029	9146400113	U00001	A01FP	10200602	55.00	SCC Descriptio	5.6014	0.0000	0.0151	TONAWANDA COKE CORP
NY	Erie	36029	9146400113	U00001	A02FP	10200707	55.00	SCC Descriptio	54.7385	0.0000	0.1504	TONAWANDA COKE CORP
NY	Erie	36029	9146400164	UTHERM	255FP	10200402	55.00	SCC Descriptio	7.3036	0.0000	0.0197	3M TONAWANDA
NY	Erie	36029	9146400164	UTHERM	253FP	10200602	55.00	SCC Descriptio	10.2840	0.0000	0.0283	3M TONAWANDA
NY	Erie	36029	9149900067	UFAC03	022EI	10200602	55.00	SCC Descriptio	26.0250	0.0000	0.0704	ISG LACKAWANNA INC
NY	Essex	36031	5154800008	POWERH	106FP	10200401	251.00	SIP Call Assum	440.1410	0.0000	1.2189	INTERNATIONAL PAPER TICONDEROGA MILL
NY	Fulton	36035	5170800016	M00007	OILFP	10200401	0.00		12.7370	0.0000	0.0353	MILLIGAN & HIGGINS
NY	Genesee	36037	8183800007	UCOGEN	E09EI	10200602	55.00	SCC Descriptio	15.2570	0.0000	0.0412	U S GYPSUM CO OAKFIELD PLANT
NY	Genesee	36037	8183800007	UMKHTR	HTREI	10200602	55.00	SCC Descriptio	0.5710	0.0000	0.0015	U S GYPSUM CO OAKFIELD PLANT
NY	Herkimer	36043	6212600023	EI0001	E05EI	10200603	5.00	SCC Descriptio	1.2735	0.0000	0.0033	UNION TOOLS INC
NY	Herkimer	36043	6212600037	00000D	B01FP	10300603	5.00	SCC Descriptio	3.4635	0.0000	0.0091	CNG TRANSMISSION/UTICA
NY	Herkimer	36043	6212600037	EI0001	E07EI	10300603	5.00	SCC Descriptio	0.3050	0.0000	0.0008	CNG TRANSMISSION/UTICA
NY	Herkimer	36043	6212600037	EI0001	E08EI	10300603	5.00	SCC Descriptio	0.0145	0.0000	0.0000	CNG TRANSMISSION/UTICA
NY	Jefferson	36045	6221800017	1SVSAT	E02EI	10200501	0.00		2.2116	0.0000	0.0057	KNOWLTON SPECIALTY PAPERS
NY	Jefferson	36045	6221800017	E00001	E01EI	10200602	55.00	SCC Descriptio	5.6600	0.0000	0.0153	KNOWLTON SPECIALTY PAPERS
NY	Jefferson	36045	6225200007	EI0001	E08EI	10200501	0.00		0.0050	0.0000	0.0000	DANC RODMAN LANDFILL
NY	Jefferson	36045	6226000018	C11003	010EI	10200501	0.00		22.8600	0.0000	0.0588	NEWSTECH NY INC
NY	Kings	36047	2610100025	1BLERS	IUBFP	10300701	55.00	SCC Descriptio	7.6550	0.0000	0.0210	NYC-DEP NEWTOWN CREEK WPCP

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NY	Kings	36047	2610100152	UFAC01	P02FP	10300601	150.00	SCC Descriptio	24.1012	0.0000	0.0662	AMERICAN SUGAR REFINING INC
NY	Kings	36047	2610100152	UFAC01	P04FP	10300601	150.00	SCC Descriptio	23.5746	0.0000	0.0637	AMERICAN SUGAR REFINING INC
NY	Kings	36047	2610100152	UFAC01	P05FP	10300601	150.00	SCC Descriptio	0.7410	0.0000	0.0020	AMERICAN SUGAR REFINING INC
NY	Kings	36047	2610100152	UFAC01	P03FP	10300401	150.00	SCC Descriptio	4.0771	0.0000	0.0110	AMERICAN SUGAR REFINING INC
NY	Kings	36047	2610100152	UFAC01	P01FP	10300401	150.00	SCC Descriptio	6.6616	0.0000	0.0180	AMERICAN SUGAR REFINING INC
NY	Kings	36047	2610100163	U00103	010EI	10300501	0.00		0.0744	0.0000	0.0002	DITMAS TERMINAL - 364 MASPETH AVENUE
NY	Kings	36047	2610100381	000002	114FP	10200502	55.00	SCC Descriptio	0.0003	0.0000	0.0000	COGEN CORP-111 LIVINGSTON ST
NY	Kings	36047	2610200005	UIC001	1P1EI	10300701	5.00	SCC Descriptio	0.3933	0.0000	0.0011	NYC-DEP OWLS HEAD WPCP
NY	Kings	36047	2610200005	UIC001	E01EI	10300603	5.00	SCC Descriptio	1.0535	0.0000	0.0028	NYC-DEP OWLS HEAD WPCP
NY	Kings	36047	2610200103	U00001	BNGFP	10300602	55.00	SCC Descriptio	11.8275	0.0000	0.0292	MAIMONIDES MEDICAL CENTER
NY	Kings	36047	2610300077	UFAC01	00AEI	10300501	55.00	SCC Descriptio	0.0060	0.0000	0.0000	ULANO CORP-280 BERGEN ST
NY	Kings	36047	2610300077	UFAC01	00BEI	10300602	55.00	SCC Descriptio	0.0089	0.0000	0.0000	ULANO CORP-280 BERGEN ST
NY	Kings	36047	2610300158	U00001	BNGFP	10300602	55.00	SCC Descriptio	6.4795	0.0000	0.0160	NEW YORK METHODIST HOSPITAL
NY	Kings	36047	2610400015	U00001	010FP	10300401	0.00		0.0118	0.0000	0.0000	NYC-HH - WOODHULL HOSPITAL
NY	Kings	36047	2610400015	UIC001	002EI	10300601	150.00	SCC Descriptio	13.0112	0.0000	0.0352	NYC-HH - WOODHULL HOSPITAL
NY	Kings	36047	2610400132	0U0001	005EI	10300504	55.00	SCC Descriptio	0.8304	0.0000	0.0021	DOWNSTATE MEDICAL CENTER
NY	Kings	36047	2610400132	0U0001	001FP	10300602	55.00	SCC Descriptio	4.2907	0.0000	0.0118	DOWNSTATE MEDICAL CENTER
NY	Kings	36047	2610400132	0U0001	E02EI	10300603	55.00	SCC Descriptio	0.4450	0.0000	0.0012	DOWNSTATE MEDICAL CENTER
NY	Kings	36047	2610400132	0U0001	010FP	10300402	55.00	SCC Descriptio	25.5988	0.0000	0.0675	DOWNSTATE MEDICAL CENTER
NY	Kings	36047	2610400151	UFAC01	002EI	10300603	5.00	SCC Descriptio	0.1405	0.0000	0.0004	RELIABLE POLY PACKAGING-1250 METROPOLITA
NY	Kings	36047	2610400174	U00001	BNGFP	10300602	55.00	SCC Descriptio	4.3535	0.0000	0.0108	BROOKDALE MED HOSP CTR-1275 LINDEN BLVD
NY	Kings	36047	2610400174	U00001	BOIFP	10300401	55.00	SCC Descriptio	0.0383	0.0000	0.0001	BROOKDALE MED HOSP CTR-1275 LINDEN BLVD
NY	Kings	36047	2610400195	U00001	001EI	10300602	55.00	SCC Descriptio	5.4100	0.0000	0.0134	BROOKLYN COLLEGE
NY	Kings	36047	2610400249	U00001	001FP	10300602	55.00	SCC Descriptio	12.9701	0.0000	0.0321	NYC-HH - KINGS COUNTY HOSPITAL CENTER
NY	Kings	36047	2610400249	U00002	010FP	10300602	55.00	SCC Descriptio	12.9701	0.0000	0.0321	NYC-HH - KINGS COUNTY HOSPITAL CENTER
NY	Kings	36047	2610400255	UC0001	001FP	10300602	55.00	SCC Descriptio	1.9750	0.0000	0.0049	SAINT MARY'S HOSPITAL
NY	Kings	36047	2610400255	UC0001	E02EI	10300603	55.00	SCC Descriptio	0.2370	0.0000	0.0007	SAINT MARY'S HOSPITAL
NY	Kings	36047	2610400255	UC0001	002FP	10300502	55.00	SCC Descriptio	0.0058	0.0000	0.0000	SAINT MARY'S HOSPITAL
NY	Kings	36047	2610400255	UC0001	E01EI	10300503	55.00	SCC Descriptio	0.0007	0.0000	0.0000	SAINT MARY'S HOSPITAL
NY	Kings	36047	2610400255	UC0002	E04EI	10300603	5.00	SCC Descriptio	0.2370	0.0000	0.0007	SAINT MARY'S HOSPITAL
NY	Kings	36047	2610400255	UC0002	E03EI	10300503	5.00	SCC Descriptio	0.0007	0.0000	0.0000	SAINT MARY'S HOSPITAL
NY	Kings	36047	2610400279	UC0001	002EI	10300602	55.00	SCC Descriptio	6.9353	0.0000	0.0171	KINGSBROOK JEWISH MEDICAL CENTER
NY	Kings	36047	2610500149	EI0001	E02EI	10200603	5.00	SCC Descriptio	0.1400	0.0000	0.0004	ULTRA FLEX PKG CORP-975 ESSEX ST
NY	Kings	36047	2610500190	UFAC01	011EI	10300603	5.00	SCC Descriptio	0.0074	0.0000	0.0000	GLENMORE PLASTIC INDUSTRIES INC
NY	Kings	36047	2610500250	UC0001	NG1FP	10200603	5.00	SCC Descriptio	0.2110	0.0000	0.0005	ARROW LOCK MANUFACTURING CO
NY	Kings	36047	2610500250	UI0001	E01EI	10300603	5.00	SCC Descriptio	0.3940	0.0000	0.0010	ARROW LOCK MANUFACTURING CO
NY	Kings	36047	2610500262	B00001	B02FP	10300602	55.00	SCC Descriptio	5.5000	0.0000	0.0151	NYC-TA EAST NY BUS DEPOT & SHOPS
NY	Kings	36047	2610500262	B00001	B01FP	10300401	55.00	SCC Descriptio	5.2430	0.0000	0.0130	NYC-TA EAST NY BUS DEPOT & SHOPS
NY	Kings	36047	2610500301	0000CB	CBGFP	10200602	55.00	SCC Descriptio	1.7669	0.0000	0.0048	KINGS PLAZA TOTAL ENERGY PLANT
NY	Kings	36047	2610700004	2BLERS	EP5EI	10300701	55.00	SCC Descriptio	3.8274	0.0000	0.0095	NYC-DEP CONEY ISLAND WPCP
NY	Kings	36047	2610700004	2BLERS	BGGFP	10300602	55.00	SCC Descriptio	2.4927	0.0000	0.0068	NYC-DEP CONEY ISLAND WPCP
NY	Kings	36047	2610700012	UC0001	001FP	10300401	0.00		14.2748	0.0000	0.0392	NYC-HH - CONEY ISLAND HOSPITAL
NY	Kings	36047	2610700079	100BLR	OILFP	10200401	55.00	SCC Descriptio	4.8345	0.0000	0.0131	NYC-TA CONEY ISLAND YARD
NY	Kings	36047	2610700079	100BLR	GASFP	10200602	55.00	SCC Descriptio	2.5350	0.0000	0.0070	NYC-TA CONEY ISLAND YARD
NY	Kings	36047	2610700141	UFAC02	P07FP	10200405	0.00		0.3100	0.0000	0.0009	WARBASSE HOUSES & POWER PLANT
NY	Lewis	36049	6233600028	000001	011FP	10200401	0.00		1.2443	0.0000	0.0034	FIBERMARK INC
NY	Lewis	36049	6233800012	U00001	100FP	10200903	290.00	Title V Permit	120.9298	0.0000	0.3309	LYONSDALE BIOMASS LLC
NY	Lewis	36049	6233800012	U00001	200FP	10200501	290.00	Title V Permit	0.0576	0.0000	0.0001	LYONSDALE BIOMASS LLC
NY	Livingston	36051	8242600012	EIC001	004EI	10300603	5.00	SCC Descriptio	4.8750	0.0000	0.0129	STATE UNIVERSITY OF NEW YORK AT GENESEO
NY	Livingston	36051	8242600012	FHTGPT	02FFP	10200602	55.00	SCC Descriptio	1.9700	0.0000	0.0051	STATE UNIVERSITY OF NEW YORK AT GENESEO
NY	Livingston	36051	8242600012	FHTGPT	01FFP	10200501	55.00	SCC Descriptio	3.2616	0.0000	0.0088	STATE UNIVERSITY OF NEW YORK AT GENESEO
NY	Livingston	36051	8243800057	000001	004FP	10300206	55.00	SCC Descriptio	0.2020	0.0000	0.0004	COMBUSTION & ENVIRONMENTAL TEST FACILITY

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NY	Livingston	36051	8243800057	000001	001FP	10200802	55.00	SCC Descriptio	0.0540	0.0000	0.0001	COMBUSTION & ENVIRONMENTAL TEST FACILITY
NY	Livingston	36051	8243800057	000001	002FP	10300602	55.00	SCC Descriptio	0.0370	0.0000	0.0001	COMBUSTION & ENVIRONMENTAL TEST FACILITY
NY	Monroe	36055	8261400205	U00015	K14FP	10200501	251.00	SIP Call Assum	0.6380	0.0000	0.0018	KODAK PARK DIVISION
NY	Monroe	36055	8261400205	U00015	K12FP	10200401	251.00	SIP Call Assum	8.9065	0.0000	0.0245	KODAK PARK DIVISION
NY	Monroe	36055	8261400205	U00015	K07FP	10200401	251.00	SIP Call Assum	20.3455	0.0000	0.0563	KODAK PARK DIVISION
NY	Monroe	36055	8261400205	U00015	K10FP	10200401	251.00	SIP Call Assum	71.5750	0.0000	0.1966	KODAK PARK DIVISION
NY	Monroe	36055	8261400205	U00015	K09EI	10200206	251.00	SIP Call Assum	677.5085	0.0000	1.8762	KODAK PARK DIVISION
NY	Monroe	36055	8261400205	U00015	K15FP	10200202	251.00	SIP Call Assum	1017.9105	0.0000	2.7965	KODAK PARK DIVISION
NY	Monroe	36055	8261400205	U00015	K11FP	10200203	251.00	SIP Call Assum	1184.7930	0.0000	3.0466	KODAK PARK DIVISION
NY	Monroe	36055	8261400205	U00015	K13FP	10200203	251.00	SIP Call Assum	1937.5105	0.0000	5.3228	KODAK PARK DIVISION
NY	Monroe	36055	8261400208	UFAC01	999EI	10200603	5.00	SCC Descriptio	0.0545	0.0000	0.0001	ECONO PRODUCTS
NY	Monroe	36055	8261400709	1BOILR	BL1FP	10300601	150.00	SCC Descriptio	32.7275	0.0000	0.0885	ROCHESTER DISTRICT HEATING COOPERATIVE
NY	Monroe	36055	8261400709	1BOILR	BL2FP	10200602	150.00	SCC Descriptio	5.4550	0.0000	0.0147	ROCHESTER DISTRICT HEATING COOPERATIVE
NY	Monroe	36055	8261400709	1BOILR	BL3FP	10300601	150.00	SCC Descriptio	9.2150	0.0000	0.0249	ROCHESTER DISTRICT HEATING COOPERATIVE
NY	Monroe	36055	8261400795	A00001	011FP	10300209	55.00	SCC Descriptio	43.3470	0.0000	0.1191	IOLA POWERHOUSE & COGEN FACILITY
NY	Monroe	36055	8261400795	A00001	013FP	10300602	55.00	SCC Descriptio	11.5314	0.0000	0.0308	IOLA POWERHOUSE & COGEN FACILITY
NY	Monroe	36055	8261400795	A00001	012FP	10300501	55.00	SCC Descriptio	1.3250	0.0000	0.0033	IOLA POWERHOUSE & COGEN FACILITY
NY	Monroe	36055	8262600038	EI0001	E01EI	10200603	5.00	SCC Descriptio	0.1150	0.0000	0.0003	CRYOVAC INC
NY	Monroe	36055	8262600109	U00001	BLRFP	10200602	55.00	SCC Descriptio	13.3800	0.0000	0.0362	ROCHESTER TECHNOLOGY PARK
NY	Monroe	36055	8265400064	B00001	G01FP	10200602	55.00	SCC Descriptio	20.5000	0.0000	0.0554	XEROX JOSEPH C WILSON CTR FOR TECHNOLOGY
NY	Monroe	36055	8265400064	B00002	G03FP	10200602	55.00	SCC Descriptio	13.0200	0.0000	0.0352	XEROX JOSEPH C WILSON CTR FOR TECHNOLOGY
NY	Monroe	36055	8269900059	BOILR3	302FP	10300502	55.00	SCC Descriptio	2.8285	0.0000	0.0078	UNIVERSITY OF ROCHESTER
NY	Monroe	36055	8269900059	BOILR5	501FP	10300601	150.00	SCC Descriptio	18.5635	0.0000	0.0502	UNIVERSITY OF ROCHESTER
NY	Monroe	36055	8269900059	BOILR5	502FP	10300501	150.00	SCC Descriptio	0.0002	0.0000	0.0000	UNIVERSITY OF ROCHESTER
NY	Monroe	36055	8269900059	BOILR6	601FP	10300601	150.00	SCC Descriptio	28.4740	0.0000	0.0770	UNIVERSITY OF ROCHESTER
NY	Monroe	36055	8269900059	BOILR7	701FP	10300601	150.00	SCC Descriptio	13.6750	0.0000	0.0370	UNIVERSITY OF ROCHESTER
NY	Monroe	36055	8269900059	BOILR7	702FP	10300501	150.00	SCC Descriptio	0.0005	0.0000	0.0000	UNIVERSITY OF ROCHESTER
NY	Monroe	36055	8269900059	EI0001	E04EI	10300603	5.00	SCC Descriptio	3.5507	0.0000	0.0094	UNIVERSITY OF ROCHESTER
NY	Monroe	36055	8269900059	EI0001	E06EI	10301002	5.00	SCC Descriptio	0.0444	0.0000	0.0001	UNIVERSITY OF ROCHESTER
NY	Montgomery	36057	4273200014	U00005	E02FP	10200602	55.00	SCC Descriptio	2.9900	0.0000	0.0081	KEYMARK CORP PLANT
NY	Montgomery	36057	4273200014	U00006	E03FP	10200602	55.00	SCC Descriptio	2.9900	0.0000	0.0081	KEYMARK CORP PLANT
NY	Montgomery	36057	4273200014	U00027	F04FP	10300603	5.00	SCC Descriptio	0.8850	0.0000	0.0023	KEYMARK CORP PLANT
NY	Montgomery	36057	4273200014	U00028	F05FP	10300603	5.00	SCC Descriptio	0.0110	0.0000	0.0000	KEYMARK CORP PLANT
NY	Montgomery	36057	4273200014	U00034	212FP	10300603	5.00	SCC Descriptio	0.7650	0.0000	0.0020	KEYMARK CORP PLANT
NY	Montgomery	36057	4273200014	U00035	E01FP	10200602	55.00	SCC Descriptio	1.1650	0.0000	0.0031	KEYMARK CORP PLANT
NY	Nassau	36059	1280500030	U00002	E21EI	10200602	55.00	SCC Descriptio	1.7000	0.0000	0.0046	KONICA FILM PAPER & PHOTOCHEM MFG PLANT
NY	Nassau	36059	1280500030	U00003	E22EI	10200602	55.00	SCC Descriptio	1.7000	0.0000	0.0046	KONICA FILM PAPER & PHOTOCHEM MFG PLANT
NY	Nassau	36059	1282000357	100005	106EI	10300603	5.00	SCC Descriptio	0.3345	0.0000	0.0009	FREEPORT POWER PLANT #1
NY	Nassau	36059	1282000357	100005	105EI	10300503	5.00	SCC Descriptio	0.0146	0.0000	0.0000	FREEPORT POWER PLANT #1
NY	Nassau	36059	1282000457	EI0001	E02EI	10300501	5.00	SCC Descriptio	0.4855	0.0000	0.0013	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000457	EI0001	E01EI	10300603	5.00	SCC Descriptio	2.4677	0.0000	0.0066	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000457	U00001	1NGFP	10300602	55.00	SCC Descriptio	3.1241	0.0000	0.0083	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000457	U00001	1FOFP	10300501	55.00	SCC Descriptio	0.0050	0.0000	0.0000	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000457	U00017	6NGFP	10300602	55.00	SCC Descriptio	0.9395	0.0000	0.0025	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000457	U00017	6FOFP	10300501	55.00	SCC Descriptio	0.0140	0.0000	0.0000	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000457	U00101	4NGFP	10300602	55.00	SCC Descriptio	2.5533	0.0000	0.0063	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000457	U00101	3NGFP	10300602	55.00	SCC Descriptio	0.7961	0.0000	0.0021	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000457	U00101	4FOFP	10300501	55.00	SCC Descriptio	0.0087	0.0000	0.0000	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000652	UBOILR	B02FP	10200602	55.00	SCC Descriptio	0.3113	0.0000	0.0008	NASSAU COUNTY SD #2 BAY PARK STP
NY	Nassau	36059	1282000652	UBOILR	B08FP	10200602	55.00	SCC Descriptio	0.3033	0.0000	0.0008	NASSAU COUNTY SD #2 BAY PARK STP
NY	Nassau	36059	1282000652	UBOILR	B05FP	10200602	55.00	SCC Descriptio	0.2486	0.0000	0.0007	NASSAU COUNTY SD #2 BAY PARK STP
NY	Nassau	36059	1282000652	UBOILR	B11FP	10200602	55.00	SCC Descriptio	0.2379	0.0000	0.0007	NASSAU COUNTY SD #2 BAY PARK STP

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NY	Nassau	36059	1282000652	UBOILR	B12FP	10200502	55.00	SCC Descriptio	0.3723	0.0000	0.0010	NASSAU COUNTY SD #2 BAY PARK STP
NY	Nassau	36059	1282000652	UBOILR	B06FP	10200502	55.00	SCC Descriptio	0.1462	0.0000	0.0004	NASSAU COUNTY SD #2 BAY PARK STP
NY	Nassau	36059	1282000652	UBOILR	B03FP	10200502	55.00	SCC Descriptio	0.0953	0.0000	0.0003	NASSAU COUNTY SD #2 BAY PARK STP
NY	Nassau	36059	1282000652	UBOILR	B07FP	10300701	55.00	SCC Descriptio	0.0004	0.0000	0.0000	NASSAU COUNTY SD #2 BAY PARK STP
NY	Nassau	36059	1282000652	UBOILR	B09FP	10200502	55.00	SCC Descriptio	0.0005	0.0000	0.0000	NASSAU COUNTY SD #2 BAY PARK STP
NY	Nassau	36059	1282000653	UBOILR	B05FP	10200602	55.00	SCC Descriptio	0.0055	0.0000	0.0000	NCDPW - CEDAR CREEK WPCP (STP)
NY	Nassau	36059	1282000653	UBOILR	B03FP	10200602	55.00	SCC Descriptio	0.0045	0.0000	0.0000	NCDPW - CEDAR CREEK WPCP (STP)
NY	Nassau	36059	1282000653	UBOILR	B07FP	10200602	55.00	SCC Descriptio	0.0045	0.0000	0.0000	NCDPW - CEDAR CREEK WPCP (STP)
NY	Nassau	36059	1282000653	UBOILR	B01FP	10200602	55.00	SCC Descriptio	0.0010	0.0000	0.0000	NCDPW - CEDAR CREEK WPCP (STP)
NY	Nassau	36059	1282000947	EIC001	E01EI	10300501	0.00		0.1050	0.0000	0.0003	EXXONMOBIL INWOOD TERMINAL
NY	Nassau	36059	1282001104	4COMBU	CMBFP	10200501	0.00		0.0580	0.0000	0.0001	SPRAGUE - OCEANSIDE MARINE TERMINAL
NY	Nassau	36059	1282001549	EIC001	E01EI	10300501	0.00		0.2227	0.0000	0.0006	MOTIVA ENTERPRISES LLC PROPERTY
NY	Nassau	36059	1282400112	100CSP	GASFP	10200602	55.00	SCC Descriptio	0.0174	0.0000	0.0000	GRUMMAN AEROSPACE MFG PLANT
NY	Nassau	36059	1282400112	1BLR25	FO6FP	10200402	55.00	SCC Descriptio	1.5620	0.0000	0.0043	GRUMMAN AEROSPACE MFG PLANT
NY	Nassau	36059	1282400112	EI0001	E16EI	10200503	5.00	SCC Descriptio	0.6200	0.0000	0.0016	GRUMMAN AEROSPACE MFG PLANT
NY	Nassau	36059	1282400112	EI0001	E12EI	10200603	5.00	SCC Descriptio	0.0070	0.0000	0.0000	GRUMMAN AEROSPACE MFG PLANT
NY	Nassau	36059	1282400112	U14B01	070EI	10200401	0.00		4.2629	0.0000	0.0118	GRUMMAN AEROSPACE MFG PLANT
NY	Nassau	36059	1282400388	EIC001	E01EI	10300501	0.00		0.0240	0.0000	0.0001	EXXONMOBIL GLENWOOD LANDING TERMINAL
NY	Nassau	36059	1282400455	1BOILR	FO1FP	10200501	0.00		0.2681	0.0000	0.0007	COMMANDER OIL TERMINAL
NY	New York	36061	2620100004	100BLR	OILFP	10300401	0.00		17.3744	0.0000	0.0477	NYC-TA 207 STREET SHOP
NY	New York	36061	2620100004	EI0001	E07EI	10200503	5.00	SCC Descriptio	0.0100	0.0000	0.0000	NYC-TA 207 STREET SHOP
NY	New York	36061	2620100005	U00001	001FP	10300601	150.00	SCC Descriptio	68.3161	0.0000	0.1847	NEW YORK PRESBYTERIAN HOSPITAL
NY	New York	36061	2620100005	U00001	E02EI	10300602	150.00	SCC Descriptio	3.7000	0.0000	0.0102	NEW YORK PRESBYTERIAN HOSPITAL
NY	New York	36061	2620100005	U00001	002FP	10300401	150.00	SCC Descriptio	1.2233	0.0000	0.0030	NEW YORK PRESBYTERIAN HOSPITAL
NY	New York	36061	2620100045	U00001	P01FP	10300401	0.00		20.6588	0.0000	0.0568	RACHEL BRIDGE CORP
NY	New York	36061	2620200007	3BLERS	BGGFP	10300701	55.00	SCC Descriptio	13.2800	0.0000	0.0355	NYC-DEP NORTH RIVER WPCP
NY	New York	36061	2620200007	3BLERS	BDFFP	10300501	55.00	SCC Descriptio	2.8128	0.0000	0.0077	NYC-DEP NORTH RIVER WPCP
NY	New York	36061	2620200044	U00001	002FP	10300602	55.00	SCC Descriptio	6.1785	0.0000	0.0170	CITY COLLEGE OF NEW YORK
NY	New York	36061	2620200044	U00001	001FP	10300502	55.00	SCC Descriptio	0.0222	0.0000	0.0001	CITY COLLEGE OF NEW YORK
NY	New York	36061	2620200044	U00002	003FP	10200602	55.00	SCC Descriptio	1.9950	0.0000	0.0054	CITY COLLEGE OF NEW YORK
NY	New York	36061	2620200044	UFAC01	E05EI	10300603	5.00	SCC Descriptio	0.0350	0.0000	0.0001	CITY COLLEGE OF NEW YORK
NY	New York	36061	2620200100	UC0001	001FP	10300401	0.00		19.0475	0.0000	0.0523	ONE LINCOLN PLAZA CONDOMINIUM
NY	New York	36061	2620200106	UC0001	001FP	10300401	0.00		19.0960	0.0000	0.0525	RIVERSIDE MGMT CORP
NY	New York	36061	2620200167	U00101	002FP	10200602	55.00	SCC Descriptio	26.8145	0.0000	0.0737	COLUMBIA UNIVERSITY-410 W 118TH ST
NY	New York	36061	2620200167	U00101	001FP	10300401	55.00	SCC Descriptio	17.1775	0.0000	0.0464	COLUMBIA UNIVERSITY-410 W 118TH ST
NY	New York	36061	2620200181	UBOILR	BLRFP	10300401	0.00		9.4900	0.0000	0.0261	LE PARKER MERIDIEN-109 WEST 56TH ST
NY	New York	36061	2620200193	EI0001	E01EI	10300603	5.00	SCC Descriptio	0.0650	0.0000	0.0002	ASTRID OFFSET CORP
NY	New York	36061	2620200674	U-0001	002EI	10300602	55.00	SCC Descriptio	8.6300	0.0000	0.0237	ST LUKE'S ROOSEVELT HOSPITAL
NY	New York	36061	2620200674	U-0001	001EI	10300401	55.00	SCC Descriptio	11.8393	0.0000	0.0293	ST LUKE'S ROOSEVELT HOSPITAL
NY	New York	36061	2620300001	000001	E02EI	10300602	55.00	SCC Descriptio	16.8945	0.0000	0.0418	NYC-HH - HARLEM HOSPITAL
NY	New York	36061	2620300001	U00001	001EP	10300401	0.00		0.1645	0.0000	0.0005	NYC-HH - HARLEM HOSPITAL
NY	New York	36061	2620300005	1BLERS	BDFFP	10300501	0.00		4.0378	0.0000	0.0108	NYC-DEP WARDS ISLAND WPCP
NY	New York	36061	2620300017	U00001	002FP	10300701	55.00	SCC Descriptio	15.9772	0.0000	0.0439	MANHATTAN PSYCH CTR
NY	New York	36061	2620300017	U00001	001FP	10300402	55.00	SCC Descriptio	58.8155	0.0000	0.1616	MANHATTAN PSYCH CTR
NY	New York	36061	2620300047	UC0001	002FP	10200602	55.00	SCC Descriptio	7.0744	0.0000	0.0191	TAINO TOWERS-2253 THIRD AVENUE
NY	New York	36061	2620400058	UC0001	OILFP	10300402	55.00	SCC Descriptio	28.5575	0.0000	0.0785	NYC-HH - METROPOLITAN HOSPITAL
NY	New York	36061	2620400059	UC0001	001FP	10200602	55.00	SCC Descriptio	21.6320	0.0000	0.0585	MOUNT SINAI HOSPITAL
NY	New York	36061	2620400059	UC0001	004FP	10300402	55.00	SCC Descriptio	78.9620	0.0000	0.2169	MOUNT SINAI HOSPITAL
NY	New York	36061	2620400064	U00001	001FP	10300601	145.00	Title V Permit	102.7634	0.0000	0.2778	NY - PRESBYTERIAN HOSPITAL-525 E 68TH ST
NY	New York	36061	2620400064	U00001	E01EI	10300401	145.00	Title V Permit	0.2134	0.0000	0.0006	NY - PRESBYTERIAN HOSPITAL-525 E 68TH ST
NY	New York	36061	2620400118	043010	02AFP	10300602	55.00	SCC Descriptio	13.2085	0.0000	0.0363	ROCKEFELLER UNIVERSITY
NY	New York	36061	2620400118	043010	01AFP	10300401	55.00	SCC Descriptio	27.4541	0.0000	0.0679	ROCKEFELLER UNIVERSITY

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NY	New York	36061	2620400127	000001	010FP	10300401	7.60	Title V Permit	25.5545	0.0000	0.0702	COLER-GOLDWATER MEMORIAL HOSPITAL
NY	New York	36061	2620400127	000002	020FP	10300401	7.20	Title V Permit	25.5545	0.0000	0.0702	COLER-GOLDWATER MEMORIAL HOSPITAL
NY	New York	36061	2620400139	UC0001	001FP	10300401	0.00		30.9308	0.0000	0.0850	FRANKLIN PLAZA APARTMENTS
NY	New York	36061	2620500084	U00001	002EI	10300501	55.00	SCC Descriptio	0.1254	0.0000	0.0003	ENTERPRISE EXPRESS
NY	New York	36061	2620500084	U00001	001EI	10200602	55.00	SCC Descriptio	0.0525	0.0000	0.0001	ENTERPRISE EXPRESS
NY	New York	36061	2620500088	U00001	004EI	10200503	5.00	SCC Descriptio	0.0283	0.0000	0.0001	TANAGRAPHICS INC-263 NINTH AVE
NY	New York	36061	2620500182	U00001	001FP	10300602	55.00	SCC Descriptio	7.8200	0.0000	0.0193	MUTUAL REDEVELOPMENT HOUSES
NY	New York	36061	2620500246	100000	E02EI	10300601	150.00	SCC Descriptio	22.8260	0.0000	0.0627	CENTRAL PLANT - 251 MERCER ST
NY	New York	36061	2620500246	100000	002FP	10300401	150.00	SCC Descriptio	16.6935	0.0000	0.0459	CENTRAL PLANT - 251 MERCER ST
NY	New York	36061	2620500246	100000	E01EI	10300401	150.00	SCC Descriptio	19.2830	0.0000	0.0521	CENTRAL PLANT - 251 MERCER ST
NY	New York	36061	2620600063	U00001	1CRFP	10300401	0.00		4.7494	0.0000	0.0130	KNICKERBOCKER VILLAGE-10 MONROE ST
NY	New York	36061	2620600063	U00001	1BRFP	10300401	0.00		5.2687	0.0000	0.0145	KNICKERBOCKER VILLAGE-10 MONROE ST
NY	New York	36061	2620600063	U00001	1ARFP	10300401	0.00		7.9030	0.0000	0.0217	KNICKERBOCKER VILLAGE-10 MONROE ST
NY	New York	36061	2620600095	UC0001	003FP	10200504	0.00		17.6179	0.0000	0.0484	VILLAGE VIEW HOUSING
NY	New York	36061	2620600096	000001	MIDFP	10200402	55.00	SCC Descriptio	54.1750	0.0000	0.1488	EAST RIVER HOUSING CORP
NY	New York	36061	2620600096	000001	OILFP	10200401	55.00	SCC Descriptio	28.7875	0.0000	0.0797	EAST RIVER HOUSING CORP
NY	Niagara	36063	9290900018	BOILR1	BL1FP	10200602	55.00	SCC Descriptio	0.0774	0.0000	0.0002	DELPHI AUTOMOTIVE SYSTEMS - LOCKPORT
NY	Niagara	36063	9290900107	EIC001	E02EI	10200501	0.00		0.0236	0.0000	0.0001	ISOCHEM INC
NY	Niagara	36063	9291100030	U08001	100EI	10200799	0.00		9.8405	0.0000	0.0271	DUPONT COMPANY
NY	Niagara	36063	9291100030	UNIT03	GASFP	10200601	150.00	SCC Descriptio	39.7810	0.0000	0.1097	DUPONT COMPANY
NY	Niagara	36063	9291100030	UNIT05	PKGFP	10200601	150.00	SCC Descriptio	9.1405	0.0000	0.0252	DUPONT COMPANY
NY	Niagara	36063	9292800001	EI0001	E03EI	10200603	5.00	SCC Descriptio	0.0106	0.0000	0.0000	AKZO CHEMICALS BURT PLANT
NY	Oneida	36065	6301300103	00MAIN	GASFP	10300602	55.00	SCC Descriptio	11.8275	0.0000	0.0292	ONEIDA CORRECTIONAL FACILITY
NY	Oneida	36065	6301300103	00MAIN	OILFP	10300401	55.00	SCC Descriptio	6.8194	0.0000	0.0187	ONEIDA CORRECTIONAL FACILITY
NY	Oneida	36065	6301600057	EI0001	E04EI	10200603	5.00	SCC Descriptio	0.3548	0.0000	0.0009	UTICA ALLOYS
NY	Oneida	36065	6302000024	0POWER	BW3FP	10300902	0.00		3.4411	0.0000	0.0095	HARDEN FURNITURE INC
NY	Oneida	36065	6302000024	0POWER	BW1FP	10300902	0.00		5.6891	0.0000	0.0156	HARDEN FURNITURE INC
NY	Oneida	36065	6302000024	0POWER	BW2FP	10300902	0.00		14.8709	0.0000	0.0409	HARDEN FURNITURE INC
NY	Oneida	36065	6302600012	U00007	006EP	10200903	0.00		2.6327	0.0000	0.0072	ETHAN ALLEN INC
NY	Onondaga	36067	7312600016	1CMBUS	C33FP	10200602	55.00	SCC Descriptio	31.2480	0.0000	0.0845	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600016	1CMBUS	C35FP	10200602	55.00	SCC Descriptio	26.9325	0.0000	0.0746	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600016	1CMBUS	C31FP	10200602	55.00	SCC Descriptio	8.4000	0.0000	0.0227	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600016	1CMBUS	C32FP	10200401	55.00	SCC Descriptio	1.6365	0.0000	0.0042	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600016	1CMBUS	C38FP	10200602	55.00	SCC Descriptio	1.2663	0.0000	0.0034	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600016	1CMBUS	C40FP	10300701	55.00	SCC Descriptio	0.3242	0.0000	0.0008	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600016	1CMBUS	C37FP	10200602	55.00	SCC Descriptio	0.1827	0.0000	0.0005	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600016	1CMBUS	C34FP	10200501	55.00	SCC Descriptio	0.1200	0.0000	0.0003	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600016	1CMBUS	C36FP	10200501	55.00	SCC Descriptio	0.0970	0.0000	0.0003	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600093	000001	012EI	10200603	5.00	SCC Descriptio	2.0580	0.0000	0.0053	MARSELLUS CASKET CO
NY	Onondaga	36067	7313600002	0001UT	105FP	10200401	55.00	SCC Descriptio	1.3630	0.0000	0.0038	ANHEUSER BUSCH BALDWINSVILLE BREWERY
NY	Onondaga	36067	7313600002	0001UT	106FP	10200602	55.00	SCC Descriptio	0.0295	0.0000	0.0001	ANHEUSER BUSCH BALDWINSVILLE BREWERY
NY	Onondaga	36067	7313600002	EIC001	E02EI	10200799	0.00		0.1485	0.0000	0.0004	ANHEUSER BUSCH BALDWINSVILLE BREWERY
NY	Onondaga	36067	7313600002	U00001	002EP	10200601	150.00	SCC Descriptio	286.2750	0.0000	0.7896	ANHEUSER BUSCH BALDWINSVILLE BREWERY
NY	Onondaga	36067	7313600002	U00121	049EP	10200799	0.00		72.2285	0.0000	0.1992	ANHEUSER BUSCH BALDWINSVILLE BREWERY
NY	Onondaga	36067	7313800015	000002	BLRFP	10200903	0.00		1.9958	0.0000	0.0055	L & J G STICKLEY INC
NY	Ontario	36069	8320500041	UCOMBU	E02EI	10200603	5.00	SCC Descriptio	5.5825	0.0000	0.0153	GUARDIAN GENEVA FLOAT GLASS FACILITY
NY	Ontario	36069	8320500041	UCOMBU	E01EI	10201002	5.00	SCC Descriptio	0.1288	0.0000	0.0003	GUARDIAN GENEVA FLOAT GLASS FACILITY
NY	Orange	36071	3334600267	000001	001FP	10200602	55.00	SCC Descriptio	1.5900	0.0000	0.0043	NEW ENGLAND LAMINATES
NY	Orange	36071	3334800082	EI0001	E01EI	10300503	5.00	SCC Descriptio	0.0160	0.0000	0.0000	WAREX CARGO TERMINAL
NY	Orange	36071	3334800082	U0EVC1	01AEI	10201002	0.00		0.0371	0.0000	0.0001	WAREX CARGO TERMINAL
NY	Orange	36071	3334800084	UFAC01	E01EI	10200603	5.00	SCC Descriptio	12.6120	0.0000	0.0324	METAL CONTAINER CORP
NY	Orange	36071	3334800087	EI0001	E02EI	10201002	0.00		0.0618	0.0000	0.0002	WAREX TERMINALS CORP - NORTH TERMINAL

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NY	Orange	36071	3334800100	100BLR	E01EI	10200603	5.00	SCC Descriptio	0.0758	0.0000	0.0002	LAFAYETTE PAPER LP
NY	Orange	36071	3334800197	EIC001	E02EI	10300501	0.00		0.0105	0.0000	0.0000	WAREX TERMINALS CORP - SOUTH TERMINAL
NY	Orange	36071	3335200111	UFAC01	E01EI	10200602	55.00	SCC Descriptio	0.0900	0.0000	0.0002	TESA TAPE - MIDDLETOWN
NY	Orange	36071	3335200145	4BOILR	BLRFP	10200602	55.00	SCC Descriptio	4.3345	0.0000	0.0117	REVERE SMELTING & REFINING CORP
NY	Orange	36071	3335200145	UFAC01	E04EI	10201002	0.00		0.0143	0.0000	0.0000	REVERE SMELTING & REFINING CORP
NY	Orange	36071	3335400138	UFAC01	E01EI	10201002	0.00		0.0040	0.0000	0.0000	GEORGIA PACIFIC - WARWICK FACILITY
NY	Orange	36071	3335800045	1BYLER	103FP	10200602	55.00	SCC Descriptio	0.3522	0.0000	0.0009	NEPERA INC
NY	Orange	36071	3335800045	1BYLER	101FP	10300602	55.00	SCC Descriptio	1.5114	0.0000	0.0039	NEPERA INC
NY	Orange	36071	3335800045	1BYLER	102FP	10200501	55.00	SCC Descriptio	0.8766	0.0000	0.0024	NEPERA INC
NY	Orange	36071	3335800045	3PYRIN	E02EI	10300602	55.00	SCC Descriptio	11.6353	0.0000	0.0288	NEPERA INC
NY	Orange	36071	3335800045	U09002	007EI	10200401	0.00		14.4708	0.0000	0.0401	NEPERA INC
NY	Orange	36071	3335800045	U09003	101EI	10200602	55.00	SCC Descriptio	11.7936	0.0000	0.0319	NEPERA INC
NY	Orleans	36073	8342000010	B00001	G01FP	10200602	55.00	SCC Descriptio	5.0200	0.0000	0.0136	SAINT-GOBAIN TECHNICAL FABRICS GROUP
NY	Orleans	36073	8342000010	B00001	R01FP	10200402	55.00	SCC Descriptio	0.3094	0.0000	0.0009	SAINT-GOBAIN TECHNICAL FABRICS GROUP
NY	Oswego	36075	7350400012	EI0001	E04EI	10201002	0.00		0.0095	0.0000	0.0000	SONOCO FLEXIBLE PACKAGING INC
NY	Oswego	36075	7354200024	U00001	P11FP	10300501	0.00		0.4900	0.0000	0.0013	SOUTH OSWEGO TERMINAL
NY	Oswego	36075	7355000021	100BR1	029EP	10200602	55.00	SCC Descriptio	12.5000	0.0000	0.0338	FELIX SCHOELLER TECHNICAL PAPERS
NY	Oswego	36075	7355800001	1BOILR	003FP	10200401	150.00	SCC Descriptio	8.1512	0.0000	0.0225	INTERFACE SOLUTIONS INC
NY	Oswego	36075	7355800001	1BOILR	002FP	10200601	150.00	SCC Descriptio	3.9025	0.0000	0.0108	INTERFACE SOLUTIONS INC
NY	Oswego	36075	7355800001	EI0001	E03EI	10300501	0.00		0.1480	0.0000	0.0004	INTERFACE SOLUTIONS INC
NY	Oswego	36075	7355800013	U00001	E05EI	10200603	5.00	SCC Descriptio	0.0575	0.0000	0.0001	OSWEGO CO ENERGY RECOVERY FAC
NY	Queens	36081	2630100005	00BOIL	BCGFP	10200602	55.00	SCC Descriptio	1.8750	0.0000	0.0052	STEINWAY & SONS - QUEENS FACILITY
NY	Queens	36081	2630100005	00BOIL	BAGFP	10300602	55.00	SCC Descriptio	1.8750	0.0000	0.0046	STEINWAY & SONS - QUEENS FACILITY
NY	Queens	36081	2630100005	00BOIL	BAFFP	10300502	55.00	SCC Descriptio	0.0175	0.0000	0.0000	STEINWAY & SONS - QUEENS FACILITY
NY	Queens	36081	2630100005	00BOIL	BCFFP	10200502	55.00	SCC Descriptio	0.0175	0.0000	0.0000	STEINWAY & SONS - QUEENS FACILITY
NY	Queens	36081	2630100006	EI0001	E08EI	10300603	5.00	SCC Descriptio	1.3214	0.0000	0.0035	ASTORIA TUNNEL HEADHOUSE / PCB STORAGE
NY	Queens	36081	2630100065	0U0001	002FP	10300602	55.00	SCC Descriptio	5.7595	0.0000	0.0142	ELMHURST HOSP-79-01 BROADWAY
NY	Queens	36081	2630100065	0U0001	004EI	10300401	55.00	SCC Descriptio	11.2568	0.0000	0.0309	ELMHURST HOSP-79-01 BROADWAY
NY	Queens	36081	2630100093	EI0001	E01EI	10300603	5.00	SCC Descriptio	0.1330	0.0000	0.0004	STD FOLDING CARTON INC-85 ST & 24 AVE
NY	Queens	36081	2630200012	3BLERS	DIFFP	10300501	0.00		1.3629	0.0000	0.0037	NYC-DEP TALLMAN ISLAND WPCP
NY	Queens	36081	2630200012	3BLERS	011EI	10300701	0.00		0.2210	0.0000	0.0006	NYC-DEP TALLMAN ISLAND WPCP
NY	Queens	36081	2630200138	B00001	P03FP	10300503	5.00	SCC Descriptio	0.0320	0.0000	0.0001	GRACE ASPHALT DIV OF GRACE INDUSTRIES
NY	Queens	36081	2630400404	1STACK	PBGFP	10300602	55.00	SCC Descriptio	2.9000	0.0000	0.0072	BIG SIX TOWERS INC
NY	Queens	36081	2630400404	1STACK	PBOFP	10300502	55.00	SCC Descriptio	0.0265	0.0000	0.0001	BIG SIX TOWERS INC
NY	Queens	36081	2630500005	UFAC01	014EI	10300501	0.00		0.1584	0.0000	0.0004	BARKER BROS - RIDGEWOOD
NY	Queens	36081	2630600067	U00001	DI1FP	10300502	55.00	SCC Descriptio	0.7940	0.0000	0.0022	ST JOHNS UNIVERSITY
NY	Queens	36081	2630600067	U00001	NG1FP	10300602	55.00	SCC Descriptio	3.5650	0.0000	0.0088	ST JOHNS UNIVERSITY
NY	Queens	36081	2630600067	U00002	DI2FP	10300502	55.00	SCC Descriptio	2.6560	0.0000	0.0073	ST JOHNS UNIVERSITY
NY	Queens	36081	2630600067	U00002	NG2FP	10300602	55.00	SCC Descriptio	5.3500	0.0000	0.0132	ST JOHNS UNIVERSITY
NY	Queens	36081	2630600067	U00003	DI3FP	10300502	55.00	SCC Descriptio	0.2280	0.0000	0.0006	ST JOHNS UNIVERSITY
NY	Queens	36081	2630600067	U00003	NG3FP	10300602	55.00	SCC Descriptio	0.7700	0.0000	0.0019	ST JOHNS UNIVERSITY
NY	Queens	36081	2630600067	UFAC01	EX2EI	10300503	5.00	SCC Descriptio	0.4140	0.0000	0.0011	ST JOHNS UNIVERSITY
NY	Queens	36081	2630600067	UFAC01	EX1EI	10300603	5.00	SCC Descriptio	1.2050	0.0000	0.0033	ST JOHNS UNIVERSITY
NY	Queens	36081	2630600071	U00002	P03EI	10200602	55.00	SCC Descriptio	17.0780	0.0000	0.0439	QUEENS FRESH MEADOWS FACILITY
NY	Queens	36081	2630600071	U00002	P02EI	10200501	55.00	SCC Descriptio	1.5307	0.0000	0.0041	QUEENS FRESH MEADOWS FACILITY
NY	Queens	36081	2630600111	0COMB1	F06FP	10300402	55.00	SCC Descriptio	17.1472	0.0000	0.0471	PARKER TOWERS
NY	Queens	36081	2630700242	U00001	002FP	10200602	55.00	SCC Descriptio	1.9483	0.0000	0.0054	CREEDMOOR PSYCHIATRIC CTR
NY	Queens	36081	2630700242	U00001	001FP	10300402	55.00	SCC Descriptio	34.8954	0.0000	0.0943	CREEDMOOR PSYCHIATRIC CTR
NY	Queens	36081	2630700242	UFAC01	E02EI	10300503	5.00	SCC Descriptio	0.2065	0.0000	0.0005	CREEDMOOR PSYCHIATRIC CTR
NY	Queens	36081	2630700242	UFAC01	E01EI	10300603	5.00	SCC Descriptio	0.0689	0.0000	0.0002	CREEDMOOR PSYCHIATRIC CTR
NY	Queens	36081	2630700273	UC0001	001FP	10300601	125.00	Title V Permit	126.3244	0.0000	0.3415	ROCHDALE VILLAGE
NY	Queens	36081	2630700273	UC0001	002FP	10300501	125.00	Title V Permit	1.7111	0.0000	0.0046	ROCHDALE VILLAGE

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NY	Queens	36081	2630700276	EI0001	E01EI	10300603	5.00	SCC Descriptio	3.7800	0.0000	0.0100	INTERSTATE BRANDS CORPORATION
NY	Queens	36081	2630700290	U000LB	LB3FP	10300504	0.00		0.4658	0.0000	0.0013	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	U000LB	LB1FP	10300504	0.00		0.4656	0.0000	0.0013	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	U000LB	LB2FP	10300504	0.00		0.4656	0.0000	0.0013	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	U000UB	4NGFP	10300602	55.00	SCC Descriptio	6.8560	0.0000	0.0188	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	U000UB	5NGFP	10300602	55.00	SCC Descriptio	6.8560	0.0000	0.0188	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	U000UB	3FOFP	10300402	55.00	SCC Descriptio	5.5941	0.0000	0.0154	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	U000UB	1FOFP	10300402	55.00	SCC Descriptio	5.8338	0.0000	0.0144	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	U000UB	4FOFP	10300402	55.00	SCC Descriptio	6.5806	0.0000	0.0163	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	UFAC01	EX1EI	10300504	5.00	SCC Descriptio	0.6243	0.0000	0.0017	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	UFAC01	EX3EI	10300501	5.00	SCC Descriptio	0.4026	0.0000	0.0011	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	UFAC01	EX2EI	10300603	5.00	SCC Descriptio	0.1475	0.0000	0.0004	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700339	UFAC02	007FP	10300501	55.00	SCC Descriptio	1.3211	0.0000	0.0035	N SHORE TOWERS APT TOTAL ENERGY PLANT
NY	Queens	36081	2630700339	UFAC02	008FP	10300602	55.00	SCC Descriptio	5.6725	0.0000	0.0140	N SHORE TOWERS APT TOTAL ENERGY PLANT
NY	Queens	36081	2630700391	EI0001	E03EI	10300603	5.00	SCC Descriptio	1.1225	0.0000	0.0030	MARY IMMACULATE HOSPITAL
NY	Queens	36081	2630700391	UC0001	GASFP	10300602	55.00	SCC Descriptio	1.1505	0.0000	0.0028	MARY IMMACULATE HOSPITAL
NY	Queens	36081	2630800233	UC0001	GB1FP	10300402	55.00	SCC Descriptio	11.2475	0.0000	0.0309	DAYTON BEACH PARK # 1 CORPORATION
NY	Queens	36081	2630800233	UC0002	GB2FP	10300402	55.00	SCC Descriptio	9.1575	0.0000	0.0252	DAYTON BEACH PARK # 1 CORPORATION
NY	Rensselaer	36083	4381400016	U00007	702FP	10200602	55.00	SCC Descriptio	3.3185	0.0000	0.0090	ORGANICHEM CORP
NY	Rensselaer	36083	4381400016	U00007	701FP	10200602	55.00	SCC Descriptio	3.0635	0.0000	0.0083	ORGANICHEM CORP
NY	Rensselaer	36083	4382400019	U00002	002EP	10200401	0.00		3.1936	0.0000	0.0088	AMERADA HESS RENSSELAER TERMINAL
NY	Rensselaer	36083	4382400019	U00005	105FP	10200402	55.00	SCC Descriptio	7.5454	0.0000	0.0207	AMERADA HESS RENSSELAER TERMINAL
NY	Rensselaer	36083	4382800006	U00001	001FP	10200401	56.30	Title V Permit	47.9700	0.0000	0.1328	BENNINGTON PAPERBOARD CO
NY	Rensselaer	36083	4382800031	U11000	11AEI	10201002	0.00		0.4028	0.0000	0.0011	SAINT GOBAIN PERFORMANCE PLASTICS
NY	Richmond	36085	2640300031	UFAC01	00AEI	10300501	0.00		0.2162	0.0000	0.0006	VANBRO CORPORATION
NY	Richmond	36085	2640300107	U00001	001FP	10300601	150.00	SCC Descriptio	6.5149	0.0000	0.0176	VISY PAPER STATEN ISLAND PLANT
NY	Richmond	36085	2640500073	1-BOIL	DISFP	10200502	55.00	SCC Descriptio	5.3110	0.0000	0.0146	EXXONMOBIL - PORT MOBIL TERMINAL
NY	Richmond	36085	2649900029	U00001	A61EI	10300502	55.00	SCC Descriptio	1.6780	0.0000	0.0046	STATEN ISLAND LANDFILL
NY	Richmond	36085	2649900029	U00001	E03EI	10300503	55.00	SCC Descriptio	1.2964	0.0000	0.0034	STATEN ISLAND LANDFILL
NY	Richmond	36085	2649900029	U00001	E01EI	10300603	55.00	SCC Descriptio	1.3975	0.0000	0.0038	STATEN ISLAND LANDFILL
NY	Rockland	36087	3392200026	EIC001	E01EI	10200602	5.00	SCC Descriptio	1.8230	0.0000	0.0049	LOUIS HORNICK CO INC
NY	Rockland	36087	3392200026	EIC001	E03EI	10200603	5.00	SCC Descriptio	0.5040	0.0000	0.0013	LOUIS HORNICK CO INC
NY	Rockland	36087	3392400025	F00001	B01FP	10200601	150.00	SCC Descriptio	117.2350	0.0000	0.3234	WYETH PHARMACEUTICALS
NY	Rockland	36087	3392400025	F00001	B02FP	10200501	150.00	SCC Descriptio	0.0209	0.0000	0.0001	WYETH PHARMACEUTICALS
NY	Rockland	36087	3392400035	0U0001	001FP	10300602	55.00	SCC Descriptio	3.6111	0.0000	0.0089	NYACK HOSPITAL
NY	Rockland	36087	3392400173	EI0001	C01EI	10300603	5.00	SCC Descriptio	13.7895	0.0000	0.0364	PAXAR CORP SYSTEMS GROUP
NY	Rockland	36087	3392400178	0EU001	PR2FP	10300602	55.00	SCC Descriptio	3.2539	0.0000	0.0089	ROCKLAND PSYCHIATRIC CENTER
NY	Rockland	36087	3392400178	0EU001	PR1FP	10300402	55.00	SCC Descriptio	25.1572	0.0000	0.0622	ROCKLAND PSYCHIATRIC CENTER
NY	Rockland	36087	3392600041	U00001	BNGFP	10300602	55.00	SCC Descriptio	4.1210	0.0000	0.0102	GOOD SAMARITAN HOSPITAL
NY	Rockland	36087	3392600041	U00001	BOIFP	10300504	55.00	SCC Descriptio	0.0601	0.0000	0.0002	GOOD SAMARITAN HOSPITAL
NY	Rockland	36087	3392800001	UFAC01	E01EI	10200603	5.00	SCC Descriptio	0.2361	0.0000	0.0006	ALGONQUIN GAS: STONY POINT COMPRESSOR
NY	St. Lawrence	36089	6403000002	EI0001	E10EI	10200603	5.00	SCC Descriptio	2.5838	0.0000	0.0066	CORNING INC CANTON PLANT
NY	St. Lawrence	36089	6405800003	A00001	E02EI	10301002	0.00		0.1091	0.0000	0.0003	ALCOA MASSENA OPERATIONS (WEST PLANT)
NY	St. Lawrence	36089	6405800003	B00001	GASFP	10200601	150.00	SCC Descriptio	22.3290	0.0000	0.0616	ALCOA MASSENA OPERATIONS (WEST PLANT)
NY	St. Lawrence	36089	6405800003	B00001	OILFP	10200401	150.00	SCC Descriptio	0.0165	0.0000	0.0000	ALCOA MASSENA OPERATIONS (WEST PLANT)
NY	St. Lawrence	36089	6405800004	1GMFAC	PWRFP	10200602	55.00	SCC Descriptio	14.8920	0.0000	0.0403	GM POWERTRAIN - MASSENA PLANT
NY	St. Lawrence	36089	6405800024	BOIL01	I01FP	10200602	55.00	SCC Descriptio	12.2786	0.0000	0.0332	REYNOLDS METALS ST LAWRENCE REDUCTION PL
NY	St. Lawrence	36089	6405800024	BOIL01	I03FP	10200401	55.00	SCC Descriptio	0.1261	0.0000	0.0003	REYNOLDS METALS ST LAWRENCE REDUCTION PL
NY	Saratoga	36091	5412600007	UBOILR	B01FP	10200601	150.00	SCC Descriptio	78.0320	0.0000	0.2152	INTERNATIONAL PAPER HUDSON RIVER MILL
NY	Saratoga	36091	5412600007	UBOILR	B02FP	10200401	150.00	SCC Descriptio	4.9325	0.0000	0.0137	INTERNATIONAL PAPER HUDSON RIVER MILL
NY	Schenectady	36093	4421500054	1STDL0	NGCFP	10200602	55.00	SCC Descriptio	0.0715	0.0000	0.0002	GENERAL ELECTRIC TURBINE PLT
NY	Schenectady	36093	4421500054	BOILRS	67GFP	10200602	55.00	SCC Descriptio	18.3060	0.0000	0.0495	GENERAL ELECTRIC TURBINE PLT

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NY	Schenectady	36093	4421500054	BOILRS	67OFP	10200401	55.00	SCC Descriptio	1.0368	0.0000	0.0029	GENERAL ELECTRIC TURBINE PLT
NY	Schenectady	36093	4421500054	BOILRS	B5GFP	10200602	55.00	SCC Descriptio	3.4455	0.0000	0.0093	GENERAL ELECTRIC TURBINE PLT
NY	Schenectady	36093	4421500054	EI0001	E34EI	10200503	5.00	SCC Descriptio	1.0230	0.0000	0.0028	GENERAL ELECTRIC TURBINE PLT
NY	Schenectady	36093	4421500054	EXMBLR	NGSFP	10200603	5.00	SCC Descriptio	1.1200	0.0000	0.0031	GENERAL ELECTRIC TURBINE PLT
NY	Schenectady	36093	4421500054	EXMBLR	2FOFP	10200503	5.00	SCC Descriptio	0.0024	0.0000	0.0000	GENERAL ELECTRIC TURBINE PLT
NY	Schenectady	36093	4421500054	U00018	007EP	10200504	0.00		0.8460	0.0000	0.0023	GENERAL ELECTRIC TURBINE PLT
NY	Schenectady	36093	4422400001	A10000	A01FP	10300603	5.00	SCC Descriptio	0.0900	0.0000	0.0002	GE GLOBAL RESEARCH CENTER
NY	Schenectady	36093	4422400001	B18201	B02FP	10300602	55.00	SCC Descriptio	13.9850	0.0000	0.0384	GE GLOBAL RESEARCH CENTER
NY	Schenectady	36093	4422400001	B18201	B01FP	10300402	55.00	SCC Descriptio	14.4797	0.0000	0.0358	GE GLOBAL RESEARCH CENTER
NY	Schenectady	36093	4422400001	EI0001	E08EI	10300603	5.00	SCC Descriptio	0.1350	0.0000	0.0004	GE GLOBAL RESEARCH CENTER
NY	Schenectady	36093	4422400001	H17659	H01FP	10300602	55.00	SCC Descriptio	0.0450	0.0000	0.0001	GE GLOBAL RESEARCH CENTER
NY	Schenectady	36093	4422800056	000001	001FP	10200602	55.00	SCC Descriptio	19.6599	0.0000	0.0531	SCHENECTADY INTERNATIONAL/ROTT JCT FAC
NY	Schenectady	36093	4422800056	000001	005FP	10200602	55.00	SCC Descriptio	1.5845	0.0000	0.0044	SCHENECTADY INTERNATIONAL/ROTT JCT FAC
NY	Schenectady	36093	4422800056	000001	003FP	10200602	55.00	SCC Descriptio	0.2428	0.0000	0.0007	SCHENECTADY INTERNATIONAL/ROTT JCT FAC
NY	Schenectady	36093	4422800056	000001	002FP	10200502	55.00	SCC Descriptio	0.1322	0.0000	0.0004	SCHENECTADY INTERNATIONAL/ROTT JCT FAC
NY	Schenectady	36093	4422800056	000001	006FP	10200502	55.00	SCC Descriptio	0.1164	0.0000	0.0003	SCHENECTADY INTERNATIONAL/ROTT JCT FAC
NY	Schenectady	36093	4422800056	000001	004FP	10200502	55.00	SCC Descriptio	0.0135	0.0000	0.0000	SCHENECTADY INTERNATIONAL/ROTT JCT FAC
NY	Schenectady	36093	4422800056	000002	011FP	10200602	55.00	SCC Descriptio	3.0132	0.0000	0.0081	SCHENECTADY INTERNATIONAL/ROTT JCT FAC
NY	Schenectady	36093	4422800076	EI0001	E16EI	10200603	5.00	SCC Descriptio	2.4950	0.0000	0.0064	VON ROLL ISOLA USA INC
NY	Schuyler	36097	8442400001	EI0001	E03EI	10200602	5.00	SCC Descriptio	0.1930	0.0000	0.0005	CARGILL SALT CO- WATKINS GLEN PLANT
NY	Schuyler	36097	8442400001	EI0001	E01EI	10200603	5.00	SCC Descriptio	0.1250	0.0000	0.0003	CARGILL SALT CO- WATKINS GLEN PLANT
NY	Schuyler	36097	8442400001	U00001	001FP	10300209	92.20	Title V Permit	127.7640	0.0000	0.3510	CARGILL SALT CO- WATKINS GLEN PLANT
NY	Schuyler	36097	8442400001	UBLR02	NG2FP	10200602	55.00	SCC Descriptio	0.8580	0.0000	0.0023	CARGILL SALT CO- WATKINS GLEN PLANT
NY	Schuyler	36097	8443200001	1BOILS	U1GFP	10200601	150.00	SCC Descriptio	72.3140	0.0000	0.1995	U S SALT - WATKINS GLEN REFINERY
NY	Schuyler	36097	8443200001	1BOILS	U7GFP	10200602	150.00	SCC Descriptio	15.8800	0.0000	0.0429	U S SALT - WATKINS GLEN REFINERY
NY	Seneca	36099	8453800003	1BOILR	GASFP	10200601	150.00	SCC Descriptio	14.6110	0.0000	0.0403	HAMPSHIRE CHEMICAL CORP/EVANS CHEMETICS
NY	Steuben	36101	8460300008	EI0001	E01EI	10200603	5.00	SCC Descriptio	1.0000	0.0000	0.0026	CORNING INC - FALLBROOK PLANT
NY	Steuben	36101	8460600024	EI0001	E01EI	10200603	5.00	SCC Descriptio	1.5750	0.0000	0.0041	ALSTOM - HORNELL CAR SHOP
NY	Steuben	36101	8467400004	400000	400FP	10200906	55.00	SCC Descriptio	1.7000	0.0000	0.0047	GUNLOCKE CO
NY	Steuben	36101	8467400004	400000	500FP	10200602	55.00	SCC Descriptio	4.2532	0.0000	0.0115	GUNLOCKE CO
NY	Steuben	36101	8468200006	00000C	B01FP	10200602	55.00	SCC Descriptio	16.4934	0.0000	0.0446	WOODHULL STATION
NY	Steuben	36101	8468200006	EI0001	X02EI	10300603	5.00	SCC Descriptio	0.0250	0.0000	0.0001	WOODHULL STATION
NY	Suffolk	36103	1472000343	U00001	BNGFP	10300602	55.00	SCC Descriptio	1.8666	0.0000	0.0046	SOUTH OAKS HOSPITAL
NY	Suffolk	36103	1472000343	U00001	BOIFP	10300501	55.00	SCC Descriptio	0.0035	0.0000	0.0000	SOUTH OAKS HOSPITAL
NY	Suffolk	36103	1472000355	U00002	P01FP	10200602	55.00	SCC Descriptio	2.4850	0.0000	0.0067	BERGEN POINT STP & BERGEN AVE DOCK
NY	Suffolk	36103	1472000355	U00002	P02FP	10200501	55.00	SCC Descriptio	1.0224	0.0000	0.0026	BERGEN POINT STP & BERGEN AVE DOCK
NY	Suffolk	36103	1472200032	U61005	SF2FP	10300601	150.00	SCC Descriptio	0.0724	0.0000	0.0002	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200032	U61005	SF3FP	10300501	150.00	SCC Descriptio	0.0005	0.0000	0.0000	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200032	U61005	SF1FP	10300401	150.00	SCC Descriptio	17.1775	0.0000	0.0459	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200032	U61006	SF5FP	10300601	150.00	SCC Descriptio	7.2420	0.0000	0.0199	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200032	U61006	SF6FP	10300501	150.00	SCC Descriptio	0.0010	0.0000	0.0000	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200032	U61006	SF4FP	10300401	150.00	SCC Descriptio	0.4145	0.0000	0.0011	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200032	U61007	SF8FP	10300601	150.00	SCC Descriptio	2.2910	0.0000	0.0063	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200032	U61007	SF9FP	10300501	150.00	SCC Descriptio	0.0015	0.0000	0.0000	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200032	U61007	SF7FP	10300401	150.00	SCC Descriptio	35.1585	0.0000	0.0939	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200557	UFAC01	005FP	10300602	55.00	SCC Descriptio	2.6363	0.0000	0.0065	ST CHARLES HOSPITAL
NY	Suffolk	36103	1472200557	UFAC01	006FP	10300502	55.00	SCC Descriptio	0.0350	0.0000	0.0001	ST CHARLES HOSPITAL
NY	Suffolk	36103	1472801480	EI0001	E07EI	10300603	5.00	SCC Descriptio	1.8505	0.0000	0.0049	ENTENMANN'S BAKERY
NY	Suffolk	36103	1472801480	EI0001	E01EI	10300501	5.00	SCC Descriptio	0.0678	0.0000	0.0002	ENTENMANN'S BAKERY
NY	Suffolk	36103	1472801480	EI0001	E15EI	10300603	5.00	SCC Descriptio	0.1620	0.0000	0.0004	ENTENMANN'S BAKERY
NY	Suffolk	36103	1472801480	EI0001	E08EI	10300501	5.00	SCC Descriptio	0.0006	0.0000	0.0000	ENTENMANN'S BAKERY
NY	Suffolk	36103	1473000023	U00002	NO6FP	10200401	0.00		31.0435	0.0000	0.0860	RIVERHEAD TERMINAL-CONOCOPHILLIPS

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NY	Suffolk	36103	1473400016	U00004	001EI	10200603	5.00	SCC Descriptio	0.7710	0.0000	0.0020	ARKAY PACKAGING CORP
NY	Suffolk	36103	1473400016	U00005	E02EI	10200501	0.00		0.0027	0.0000	0.0000	ARKAY PACKAGING CORP
NY	Suffolk	36103	1473600387	U00001	X01EI	10300602	55.00	SCC Descriptio	1.5450	0.0000	0.0042	SOUTHAMPTON HOSPITAL PROPERTY
NY	Suffolk	36103	1473600387	U00001	001FP	10300401	55.00	SCC Descriptio	0.2092	0.0000	0.0005	SOUTHAMPTON HOSPITAL PROPERTY
NY	Sullivan	36105	3484600079	EIC001	E03EI	10301002	0.00		0.0577	0.0000	0.0002	SULLIVAN COUNTY LANDFILL
NY	Tompkins	36109	7500700030	1CHP01	B8CFP	10200205	248.00	TITLE V PERM	205.9035	0.0000	0.5679	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7500700030	1CHP01	67GFP	10200601	248.00	TITLE V PERM	3.7620	0.0000	0.0104	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7500700030	1CHP01	67OFP	10200401	248.00	TITLE V PERM	0.7185	0.0000	0.0020	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7500700030	1CHP02	B1CFP	10200204	117.00	TITLE V PERM	135.2185	0.0000	0.3715	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7500700030	1CHP02	B20FP	10200401	117.00	TITLE V PERM	0.0047	0.0000	0.0000	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7500700030	1CHP03	B5GFP	10200601	145.00	TITLE V PERM	0.0260	0.0000	0.0001	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7500700030	EI0001	E03EI	10300603	5.00	SCC Descriptio	3.9600	0.0000	0.0104	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7500700030	EI0001	E04EI	10300603	5.00	SCC Descriptio	3.9600	0.0000	0.0104	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7500700030	EI0001	E16EI	10200503	5.00	SCC Descriptio	0.0246	0.0000	0.0001	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7502400007	EI0001	E02EI	10300603	5.00	SCC Descriptio	0.5813	0.0000	0.0015	CONSOLIDATED GAS BORGER STATION
NY	Tompkins	36109	7503200017	EI0001	E04EI	10200603	5.00	SCC Descriptio	12.0923	0.0000	0.0311	BORG WARNER AUTO-TRANSMISSION COMPONENTS
NY	Ulster	36111	3513800024	00MAIN	NO2EI	10300501	55.00	SCC Descriptio	1.8800	0.0000	0.0046	SUNY AT NEW PALTZ
NY	Ulster	36111	3513800024	00MAIN	GASFP	10300602	55.00	SCC Descriptio	0.2375	0.0000	0.0006	SUNY AT NEW PALTZ
NY	Ulster	36111	3513800024	00MAIN	OILFP	10300401	55.00	SCC Descriptio	18.2618	0.0000	0.0502	SUNY AT NEW PALTZ
NY	Ulster	36111	3515200100	00MAIN	OILFP	10200401	0.00		16.1069	0.0000	0.0442	WALLKILL/SHAWANGUNK CORRECTIONAL
NY	Ulster	36111	3515200100	00MAIN	E04EI	10301002	0.00		0.0037	0.0000	0.0000	WALLKILL/SHAWANGUNK CORRECTIONAL
NY	Ulster	36111	3515400153	A00001	OILFP	10200402	55.00	SCC Descriptio	11.6600	0.0000	0.0315	TECH CITY
NY	Ulster	36111	3515400153	A00001	GASFP	10200602	55.00	SCC Descriptio	1.4700	0.0000	0.0040	TECH CITY
NY	Ulster	36111	3515600095	U00043	001FP	10200504	0.00		34.3126	0.0000	0.0943	HYDRO ALUMINUM NORTH AMERICA
NY	Ulster	36111	3515600095	U00045	012FP	10200504	0.00		5.7188	0.0000	0.0157	HYDRO ALUMINUM NORTH AMERICA
NY	Ulster	36111	3515600095	U00046	013FP	10200504	0.00		5.7188	0.0000	0.0157	HYDRO ALUMINUM NORTH AMERICA
NY	Warren	36113	5520500005	300000	302FP	10200402	55.00	SCC Descriptio	78.2045	0.0000	0.2114	FINCH PRUYN & CO
NY	Warren	36113	5520500005	300000	301FP	10200602	55.00	SCC Descriptio	213.7915	0.0000	0.5873	FINCH PRUYN & CO
NY	Warren	36113	5520500005	310000	303FP	10200602	55.00	SCC Descriptio	68.8415	0.0000	0.1861	FINCH PRUYN & CO
NY	Warren	36113	5520500005	310000	305FP	10200901	55.00	SCC Descriptio	22.0385	0.0000	0.0605	FINCH PRUYN & CO
NY	Warren	36113	5520500005	310000	304FP	10200402	55.00	SCC Descriptio	2.2990	0.0000	0.0063	FINCH PRUYN & CO
NY	Warren	36113	5520500005	320000	306FP	10200602	55.00	SCC Descriptio	51.1845	0.0000	0.1384	FINCH PRUYN & CO
NY	Warren	36113	5520500013	EIC001	E01EI	10200501	0.00		0.0251	0.0000	0.0001	GLENS FALLS LEHIGH CEMENT COMPANY
NY	Warren	36113	5520500020	100BLR	60FFP	10200402	55.00	SCC Descriptio	7.3975	0.0000	0.0203	NATIVE TEXTILES
NY	Warren	36113	5520500020	100BLR	NGFFP	10200602	55.00	SCC Descriptio	3.6500	0.0000	0.0099	NATIVE TEXTILES
NY	Washington	36115	5532600004	UBOILR	001FP	10200402	55.00	SCC Descriptio	24.0350	0.0000	0.0660	HOLLINGSWORTH & VOSE-EASTON MILL
NY	Washington	36115	5532600004	UBOILR	002FP	10200602	55.00	SCC Descriptio	7.4500	0.0000	0.0201	HOLLINGSWORTH & VOSE-EASTON MILL
NY	Washington	36115	5532800010	00MAIN	OILFP	10300401	30.75	Title V Permit	35.6573	0.0000	0.0980	NYS GREAT MEADOW CORRECTIONAL FACILITY
NY	Washington	36115	5533000015	B00001	001FP	10200601	150.00	SCC Descriptio	57.9880	0.0000	0.1599	IRVING TISSUE INC FT EDWARD OPERATIONS
NY	Washington	36115	5533000015	B00001	003FP	10200501	150.00	SCC Descriptio	0.4032	0.0000	0.0010	IRVING TISSUE INC FT EDWARD OPERATIONS
NY	Washington	36115	5533000016	EI0001	E01EI	10200603	5.00	SCC Descriptio	1.8385	0.0000	0.0047	PLIANT SOLUTIONS CORPORATION
NY	Washington	36115	5533200025	U00002	002EP	10200501	0.00		0.2058	0.0000	0.0005	MANCHESTER WOOD INC
NY	Washington	36115	5533400006	U00008	001EP	10200401	0.00		3.5250	0.0000	0.0098	HOLLINGSWORTH & VOSE GREENWICH MILL
NY	Washington	36115	5533400006	U00009	002EP	10200401	0.00		4.8645	0.0000	0.0135	HOLLINGSWORTH & VOSE GREENWICH MILL
NY	Washington	36115	5533400006	UBOILR	001FP	10200401	0.00		3.2900	0.0000	0.0091	HOLLINGSWORTH & VOSE GREENWICH MILL
NY	Wayne	36117	8543000073	EI0001	998EI	10200602	55.00	SCC Descriptio	0.5800	0.0000	0.0016	TYCO PLASTICS/ADHESIVES
NY	Wayne	36117	8543600007	1BOILR	GASFP	10200602	55.00	SCC Descriptio	48.1245	0.0000	0.1301	GARLOCK SEALING TECHNOLOGIES
NY	Westchester	36119	3550800088	E00001	E01EI	10200501	5.00	SCC Descriptio	0.1783	0.0000	0.0005	SPRAYLAT CORP
NY	Westchester	36119	3550800088	E00001	E03EI	10200603	5.00	SCC Descriptio	0.0140	0.0000	0.0000	SPRAYLAT CORP
NY	Westchester	36119	3551200041	EIC001	X01EI	10200704	0.00		0.4545	0.0000	0.0012	ENGELHARD CORPORATION - PIGMENT PLANT
NY	Westchester	36119	3551200041	EU001A	P1AFP	10200602	55.00	SCC Descriptio	7.0730	0.0000	0.0191	ENGELHARD CORPORATION - PIGMENT PLANT
NY	Westchester	36119	3551800222	U00001	BOIFP	10300401	0.00		11.3435	0.0000	0.0312	SAINT JOHN'S RIVERSIDE HOSPITAL

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NY	Westchester	36119	3551800242	UFAC01	E03EI	10200504	0.00		1.1304	0.0000	0.0031	STEWART EFI NEW YORK LLC
NY	Westchester	36119	3551800342	1SDBLR	OILFP	10200502	55.00	SCC Descriptio	1.4602	0.0000	0.0040	YONKERS JOINT WWTP
NY	Westchester	36119	3551800342	EIC001	E09EI	10300603	5.00	SCC Descriptio	0.3800	0.0000	0.0010	YONKERS JOINT WWTP
NY	Westchester	36119	3552000007	00MAIN	NG2FP	10200602	55.00	SCC Descriptio	3.8606	0.0000	0.0104	BEDFORD HILLS CORRECTIONAL FACILITY
NY	Westchester	36119	3553400075	U00001	001FP	10300601	150.00	SCC Descriptio	14.5000	0.0000	0.0392	LANDMARK @ EASTVIEW
NY	Westchester	36119	3553400075	U00002	003FP	10300602	55.00	SCC Descriptio	3.4032	0.0000	0.0084	LANDMARK @ EASTVIEW
NY	Westchester	36119	3553400075	U00003	005FP	10300602	55.00	SCC Descriptio	3.0000	0.0000	0.0074	LANDMARK @ EASTVIEW
NY	Westchester	36119	3553400157	0U0001	002EI	10300601	150.00	SCC Descriptio	2.6406	0.0000	0.0071	WESTCHESTER COUNTY HEALTH CARE CORP
NY	Westchester	36119	3553400189	000101	CH1FP	10300602	55.00	SCC Descriptio	9.7250	0.0000	0.0240	VALHALLA CAMPUS (GRASSLANDS)
NY	Westchester	36119	3553400189	000101	CH2FP	10300501	55.00	SCC Descriptio	0.4350	0.0000	0.0012	VALHALLA CAMPUS (GRASSLANDS)
NY	Westchester	36119	3555400036	A00001	COMFP	10200402	55.00	SCC Descriptio	42.7785	0.0000	0.1175	TJ WATSON RESEARCH CENTER
NY	Westchester	36119	3555400036	EI0001	E03EI	10200502	55.00	SCC Descriptio	0.7794	0.0000	0.0021	TJ WATSON RESEARCH CENTER
NY	Westchester	36119	3555400036	EI0001	E01EI	10201002	55.00	SCC Descriptio	0.0826	0.0000	0.0002	TJ WATSON RESEARCH CENTER
NY	Wyoming	36121	9563200007	MBC001	001FP	10200202	251.00	Title V Permit	167.5740	0.0000	0.4604	MORTON SALT DIV
NY	Wyoming	36121	9563200007	MBC001	002FP	10200601	251.00	Title V Permit	0.4519	0.0000	0.0012	MORTON SALT DIV
PA	Adams	42001	420010009	101	1	10200603	7.50	MANEVU2002	1.4500	0.0000	0.0038	SCHINDLER ELEVATOR CORP/GETTYSBURG
PA	Adams	42001	420010019	031	1	10300603	6.10	MANEVU2002	0.2420	0.0000	0.0001	MCCLARIN PLASTICS INC/BLETTNER AVE
PA	Adams	42001	420010050	104	3	10200504	55.00	MANEVU2002	2.3788	0.0000	0.0133	CARMEUSE LIME INC/HANOVER LIME PLT
PA	Adams	42001	420010050	105	1	10200504	0.00	MANEVU2002	4.2896	0.0000	0.0170	CARMEUSE LIME INC/HANOVER LIME PLT
PA	Adams	42001	420010050	106	1	10200504	55.00	MANEVU2002	7.3420	0.0000	0.0218	CARMEUSE LIME INC/HANOVER LIME PLT
PA	Adams	42001	420010557	103	3	10300503	5.00	John Hulsberg	0.0560	0.0000	0.0002	RAVEN ROCK MTN COMPLEX/SITE R
PA	Adams	42001	420010557	103	4	10300503	5.00	John Hulsberg	0.0560	0.0000	0.0002	RAVEN ROCK MTN COMPLEX/SITE R
PA	Allegheny	42003	4200300002	003	1	10200104	0.00		21.9621	0.0011	0.0011	THE LANE CONSTRUCTION BRIDGEVILLE
PA	Allegheny	42003	4200300003	018	1	10200603	5.00	SCC Descriptio	1.1819	0.0000	0.0032	UNIVERSAL STAINLESS & ALLOY PRODUCTS
PA	Allegheny	42003	4200300005	B01	1	10300602	55.00	SCC Descriptio	4.0075	0.0000	0.0026	UNIVERSITY OF PITTSBURGH (MAIN CAMPUS)
PA	Allegheny	42003	4200300005	H01	1	10300602	55.00	SCC Descriptio	0.0794	0.0000	0.0001	UNIVERSITY OF PITTSBURGH (MAIN CAMPUS)
PA	Allegheny	42003	4200300005	HW1	1	10300602	55.00	SCC Descriptio	0.4781	0.0000	0.0013	UNIVERSITY OF PITTSBURGH (MAIN CAMPUS)
PA	Allegheny	42003	4200300008	032	1	10200602	55.00	SCC Descriptio	0.0200	0.0000	0.0000	NEVILLE CHEMICAL COMPANY
PA	Allegheny	42003	4200300008	033	1	10200501	0.00		0.5500	0.0000	0.0000	NEVILLE CHEMICAL COMPANY
PA	Allegheny	42003	4200300008	034	1	10200602	55.00	SCC Descriptio	0.0230	0.0000	0.0000	NEVILLE CHEMICAL COMPANY
PA	Allegheny	42003	4200300008	035	1	10200501	0.00		14.6900	0.0007	0.0007	NEVILLE CHEMICAL COMPANY
PA	Allegheny	42003	4200300008	037	1	10200501	0.00		29.5900	0.1036	0.1036	NEVILLE CHEMICAL COMPANY
PA	Allegheny	42003	4200300009	001	1	10200205	61.50	Gary Fischman	12.8138	0.0572	0.0572	PITTSBURGH BREWING CO. PITTSBURGH
PA	Allegheny	42003	4200300009	003	1	10200205	61.50	Gary Fischman	12.3900	0.0572	0.0572	PITTSBURGH BREWING CO. PITTSBURGH
PA	Allegheny	42003	4200300009	005	1	10200602	61.50	Gary Fischman	2.8290	0.0000	0.0040	PITTSBURGH BREWING CO. PITTSBURGH
PA	Allegheny	42003	4200300016	001	3	10200602	9.00	MANEVU2002	9.5580	0.0263	0.0263	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	003	2	10200603	5.00	SCC Descriptio	0.1373	0.0004	0.0004	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	006	1	10200603	5.00	SCC Descriptio	1.0087	0.0000	0.0028	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	007	1	10200603	5.00	SCC Descriptio	1.0087	0.0028	0.0028	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	008	1	10200602	55.00	SCC Descriptio	4.7078	0.0001	0.0001	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	009	1	10200603	5.00	SCC Descriptio	0.0267	0.0000	0.0001	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	011	1	10200603	5.00	SCC Descriptio	0.4626	0.0077	0.0077	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	012	1	10200603	5.00	SCC Descriptio	0.4626	0.0077	0.0077	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	013	1	10200603	9.00	MANEVU2002	0.4626	0.0077	0.0077	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	014	1	10200603	5.00	SCC Descriptio	0.4626	0.0077	0.0077	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	017	2	10200603	5.00	SCC Descriptio	0.0155	0.0001	0.0001	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	022	1	10200603	9.00	MANEVU2002	0.3048	0.0025	0.0025	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	023	1	10200603	9.00	MANEVU2002	0.3048	0.0025	0.0025	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	028	1	10200603	9.00	MANEVU2002	1.7509	0.0048	0.0048	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300022	005	1	10200601	400.00	Gary Fischman	8.4200	0.0229	0.0229	SHENANGO INC.
PA	Allegheny	42003	4200300022	006	1	10200707	400.00	Gary Fischman	66.2300	0.0018	0.0018	SHENANGO INC.
PA	Allegheny	42003	4200300022	007	1	10200501	400.00	Gary Fischman	0.4700	0.0000	0.0013	SHENANGO INC.

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Allegheny	42003	4200300022	008	1	10200601	532.00	Gary Fischman	4.6170	0.0125	0.0125	SHENANGO INC.
PA	Allegheny	42003	4200300022	009	1	10200707	532.00	Gary Fischman	62.3500	0.0017	0.0017	SHENANGO INC.
PA	Allegheny	42003	4200300022	010	1	10200501	532.00	Gary Fischman	0.1400	0.0000	0.0004	SHENANGO INC.
PA	Allegheny	42003	4200300022	036	1	10200602	55.00	SCC Descriptio	0.1685	0.0005	0.0005	SHENANGO INC.
PA	Allegheny	42003	4200300024	001	1	10200205	91.00	Gary Fischman	65.3111	0.0016	0.0016	DLM FOODS
PA	Allegheny	42003	4200300024	002	1	10200602	91.00	Gary Fischman	1.9750	0.0000	0.0046	DLM FOODS
PA	Allegheny	42003	4200300024	003	1	10200205	91.00	Gary Fischman	62.8526	0.0016	0.0016	DLM FOODS
PA	Allegheny	42003	4200300024	005	1	10200205	61.00	Gary Fischman	46.1447	0.0011	0.0011	DLM FOODS
PA	Allegheny	42003	4200300024	006	1	10200602	61.00	Gary Fischman	0.7300	0.0000	0.0017	DLM FOODS
PA	Allegheny	42003	4200300024	007	1	10200205	61.00	Gary Fischman	36.8403	0.0009	0.0009	DLM FOODS
PA	Allegheny	42003	4200300024	008	1	10200602	61.00	Gary Fischman	0.5850	0.0000	0.0014	DLM FOODS
PA	Allegheny	42003	4200300024	013	1	10200601	150.00	SCC Descriptio	0.0369	0.0000	0.0000	DLM FOODS
PA	Allegheny	42003	4200300027	004	1	10200603	5.00	SCC Descriptio	1.9761	0.0001	0.0001	KOPPERS INDUSTRIES INC. CLAIRTON PLANT
PA	Allegheny	42003	4200300027	005	1	10200603	5.00	SCC Descriptio	3.5591	0.0001	0.0001	KOPPERS INDUSTRIES INC. CLAIRTON PLANT
PA	Allegheny	42003	4200300027	007	1	10200603	5.00	SCC Descriptio	1.0055	0.0000	0.0028	KOPPERS INDUSTRIES INC. CLAIRTON PLANT
PA	Allegheny	42003	4200300028	001	1	10300602	55.00	SCC Descriptio	2.0835	0.0000	0.0037	UPMC MAGEE HOSPITAL
PA	Allegheny	42003	4200300028	002	1	10300501	0.00		0.0500	0.0000	0.0000	UPMC MAGEE HOSPITAL
PA	Allegheny	42003	4200300028	003	1	10300602	55.00	SCC Descriptio	2.0835	0.0000	0.0037	UPMC MAGEE HOSPITAL
PA	Allegheny	42003	4200300028	004	1	10300501	0.00		0.0500	0.0000	0.0000	UPMC MAGEE HOSPITAL
PA	Allegheny	42003	4200300028	005	1	10300602	55.00	SCC Descriptio	2.0835	0.0000	0.0037	UPMC MAGEE HOSPITAL
PA	Allegheny	42003	4200300028	006	1	10300501	0.00		0.0500	0.0000	0.0000	UPMC MAGEE HOSPITAL
PA	Allegheny	42003	4200300032	047	1	10200707	0.00		8.8200	0.0000	0.0010	USS - CLAIRTON WORKS
PA	Allegheny	42003	4200300032	049	1	10200707	0.00		5.5200	0.0000	0.0000	USS - CLAIRTON WORKS
PA	Allegheny	42003	4200300032	051	1	10200707	0.00		5.3500	0.0000	0.0000	USS - CLAIRTON WORKS
PA	Allegheny	42003	4200300032	053	1	10200707	0.00		5.3500	0.0000	0.0000	USS - CLAIRTON WORKS
PA	Allegheny	42003	4200300051	003	1	10300603	5.00	SCC Descriptio	0.1018	0.0000	0.0001	PRUETT-SCHAFFER CHEMICAL CO., INC.
PA	Allegheny	42003	4200300065	002	1	10200602	55.00	SCC Descriptio	2.0463	0.0000	0.0000	GENERAL MOTORS PITTSBURGH PLANT
PA	Allegheny	42003	4200300065	006	1	10300603	5.00	SCC Descriptio	0.3168	0.0000	0.0000	GENERAL MOTORS PITTSBURGH PLANT
PA	Allegheny	42003	4200300065	007	1	10200603	5.00	SCC Descriptio	0.1056	0.0000	0.0003	GENERAL MOTORS PITTSBURGH PLANT
PA	Allegheny	42003	4200300065	008	1	10200603	5.00	SCC Descriptio	0.0117	0.0000	0.0000	GENERAL MOTORS PITTSBURGH PLANT
PA	Allegheny	42003	4200300065	009	1	10300603	5.00	SCC Descriptio	0.0235	0.0000	0.0000	GENERAL MOTORS PITTSBURGH PLANT
PA	Allegheny	42003	4200300065	010	1	10300603	5.00	SCC Descriptio	0.0528	0.0000	0.0000	GENERAL MOTORS PITTSBURGH PLANT
PA	Allegheny	42003	4200300065	011	1	10300603	5.00	SCC Descriptio	0.0704	0.0000	0.0002	GENERAL MOTORS PITTSBURGH PLANT
PA	Allegheny	42003	4200300065	013	1	10300603	5.00	SCC Descriptio	0.0029	0.0000	0.0000	GENERAL MOTORS PITTSBURGH PLANT
PA	Allegheny	42003	4200300073	001	1	10300601	150.00	Gary Fischman	13.7011	0.0000	0.0000	PITTSBURGH ALLEGHENY COUNTY THERMAL, LTD
PA	Allegheny	42003	4200300073	003	1	10300601	150.00	Gary Fischman	29.0604	0.0000	0.0000	PITTSBURGH ALLEGHENY COUNTY THERMAL, LTD
PA	Allegheny	42003	4200300073	005	1	10300601	150.00	Gary Fischman	34.0863	0.1408	0.1408	PITTSBURGH ALLEGHENY COUNTY THERMAL, LTD
PA	Allegheny	42003	4200300073	007	1	10300601	150.00	Gary Fischman	14.1882	0.0000	0.0000	PITTSBURGH ALLEGHENY COUNTY THERMAL, LTD
PA	Allegheny	42003	4200300075	009	1	10200603	5.00	SCC Descriptio	0.2790	0.0008	0.0008	LIBERTY POLYGLAS PULTRUSIONS
PA	Allegheny	42003	4200300092	004	1	10300603	5.00	SCC Descriptio	0.0188	0.0002	0.0002	NATIONAL ENERGY TECHNOLOGY LAB - PGH
PA	Allegheny	42003	4200300092	005	1	10300602	55.00	SCC Descriptio	0.0229	0.0002	0.0002	NATIONAL ENERGY TECHNOLOGY LAB - PGH
PA	Allegheny	42003	4200300092	006	1	10300603	5.00	SCC Descriptio	0.0111	0.0001	0.0001	NATIONAL ENERGY TECHNOLOGY LAB - PGH
PA	Allegheny	42003	4200300092	007	1	10300603	5.00	SCC Descriptio	0.0050	0.0000	0.0000	NATIONAL ENERGY TECHNOLOGY LAB - PGH
PA	Allegheny	42003	4200300092	008	1	10300603	5.00	SCC Descriptio	0.0007	0.0000	0.0000	NATIONAL ENERGY TECHNOLOGY LAB - PGH
PA	Allegheny	42003	4200300092	009	1	10300603	5.00	SCC Descriptio	0.0540	0.0004	0.0004	NATIONAL ENERGY TECHNOLOGY LAB - PGH
PA	Allegheny	42003	4200300093	002	1	10200602	55.00	SCC Descriptio	0.8500	0.0054	0.0054	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	004	1	10200602	55.00	SCC Descriptio	0.8500	0.0054	0.0054	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	008	1	10200603	5.00	SCC Descriptio	0.7000	0.0000	0.0012	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	009	1	10200602	55.00	SCC Descriptio	5.1000	0.0002	0.0002	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	010	1	10200603	5.00	SCC Descriptio	2.4500	0.0001	0.0001	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	011	1	10200603	5.00	SCC Descriptio	1.7000	0.0001	0.0001	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	019	1	10200602	55.00	SCC Descriptio	4.4000	0.0001	0.0001	ALLEGHENY LUDLUM CORP - BRACKENRIDGE

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PA	Allegheny	42003	4200300093	020	1	10200602	55.00	SCC Descriptio	3.3500	0.0001	0.0001	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	021	1	10200603	5.00	SCC Descriptio	2.6500	0.0001	0.0001	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	022	1	10200602	55.00	SCC Descriptio	5.9000	0.0002	0.0002	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	023	1	10200603	5.00	SCC Descriptio	0.9500	0.0000	0.0023	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	024	1	10200603	5.00	SCC Descriptio	0.6500	0.0000	0.0015	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	025	1	10200603	5.00	SCC Descriptio	2.5500	0.0001	0.0001	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	026	3	10200603	5.00	SCC Descriptio	0.1500	0.0000	0.0004	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	027	1	10200603	5.00	SCC Descriptio	0.5500	0.0000	0.0013	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	028	1	10200602	55.00	SCC Descriptio	5.8500	0.0006	0.0006	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	028	2	10200602	55.00	SCC Descriptio	5.8500	0.0006	0.0006	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	028	3	10200602	55.00	SCC Descriptio	5.8500	0.0006	0.0006	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	028	4	10200602	55.00	SCC Descriptio	4.3500	0.0005	0.0005	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	028	5	10200602	55.00	SCC Descriptio	1.8000	0.0002	0.0002	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	029	1	10200602	55.00	SCC Descriptio	1.8000	0.0005	0.0005	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	029	2	10200602	55.00	SCC Descriptio	1.8000	0.0005	0.0005	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	037	1	10200603	5.00	SCC Descriptio	0.5000	0.0000	0.0012	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	040	1	10200603	5.00	SCC Descriptio	1.3000	0.0000	0.0030	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	041	1	10200603	5.00	SCC Descriptio	0.7500	0.0000	0.0017	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	043	1	10200602	55.00	SCC Descriptio	0.3000	0.0000	0.0007	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	044	1	10200603	5.00	SCC Descriptio	0.0500	0.0000	0.0001	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	046	1	10200602	55.00	SCC Descriptio	6.8000	0.0003	0.0003	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	049	1	10200603	5.00	SCC Descriptio	0.1500	0.0000	0.0003	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	054	1	10200602	55.00	SCC Descriptio	9.9000	0.0002	0.0002	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	055	1	10200603	5.00	SCC Descriptio	4.0500	0.0035	0.0035	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	066	1	10200603	5.00	SCC Descriptio	0.1000	0.0000	0.0001	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300102	018	1	10200501	0.00		0.1621	0.0000	0.0000	KINDER MORGAN INDIANOLA PLANT
PA	Allegheny	42003	4200300102	103	1	10300602	55.00	SCC Descriptio	0.1505	0.0000	0.0000	KINDER MORGAN INDIANOLA PLANT
PA	Allegheny	42003	4200300102	104	1	10200602	55.00	SCC Descriptio	5.3319	0.0110	0.0110	KINDER MORGAN INDIANOLA PLANT
PA	Allegheny	42003	4200300114	013	1	10300501	0.00		0.0300	0.0000	0.0000	MOTIVA ENTERPRISES LLC
PA	Allegheny	42003	4200300121	002	4	10200602	58.40	Gary Fischman	14.5840	0.0396	0.0396	ASHLAND SPECIALTY CHEMICAL CO - NEVILLE
PA	Allegheny	42003	4200300121	003	1	10200601	113.00	Gary Fischman	29.1123	0.0222	0.0222	ASHLAND SPECIALTY CHEMICAL CO - NEVILLE
PA	Allegheny	42003	4200300121	004	1	10200602	55.00	SCC Descriptio	0.8673	0.0017	0.0017	ASHLAND SPECIALTY CHEMICAL CO - NEVILLE
PA	Allegheny	42003	4200300121	005	1	10200602	55.00	SCC Descriptio	1.7449	0.0047	0.0047	ASHLAND SPECIALTY CHEMICAL CO - NEVILLE
PA	Allegheny	42003	4200300122	001	1	10200602	43.40	MANEVU2002	8.9900	0.0002	0.0002	REICHHOLD, INC.
PA	Allegheny	42003	4200300122	003	1	10200602	5.10	MANEVU2002	0.0550	0.0000	0.0002	REICHHOLD, INC.
PA	Allegheny	42003	4200300122	004	1	10200602	70.00	MANEVU2002	0.0001	0.0000	0.0000	REICHHOLD, INC.
PA	Allegheny	42003	4200300122	009	1	10200602	12.00	MANEVU2002	1.7250	0.0000	0.0047	REICHHOLD, INC.
PA	Allegheny	42003	4200300122	010	2	10200602	5.00	MANEVU2002	0.4050	0.0011	0.0011	REICHHOLD, INC.
PA	Allegheny	42003	4200300122	012	2	10300501	55.00	SCC Descriptio	0.0001	0.0000	0.0000	REICHHOLD, INC.
PA	Allegheny	42003	4200300122	012	1	10300602	55.00	SCC Descriptio	0.0005	0.0000	0.0000	REICHHOLD, INC.
PA	Allegheny	42003	4200300122	013	1	10300603	5.30	MANEVU2002	0.0900	0.0000	0.0002	REICHHOLD, INC.
PA	Allegheny	42003	4200300122	014	2	10300603	5.00	SCC Descriptio	0.5600	0.0000	0.0015	REICHHOLD, INC.
PA	Allegheny	42003	4200300134	001	1	10200602	66.50	Gary Fischman	25.0100	0.0680	0.0680	GALVTECH
PA	Allegheny	42003	4200300134	001	2	10200602	66.50	Gary Fischman	8.2500	0.0224	0.0224	GALVTECH
PA	Allegheny	42003	4200300134	001	3	10200602	66.50	Gary Fischman	1.0000	0.0027	0.0027	GALVTECH
PA	Allegheny	42003	4200300140	019	1	10200602	55.00	SCC Descriptio	0.9820	0.0000	0.0000	ALLEGHENY COUNTY SANITARY AUTHORITY
PA	Allegheny	42003	4200300144	001	1	10300207	124.00	Gary Fischman	34.7917	0.1160	0.1160	BELLEFIELD BOILER PLANT
PA	Allegheny	42003	4200300144	002	1	10300602	74.00	Gary Fischman	13.0620	0.0005	0.0005	BELLEFIELD BOILER PLANT
PA	Allegheny	42003	4200300144	003	1	10300208	163.00	Gary Fischman	6.2277	0.0778	0.0778	BELLEFIELD BOILER PLANT
PA	Allegheny	42003	4200300144	004	1	10300207	115.00	Gary Fischman	57.8164	0.1527	0.1527	BELLEFIELD BOILER PLANT
PA	Allegheny	42003	4200300144	005	1	10300602	115.00	Gary Fischman	12.1984	0.0368	0.0368	BELLEFIELD BOILER PLANT
PA	Allegheny	42003	4200300144	008	1	10300207	134.00	Gary Fischman	33.7787	0.0008	0.0008	BELLEFIELD BOILER PLANT

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PA	Allegheny	42003	4200300144	009	1	10300602	74.00	Gary Fischman	10.5791	0.0005	0.0005	BELLEFIELD BOILER PLANT
PA	Allegheny	42003	4200300144	010	1	10300601	179.00	Gary Fischman	25.8870	0.0863	0.0863	BELLEFIELD BOILER PLANT
PA	Allegheny	42003	4200300144	012	1	10300601	179.00	Gary Fischman	2.8529	0.1854	0.1854	BELLEFIELD BOILER PLANT
PA	Allegheny	42003	4200300145	B02	1	10300602	30.00	MANEVU2002	0.2850	0.0000	0.0000	PPG INDUSTRIES - CHEMICALS TECHNICAL CTR
PA	Allegheny	42003	4200300145	B03	1	10300602	35.00	MANEVU2002	0.9550	0.0000	0.0038	PPG INDUSTRIES - CHEMICALS TECHNICAL CTR
PA	Allegheny	42003	4200300145	B04	1	10300602	35.00	MANEVU2002	0.5650	0.0000	0.0031	PPG INDUSTRIES - CHEMICALS TECHNICAL CTR
PA	Allegheny	42003	4200300145	B05	1	10300602	35.00	MANEVU2002	0.5400	0.0000	0.0030	PPG INDUSTRIES - CHEMICALS TECHNICAL CTR
PA	Allegheny	42003	4200300154	009	1	10300603	5.00	SCC Descriptio	0.0520	0.0000	0.0001	GENERAL ELECTRIC APPARATUS SERVICE
PA	Allegheny	42003	4200300154	010	1	10300603	5.00	SCC Descriptio	0.0105	0.0000	0.0000	GENERAL ELECTRIC APPARATUS SERVICE
PA	Allegheny	42003	4200300164	019	1	10200603	5.00	SCC Descriptio	0.1925	0.0000	0.0000	GE CONSUMER PRODUCTS, LIGHTING
PA	Allegheny	42003	4200300164	020	1	10200603	5.00	SCC Descriptio	0.1285	0.0000	0.0000	GE CONSUMER PRODUCTS, LIGHTING
PA	Allegheny	42003	4200300165	B01	1	10300603	5.00	SCC Descriptio	4.0235	0.0000	0.0000	GLENSHAW GLASS COMPANY, INC.
PA	Allegheny	42003	4200300171	P04	1	10200602	55.00	SCC Descriptio	0.4150	0.0026	0.0026	CP INDUSTRIES
PA	Allegheny	42003	4200300171	P05	1	10200602	55.00	SCC Descriptio	0.6250	0.0039	0.0039	CP INDUSTRIES
PA	Allegheny	42003	4200300171	P06	1	10200603	5.00	SCC Descriptio	0.4378	0.0037	0.0037	CP INDUSTRIES
PA	Allegheny	42003	4200300175	011	1	10200603	5.00	SCC Descriptio	0.0357	0.0000	0.0001	ROYSTON LABORATORIES DIVISION
PA	Allegheny	42003	4200300176	001	1	10200602	35.00	MANEVU2002	1.9743	0.0002	0.0002	MERCY HOSPITAL OF PITTSBURGH
PA	Allegheny	42003	4200300176	001	2	10200502	35.00	MANEVU2002	0.0025	0.0000	0.0000	MERCY HOSPITAL OF PITTSBURGH
PA	Allegheny	42003	4200300176	002	1	10200602	31.00	MANEVU2002	0.4254	0.0001	0.0001	MERCY HOSPITAL OF PITTSBURGH
PA	Allegheny	42003	4200300176	007	1	10200602	35.00	MANEVU2002	3.2035	0.0192	0.0192	MERCY HOSPITAL OF PITTSBURGH
PA	Allegheny	42003	4200300176	007	2	10200502	35.00	MANEVU2002	0.0025	0.0000	0.0000	MERCY HOSPITAL OF PITTSBURGH
PA	Allegheny	42003	4200300176	008	1	10200602	35.00	MANEVU2002	1.4242	0.0175	0.0175	MERCY HOSPITAL OF PITTSBURGH
PA	Allegheny	42003	4200300176	008	2	10200502	35.00	MANEVU2002	0.0033	0.0000	0.0000	MERCY HOSPITAL OF PITTSBURGH
PA	Allegheny	42003	4200300183	002	1	10300207	40.00	MANEVU2002	6.1771	0.0000	0.0000	STATE CORRECTIONAL INSTITUTION -- PGH.
PA	Allegheny	42003	4200300183	004	1	10300602	40.00	MANEVU2002	2.1057	0.0001	0.0001	STATE CORRECTIONAL INSTITUTION -- PGH.
PA	Allegheny	42003	4200300191	05A	1	10200602	55.00	SCC Descriptio	2.7885	0.0042	0.0042	PPG INDUSTRIES, INC. SPRINGDALE
PA	Allegheny	42003	4200300191	06A	1	10200602	55.00	SCC Descriptio	2.9509	0.0038	0.0038	PPG INDUSTRIES, INC. SPRINGDALE
PA	Allegheny	42003	4200300196	001	1	10200603	5.00	SCC Descriptio	1.1601	0.0082	0.0082	THE LANE MCKEES ROCK ASPHALT PLANT
PA	Allegheny	42003	4200300196	002	1	10200104	0.00		26.4070	0.0019	0.0019	THE LANE MCKEES ROCK ASPHALT PLANT
PA	Allegheny	42003	4200300202	027	1	10200707	41.30	Gary Fischman	24.2000	0.0006	0.0006	USS CORPORATION - EDGAR THOMSON WORKS
PA	Allegheny	42003	4200300202	028	1	10200603	42.36	Gary Fischman	12.7000	0.0002	0.0002	USS CORPORATION - EDGAR THOMSON WORKS
PA	Allegheny	42003	4200300202	048	1	10200707	0.00		1.0744	0.0029	0.0029	USS CORPORATION - EDGAR THOMSON WORKS
PA	Allegheny	42003	4200300202	049	1	10200707	0.00		0.9184	0.0025	0.0025	USS CORPORATION - EDGAR THOMSON WORKS
PA	Allegheny	42003	4200300202	055	1	10200603	5.00	SCC Descriptio	7.4500	0.0089	0.0089	USS CORPORATION - EDGAR THOMSON WORKS
PA	Allegheny	42003	4200300203	001	1	10200707	79.80	Gary Fischman	23.9632	0.0625	0.0625	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300203	002	1	10200602	79.80	Gary Fischman	3.9745	0.0099	0.0099	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300203	003	1	10200707	84.60	Gary Fischman	21.0956	0.0390	0.0390	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300203	004	1	10200602	84.60	Gary Fischman	3.5930	0.0001	0.0001	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300203	005	1	10200707	0.00		5.7768	0.0188	0.0188	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300203	006	1	10200602	55.00	SCC Descriptio	0.9515	0.0030	0.0030	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300203	007	1	10200707	0.00		5.7152	0.0002	0.0002	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300203	008	1	10200602	55.00	SCC Descriptio	0.9465	0.0000	0.0030	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300203	034	1	10200603	5.00	SCC Descriptio	15.2135	0.0001	0.0001	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300208	001	2	10200402	55.00	SCC Descriptio	4.9884	0.0000	0.0225	KINDER-MORGAN LIQUIDS TERMINAL LLC
PA	Allegheny	42003	4200300208	001	1	10200602	55.00	SCC Descriptio	0.9527	0.0000	0.0043	KINDER-MORGAN LIQUIDS TERMINAL LLC
PA	Allegheny	42003	4200300208	002	1	10200602	55.00	SCC Descriptio	0.1019	0.0000	0.0002	KINDER-MORGAN LIQUIDS TERMINAL LLC
PA	Allegheny	42003	4200300208	003	1	10200602	55.00	SCC Descriptio	0.1185	0.0000	0.0000	KINDER-MORGAN LIQUIDS TERMINAL LLC
PA	Allegheny	42003	4200300208	008	1	10200602	55.00	SCC Descriptio	0.1793	0.0007	0.0007	KINDER-MORGAN LIQUIDS TERMINAL LLC
PA	Allegheny	42003	4200300221	001	1	10200602	55.00	SCC Descriptio	0.6100	0.0090	0.0090	VA MEDICAL CENTER - HIGHLAND DRIVE FAC
PA	Allegheny	42003	4200300221	001	2	10200502	55.00	SCC Descriptio	0.0007	0.0000	0.0000	VA MEDICAL CENTER - HIGHLAND DRIVE FAC
PA	Allegheny	42003	4200300221	002	1	10200602	55.00	SCC Descriptio	0.7210	0.0031	0.0031	VA MEDICAL CENTER - HIGHLAND DRIVE FAC
PA	Allegheny	42003	4200300221	002	2	10200502	55.00	SCC Descriptio	0.0027	0.0000	0.0000	VA MEDICAL CENTER - HIGHLAND DRIVE FAC

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PA	Allegheny	42003	4200300221	003	1	10200602	55.00	SCC Descriptio	1.2553	0.0142	0.0142	VA MEDICAL CENTER - HIGHLAND DRIVE FAC
PA	Allegheny	42003	4200300221	003	2	10200502	55.00	SCC Descriptio	0.0015	0.0000	0.0000	VA MEDICAL CENTER - HIGHLAND DRIVE FAC
PA	Allegheny	42003	4200300227	011	1	10300603	5.00	SCC Descriptio	0.0709	0.0014	0.0014	KOPP GLASS, INCORPORATED
PA	Allegheny	42003	4200300227	012	1	10300603	5.00	SCC Descriptio	0.2637	0.0053	0.0053	KOPP GLASS, INCORPORATED
PA	Allegheny	42003	4200300228	003	1	10200603	5.00	SCC Descriptio	0.3430	0.0011	0.0011	PRECOAT METALS, A DIV. OF SEQUA COATINGS
PA	Allegheny	42003	4200300228	004	1	10200603	5.00	SCC Descriptio	0.2572	0.0008	0.0008	PRECOAT METALS, A DIV. OF SEQUA COATINGS
PA	Allegheny	42003	4200300228	005	1	10200603	5.00	SCC Descriptio	1.0456	0.0034	0.0034	PRECOAT METALS, A DIV. OF SEQUA COATINGS
PA	Allegheny	42003	4200300228	006	1	10200603	5.00	SCC Descriptio	0.4380	0.0000	0.0000	PRECOAT METALS, A DIV. OF SEQUA COATINGS
PA	Allegheny	42003	4200300228	007	1	10200603	5.00	SCC Descriptio	0.2519	0.0000	0.0000	PRECOAT METALS, A DIV. OF SEQUA COATINGS
PA	Allegheny	42003	4200300240	003	3	10200501	55.00	SCC Descriptio	9.1600	0.0382	0.0382	VALLEY PROTEINS (PA), INC.
PA	Allegheny	42003	4200300240	003	1	10200602	55.00	SCC Descriptio	0.0013	0.0000	0.0000	VALLEY PROTEINS (PA), INC.
PA	Allegheny	42003	4200300240	003	2	10200501	55.00	SCC Descriptio	0.0025	0.0000	0.0000	VALLEY PROTEINS (PA), INC.
PA	Allegheny	42003	4200300241	B1G	1	10200602	55.00	SCC Descriptio	1.4322	0.0081	0.0081	BAKE- LINE GROUP LLC
PA	Allegheny	42003	4200300241	B2G	1	10200602	55.00	SCC Descriptio	1.4324	0.0000	0.0000	BAKE- LINE GROUP LLC
PA	Allegheny	42003	4200300255	B01	1	10200603	5.00	SCC Descriptio	0.2054	0.0007	0.0007	BAKERSTOWN CONTAINER CORPORATION
PA	Allegheny	42003	4200300258	001	3	10300602	58.70	MANEVU2002	4.9102	0.0107	0.0107	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	001	4	10300602	58.70	MANEVU2002	2.4040	0.0052	0.0052	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	001	1	10300602	58.70	MANEVU2002	1.0719	0.0023	0.0023	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	001	2	10300602	58.70	MANEVU2002	1.0113	0.0022	0.0022	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	001	5	10300602	58.70	MANEVU2002	0.6155	0.0013	0.0013	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	001	7	10300602	58.70	MANEVU2002	0.3342	0.0007	0.0007	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	001	6	10300602	58.70	MANEVU2002	0.1621	0.0004	0.0004	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	003	1	10300603	5.40	MANEVU2002	0.1567	0.0000	0.0000	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	004	1	10300603	7.00	MANEVU2002	0.2908	0.0756	0.0756	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	004	2	10300603	7.00	MANEVU2002	0.2908	0.0756	0.0756	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	008	1	10300502	58.70	MANEVU2002	0.0050	0.0000	0.0000	UPMC SHADYSIDE
PA	Allegheny	42003	4200300259	B1G	1	10300602	20.90	MANEVU2002	0.4257	0.0000	0.0000	BETTIS ATOMIC POWER LABORATORY
PA	Allegheny	42003	4200300259	B2G	1	10300602	20.90	MANEVU2002	0.4634	0.0000	0.0000	BETTIS ATOMIC POWER LABORATORY
PA	Allegheny	42003	4200300259	B3F	1	10300501	21.00	MANEVU2002	0.0002	0.0000	0.0000	BETTIS ATOMIC POWER LABORATORY
PA	Allegheny	42003	4200300259	B3G	1	10300602	21.00	MANEVU2002	0.5063	0.0000	0.0000	BETTIS ATOMIC POWER LABORATORY
PA	Allegheny	42003	4200300259	B4F	1	10300501	21.00	MANEVU2002	0.0005	0.0000	0.0000	BETTIS ATOMIC POWER LABORATORY
PA	Allegheny	42003	4200300259	B4G	1	10300602	21.00	MANEVU2002	0.4821	0.0000	0.0000	BETTIS ATOMIC POWER LABORATORY
PA	Allegheny	42003	4200300259	SCG	1	10300603	5.00	SCC Descriptio	2.6920	0.0000	0.0000	BETTIS ATOMIC POWER LABORATORY
PA	Allegheny	42003	4200300259	VHG	1	10300602	88.50	MANEVU2002	0.5029	0.0000	0.0006	BETTIS ATOMIC POWER LABORATORY
PA	Allegheny	42003	4200300265	001	11	10200603	5.00	SCC Descriptio	0.3748	0.0000	0.0010	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300265	006	1	10200602	55.00	SCC Descriptio	0.1826	0.0000	0.0004	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300265	007	1	10200602	55.00	SCC Descriptio	0.1084	0.0000	0.0003	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300265	008	1	10200602	55.00	SCC Descriptio	1.7055	0.0000	0.0022	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300265	010	1	10200602	38.00	Gary Fischman	1.0698	0.0002	0.0002	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300265	015	1	10200602	55.00	SCC Descriptio	2.9337	0.0001	0.0001	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300265	019	3	10200603	5.00	SCC Descriptio	0.8678	0.0000	0.0024	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300265	019	1	10200603	5.00	SCC Descriptio	1.8054	0.0001	0.0001	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300265	020	1	10200603	5.00	SCC Descriptio	0.1542	0.0000	0.0004	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300280	002	1	10300602	55.00	SCC Descriptio	0.0240	0.0001	0.0001	DURA - BOND INDUSTRIES INC.
PA	Allegheny	42003	4200300280	004	1	10300603	5.00	SCC Descriptio	0.1550	0.0005	0.0005	DURA - BOND INDUSTRIES INC.
PA	Allegheny	42003	4200300280	005	1	10300603	5.00	SCC Descriptio	0.1550	0.0005	0.0005	DURA - BOND INDUSTRIES INC.
PA	Allegheny	42003	4200300280	006	1	10300603	5.00	SCC Descriptio	0.1550	0.0005	0.0005	DURA - BOND INDUSTRIES INC.
PA	Allegheny	42003	4200300280	009	1	10300603	5.00	SCC Descriptio	0.3050	0.0011	0.0011	DURA - BOND INDUSTRIES INC.
PA	Allegheny	42003	4200300281	001	1	10200602	55.00	SCC Descriptio	0.0475	0.0000	0.0000	VA MEDICAL CENTER - ASPINWAL FACILITY
PA	Allegheny	42003	4200300281	002	1	10200602	55.00	SCC Descriptio	0.7594	0.0000	0.0000	VA MEDICAL CENTER - ASPINWAL FACILITY
PA	Allegheny	42003	4200300281	003	1	10200602	55.00	SCC Descriptio	0.6215	0.0030	0.0030	VA MEDICAL CENTER - ASPINWAL FACILITY
PA	Allegheny	42003	4200300281	004	1	10200602	55.00	SCC Descriptio	0.6499	0.0000	0.0000	VA MEDICAL CENTER - ASPINWAL FACILITY

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PA	Allegheny	42003	4200300303	001	1	10200603	5.00	SCC Descriptio	1.3033	0.0000	0.0014	RANBAR TECHNOLOGY INC.
PA	Allegheny	42003	4200300310	006	1	10200603	5.00	SCC Descriptio	0.3072	0.0000	0.0008	THE VALSPAR CORPORATION
PA	Allegheny	42003	4200300310	007	1	10200603	5.00	SCC Descriptio	0.3072	0.0000	0.0008	THE VALSPAR CORPORATION
PA	Allegheny	42003	4200300310	008	1	10200603	5.00	SCC Descriptio	0.4096	0.0011	0.0011	THE VALSPAR CORPORATION
PA	Allegheny	42003	4200300310	009	1	10200603	5.00	SCC Descriptio	0.4096	0.0000	0.0011	THE VALSPAR CORPORATION
PA	Allegheny	42003	4200300310	011	1	10200603	5.00	SCC Descriptio	0.0661	0.0000	0.0002	THE VALSPAR CORPORATION
PA	Allegheny	42003	4200300310	012	1	10200603	5.00	SCC Descriptio	0.2080	0.0006	0.0006	THE VALSPAR CORPORATION
PA	Allegheny	42003	4200300310	013	1	10200603	5.00	SCC Descriptio	0.2080	0.0006	0.0006	THE VALSPAR CORPORATION
PA	Allegheny	42003	4200300310	014	1	10200603	5.00	SCC Descriptio	0.1689	0.0006	0.0006	THE VALSPAR CORPORATION
PA	Allegheny	42003	4200300311	001	1	10300207	0.00		19.5113	0.0000	0.0000	CDC, NIOSH, PITTSBURGH RESEARCH LAB.
PA	Allegheny	42003	4200300311	003	1	10300602	55.00	SCC Descriptio	0.2575	0.0000	0.0000	CDC, NIOSH, PITTSBURGH RESEARCH LAB.
PA	Allegheny	42003	4200300311	004	1	10300602	55.00	SCC Descriptio	0.1300	0.0000	0.0000	CDC, NIOSH, PITTSBURGH RESEARCH LAB.
PA	Allegheny	42003	4200300312	004	5	10300603	5.00	SCC Descriptio	0.0854	0.0002	0.0002	MCCONWAY & TORLEY CORPORATION
PA	Allegheny	42003	4200300312	004	6	10300603	5.00	SCC Descriptio	0.0854	0.0002	0.0002	MCCONWAY & TORLEY CORPORATION
PA	Allegheny	42003	4200300312	005	1	10300603	5.00	SCC Descriptio	3.8023	0.0111	0.0111	MCCONWAY & TORLEY CORPORATION
PA	Allegheny	42003	4200300312	006	1	10300603	5.00	SCC Descriptio	0.1282	0.0004	0.0004	MCCONWAY & TORLEY CORPORATION
PA	Allegheny	42003	4200300316	001	3	10200602	55.00	SCC Descriptio	1.1047	0.0000	0.0030	BARBER SPRING
PA	Allegheny	42003	4200300316	001	4	10200602	55.00	SCC Descriptio	0.5524	0.0000	0.0015	BARBER SPRING
PA	Allegheny	42003	4200300316	001	1	10200602	55.00	SCC Descriptio	0.1990	0.0000	0.0005	BARBER SPRING
PA	Allegheny	42003	4200300316	001	2	10200602	55.00	SCC Descriptio	0.1990	0.0000	0.0005	BARBER SPRING
PA	Allegheny	42003	4200300316	002	3	10200602	55.00	SCC Descriptio	0.5524	0.0000	0.0015	BARBER SPRING
PA	Allegheny	42003	4200300316	002	4	10200602	55.00	SCC Descriptio	0.3006	0.0000	0.0008	BARBER SPRING
PA	Allegheny	42003	4200300316	002	1	10200602	55.00	SCC Descriptio	0.1016	0.0000	0.0003	BARBER SPRING
PA	Allegheny	42003	4200300316	002	2	10200602	55.00	SCC Descriptio	0.1016	0.0000	0.0003	BARBER SPRING
PA	Allegheny	42003	4200300316	003	2	10200602	55.00	SCC Descriptio	0.6498	0.0000	0.0018	BARBER SPRING
PA	Allegheny	42003	4200300316	003	1	10200602	55.00	SCC Descriptio	0.1990	0.0000	0.0005	BARBER SPRING
PA	Allegheny	42003	4200300316	003	3	10200602	55.00	SCC Descriptio	0.1016	0.0000	0.0003	BARBER SPRING
PA	Allegheny	42003	4200300330	002	1	10300602	55.00	SCC Descriptio	0.5000	0.0020	0.0020	LOZIER CORPORATION
PA	Allegheny	42003	4200300332	I02	1	10200602	55.00	SCC Descriptio	0.0847	0.0000	0.0000	PENNSYLVANIA ELECTRIC COIL LTD
PA	Allegheny	42003	4200300335	B01	1	10200602	55.00	SCC Descriptio	2.1600	0.0000	0.0000	UNIV OF PITT APPLIED RESEARCH CTR- UPARC
PA	Allegheny	42003	4200300335	B02	1	10200602	55.00	SCC Descriptio	1.4700	0.0000	0.0000	UNIV OF PITT APPLIED RESEARCH CTR- UPARC
PA	Allegheny	42003	4200300335	B03	1	10200602	55.00	SCC Descriptio	2.7250	0.0000	0.0144	UNIV OF PITT APPLIED RESEARCH CTR- UPARC
PA	Allegheny	42003	4200300335	B04	1	10200602	55.00	SCC Descriptio	2.0650	0.0000	0.0000	UNIV OF PITT APPLIED RESEARCH CTR- UPARC
PA	Allegheny	42003	4200300335	B05	1	10300603	5.00	SCC Descriptio	0.0650	0.0000	0.0000	UNIV OF PITT APPLIED RESEARCH CTR- UPARC
PA	Allegheny	42003	4200300335	B06	1	10300603	5.00	SCC Descriptio	0.0600	0.0000	0.0000	UNIV OF PITT APPLIED RESEARCH CTR- UPARC
PA	Allegheny	42003	4200300342	001	2	10200603	5.00	SCC Descriptio	0.0150	0.0000	0.0000	GUARDIAN INDUSTRIES CORP. FLOREFFE
PA	Allegheny	42003	4200300342	003	2	10200603	5.00	SCC Descriptio	0.1050	0.0003	0.0003	GUARDIAN INDUSTRIES CORP. FLOREFFE
PA	Allegheny	42003	4200300342	004	1	10200603	5.00	SCC Descriptio	0.6500	0.0018	0.0018	GUARDIAN INDUSTRIES CORP. FLOREFFE
PA	Allegheny	42003	4200300346	B01	1	10200602	55.00	SCC Descriptio	0.0432	0.0000	0.0001	PITT PENN OIL COMPANY
PA	Allegheny	42003	4200300346	B02	1	10300603	5.00	SCC Descriptio	0.0969	0.0000	0.0000	PITT PENN OIL COMPANY
PA	Allegheny	42003	4200300351	0B1	1	10300603	5.00	SCC Descriptio	0.1040	0.0000	0.0000	DICE COMPRESSOR STATION
PA	Allegheny	42003	4200300358	B01	1	10200602	55.00	SCC Descriptio	1.2523	0.0047	0.0047	UNION ELECTRIC STEEL CORPORATION
PA	Allegheny	42003	4200300358	B01	2	10200604	55.00	SCC Descriptio	0.4019	0.0015	0.0015	UNION ELECTRIC STEEL CORPORATION
PA	Allegheny	42003	4200300360	009	1	10200603	5.00	SCC Descriptio	0.1045	0.0003	0.0003	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	017	1	10200603	5.00	SCC Descriptio	0.1479	0.0004	0.0004	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	019	1	10200603	5.00	SCC Descriptio	0.1479	0.0004	0.0004	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	023	1	10200603	5.00	SCC Descriptio	0.1479	0.0004	0.0004	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	029	1	10200602	55.00	SCC Descriptio	0.4903	0.0013	0.0013	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	030	1	10200602	55.00	SCC Descriptio	0.4903	0.0013	0.0013	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	031	1	10200603	5.00	SCC Descriptio	0.1204	0.0003	0.0003	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	047	1	10200603	5.00	SCC Descriptio	0.2452	0.0007	0.0007	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	048	1	10200603	5.00	SCC Descriptio	0.2452	0.0007	0.0007	US AIRWAYS MAINTENANCE BASE

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PA	Allegheny	42003	4200300360	054	1	10200603	5.00	SCC Descriptio	0.1450	0.0004	0.0004	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	092	1	10200603	5.00	SCC Descriptio	0.2547	0.0007	0.0007	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	095	1	10200603	5.00	SCC Descriptio	0.2547	0.0007	0.0007	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	101	1	10200603	5.00	SCC Descriptio	0.2735	0.0007	0.0007	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300379	003	1	10300603	5.00	SCC Descriptio	0.7215	0.0019	0.0019	BEST FEEDS & FARM SUPPLIES, INC.
PA	Allegheny	42003	4200300379	003	2	10300603	5.00	SCC Descriptio	0.7215	0.0019	0.0019	BEST FEEDS & FARM SUPPLIES, INC.
PA	Allegheny	42003	4200300389	001	1	10300602	55.00	SCC Descriptio	4.0865	0.0005	0.0005	NRG ENERGY CENTER PITTSBURGH
PA	Allegheny	42003	4200300389	003	1	10300602	92.00	Gary Fischman	11.3950	0.0007	0.0007	NRG ENERGY CENTER PITTSBURGH
PA	Allegheny	42003	4200300389	005	1	10300601	131.10	Gary Fischman	28.1216	0.0009	0.0009	NRG ENERGY CENTER PITTSBURGH
PA	Allegheny	42003	4200300389	008	1	10300602	55.00	SCC Descriptio	0.3250	0.0000	0.0000	NRG ENERGY CENTER PITTSBURGH
PA	Allegheny	42003	4200300498	001	1	10300602	55.00	SCC Descriptio	1.2321	0.0246	0.0246	FOX CHAPEL SENIOR HIGH SCHOOL
PA	Allegheny	42003	4200300498	001	2	10300602	55.00	SCC Descriptio	0.0649	0.0013	0.0013	FOX CHAPEL SENIOR HIGH SCHOOL
PA	Allegheny	42003	4200300564	001	1	10300602	16.90	MANEVU2002	0.3019	0.0000	0.0000	ALLDERDICE SCHOOL
PA	Allegheny	42003	4200300564	002	2	10300602	16.90	MANEVU2002	0.3019	0.0000	0.0000	ALLDERDICE SCHOOL
PA	Allegheny	42003	4200300564	003	3	10300602	13.90	MANEVU2002	0.3019	0.0000	0.0000	ALLDERDICE SCHOOL
PA	Allegheny	42003	4200300564	004	3	10300602	13.90	MANEVU2002	0.0425	0.0005	0.0005	ALLDERDICE SCHOOL
PA	Allegheny	42003	4200300573	001	1	10300602	55.00	MANEVU2002	0.1808	0.0000	0.0000	ARSENAL SCHOOL
PA	Allegheny	42003	4200300573	002	2	10300602	55.00	MANEVU2002	0.1808	0.0000	0.0000	ARSENAL SCHOOL
PA	Allegheny	42003	4200300573	003	3	10300602	55.00	MANEVU2002	0.1808	0.0000	0.0000	ARSENAL SCHOOL
PA	Allegheny	42003	4200300577	002	2	10300602	12.00	MANEVU2002	0.3100	0.0000	0.0000	CARRICK SCHOOL
PA	Allegheny	42003	4200300577	003	3	10300602	12.00	MANEVU2002	0.3100	0.0000	0.0000	CARRICK SCHOOL
PA	Allegheny	42003	4200300577	004	1	10300603	12.00	MANEVU2002	0.0002	0.0000	0.0000	CARRICK SCHOOL
PA	Allegheny	42003	4200300577	005	1	10300603	12.00	MANEVU2002	0.0003	0.0000	0.0000	CARRICK SCHOOL
PA	Allegheny	42003	4200300581	001	1	10300602	21.00	MANEVU2002	0.4158	0.0000	0.0000	CONNELLEY SCHOOL
PA	Allegheny	42003	4200300581	002	2	10300602	21.00	MANEVU2002	0.4158	0.0000	0.0000	CONNELLEY SCHOOL
PA	Allegheny	42003	4200300581	003	3	10300602	21.00	MANEVU2002	0.4158	0.0000	0.0000	CONNELLEY SCHOOL
PA	Allegheny	42003	4200300581	005	1	10300602	21.00	MANEVU2002	0.0001	0.0000	0.0000	CONNELLEY SCHOOL
PA	Allegheny	42003	4200300611	001	1	10300602	12.60	MANEVU2002	0.3238	0.0001	0.0001	SCHENLEY SCHOOL
PA	Allegheny	42003	4200300611	002	2	10300602	12.60	MANEVU2002	0.3238	0.0001	0.0001	SCHENLEY SCHOOL
PA	Allegheny	42003	4200300611	003	3	10300602	12.60	MANEVU2002	0.3238	0.0001	0.0001	SCHENLEY SCHOOL
PA	Allegheny	42003	4200300611	004	4	10300603	4.30	MANEVU2002	0.1795	0.0005	0.0005	SCHENLEY SCHOOL
PA	Allegheny	42003	4200300617	001	1	10300602	14.40	MANEVU2002	0.2751	0.0000	0.0000	SOUTH HIGH SCHOOL
PA	Allegheny	42003	4200300617	002	2	10300602	14.40	MANEVU2002	0.2751	0.0000	0.0000	SOUTH HIGH SCHOOL
PA	Allegheny	42003	4200300617	003	3	10300602	14.40	MANEVU2002	0.2751	0.0000	0.0000	SOUTH HIGH SCHOOL
PA	Allegheny	42003	4200300623	005	1	10300602	55.00	SCC Descriptio	0.2453	0.0000	0.0000	WESTINGHOUSE SCHOOL
PA	Allegheny	42003	4200300623	006	1	10300602	55.00	SCC Descriptio	0.2453	0.0000	0.0000	WESTINGHOUSE SCHOOL
PA	Allegheny	42003	4200300623	007	1	10300603	0.80	MANEVU2002	0.0148	0.0000	0.0000	WESTINGHOUSE SCHOOL
PA	Allegheny	42003	4200300623	008	1	10300602	55.00	SCC Descriptio	0.2453	0.0000	0.0000	WESTINGHOUSE SCHOOL
PA	Allegheny	42003	4200300623	009	1	10300603	0.80	MANEVU2002	0.0148	0.0000	0.0000	WESTINGHOUSE SCHOOL
PA	Allegheny	42003	4200300623	010	1	10300603	0.80	MANEVU2002	0.0148	0.0000	0.0000	WESTINGHOUSE SCHOOL
PA	Allegheny	42003	4200300634	001	1	10300602	11.70	MANEVU2002	0.4283	0.0001	0.0001	CENTRAL FOOD KITCHEN
PA	Allegheny	42003	4200300634	002	2	10300602	11.70	MANEVU2002	0.4283	0.0001	0.0001	CENTRAL FOOD KITCHEN
PA	Allegheny	42003	4200300634	003	3	10300602	11.70	MANEVU2002	0.4283	0.0001	0.0001	CENTRAL FOOD KITCHEN
PA	Allegheny	42003	4200300634	004	1	10300603	11.70	MANEVU2002	0.0012	0.0000	0.0000	CENTRAL FOOD KITCHEN
PA	Allegheny	42003	4200300705	B01	1	10200602	55.00	SCC Descriptio	0.8500	0.0106	0.0106	DUQUESNE UNIVERSITY
PA	Allegheny	42003	4200300705	B02	1	10200602	55.00	SCC Descriptio	0.6500	0.0046	0.0046	DUQUESNE UNIVERSITY
PA	Allegheny	42003	4200300705	B03	1	10200602	55.00	SCC Descriptio	0.7500	0.0105	0.0105	DUQUESNE UNIVERSITY
PA	Allegheny	42003	4200300705	B04	1	10200602	55.00	SCC Descriptio	0.4000	0.0005	0.0005	DUQUESNE UNIVERSITY
PA	Allegheny	42003	4200300746	007	1	10200502	55.00	SCC Descriptio	1.7900	0.0000	0.0000	ALLEGHENY VALLEY HOSPITAL
PA	Allegheny	42003	4200300755	001	2	10300501	33.50	MANEVU2002	0.0184	0.0000	0.0001	UPMC MCKEESPORT
PA	Allegheny	42003	4200300755	001	1	10300602	33.50	MANEVU2002	0.9741	0.0001	0.0001	UPMC MCKEESPORT
PA	Allegheny	42003	4200300755	002	2	10300501	33.50	MANEVU2002	0.0184	0.0000	0.0001	UPMC MCKEESPORT

									2002 NOx Emissions			
								Source of Boiler Size		Summer Day from	Summer Day	
							Size	Data	Annual	Inventory	Calculated	
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	mmBtu/hr		(tpy)	(tpd)	(tpd)	Plant Name
PA	Allegheny	42003	4200300755	002	1	10300602	33.50	MANEVU2002	0.9741	0.0001	0.0001	UPMC MCKEESPORT
PA	Allegheny	42003	4200300760	001	1	10200602	55.00	SCC Descriptio	7.9500	0.0216	0.0216	METALTECH
PA	Allegheny	42003	4200300760	001	2	10200602	55.00	SCC Descriptio	7.9500	0.0216	0.0216	METALTECH
PA	Allegheny	42003	4200300760	001	4	10200602	55.00	SCC Descriptio	0.9250	0.0025	0.0025	METALTECH
PA	Allegheny	42003	4200300760	001	3	10200602	55.00	SCC Descriptio	0.0230	0.0001	0.0001	METALTECH
PA	Allegheny	42003	4200300766	001	1	10300602	55.00	SCC Descriptio	1.0084	0.0032	0.0032	UPMC SOUTHSIDE
PA	Allegheny	42003	4200300766	001	2	10300602	55.00	SCC Descriptio	1.0084	0.0032	0.0032	UPMC SOUTHSIDE
PA	Allegheny	42003	4200300766	001	3	10300501	55.00	SCC Descriptio	0.0048	0.0000	0.0000	UPMC SOUTHSIDE
PA	Allegheny	42003	4200300766	001	4	10300501	55.00	SCC Descriptio	0.0048	0.0000	0.0000	UPMC SOUTHSIDE
PA	Allegheny	42003	4200300767	002	3	10200603	5.00	SCC Descriptio	0.3290	0.0011	0.0011	TRINITY INDUSTRIES, INC. PLT # 441
PA	Allegheny	42003	4200300809	020	1	10300501	0.00		0.1272	0.0000	0.0000	GULF OIL LIMITED PARTNERSHIP NEVILLE IS
PA	Allegheny	42003	4200300812	011	1	10300602	55.00	SCC Descriptio	2.6500	0.0001	0.0001	ARROW CONCRETE COMPANY
PA	Allegheny	42003	4200300839	006	1	10300603	5.00	SCC Descriptio	0.0103	0.0003	0.0003	PITTSBURGH ELECTRICAL INSULATION
PA	Allegheny	42003	4200300839	007	1	10300603	5.00	SCC Descriptio	0.0069	0.0003	0.0003	PITTSBURGH ELECTRICAL INSULATION
PA	Allegheny	42003	4200300839	009	1	10200602	55.00	SCC Descriptio	0.0344	0.0000	0.0000	PITTSBURGH ELECTRICAL INSULATION
PA	Allegheny	42003	4200300839	010	1	10300602	55.00	SCC Descriptio	0.0172	0.0007	0.0007	PITTSBURGH ELECTRICAL INSULATION
PA	Allegheny	42003	4200300881	4	3	10200602	44.40	MANEVU2002	1.6440	0.0048	0.0048	BOX USA
PA	Allegheny	42003	4200300885	012	1	10200603	5.00	SCC Descriptio	3.1000	0.0031	0.0031	WINTHROP MANAGEMENT - US STEEL TOWER
PA	Allegheny	42003	4200300885	012	3	10200603	5.00	SCC Descriptio	2.3500	0.0023	0.0023	WINTHROP MANAGEMENT - US STEEL TOWER
PA	Allegheny	42003	4200300885	012	2	10200603	5.00	SCC Descriptio	1.5500	0.0015	0.0015	WINTHROP MANAGEMENT - US STEEL TOWER
PA	Allegheny	42003	4200300889	001	1	10200602	55.00	SCC Descriptio	9.3800	0.0255	0.0255	NEXTECH
PA	Allegheny	42003	4200300889	001	2	10200602	55.00	SCC Descriptio	2.0630	0.0056	0.0056	NEXTECH
PA	Allegheny	42003	4200300889	001	4	10200602	55.00	SCC Descriptio	0.0520	0.0001	0.0001	NEXTECH
PA	Allegheny	42003	4200300895	001	9	10300602	5.00	SCC Descriptio	0.1473	0.0011	0.0011	WHEMCO - WEST HOMESTEAD FACILITY
PA	Allegheny	42003	4200300895	001	1	10300603	5.00	SCC Descriptio	0.3715	0.0000	0.0010	WHEMCO - WEST HOMESTEAD FACILITY
PA	Allegheny	42003	4200300895	001	2	10300602	5.00	SCC Descriptio	0.3284	0.0000	0.0009	WHEMCO - WEST HOMESTEAD FACILITY
PA	Allegheny	42003	4200300895	001	6	10300602	5.00	SCC Descriptio	0.0688	0.0000	0.0002	WHEMCO - WEST HOMESTEAD FACILITY
PA	Allegheny	42003	4200300895	001	7	10300603	5.00	SCC Descriptio	1.6009	0.0001	0.0001	WHEMCO - WEST HOMESTEAD FACILITY
PA	Allegheny	42003	4200300895	001	4	10300603	5.00	SCC Descriptio	0.0101	0.0000	0.0000	WHEMCO - WEST HOMESTEAD FACILITY
PA	Allegheny	42003	4200300895	001	5	10300603	5.00	SCC Descriptio	0.0101	0.0000	0.0000	WHEMCO - WEST HOMESTEAD FACILITY
PA	Allegheny	42003	4200300899	005	1	10200603	5.00	SCC Descriptio	0.4000	0.0002	0.0002	ACEOMATIC RECON, LLC
PA	Allegheny	42003	4200300907	001	2	10300602	123.00	MANEVU2002	2.3700	0.0046	0.0046	UPMC - OAKLAND CAMPUS
PA	Allegheny	42003	4200300907	001	3	10300602	123.00	MANEVU2002	2.1049	0.0041	0.0041	UPMC - OAKLAND CAMPUS
PA	Allegheny	42003	4200300907	001	1	10300602	123.00	MANEVU2002	1.6125	0.0032	0.0032	UPMC - OAKLAND CAMPUS
PA	Allegheny	42003	4200300912	002	1	10200602	55.00	SCC Descriptio	1.7167	0.0000	0.0000	VA MEDICAL CENTER - OAKLAND FACILITY
PA	Allegheny	42003	4200300912	003	1	10200602	55.00	SCC Descriptio	1.1265	0.0000	0.0000	VA MEDICAL CENTER - OAKLAND FACILITY
PA	Allegheny	42003	4200300912	004	1	10200602	55.00	SCC Descriptio	1.0013	0.0000	0.0052	VA MEDICAL CENTER - OAKLAND FACILITY
PA	Allegheny	42003	4200300913	001	2	10200707	0.00		0.5624	0.0000	0.0015	BRADDOCK RECOVERY, INC.
PA	Allegheny	42003	4200300913	002	2	10200707	0.00		3.0056	0.0001	0.0001	BRADDOCK RECOVERY, INC.
PA	Allegheny	42003	4200300950	001	1	10300602	55.00	SCC Descriptio	0.7042	0.0005	0.0005	MT. LEBANON HIGH SCHOOL
PA	Allegheny	42003	4200300950	001	2	10300602	55.00	SCC Descriptio	0.7042	0.0005	0.0005	MT. LEBANON HIGH SCHOOL
PA	Allegheny	42003	4200300950	001	3	10300602	55.00	SCC Descriptio	0.7042	0.0005	0.0005	MT. LEBANON HIGH SCHOOL
PA	Allegheny	42003	4200300951	B02	1	10200602	55.00	SCC Descriptio	0.4561	0.0000	0.0013	NASH_ELMO INDUSTRIES, L.L.C.
PA	Allegheny	42003	4200300982	001	1	10300603	5.00	SCC Descriptio	0.4774	0.0000	0.0013	WHEMCO - HAYS PLANT
PA	Allegheny	42003	4200300982	001	8	10300603	5.00	SCC Descriptio	0.4613	0.0000	0.0013	WHEMCO - HAYS PLANT
PA	Allegheny	42003	4200300982	001	4	10300603	5.00	SCC Descriptio	0.4384	0.0000	0.0012	WHEMCO - HAYS PLANT
PA	Allegheny	42003	4200300982	001	2	10300602	5.00	SCC Descriptio	0.4119	0.0000	0.0011	WHEMCO - HAYS PLANT
PA	Allegheny	42003	4200300982	001	5	10300603	5.00	SCC Descriptio	0.3830	0.0000	0.0011	WHEMCO - HAYS PLANT
PA	Allegheny	42003	4200300982	001	3	10300602	5.00	SCC Descriptio	0.2437	0.0000	0.0007	WHEMCO - HAYS PLANT
PA	Allegheny	42003	4200300982	001	6	10300603	5.00	SCC Descriptio	0.1785	0.0000	0.0005	WHEMCO - HAYS PLANT
PA	Allegheny	42003	4200300982	001	7	10300602	5.00	SCC Descriptio	0.1148	0.0000	0.0003	WHEMCO - HAYS PLANT
PA	Allegheny	42003	4200301012	005	1	10200603	5.00	SCC Descriptio	0.0410	0.0001	0.0001	LIBERTY-PITTSBURGH SYSTEMS, INC.

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Allegheny	42003	4200301019	001	1	10300602	21.00	MANEVU2002	1.8465	0.0032	0.0032	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	001	2	10300602	21.00	MANEVU2002	1.3580	0.0024	0.0024	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	001	3	10300602	21.00	MANEVU2002	0.3615	0.0006	0.0006	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	002	1	10300501	21.00	MANEVU2002	0.0232	0.0005	0.0005	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	002	2	10300501	21.00	MANEVU2002	0.0170	0.0004	0.0004	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	002	3	10300501	21.00	MANEVU2002	0.0046	0.0001	0.0001	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	005	1	10300602	55.00	SCC Descriptio	0.0360	0.0000	0.0000	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	005	2	10300602	55.00	SCC Descriptio	0.0360	0.0000	0.0000	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	006	1	10300602	55.00	SCC Descriptio	0.0340	0.0000	0.0000	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	006	2	10300602	55.00	SCC Descriptio	0.0340	0.0000	0.0000	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301021	H01	1	10200602	55.00	SCC Descriptio	0.0204	0.0001	0.0001	PANNIER CORPORATION, GRAPHICS DIVISION
PA	Allegheny	42003	4200301021	P01	3	10200602	55.00	SCC Descriptio	0.0402	0.0002	0.0002	PANNIER CORPORATION, GRAPHICS DIVISION
PA	Allegheny	42003	4200301032	C01	1	10200603	5.00	SCC Descriptio	0.3650	0.0058	0.0058	AMERICAN BRIDGE MANUFACTURING
PA	Allegheny	42003	4200301033	001	8	10200603	5.00	SCC Descriptio	0.0575	0.0001	0.0001	HOECHSTETTER PRINTING
PA	Allegheny	42003	4200301033	001	3	10300602	5.00	SCC Descriptio	0.1900	0.0002	0.0002	HOECHSTETTER PRINTING
PA	Allegheny	42003	4200301033	001	6	10300602	5.00	SCC Descriptio	0.0245	0.0000	0.0000	HOECHSTETTER PRINTING
PA	Armstrong	42005	420050008	100	1	10200602	55.00	MANEVU2002	0.9746	0.0000	0.0000	FREEPORT BRICK CO/FREEPORT BORO
PA	Armstrong	42005	420050008	101	1	10200602	55.00	MANEVU2002	1.1450	0.0000	0.0035	FREEPORT BRICK CO/FREEPORT BORO
PA	Armstrong	42005	420050013	032	1	10200603	1.00	MANEVU2002	0.9000	0.0000	0.0024	DOMINION PEOPLES/VALLEY STA
PA	Armstrong	42005	420050015	032	1	10200603	5.50	MANEVU2002	0.2000	0.0000	0.0000	DOMINION TRANS INC/SOUTH BEND STA
PA	Armstrong	42005	420050100	P05	1	10200603	1.00	MANEVU2002	0.0730	0.0000	0.0000	NATURES BLEND WOOD PROD/FORD CITY
PA	Armstrong	42005	420050371	031	1	10300603	5.00	MANEVU2002	0.2680	0.0000	0.0004	KITTANNING BRICK CO/REESEDALE
PA	Armstrong	42005	420050371	100	1	10200602	55.00	SCC Descriptio	0.4880	0.0000	0.0012	KITTANNING BRICK CO/REESEDALE
PA	Armstrong	42005	420050371	101	1	10200602	55.00	SCC Descriptio	0.3460	0.0000	0.0000	KITTANNING BRICK CO/REESEDALE
PA	Armstrong	42005	420050371	102	1	10200602	55.00	SCC Descriptio	0.0310	0.0000	0.0000	KITTANNING BRICK CO/REESEDALE
PA	Armstrong	42005	420050371	103	1	10200603	5.00	SCC Descriptio	0.1276	0.0000	0.0004	KITTANNING BRICK CO/REESEDALE
PA	Armstrong	42005	420050371	105	1	10200603	5.00	SCC Descriptio	0.1492	0.0000	0.0004	KITTANNING BRICK CO/REESEDALE
PA	Beaver	42007	420070003	032	1	10300602	48.80	MANEVU2002	3.6800	0.0000	0.0000	CUTLER HAMMER/BEAVER
PA	Beaver	42007	420070003	033	1	10300602	25.00	MANEVU2002	1.7700	0.0000	0.0000	CUTLER HAMMER/BEAVER
PA	Beaver	42007	420070022	033	1	10200602	20.90	MANEVU2002	2.3000	0.0000	0.0058	ARMSTRONG WORLD IND /BEAVER FALLS
PA	Beaver	42007	420070027	033	1	10200603	5.00	SCC Descriptio	1.5400	0.0000	0.0019	KOPPEL STEEL CORP/KOPPEL
PA	Beaver	42007	420070043	040	1	10200602	49.90	MANEVU2002	9.1300	0.0000	0.0191	JEWEL ACQUISITION/MIDLAND FAC
PA	Beaver	42007	420070043	041	1	10200603	9.30	MANEVU2002	14.0000	0.0000	0.0092	JEWEL ACQUISITION/MIDLAND FAC
PA	Beaver	42007	420070043	041	2	10200603	9.30	MANEVU2002	14.0000	0.0000	0.0092	JEWEL ACQUISITION/MIDLAND FAC
PA	Beaver	42007	420070043	050	1	10200603	5.00	MANEVU2002	0.0090	0.0000	0.0000	JEWEL ACQUISITION/MIDLAND FAC
PA	Beaver	42007	420070043	209	1	10200602	55.00	SCC Descriptio	2.8700	0.0000	0.0079	JEWEL ACQUISITION/MIDLAND FAC
PA	Beaver	42007	420070044	134	1	10200603	191.60	MANEVU2002	7.4600	0.0000	0.0221	WHEMCO FOUNDRY/MIDLAND
PA	Beaver	42007	420070044	135	1	10200603	8.00	MANEVU2002	0.3300	0.0000	0.0009	WHEMCO FOUNDRY/MIDLAND
PA	Beaver	42007	420070055	032	1	10200602	12.90	MANEVU2002	0.9100	0.0000	0.0024	SCA PKG NORTH AMERICA /NEW BRIGHTON FAC
PA	Beaver	42007	420070119	036	1	10300602	8.50	MANEVU2002	6.5000	0.0000	0.0200	DOMINION TRANS INC/BEAVER
PA	Beaver	42007	420070165	EU-7	1	10300603	5.00	MANEVU2002	1.2700	0.0000	0.0000	US GYPSUM CO/ALIQUIPPA
PA	Beaver	42007	420071036	031	1	10200602	16.70	MANEVU2002	1.3445	0.0000	0.0000	NORFOLK SOUTHERN RAILWAY/CONWAY
PA	Beaver	42007	420071036	032	1	10200602	16.70	MANEVU2002	1.3000	0.0000	0.0000	NORFOLK SOUTHERN RAILWAY/CONWAY
PA	Beaver	42007	420071036	033	1	10200602	16.70	MANEVU2002	1.3000	0.0000	0.0000	NORFOLK SOUTHERN RAILWAY/CONWAY
PA	Bedford	42009	420090004	031	1	10200603	5.00	SCC Descriptio	1.7000	0.0000	0.0013	BEDFORD MATERIALS/BEDFORD
PA	Bedford	42009	420090004	C01	1	10200601	150.00	SCC Descriptio	18.6000	0.0000	0.0513	BEDFORD MATERIALS/BEDFORD
PA	Bedford	42009	420090004	C02	1	10200601	150.00	SCC Descriptio	9.8000	0.0000	0.0270	BEDFORD MATERIALS/BEDFORD
PA	Bedford	42009	420090008	032	1	10200603	5.00	SCC Descriptio	0.4800	0.0000	0.0011	HEDSTROM CORP/BEDFORD PLT
PA	Bedford	42009	420090009	HTR2	1	10200602	11.00	MANEVU2002	2.7000	0.0000	0.0047	COLUMBIA GAS TRANS CORP/ARTEMAS COMP STA
PA	Bedford	42009	420090009	HTR3	1	10200603	5.60	MANEVU2002	1.0000	0.0000	0.0018	COLUMBIA GAS TRANS CORP/ARTEMAS COMP STA
PA	Bedford	42009	420090009	HTR4	1	10200603	5.00	MANEVU2002	0.8000	0.0000	0.0010	COLUMBIA GAS TRANS CORP/ARTEMAS COMP STA
PA	Bedford	42009	420090013	031	1	10200603	20.30	MANEVU2002	1.0778	0.0000	0.0019	CANNONDALE BICYCLE CORP/BEDFORD PLT

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Bedford	42009	420090359	031	1	10300501	21.00	MANEVU2002	1.2940	0.0000	0.0028	SETON/SAXTON PLT
PA	Berks	42011	420110002	034	1	10200401	28.80	MANEVU2002	2.2600	0.0000	0.0002	COUNTY OF BERKS/BERKS COUNTY COMPLEX
PA	Berks	42011	420110002	035	1	10200401	28.80	MANEVU2002	5.1700	0.0000	0.0114	COUNTY OF BERKS/BERKS COUNTY COMPLEX
PA	Berks	42011	420110002	036	1	10200401	28.80	MANEVU2002	3.4900	0.0000	0.0081	COUNTY OF BERKS/BERKS COUNTY COMPLEX
PA	Berks	42011	420110002	037	1	10300501	2.70	MANEVU2002	0.2500	0.0000	0.0010	COUNTY OF BERKS/BERKS COUNTY COMPLEX
PA	Berks	42011	420110002	038	1	10300501	2.70	MANEVU2002	0.2500	0.0000	0.0010	COUNTY OF BERKS/BERKS COUNTY COMPLEX
PA	Berks	42011	420110008	031	1	10300102	25.80	MANEVU2002	2.6616	0.0000	0.0000	PA STATE SYS OF HIGHER ED/KUTZTOWN UNIV OF PA
PA	Berks	42011	420110008	032	1	10300102	25.80	MANEVU2002	6.8528	0.0000	0.0000	PA STATE SYS OF HIGHER ED/KUTZTOWN UNIV OF PA
PA	Berks	42011	420110008	033	1	10300102	38.60	MANEVU2002	12.9722	0.0000	0.0000	PA STATE SYS OF HIGHER ED/KUTZTOWN UNIV OF PA
PA	Berks	42011	420110008	034	3	10300602	16.80	MANEVU2002	0.5000	0.0000	0.0000	PA STATE SYS OF HIGHER ED/KUTZTOWN UNIV OF PA
PA	Berks	42011	420110008	035	2	10300102	43.60	MANEVU2002	21.3750	0.0000	0.0000	PA STATE SYS OF HIGHER ED/KUTZTOWN UNIV OF PA
PA	Berks	42011	420110008	043	1	10200602	0.80	MANEVU2002	0.2375	0.0000	0.0007	PA STATE SYS OF HIGHER ED/KUTZTOWN UNIV OF PA
PA	Berks	42011	420110014	107	2	10300603	5.00	SCC Descriptio	1.1500	0.0000	0.0030	EAST PENN MFG CO INC/SMELTER PLT
PA	Berks	42011	420110014	110	1	10200602	55.00	SCC Descriptio	1.1000	0.0000	0.0028	EAST PENN MFG CO INC/SMELTER PLT
PA	Berks	42011	420110016	033	1	10200602	39.40	MANEVU2002	0.0230	0.0000	0.0000	INTERSTATE CONTAINER/READING PLT
PA	Berks	42011	420110016	035	1	10200602	60.00	MANEVU2002	2.7124	0.0000	0.0057	INTERSTATE CONTAINER/READING PLT
PA	Berks	42011	420110016	035	2	10200501	60.00	MANEVU2002	0.0009	0.0000	0.0000	INTERSTATE CONTAINER/READING PLT
PA	Berks	42011	420110028	031	2	10300501	7.50	MANEVU2002	0.1596	0.0000	0.0000	BOYERTOWN FOUNDRY CO/FKA EAFCO
PA	Berks	42011	420110028	032	1	10300501	6.70	MANEVU2002	0.4787	0.0000	0.0004	BOYERTOWN FOUNDRY CO/FKA EAFCO
PA	Berks	42011	420110028	033	1	10300603	5.00	MANEVU2002	0.3366	0.0000	0.0000	BOYERTOWN FOUNDRY CO/FKA EAFCO
PA	Berks	42011	420110028	034	1	10300603	5.00	SCC Descriptio	0.8050	0.0000	0.0000	BOYERTOWN FOUNDRY CO/FKA EAFCO
PA	Berks	42011	420110031	041	1	10300603	8.40	MANEVU2002	0.0212	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	045	1	10300603	4.20	MANEVU2002	0.5194	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	046	1	10300603	4.20	MANEVU2002	0.5194	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	047	2	10200602	20.90	MANEVU2002	3.7400	0.0000	0.0160	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	048	2	10200602	29.40	MANEVU2002	4.0800	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	049	2	10200602	29.40	MANEVU2002	5.3700	0.0000	0.0153	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	050	1	10200603	4.20	MANEVU2002	0.0885	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	051	1	10300603	4.20	MANEVU2002	0.0722	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	052	1	10300603	4.20	MANEVU2002	0.0722	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	053	1	10300603	12.50	MANEVU2002	0.5759	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	054	2	10200602	12.50	MANEVU2002	0.5759	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	056	1	10300603	8.40	MANEVU2002	0.4907	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	059	1	10200603	61.30	MANEVU2002	0.4256	0.0000	0.0012	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	060	2	10200602	8.40	MANEVU2002	0.4907	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	062	1	10300603	1.70	MANEVU2002	0.1474	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	063	2	10200603	1.50	MANEVU2002	0.0633	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	065	1	10200603	25.00	MANEVU2002	1.5500	0.0000	0.0043	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	067	1	10200603	1.50	MANEVU2002	0.0258	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	145	1	10300603	5.00	SCC Descriptio	0.2961	0.0000	0.0007	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	146	1	10200603	5.00	SCC Descriptio	0.3555	0.0000	0.0009	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	147	1	10300603	5.00	SCC Descriptio	0.4880	0.0000	0.0012	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	148	1	10300603	5.00	SCC Descriptio	0.1089	0.0000	0.0002	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	149	1	10300603	5.00	MANEVU2002	0.1192	0.0000	0.0003	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	150	1	10300603	5.00	MANEVU2002	0.0008	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	151	1	10300603	5.00	SCC Descriptio	0.2635	0.0000	0.0007	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	152	1	10300603	5.00	MANEVU2002	0.3621	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	153	1	10300603	5.00	SCC Descriptio	0.3621	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	154	1	10300603	5.00	SCC Descriptio	0.2260	0.0000	0.0006	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	155	2	10200603	5.00	SCC Descriptio	0.4852	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	156	1	10300603	5.00	SCC Descriptio	0.2054	0.0000	0.0006	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	157	1	10300603	5.00	SCC Descriptio	0.0992	0.0000	0.0003	CARPENTER TECH CORP/READING PLT

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PA	Berks	42011	420110031	158	1	10300603	5.00	SCC Descriptio	0.1072	0.0000	0.0003	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	159	1	10300603	5.00	SCC Descriptio	0.0135	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	160	1	10300603	5.00	SCC Descriptio	1.3404	0.0000	0.0034	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	161	1	10300603	5.00	SCC Descriptio	0.6530	0.0000	0.0018	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	163	1	10300603	5.00	MANEVU2002	0.4341	0.0000	0.0012	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	164	1	10200603	5.00	MANEVU2002	0.2389	0.0000	0.0007	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	165	1	10200603	5.00	MANEVU2002	0.5725	0.0000	0.0016	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	166	1	10300603	5.00	MANEVU2002	0.5720	0.0000	0.0016	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	167	1	10300603	5.00	SCC Descriptio	0.2771	0.0000	0.0008	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	168	1	10300603	5.00	SCC Descriptio	0.2418	0.0000	0.0007	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	169	1	10300603	5.00	MANEVU2002	0.0997	0.0000	0.0003	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	170	1	10300603	5.00	SCC Descriptio	0.3247	0.0000	0.0009	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	173	1	10300603	5.00	MANEVU2002	0.3669	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	174	1	10300603	5.00	SCC Descriptio	0.4866	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	182	1	10300603	5.00	SCC Descriptio	0.0805	0.0000	0.0002	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	183	1	10300603	5.00	SCC Descriptio	0.1676	0.0000	0.0005	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	184	1	10300603	5.00	MANEVU2002	4.8500	0.0000	0.0123	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	185	1	10200602	55.00	MANEVU2002	6.6300	0.0000	0.0204	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	186	1	10200602	55.00	MANEVU2002	8.3300	0.0000	0.0220	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	187	1	10200602	55.00	SCC Descriptio	25.2000	0.0000	0.0637	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	200	1	10300603	5.00	SCC Descriptio	0.2419	0.0000	0.0007	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	201	1	10300603	5.00	SCC Descriptio	0.1650	0.0000	0.0005	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	202	1	10200603	5.00	SCC Descriptio	0.3092	0.0000	0.0008	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	203	1	10200603	5.00	SCC Descriptio	0.7740	0.0000	0.0021	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	204	1	10300603	5.00	SCC Descriptio	0.1919	0.0000	0.0005	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	205	2	10200603	5.00	SCC Descriptio	0.0864	0.0000	0.0002	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	208	1	10300603	5.00	SCC Descriptio	0.0378	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	211	1	10300603	5.00	SCC Descriptio	0.2155	0.0000	0.0006	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	212	1	10300603	5.00	SCC Descriptio	0.3475	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	213	1	10300603	5.00	SCC Descriptio	0.3618	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	214	1	10300603	5.00	SCC Descriptio	0.0775	0.0000	0.0002	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	215	1	10300603	5.00	SCC Descriptio	0.9090	0.0000	0.0021	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	216	1	10300603	5.00	SCC Descriptio	0.9786	0.0000	0.0027	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	217	1	10300603	5.00	SCC Descriptio	0.8525	0.0000	0.0023	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	221	1	10300603	5.00	SCC Descriptio	0.0895	0.0000	0.0002	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	222	1	10300603	5.00	SCC Descriptio	0.4945	0.0000	0.0014	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	223	1	10300603	5.00	SCC Descriptio	0.2675	0.0000	0.0007	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	224	2	10200603	5.00	SCC Descriptio	0.3069	0.0000	0.0008	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	225	1	10300603	5.00	SCC Descriptio	0.3657	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	226	1	10300603	5.00	SCC Descriptio	0.5625	0.0000	0.0015	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	227	1	10300603	5.00	SCC Descriptio	0.3678	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	232	1	10200603	5.00	SCC Descriptio	0.0008	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	234	1	10300603	5.00	SCC Descriptio	0.7905	0.0000	0.0022	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	235	1	10300603	5.00	SCC Descriptio	1.3294	0.0000	0.0037	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	242	1	10300603	5.00	SCC Descriptio	0.2075	0.0000	0.0006	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	243	2	10200603	5.00	SCC Descriptio	0.3265	0.0000	0.0009	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	244	1	10300603	5.00	SCC Descriptio	0.1310	0.0000	0.0004	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	245	1	10300603	5.00	SCC Descriptio	0.4741	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	246	1	10300603	5.00	SCC Descriptio	0.3170	0.0000	0.0009	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	247	1	10300603	5.00	SCC Descriptio	0.1371	0.0000	0.0004	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	248	1	10300603	5.00	SCC Descriptio	0.7330	0.0000	0.0020	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	251	1	10300603	5.00	SCC Descriptio	0.1532	0.0000	0.0004	CARPENTER TECH CORP/READING PLT

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PA	Berks	42011	420110031	254	1	10300603	5.00	SCC Descriptio	0.2494	0.0000	0.0007	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	255	1	10300603	5.00	SCC Descriptio	0.4119	0.0000	0.0011	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	260	1	10300603	5.00	SCC Descriptio	0.1220	0.0000	0.0003	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	267	1	10300603	5.00	SCC Descriptio	0.0242	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	283	1	10300603	5.00	SCC Descriptio	0.2998	0.0000	0.0008	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	284	1	10300603	5.00	SCC Descriptio	0.1684	0.0000	0.0005	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	286	1	10300603	5.00	SCC Descriptio	0.3204	0.0000	0.0009	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	287	1	10200602	55.00	SCC Descriptio	0.3044	0.0000	0.0008	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	289	1	10300603	5.00	SCC Descriptio	0.1333	0.0000	0.0004	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	290	1	10300603	5.00	SCC Descriptio	0.5780	0.0000	0.0016	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	291	1	10300603	5.00	SCC Descriptio	0.4624	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	293	1	10300603	5.00	SCC Descriptio	0.5020	0.0000	0.0014	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	295	1	10300603	5.00	SCC Descriptio	0.3500	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	296	2	10200602	55.00	SCC Descriptio	0.4776	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	297	2	10200602	55.00	SCC Descriptio	0.4678	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	300	2	10200602	55.00	SCC Descriptio	1.7490	0.0000	0.0048	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	302	1	10300603	5.00	SCC Descriptio	0.0597	0.0000	0.0002	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	305	1	10300603	5.00	SCC Descriptio	0.2058	0.0000	0.0006	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	306	1	10300603	5.00	SCC Descriptio	0.8710	0.0000	0.0024	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	307	1	10300603	5.00	SCC Descriptio	0.7415	0.0000	0.0020	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	308	1	10300603	5.00	SCC Descriptio	0.5835	0.0000	0.0016	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	309	1	10300603	5.00	SCC Descriptio	0.6090	0.0000	0.0017	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	310	1	10300603	5.00	SCC Descriptio	0.6495	0.0000	0.0018	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	312	2	10200602	55.00	SCC Descriptio	1.1670	0.0000	0.0032	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	313	2	10200602	55.00	SCC Descriptio	1.6020	0.0000	0.0044	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	314	1	10300603	5.00	SCC Descriptio	0.4749	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	315	1	10300603	5.00	SCC Descriptio	0.7910	0.0000	0.0022	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	316	1	10300603	5.00	SCC Descriptio	0.6700	0.0000	0.0018	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	317	1	10300603	5.00	SCC Descriptio	0.7250	0.0000	0.0020	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	318	1	10300603	5.00	SCC Descriptio	0.4383	0.0000	0.0012	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	320	2	10200602	55.00	SCC Descriptio	1.3675	0.0000	0.0038	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	321	1	10300603	5.00	SCC Descriptio	0.7365	0.0000	0.0020	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	322	1	10300603	5.00	SCC Descriptio	0.6270	0.0000	0.0017	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	323	1	10300603	5.00	SCC Descriptio	0.6735	0.0000	0.0019	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	324	1	10300603	5.00	SCC Descriptio	0.3654	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	325	1	10300603	5.00	SCC Descriptio	0.3624	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	326	1	10300603	5.00	SCC Descriptio	0.9255	0.0000	0.0025	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	327	1	10300603	5.00	SCC Descriptio	0.5003	0.0000	0.0014	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	328	2	10200602	55.00	SCC Descriptio	0.3931	0.0000	0.0011	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	330	2	10200602	55.00	SCC Descriptio	0.9335	0.0000	0.0026	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	331	2	10200602	55.00	SCC Descriptio	1.1210	0.0000	0.0031	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	332	2	10200602	55.00	SCC Descriptio	1.0045	0.0000	0.0028	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	333	2	10200602	55.00	SCC Descriptio	1.0165	0.0000	0.0028	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	334	2	10200602	55.00	SCC Descriptio	1.1015	0.0000	0.0030	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	335	1	10300603	5.00	SCC Descriptio	0.0201	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	336	2	10200602	55.00	SCC Descriptio	0.9495	0.0000	0.0026	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	337	2	10200602	55.00	SCC Descriptio	0.9685	0.0000	0.0027	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	338	2	10200602	55.00	SCC Descriptio	1.0285	0.0000	0.0028	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	344	1	10200602	55.00	SCC Descriptio	0.3580	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	345	2	10200602	55.00	SCC Descriptio	0.4663	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	354	1	10300603	5.00	SCC Descriptio	0.0289	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	356	2	10200602	55.00	SCC Descriptio	0.7755	0.0000	0.0021	CARPENTER TECH CORP/READING PLT

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Berks	42011	420110031	357	2	10200602	55.00	SCC Descriptio	0.9005	0.0000	0.0025	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	358	2	10200602	55.00	SCC Descriptio	1.1715	0.0000	0.0032	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	380	1	10300603	5.00	SCC Descriptio	0.0373	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	381	1	10200602	55.00	SCC Descriptio	1.6950	0.0000	0.0047	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	382	1	10200603	5.00	SCC Descriptio	0.7320	0.0000	0.0020	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	383	1	10300603	5.00	SCC Descriptio	0.2820	0.0000	0.0008	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	385	1	10300603	5.00	SCC Descriptio	8.6100	0.0000	0.0237	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	386	1	10300603	5.00	SCC Descriptio	0.8385	0.0000	0.0023	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	387	1	10300603	5.00	SCC Descriptio	0.9495	0.0000	0.0026	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	389	2	10200602	55.00	SCC Descriptio	1.1800	0.0000	0.0032	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	390	2	10200602	55.00	SCC Descriptio	0.7530	0.0000	0.0021	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	391	2	10200602	55.00	SCC Descriptio	0.6500	0.0000	0.0018	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	392	1	10300603	5.00	SCC Descriptio	0.4724	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	393	1	10300603	5.00	SCC Descriptio	0.4113	0.0000	0.0011	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	394	1	10300603	5.00	SCC Descriptio	0.5020	0.0000	0.0014	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	395	2	10200602	55.00	SCC Descriptio	2.0230	0.0000	0.0056	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	396	2	10200602	55.00	SCC Descriptio	3.5565	0.0000	0.0098	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	397	1	10300603	5.00	SCC Descriptio	0.7280	0.0000	0.0020	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	398	1	10300603	5.00	SCC Descriptio	0.6405	0.0000	0.0018	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	443	1	10200603	5.00	SCC Descriptio	0.0178	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	600	1	10300603	5.00	SCC Descriptio	1.2015	0.0000	0.0033	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	601	1	10300603	5.00	SCC Descriptio	0.1293	0.0000	0.0004	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	602	1	10300603	5.00	SCC Descriptio	0.6610	0.0000	0.0018	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	701	2	10200602	55.00	SCC Descriptio	0.5245	0.0000	0.0014	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	702	2	10200602	55.00	SCC Descriptio	0.4177	0.0000	0.0011	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	703	2	10200602	55.00	SCC Descriptio	0.8390	0.0000	0.0023	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	704	2	10200602	55.00	SCC Descriptio	1.0005	0.0000	0.0027	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	705	2	10200602	55.00	SCC Descriptio	1.0200	0.0000	0.0028	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	706	2	10200602	55.00	SCC Descriptio	0.7915	0.0000	0.0022	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	707	2	10200602	55.00	SCC Descriptio	0.7065	0.0000	0.0019	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	709	1	10300603	1.50	MANEVU2002	0.0479	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	710	1	10300603	1.40	MANEVU2002	0.0447	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	711	1	10300603	1.40	MANEVU2002	0.0120	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	712	1	10300603	0.10	MANEVU2002	0.0035	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	713	1	10200603	5.00	SCC Descriptio	0.0201	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	714	1	10200603	5.00	SCC Descriptio	0.0201	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	715	1	10300603	5.00	SCC Descriptio	0.0064	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	716	1	10300603	5.00	SCC Descriptio	0.0241	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	717	1	10300603	5.00	SCC Descriptio	0.2206	0.0000	0.0006	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	719	1	10300603	5.00	SCC Descriptio	0.0281	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	720	1	10300602	55.00	SCC Descriptio	0.7545	0.0000	0.0021	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	722	1	10200602	55.00	SCC Descriptio	0.6725	0.0000	0.0018	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	724	1	10200603	5.00	SCC Descriptio	0.0063	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	725	1	10200603	5.00	SCC Descriptio	0.0063	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	728	1	10200602	15.00	MANEVU2002	0.6950	0.0000	0.0019	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	729	1	10200602	55.00	SCC Descriptio	0.8295	0.0000	0.0023	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	730	1	10200602	55.00	SCC Descriptio	0.8105	0.0000	0.0022	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	731	1	10200602	55.00	SCC Descriptio	0.9135	0.0000	0.0025	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	732	1	10200602	55.00	SCC Descriptio	0.8650	0.0000	0.0024	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	733	1	10200602	55.00	SCC Descriptio	0.6630	0.0000	0.0018	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	734	1	10200602	55.00	SCC Descriptio	0.4102	0.0000	0.0011	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	736	1	10200602	21.00	MANEVU2002	0.7715	0.0000	0.0021	CARPENTER TECH CORP/READING PLT

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Plant Name
PA	Berks	42011	420110031	768	1	10300603	5.00	SCC Descriptio	0.0320	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	771	1	10300603	5.00	SCC Descriptio	0.0479	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	773	1	10300603	2.00	MANEVU2002	0.0047	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	774	1	10300603	2.00	MANEVU2002	0.0015	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	775	1	10300603	5.00	SCC Descriptio	0.1676	0.0000	0.0005	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	777	1	10200602	55.00	SCC Descriptio	1.0006	0.0000	0.0027	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	778	1	10200602	55.00	SCC Descriptio	1.0060	0.0000	0.0028	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	779	1	10300603	5.00	SCC Descriptio	0.4963	0.0000	0.0014	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	790	1	10200603	1.40	MANEVU2002	0.0218	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110034	122	1	10200603	5.00	SCC Descriptio	14.0115	0.0000	0.0360	EXIDE TECH/READING SMELTER
PA	Berks	42011	420110039	109	2	10200602	55.00	MANEVU2002	0.1000	0.0000	0.0002	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
PA	Berks	42011	420110039	110	2	10200602	55.00	MANEVU2002	0.1000	0.0000	0.0002	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
PA	Berks	42011	420110039	112	2	10200602	55.00	MANEVU2002	0.2000	0.0000	0.0004	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
PA	Berks	42011	420110039	121	2	10200603	5.00	MANEVU2002	0.3510	0.0000	0.0008	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
PA	Berks	42011	420110039	121	1	10200501	5.00	MANEVU2002	0.0233	0.0000	0.0001	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
PA	Berks	42011	420110039	122	2	10200603	5.00	MANEVU2002	0.5962	0.0000	0.0056	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
PA	Berks	42011	420110039	122	1	10200501	5.00	MANEVU2002	0.0056	0.0000	0.0000	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
PA	Berks	42011	420110039	440	1	10300501	2.70	MANEVU2002	0.4016	0.0000	0.0001	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
PA	Berks	42011	420110040	033	2	10200602	16.70	John Hulsberg	0.6200	0.0000	0.0017	GLIDDEN DBA ICI PAINTS/READING
PA	Berks	42011	420110040	034	2	10300602	24.90	MANEVU2002	4.4200	0.0000	0.0000	GLIDDEN DBA ICI PAINTS/READING
PA	Berks	42011	420110042	032	1	10200602	25.20	MANEVU2002	1.9700	0.0000	0.0030	GST AUTOLEATHER/FLEETWOOD PLT
PA	Berks	42011	420110045	036	1	10300501	0.00		0.0269	0.0000	0.0000	RELIANT ENERGY MID A/TITUS ELECTRIC GEN STA
PA	Berks	42011	420110045	037	1	10301002	0.00		0.0174	0.0000	0.0000	RELIANT ENERGY MID A/TITUS ELECTRIC GEN STA
PA	Berks	42011	420110054	031	1	10200401	7.00	MANEVU2002	6.4353	0.0000	0.0120	ATLAS MINERALS & CHEM/MERTZTOWN
PA	Berks	42011	420110054	101	1	10200401	0.00	MANEVU2002	4.7083	0.0000	0.0124	ATLAS MINERALS & CHEM/MERTZTOWN
PA	Berks	42011	420110054	101	2	10200501	0.00	MANEVU2002	0.5123	0.0000	0.0016	ATLAS MINERALS & CHEM/MERTZTOWN
PA	Berks	42011	420110066	035	1	10200401	22.20	MANEVU2002	1.4970	0.0000	0.0012	READING HOUSING AUTH/OAKBROOK
PA	Berks	42011	420110066	036	1	10200401	22.20	MANEVU2002	1.9811	0.0000	0.0015	READING HOUSING AUTH/OAKBROOK
PA	Berks	42011	420110066	037	1	10200401	22.20	MANEVU2002	1.8446	0.0000	0.0022	READING HOUSING AUTH/OAKBROOK
PA	Berks	42011	420110075	031	1	10200603	5.00	SCC Descriptio	0.1237	0.0000	0.0000	CAMBRIDGE LEE IND IN/READING TUBE DIV
PA	Berks	42011	420110075	105	1	10200602	55.00	MANEVU2002	2.7931	0.0000	0.0089	CAMBRIDGE LEE IND IN/READING TUBE DIV
PA	Berks	42011	420110075	106	1	10200603	5.00	MANEVU2002	0.9190	0.0000	0.0029	CAMBRIDGE LEE IND IN/READING TUBE DIV
PA	Berks	42011	420110075	107	1	10200603	5.00	SCC Descriptio	1.8621	0.0000	0.0059	CAMBRIDGE LEE IND IN/READING TUBE DIV
PA	Berks	42011	420110075	C01	1	10200603	5.00	SCC Descriptio	0.9095	0.0000	0.0024	CAMBRIDGE LEE IND IN/READING TUBE DIV
PA	Berks	42011	420110078	031	2	10200602	71.00	MANEVU2002	8.9000	0.0000	0.0284	AGERE SYSTEMS INC/READING FACILITY
PA	Berks	42011	420110078	032	2	10200602	49.00	MANEVU2002	0.7420	0.0000	0.0000	AGERE SYSTEMS INC/READING FACILITY
PA	Berks	42011	420110078	033	2	10200602	71.00	MANEVU2002	6.9000	0.0000	0.0114	AGERE SYSTEMS INC/READING FACILITY
PA	Berks	42011	420110078	034	2	10200602	49.00	MANEVU2002	0.5620	0.0000	0.0000	AGERE SYSTEMS INC/READING FACILITY
PA	Berks	42011	420110080	031	2	10200602	12.50	MANEVU2002	0.5575	0.0000	0.0015	SENSIENT COLORS INC/GIBRALTAR
PA	Berks	42011	420110080	033	2	10200602	12.50	MANEVU2002	0.5725	0.0000	0.0016	SENSIENT COLORS INC/GIBRALTAR
PA	Berks	42011	420110080	034	2	10200602	50.20	MANEVU2002	5.1519	0.0000	0.0142	SENSIENT COLORS INC/GIBRALTAR
PA	Berks	42011	420110080	035	2	10200602	50.00	MANEVU2002	1.6500	0.0000	0.0045	SENSIENT COLORS INC/GIBRALTAR
PA	Berks	42011	420110080	115	1	10200603	5.00	MANEVU2002	0.0400	0.0000	0.0002	SENSIENT COLORS INC/GIBRALTAR
PA	Berks	42011	420110080	117	1	10300603	5.00	MANEVU2002	0.0140	0.0000	0.0001	SENSIENT COLORS INC/GIBRALTAR
PA	Berks	42011	420110080	122	1	10300603	5.00	MANEVU2002	0.2600	0.0000	0.0005	SENSIENT COLORS INC/GIBRALTAR
PA	Berks	42011	420110082	031	2	10200602	24.40	MANEVU2002	6.5709	0.0000	0.0173	CARAUSTAR MILL GROUP INC/SINKING SPRING
PA	Berks	42011	420110082	031	3	10200401	24.40	MANEVU2002	0.2115	0.0000	0.0000	CARAUSTAR MILL GROUP INC/SINKING SPRING
PA	Berks	42011	420110082	102	1	10200603	5.00	SCC Descriptio	0.0540	0.0000	0.0001	CARAUSTAR MILL GROUP INC/SINKING SPRING
PA	Berks	42011	420110084	031	1	10200602	12.60	MANEVU2002	0.6827	0.0000	0.0000	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	105	1	10200602	55.00	MANEVU2002	0.1155	0.0000	0.0005	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	106	1	10200602	55.00	MANEVU2002	0.1153	0.0000	0.0003	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	107	1	10200602	55.00	MANEVU2002	0.0137	0.0000	0.0000	PACKAGING GROUP/BOYERTOWN PRINTING PLT

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PA	Berks	42011	420110084	109	1	10200602	55.00	MANEVU2002	0.1245	0.0000	0.0005	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	114	1	10200602	55.00	MANEVU2002	0.1552	0.0000	0.0006	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	115	1	10200602	55.00	SCC Descriptio	0.0124	0.0000	0.0001	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	116	1	10200602	55.00	SCC Descriptio	0.1491	0.0000	0.0004	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	123S	1	10200602	55.00	SCC Descriptio	0.0008	0.0000	0.0000	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	C02	1	10200602	55.00	MANEVU2002	0.0500	0.0000	0.0002	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	C03	1	10200603	5.00	MANEVU2002	0.0334	0.0000	0.0001	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110089	106	1	10200602	55.00	SCC Descriptio	0.0327	0.0000	0.0001	READING BODY WORKS I/READING
PA	Berks	42011	420110089	111	1	10200603	5.00	MANEVU2002	0.1013	0.0000	0.0002	READING BODY WORKS I/READING
PA	Berks	42011	420110089	111	3	10200603	5.00	MANEVU2002	0.1013	0.0000	0.0002	READING BODY WORKS I/READING
PA	Berks	42011	420110089	112	1	10200603	5.00	MANEVU2002	0.9000	0.0000	0.0018	READING BODY WORKS I/READING
PA	Berks	42011	420110089	118	1	10200603	5.00	SCC Descriptio	0.9000	0.0000	0.0019	READING BODY WORKS I/READING
PA	Berks	42011	420110090	110	1	10200602	55.00	SCC Descriptio	4.1000	0.0000	0.0063	YUASA BATTERY INC/LAURELDALE
PA	Berks	42011	420110091	127	1	10200501	5.00	SCC Descriptio	0.8978	0.0000	0.0002	MORGAN CORP/CAERNARVON TWP
PA	Berks	42011	420110091	127	2	10200603	5.00	SCC Descriptio	0.2022	0.0000	0.0000	MORGAN CORP/CAERNARVON TWP
PA	Berks	42011	420110095	031	1	10200401	12.60	MANEVU2002	7.7974	0.0000	0.0206	BALDWIN HDWR CORP/READING PLT
PA	Berks	42011	420110095	031	2	10200602	12.60	MANEVU2002	3.5626	0.0000	0.0059	BALDWIN HDWR CORP/READING PLT
PA	Berks	42011	420110095	125	1	10200603	10.00	MANEVU2002	3.0800	0.0000	0.0034	BALDWIN HDWR CORP/READING PLT
PA	Berks	42011	420110097	031	1	10200603	4.20	MANEVU2002	0.3547	0.0000	0.0006	STROEHMANN BAKERIES LC/MAIERS PLANT-READING
PA	Berks	42011	420110097	032	1	10200603	4.20	MANEVU2002	0.3500	0.0000	0.0003	STROEHMANN BAKERIES LC/MAIERS PLANT-READING
PA	Berks	42011	420110097	033	1	10300602	10.00	MANEVU2002	0.0800	0.0000	0.0000	STROEHMANN BAKERIES LC/MAIERS PLANT-READING
PA	Berks	42011	420110097	C01	1	10200603	5.00	SCC Descriptio	0.2777	0.0000	0.0008	STROEHMANN BAKERIES LC/MAIERS PLANT-READING
PA	Berks	42011	420110098	031	1	10200501	2.50	MANEVU2002	0.0308	0.0000	0.0000	NAFCO/READING
PA	Berks	42011	420110099	031	1	10200602	19.00	MANEVU2002	0.3000	0.0000	0.0007	CHIYODA AMER INC/CAERNARVON
PA	Berks	42011	420110099	111	1	10200603	5.00	SCC Descriptio	4.5000	0.0000	0.0109	CHIYODA AMER INC/CAERNARVON
PA	Berks	42011	420110099	C01	1	10200602	55.00	MANEVU2002	6.1000	0.0000	0.0147	CHIYODA AMER INC/CAERNARVON
PA	Berks	42011	420110099	C02	1	10200602	55.00	SCC Descriptio	4.5000	0.0000	0.0109	CHIYODA AMER INC/CAERNARVON
PA	Berks	42011	420110101	105	2	10200603	5.00	MANEVU2002	0.4632	0.0000	0.0013	CAN CORP OF AMER/BLANDON PLT
PA	Berks	42011	420110101	C02	1	10200603	5.00	MANEVU2002	0.1644	0.0000	0.0005	CAN CORP OF AMER/BLANDON PLT
PA	Berks	42011	420110101	C03	1	10200603	5.00	MANEVU2002	0.1075	0.0000	0.0002	CAN CORP OF AMER/BLANDON PLT
PA	Berks	42011	420110101	C04	1	10200603	5.00	MANEVU2002	1.2046	0.0000	0.0033	CAN CORP OF AMER/BLANDON PLT
PA	Berks	42011	420110101	C05	1	10200603	5.00	SCC Descriptio	1.3223	0.0000	0.0052	CAN CORP OF AMER/BLANDON PLT
PA	Berks	42011	420110111	032	1	10200603	12.00	MANEVU2002	0.6890	0.0000	0.0013	SFS INTEC/WYOMISSING
PA	Berks	42011	420110111	101	1	10200603	5.00	MANEVU2002	0.0213	0.0000	0.0000	SFS INTEC/WYOMISSING
PA	Berks	42011	420110111	102	1	10200603	5.00	MANEVU2002	0.0213	0.0000	0.0000	SFS INTEC/WYOMISSING
PA	Berks	42011	420110111	103	1	10200603	5.00	MANEVU2002	0.0213	0.0000	0.0000	SFS INTEC/WYOMISSING
PA	Berks	42011	420110111	106	1	10200603	5.00	MANEVU2002	0.0960	0.0000	0.0002	SFS INTEC/WYOMISSING
PA	Berks	42011	420110127	031	2	10200501	6.70	MANEVU2002	0.1911	0.0000	0.0000	HH BROWN SHOE CO INC/DOUBLE H BOOT WOMELSDORF
PA	Berks	42011	420110170	036	1	10300501	0.00		0.6000	0.0000	0.0016	SUN PIPE LINE/MONTELLO PUMP STATION
PA	Berks	42011	420110175	125	1	10200603	10.00	John Hulsberg	0.6848	0.0000	0.0018	EMPIRE STEEL CASTING/MUHLENBERG PLT
PA	Berks	42011	420110274	164A	1	10200603	10.00	MANEVU2002	3.6662	0.0000	0.0068	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110274	164A	2	10201002	10.00	MANEVU2002	0.2238	0.0000	0.0003	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110274	165A	1	10200603	10.00	MANEVU2002	4.9900	0.0000	0.0093	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110274	166	1	10200603	10.00	MANEVU2002	7.3228	0.0000	0.0137	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110274	166	2	10201002	10.00	MANEVU2002	0.4472	0.0000	0.0007	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110274	167	4	10200602	25.00	MANEVU2002	4.9600	0.0000	0.0076	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110274	167	2	10201002	25.00	MANEVU2002	0.3200	0.0000	0.0004	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110274	180	1	10200603	20.00	MANEVU2002	5.4944	0.0000	0.0103	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110274	180	2	10201002	20.00	MANEVU2002	0.3356	0.0000	0.0005	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110354	101	2	10200603	5.00	SCC Descriptio	1.2496	0.0000	0.0037	BERKS CAN CO INC/BERKS CAN PLANT
PA	Berks	42011	420110365	031	1	10201002	1.20	MANEVU2002	0.0310	0.0000	0.0000	DELAWARE CNTY SWA/ROLLING HILLS MUNI WASTE LDFL
PA	Berks	42011	420110370	101	1	10201002	0.00		0.2603	0.0000	0.0007	STERICYCLE INC/MORGANTOWN FACILITY

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PA	Berks	42011	420110370	102	1	10201002	0.00		0.3905	0.0000	0.0011	STERICYCLE INC/MORGANTOWN FACILITY
PA	Berks	42011	420110370	103	1	10201002	0.00		1.5797	0.0000	0.0049	STERICYCLE INC/MORGANTOWN FACILITY
PA	Berks	42011	420110431	031	1	10300501	25.00	MANEVU2002	1.2635	0.0000	0.0064	PA DPW/HAMBURG CTR
PA	Berks	42011	420110431	032	1	10300102	30.00	MANEVU2002	10.2673	0.0000	0.0000	PA DPW/HAMBURG CTR
PA	Berks	42011	420110431	033	1	10300102	30.00	MANEVU2002	0.0045	0.0000	0.0000	PA DPW/HAMBURG CTR
PA	Berks	42011	420110471	031	1	10300102	44.00	MANEVU2002	5.7897	0.0000	0.0000	PA DPW/WERNERSVILLE STATE HOSP
PA	Berks	42011	420110471	032	1	10300102	44.00	MANEVU2002	6.6635	0.0000	0.0388	PA DPW/WERNERSVILLE STATE HOSP
PA	Berks	42011	420110471	033	1	10300102	44.00	MANEVU2002	7.7140	0.0000	0.0000	PA DPW/WERNERSVILLE STATE HOSP
PA	Berks	42011	420110473	031	1	10200602	99.00	MANEVU2002	34.5238	0.0000	0.0835	UNITED CORRSTACK LLC/READING
PA	Berks	42011	420110476	102	1	10300603	5.00	SCC Descriptio	0.1250	0.0000	0.0003	MCCONWAY & TORLEY CO/KUTZTOWN FOUNDRY
PA	Berks	42011	420110478	102	1	10200603	5.00	SCC Descriptio	0.9200	0.0000	0.0020	EAST PENN MFG CO INC/KUTZTOWN
PA	Berks	42011	420110554	109	1	10200601	150.00	SCC Descriptio	0.1000	0.0000	0.0003	GLEN GERY CORP/MID-ATLANTIC PLANT
PA	Berks	42011	420110637	031	1	10200401	41.00	MANEVU2002	8.1634	0.0000	0.0341	SEALED AIR CORP/READING PLT
PA	Berks	42011	420110637	031	2	10200602	41.00	MANEVU2002	2.8685	0.0000	0.0079	SEALED AIR CORP/READING PLT
PA	Berks	42011	420110637	033	1	10200401	29.90	MANEVU2002	2.8510	0.0000	0.0053	SEALED AIR CORP/READING PLT
PA	Berks	42011	420110637	033	2	10200602	29.90	MANEVU2002	0.0001	0.0000	0.0000	SEALED AIR CORP/READING PLT
PA	Berks	42011	420110669	031	1	10200602	1.50	MANEVU2002	0.0912	0.0000	0.0000	BIRCHCRAFT KITCHENS/READING FACILITY
PA	Berks	42011	420110669	032	1	10200503	1.20	MANEVU2002	0.0273	0.0000	0.0000	BIRCHCRAFT KITCHENS/READING FACILITY
PA	Berks	42011	420110867	031	2	10200602	29.30	MANEVU2002	0.6875	0.0000	0.0017	HERSHEY FOODS CORP/READING PLT
PA	Berks	42011	420110867	032	2	10200602	29.30	MANEVU2002	0.6880	0.0000	0.0017	HERSHEY FOODS CORP/READING PLT
PA	Berks	42011	420111012	031	1	10300602	29.90	MANEVU2002	9.9000	0.0000	0.0272	DIETRICHS MILK PROD /READING PLANT
PA	Berks	42011	420111012	032	1	10300602	14.60	MANEVU2002	2.0160	0.0000	0.0055	DIETRICHS MILK PROD /READING PLANT
PA	Berks	42011	420111018	031	1	10300602	12.90	MANEVU2002	0.6496	0.0000	0.0015	ROEBERG ENTERPRISES/YORGEYS CLNRS
PA	Blair	42013	420130005	031	1	10200204	80.00	MANEVU2002	29.5400	0.0000	0.0519	NORFOLK SOUTHERN RAILWAY CO/JUNIATA LOCOMOTIVE SHOPS
PA	Blair	42013	420130005	032	1	10200204	80.00	MANEVU2002	25.9600	0.0000	0.0000	NORFOLK SOUTHERN RAILWAY CO/JUNIATA LOCOMOTIVE SHOPS
PA	Blair	42013	420130005	033	1	10200204	80.00	MANEVU2002	55.5000	0.0000	0.0915	NORFOLK SOUTHERN RAILWAY CO/JUNIATA LOCOMOTIVE SHOPS
PA	Blair	42013	420130005	034	1	10200603	44.00	MANEVU2002	1.4240	0.0000	0.0011	NORFOLK SOUTHERN RAILWAY CO/JUNIATA LOCOMOTIVE SHOPS
PA	Blair	42013	420130005	040	1	10200603	5.00	SCC Descriptio	0.6370	0.0000	0.0017	NORFOLK SOUTHERN RAILWAY CO/JUNIATA LOCOMOTIVE SHOPS
PA	Blair	42013	420130010	033	1	10200401	205.30	MANEVU2002	1.0198	0.0000	0.0025	APPLETON PAPERS/SPRING MILL
PA	Blair	42013	420130010	033	2	10200602	205.30	MANEVU2002	0.8202	0.0000	0.0000	APPLETON PAPERS/SPRING MILL
PA	Blair	42013	420130010	036	1	10200204	180.00	MANEVU2002	146.4561	0.0000	0.3702	APPLETON PAPERS/SPRING MILL
PA	Blair	42013	420130010	036	2	10200901	180.00	MANEVU2002	26.7598	0.0000	0.0735	APPLETON PAPERS/SPRING MILL
PA	Blair	42013	420130010	038	1	10200401	217.00	MANEVU2002	2.7423	0.0000	0.0084	APPLETON PAPERS/SPRING MILL
PA	Blair	42013	420130010	038	3	10200401	217.00	MANEVU2002	2.7423	0.0000	0.0084	APPLETON PAPERS/SPRING MILL
PA	Blair	42013	420130010	038	5	10200603	217.00	MANEVU2002	0.0798	0.0000	0.0003	APPLETON PAPERS/SPRING MILL
PA	Blair	42013	420130010	038	6	10200603	217.00	MANEVU2002	0.0798	0.0000	0.0003	APPLETON PAPERS/SPRING MILL
PA	Blair	42013	420130020	040	1	10300602	20.00	MANEVU2002	0.7500	0.0000	0.0010	NORFOLK SOUTHERN RAILWAY CO/HOLLIDAYSBURG CAR SHOP
PA	Blair	42013	420130020	041	1	10300602	20.00	MANEVU2002	0.7870	0.0000	0.0006	NORFOLK SOUTHERN RAILWAY CO/HOLLIDAYSBURG CAR SHOP
PA	Blair	42013	420130020	051	1	10200501	0.00		0.2050	0.0000	0.0000	NORFOLK SOUTHERN RAILWAY CO/HOLLIDAYSBURG CAR SHOP
PA	Blair	42013	420130021	037	1	10200603	8.00	MANEVU2002	0.0330	0.0000	0.0001	UNION TANK CAR/ALTOONA SHOP
PA	Blair	42013	420130021	037	2	10200603	8.00	MANEVU2002	0.0330	0.0000	0.0001	UNION TANK CAR/ALTOONA SHOP
PA	Blair	42013	420130021	038	1	10200603	40.30	MANEVU2002	1.8004	0.0000	0.0032	UNION TANK CAR/ALTOONA SHOP
PA	Blair	42013	420130021	039	1	10200603	8.40	MANEVU2002	0.8000	0.0000	0.0014	UNION TANK CAR/ALTOONA SHOP
PA	Blair	42013	420130021	040	1	10200603	8.40	MANEVU2002	0.8000	0.0000	0.0014	UNION TANK CAR/ALTOONA SHOP
PA	Blair	42013	420130022	040	2	10200602	55.00	SCC Descriptio	2.0200	0.0000	0.0009	MILLENNIUM RAIL/HOLLIDAYSBURG
PA	Blair	42013	420130022	104	1	10201002	0.00		0.0700	0.0000	0.0002	MILLENNIUM RAIL/HOLLIDAYSBURG
PA	Blair	42013	420130035	031	1	10200603	11.00	MANEVU2002	0.7600	0.0000	0.0013	LUMAX IND/ALTOONA PLT
PA	Blair	42013	420130037	036	1	10300603	3.40	MANEVU2002	0.7850	0.0000	0.0016	SMALL TUBE PROD/ALTOONA PLT
PA	Blair	42013	420130037	102	1	10200603	5.00	SCC Descriptio	0.0720	0.0000	0.0002	SMALL TUBE PROD/ALTOONA PLT
PA	Blair	42013	420130037	103	1	10200603	5.00	SCC Descriptio	0.4600	0.0000	0.0014	SMALL TUBE PROD/ALTOONA PLT
PA	Blair	42013	420130037	104	1	10200603	5.00	SCC Descriptio	0.7660	0.0000	0.0023	SMALL TUBE PROD/ALTOONA PLT
PA	Blair	42013	420130037	105	1	10200603	5.00	SCC Descriptio	0.2110	0.0000	0.0006	SMALL TUBE PROD/ALTOONA PLT

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PA	Blair	42013	420130077	031	1	10200603	8.40	MANEVU2002	0.9000	0.0000	0.0000	ALBEMARLE/TYRONE QUALITY CHEM
PA	Blair	42013	420130077	032	1	10200602	14.70	MANEVU2002	0.8531	0.0000	0.0038	ALBEMARLE/TYRONE QUALITY CHEM
PA	Blair	42013	420130077	032	2	10300501	14.70	MANEVU2002	0.9369	0.0000	0.0000	ALBEMARLE/TYRONE QUALITY CHEM
PA	Blair	42013	420130077	033	1	10200602	16.30	MANEVU2002	0.7400	0.0000	0.0015	ALBEMARLE/TYRONE QUALITY CHEM
PA	Blair	42013	420130077	035	1	10200603	3.00	MANEVU2002	0.2800	0.0000	0.0005	ALBEMARLE/TYRONE QUALITY CHEM
PA	Blair	42013	420130374	099	1	10200603	5.00	SCC Descriptio	0.3600	0.0000	0.0010	FRY METALS/ALTOONA PLT
PA	Blair	42013	420130374	101	1	10200603	5.00	SCC Descriptio	2.0300	0.0000	0.0056	FRY METALS/ALTOONA PLT
PA	Blair	42013	420130374	102	1	10200603	5.00	SCC Descriptio	3.1500	0.0000	0.0087	FRY METALS/ALTOONA PLT
PA	Blair	42013	420130480	031	1	10300603	6.50	John Hulsberg	0.1399	0.0000	0.0000	HH BROWN SHOE CO/COVE SHOE MARTINSBURG
PA	Blair	42013	420130480	031	2	10301002	6.50	John Hulsberg	0.0701	0.0000	0.0000	HH BROWN SHOE CO/COVE SHOE MARTINSBURG
PA	Blair	42013	420130633	035	1	10200603	6.20	MANEVU2002	0.3560	0.0000	0.0005	CHICAGO RIVET & MACH/TYRONE PLT
PA	Bradford	42015	420150002	031	1	10200601	82.40	John Hulsberg	0.0200	0.0000	0.0001	CRAFTMASTER MFG/TOWANDA MILL
PA	Bradford	42015	420150002	032	1	10200602	161.00	John Hulsberg	0.3569	0.0000	0.0010	CRAFTMASTER MFG/TOWANDA MILL
PA	Bradford	42015	420150002	032	2	10300903	161.00	John Hulsberg	0.6431	0.0000	0.0018	CRAFTMASTER MFG/TOWANDA MILL
PA	Bradford	42015	420150002	033	1	10200602	242.40	MANEVU2002	15.4044	0.0000	0.0406	CRAFTMASTER MFG/TOWANDA MILL
PA	Bradford	42015	420150002	033	2	10300903	242.40	MANEVU2002	101.1556	0.0000	0.2668	CRAFTMASTER MFG/TOWANDA MILL
PA	Bradford	42015	420150006	031	1	10200602	30.50	John Hulsberg	2.5000	0.0000	0.0068	DUPONT & CO INC/TOWANDA
PA	Bradford	42015	420150006	032	2	10200602	30.50	John Hulsberg	3.4000	0.0000	0.0092	DUPONT & CO INC/TOWANDA
PA	Bradford	42015	420150006	033	1	10200602	30.50	John Hulsberg	2.3000	0.0000	0.0062	DUPONT & CO INC/TOWANDA
PA	Bradford	42015	420150006	034	1	10200401	33.50	John Hulsberg	2.6420	0.0000	0.0073	DUPONT & CO INC/TOWANDA
PA	Bradford	42015	420150006	034	2	10200602	33.50	John Hulsberg	1.3580	0.0000	0.0037	DUPONT & CO INC/TOWANDA
PA	Bradford	42015	420150006	P155	1	10200602	55.00	SCC Descriptio	0.2000	0.0000	0.0005	DUPONT & CO INC/TOWANDA
PA	Bradford	42015	420150011	031	1	10200602	13.00	John Hulsberg	0.5500	0.0000	0.0015	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	032	1	10200602	13.00	John Hulsberg	0.5760	0.0000	0.0016	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	034	1	10200602	21.60	John Hulsberg	1.8800	0.0000	0.0051	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	035	1	10200602	21.60	John Hulsberg	2.4400	0.0000	0.0066	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	036	1	10200602	26.00	John Hulsberg	1.7900	0.0000	0.0048	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	037	1	10200602	29.20	John Hulsberg	3.2100	0.0000	0.0087	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	038	1	10200603	2.60	John Hulsberg	0.3600	0.0000	0.0009	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	039	1	10200603	2.60	John Hulsberg	0.3400	0.0000	0.0009	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	040	1	10200602	32.50	John Hulsberg	4.8100	0.0000	0.0130	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	041	1	10200602	32.50	John Hulsberg	4.8100	0.0000	0.0130	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	042	1	10200602	30.50	MANEVU2002	3.4600	0.0000	0.0099	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150012	057	1	10200603	3.40	MANEVU2002	0.1800	0.0000	0.0003	STROEHMANN BAKERIES/SAYRE PLT
PA	Bradford	42015	420150055	031	2	10300602	55.00	SCC Descriptio	8.8094	0.0000	0.0000	TAYLOR PACKING CO INC/MEAT PACKING PLT
PA	Bradford	42015	420150055	031	1	10300501	55.00	SCC Descriptio	0.0906	0.0000	0.0002	TAYLOR PACKING CO INC/MEAT PACKING PLT
PA	Bradford	42015	420150055	CU01	2	10300602	40.40	MANEVU2002	0.4000	0.0000	0.0011	TAYLOR PACKING CO INC/MEAT PACKING PLT
PA	Bradford	42015	420150055	CU01	3	10300501	40.40	MANEVU2002	0.0101	0.0000	0.0000	TAYLOR PACKING CO INC/MEAT PACKING PLT
PA	Bradford	42015	420150055	CU04	2	10300602	24.50	MANEVU2002	1.1000	0.0000	0.0057	TAYLOR PACKING CO INC/MEAT PACKING PLT
PA	Bradford	42015	420150055	CU04	1	10300501	24.50	MANEVU2002	0.0532	0.0000	0.0001	TAYLOR PACKING CO INC/MEAT PACKING PLT
PA	Bradford	42015	420150068	031	1	10200906	28.70	MANEVU2002	5.3033	0.0000	0.0128	MILLS PRIDE PA/ATHENS TWP PLT
PA	Bradford	42015	420150068	031	2	10300602	28.70	MANEVU2002	0.9167	0.0000	0.0000	MILLS PRIDE PA/ATHENS TWP PLT
PA	Bradford	42015	420150068	032	1	10200906	28.70	MANEVU2002	5.3956	0.0000	0.0130	MILLS PRIDE PA/ATHENS TWP PLT
PA	Bradford	42015	420150068	032	2	10300602	28.70	MANEVU2002	0.7744	0.0000	0.0000	MILLS PRIDE PA/ATHENS TWP PLT
PA	Bradford	42015	420150735	CU031	2	10200602	20.00	MANEVU2002	3.0900	0.0000	0.0061	LEPRINO FOODS CO/WAVERLY PLT
PA	Bradford	42015	420150735	CU032	2	10200602	16.70	MANEVU2002	2.9100	0.0000	0.0045	LEPRINO FOODS CO/WAVERLY PLT
PA	Bradford	42015	420150735	CU033	2	10200602	20.00	MANEVU2002	2.5700	0.0000	0.0068	LEPRINO FOODS CO/WAVERLY PLT
PA	Bradford	42015	420150735	CU034	2	10200602	20.90	MANEVU2002	3.0400	0.0000	0.0090	LEPRINO FOODS CO/WAVERLY PLT
PA	Bradford	42015	420150776	031	2	10200602	37.00	MANEVU2002	1.9300	0.0000	0.0000	GUTHRIE ROBERT PACKER/SAYRE
PA	Bradford	42015	420150776	032	2	10200602	37.00	MANEVU2002	1.9252	0.0000	0.0000	GUTHRIE ROBERT PACKER/SAYRE
PA	Bradford	42015	420150776	032	1	10200501	37.00	MANEVU2002	0.0048	0.0000	0.0000	GUTHRIE ROBERT PACKER/SAYRE
PA	Bradford	42015	420150776	033	2	10200602	37.00	MANEVU2002	1.5483	0.0000	0.0000	GUTHRIE ROBERT PACKER/SAYRE

								2002 NOx Emissions				
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Bradford	42015	420150776	033	1	10200501	37.00	MANEVU2002	0.0017	0.0000	0.0000	GUTHRIE ROBERT PACKER/SAYRE
PA	Bucks	42017	420170009	032	2	10200603	137.00	MANEVU2002	3.7900	0.0000	0.0000	ROHM & HAAS CO/BRISTOL
PA	Bucks	42017	420170009	032	1	10200401	137.00	MANEVU2002	29.8351	0.0000	0.1213	ROHM & HAAS CO/BRISTOL
PA	Bucks	42017	420170009	033	1	10200401	137.00	MANEVU2002	29.0737	0.0000	0.0415	ROHM & HAAS CO/BRISTOL
PA	Bucks	42017	420170009	033	2	10200602	137.00	MANEVU2002	0.5730	0.0000	0.0057	ROHM & HAAS CO/BRISTOL
PA	Bucks	42017	420170040	032	1	10200602	12.60	MANEVU2002	0.2700	0.0000	0.0011	AVERY DENNISON CORP/QUAKERTOWN
PA	Bucks	42017	420170040	033	1	10200602	12.60	MANEVU2002	0.1400	0.0000	0.0000	AVERY DENNISON CORP/QUAKERTOWN
PA	Bucks	42017	420170053	031	1	10200602	14.70	MANEVU2002	1.9600	0.0000	0.0019	FRES CO SYS USA INC/TELFORD PLT
PA	Bucks	42017	420170053	032	1	10300603	8.40	MANEVU2002	0.6600	0.0000	0.0054	FRES CO SYS USA INC/TELFORD PLT
PA	Bucks	42017	420170053	T01	1	10200602	55.00	MANEVU2002	1.1500	0.0000	0.0024	FRES CO SYS USA INC/TELFORD PLT
PA	Bucks	42017	420170053	T02	1	10200602	55.00	SCC Descriptio	2.1500	0.0000	0.0045	FRES CO SYS USA INC/TELFORD PLT
PA	Bucks	42017	420170055	C504	1	10200602	55.00	SCC Descriptio	12.8100	0.0000	0.0197	US STEEL CORP/FAIRLESS HILLS
PA	Bucks	42017	420170056	032	2	10200602	49.90	John Hulsberg	1.2000	0.0000	0.0032	3M CO/BRISTOL
PA	Bucks	42017	420170056	032	4	10200602	49.90	John Hulsberg	1.2000	0.0000	0.0032	3M CO/BRISTOL
PA	Bucks	42017	420170080	031	1	10200501	14.70	MANEVU2002	0.0996	0.0000	0.0000	WEBCRAFT LLC/CHALFONT
PA	Bucks	42017	420170080	031	2	10200602	14.70	MANEVU2002	0.0004	0.0000	0.0000	WEBCRAFT LLC/CHALFONT
PA	Bucks	42017	420170080	032	1	10200603	11.20	MANEVU2002	1.0700	0.0000	0.0000	WEBCRAFT LLC/CHALFONT
PA	Bucks	42017	420170120	031	1	10300603	3.30	MANEVU2002	0.7000	0.0000	0.0004	GILES & RANSOME INC/BENSALEM
PA	Bucks	42017	420170221	034	1	10300401	15.10	MANEVU2002	0.1000	0.0000	0.0003	LOWER BUCKS CNTY HOSP/BRISTOL
PA	Bucks	42017	420170221	035	1	10300602	14.60	MANEVU2002	5.6610	0.0000	0.0149	LOWER BUCKS CNTY HOSP/BRISTOL
PA	Bucks	42017	420170221	037	1	10300401	14.40	MANEVU2002	7.0960	0.0000	0.0000	LOWER BUCKS CNTY HOSP/BRISTOL
PA	Bucks	42017	420170306	043	2	10200604	468.50	MANEVU2002	2.4000	0.0000	0.0264	EXELON GENERATION CO/FAIRLESS HILLS GEN STA
PA	Bucks	42017	420170306	044	1	10200405	468.50	MANEVU2002	40.4348	0.0000	0.3510	EXELON GENERATION CO/FAIRLESS HILLS GEN STA
PA	Bucks	42017	420170306	044	2	10200604	468.50	MANEVU2002	23.0652	0.0000	0.1470	EXELON GENERATION CO/FAIRLESS HILLS GEN STA
PA	Bucks	42017	420170306	045	1	10200405	468.50	MANEVU2002	11.3349	0.0000	0.1208	EXELON GENERATION CO/FAIRLESS HILLS GEN STA
PA	Bucks	42017	420170306	045	2	10200604	468.50	MANEVU2002	6.2651	0.0000	0.0468	EXELON GENERATION CO/FAIRLESS HILLS GEN STA
PA	Bucks	42017	420170307	001	1	10300602	15.00	MANEVU2002	0.1500	0.0000	0.0004	LOCKHEED MARTIN CORP/COMM & POWER CTR
PA	Bucks	42017	420170307	002	1	10300602	15.00	MANEVU2002	0.1600	0.0000	0.0005	LOCKHEED MARTIN CORP/COMM & POWER CTR
PA	Bucks	42017	420170307	003	1	10300603	7.00	MANEVU2002	0.5300	0.0000	0.0002	LOCKHEED MARTIN CORP/COMM & POWER CTR
PA	Bucks	42017	420170307	004	1	10200602	10.50	MANEVU2002	0.0110	0.0000	0.0000	LOCKHEED MARTIN CORP/COMM & POWER CTR
PA	Bucks	42017	420170307	005	1	10200603	1.80	MANEVU2002	0.0002	0.0000	0.0000	LOCKHEED MARTIN CORP/COMM & POWER CTR
PA	Bucks	42017	420170313	031	1	10200602	3.00	MANEVU2002	0.1100	0.0000	0.0000	PCR AQUISITIONS DBA CAMPANIA INTL INC/QUAKERTOWN
PA	Bucks	42017	420170334	030	1	10200502	19.40	MANEVU2002	0.3300	0.0000	0.0000	NESHAMINY SCH DIST/NESHAMINY HIGH SCH
PA	Bucks	42017	420170334	030	2	10200502	19.40	MANEVU2002	0.3300	0.0000	0.0000	NESHAMINY SCH DIST/NESHAMINY HIGH SCH
PA	Bucks	42017	420170334	031	1	10200502	12.40	MANEVU2002	0.4200	0.0000	0.0000	NESHAMINY SCH DIST/NESHAMINY HIGH SCH
PA	Bucks	42017	420170334	032	1	10200502	16.20	MANEVU2002	0.5200	0.0000	0.0000	NESHAMINY SCH DIST/NESHAMINY HIGH SCH
PA	Bucks	42017	420170334	033	1	10200502	2.40	MANEVU2002	0.0800	0.0000	0.0000	NESHAMINY SCH DIST/NESHAMINY HIGH SCH
PA	Bucks	42017	420170408	C03	1	10200799	0.00		0.0400	0.0000	0.0000	WASTE MGMT DSPL SVC /GROWS LDFL
PA	Bucks	42017	420170570	031	1	10300602	25.00	MANEVU2002	4.5000	0.0000	0.0030	HINES HORTICULTURE INC/PIPERSVILLE
PA	Bucks	42017	420170570	033	2	10300602	8.40	MANEVU2002	0.5816	0.0000	0.0000	HINES HORTICULTURE INC/PIPERSVILLE
PA	Bucks	42017	420170570	037	1	10300602	13.40	MANEVU2002	2.8368	0.0000	0.0000	HINES HORTICULTURE INC/PIPERSVILLE
PA	Bucks	42017	420170571	031	1	10300501	8.90	MANEVU2002	0.9400	0.0000	0.0009	GE BETZ INC/TREVOSE
PA	Bucks	42017	420170571	032	1	10300501	31.50	MANEVU2002	3.3600	0.0000	0.0078	GE BETZ INC/TREVOSE
PA	Bucks	42017	420170572	031	2	10200502	16.70	MANEVU2002	0.0180	0.0000	0.0000	AMETEK INC/SELLERSVILLE
PA	Bucks	42017	420170572	032	1	10200602	16.70	MANEVU2002	0.4650	0.0000	0.0006	AMETEK INC/SELLERSVILLE
PA	Bucks	42017	420170572	033	2	10200401	25.10	MANEVU2002	1.8200	0.0000	0.0014	AMETEK INC/SELLERSVILLE
PA	Bucks	42017	420170572	034	3	10200401	16.70	MANEVU2002	3.0066	0.0000	0.0093	AMETEK INC/SELLERSVILLE
PA	Bucks	42017	420170572	034	4	10200602	16.70	MANEVU2002	0.1834	0.0000	0.0000	AMETEK INC/SELLERSVILLE
PA	Bucks	42017	420170574	024	1	10200601	7.50	MANEVU2002	0.9610	0.0000	0.0023	GAF MATERIALS CORP/QUAKERTOWN
PA	Bucks	42017	420170574	025	1	10200601	150.00	SCC Descriptio	0.5460	0.0000	0.0013	GAF MATERIALS CORP/QUAKERTOWN
PA	Bucks	42017	420170574	027	1	10200601	5.20	MANEVU2002	0.6700	0.0000	0.0016	GAF MATERIALS CORP/QUAKERTOWN
PA	Bucks	42017	420170574	028	1	10200601	5.20	MANEVU2002	0.6700	0.0000	0.0016	GAF MATERIALS CORP/QUAKERTOWN

									2002 NOx Emissions			
								Source of Boiler Size		Summer Day from	Summer Day	
							Size	Data	Annual	Inventory	Calculated	
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	mmBtu/hr		(tpy)	(tpd)	(tpd)	Plant Name
PA	Bucks	42017	420170574	O23	1	10200602	10.00	MANEVU2002	1.7930	0.0000	0.0043	GAF MATERIALS CORP/QUAKERTOWN
PA	Bucks	42017	420170583	C101	1	10200799	0.00		0.0410	0.0000	0.0005	WASTE MGMT PA/TULLYTOWN RES REC FAC
PA	Bucks	42017	420170611	031	1	10300501	12.60	MANEVU2002	0.2000	0.0000	0.0002	ALFA LAVAL SEPARATION/WARMINSTER
PA	Bucks	42017	420170865	031	1	10300603	1.70	MANEVU2002	0.0130	0.0000	0.0000	ST MARY MED CTR/LANGHORNE
PA	Bucks	42017	420170865	032	1	10300602	33.10	MANEVU2002	3.1900	0.0000	0.0193	ST MARY MED CTR/LANGHORNE
PA	Bucks	42017	420170865	033	1	10300602	33.10	MANEVU2002	1.9500	0.0000	0.0000	ST MARY MED CTR/LANGHORNE
PA	Bucks	42017	420170865	034	1	10300603	0.90	MANEVU2002	0.0104	0.0000	0.0000	ST MARY MED CTR/LANGHORNE
PA	Bucks	42017	420171041	031	1	10300603	6.70	MANEVU2002	1.8930	0.0000	0.0000	ROGERS FOAM CORP/MORRISVILLE
PA	Bucks	42017	420172005	011	1	10200602	55.00	SCC Descriptio	0.5500	0.0000	0.0000	CLEARVIEW STRUCTURAL STEEL/HILLTOWN
PA	Butler	42019	420190003	031	1	10300207	35.00	MANEVU2002	5.0134	0.0000	0.0242	PA STATE SYS OF HIGHER ED/SLIPPERY ROCK UNIV PA
PA	Butler	42019	420190003	031	2	10300602	35.00	MANEVU2002	0.5913	0.0000	0.0027	PA STATE SYS OF HIGHER ED/SLIPPERY ROCK UNIV PA
PA	Butler	42019	420190003	032	1	10300207	35.00	MANEVU2002	9.5689	0.0000	0.0021	PA STATE SYS OF HIGHER ED/SLIPPERY ROCK UNIV PA
PA	Butler	42019	420190003	032	2	10300602	35.00	MANEVU2002	27.7376	0.0000	0.0061	PA STATE SYS OF HIGHER ED/SLIPPERY ROCK UNIV PA
PA	Butler	42019	420190003	034	1	10300209	39.00	MANEVU2002	24.0026	0.0000	0.0264	PA STATE SYS OF HIGHER ED/SLIPPERY ROCK UNIV PA
PA	Butler	42019	420190007	031	1	10200602	69.00	MANEVU2002	5.1600	0.0000	0.0130	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	032	1	10200602	21.00	MANEVU2002	3.6200	0.0000	0.0107	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	033	1	10200602	65.00	MANEVU2002	6.0100	0.0000	0.0178	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	034	1	10200602	65.00	MANEVU2002	6.5900	0.0000	0.0275	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	035	1	10200602	65.00	MANEVU2002	11.5600	0.0000	0.0191	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	038	1	10200602	14.30	MANEVU2002	1.4100	0.0000	0.0039	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	111	1	10200601	150.00	SCC Descriptio	11.0667	0.0000	0.0304	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	112	1	10200601	150.00	SCC Descriptio	9.5707	0.0000	0.0263	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	113	1	10200601	150.00	SCC Descriptio	10.6416	0.0000	0.0292	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	130	1	10200602	55.00	SCC Descriptio	1.5400	0.0000	0.0039	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	133	1	10200602	55.00	SCC Descriptio	2.1300	0.0000	0.0054	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	134	1	10200603	5.00	SCC Descriptio	0.9600	0.0000	0.0023	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	135	1	10200602	55.00	SCC Descriptio	1.3700	0.0000	0.0032	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	137	1	10200601	150.00	SCC Descriptio	13.3825	0.0000	0.0382	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	140	1	10200603	5.00	SCC Descriptio	0.0986	0.0000	0.0002	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	141	1	10200603	5.00	SCC Descriptio	0.1724	0.0000	0.0003	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	156	1	10200602	55.00	SCC Descriptio	9.0800	0.0000	0.0269	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	157	1	10200602	55.00	SCC Descriptio	10.4800	0.0000	0.0276	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	158	1	10200601	150.00	SCC Descriptio	16.0800	0.0000	0.0424	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	159	1	10200602	55.00	SCC Descriptio	9.2500	0.0000	0.0315	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	160A	1	10200602	55.00	SCC Descriptio	4.2300	0.0000	0.0107	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	247	1	10200602	55.00	SCC Descriptio	1.2800	0.0000	0.0035	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	248	1	10200602	55.00	SCC Descriptio	1.7800	0.0000	0.0047	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	249	1	10200602	55.00	SCC Descriptio	1.3500	0.0000	0.0040	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	250	1	10200602	55.00	SCC Descriptio	1.8300	0.0000	0.0054	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	251	1	10200602	55.00	SCC Descriptio	1.5800	0.0000	0.0047	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	252	1	10200602	55.00	SCC Descriptio	1.5700	0.0000	0.0043	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	253	1	10200602	55.00	SCC Descriptio	22.6700	0.0000	0.0149	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190015	031	2	10200602	66.00	MANEVU2002	1.5674	0.0000	0.0041	PENRECO/KARNS CITY
PA	Butler	42019	420190015	031	1	10200501	66.00	MANEVU2002	2.0326	0.0000	0.0154	PENRECO/KARNS CITY
PA	Butler	42019	420190015	032	1	10200204	66.00	MANEVU2002	98.9000	0.0000	0.1848	PENRECO/KARNS CITY
PA	Butler	42019	420190015	033	1	10200204	66.00	MANEVU2002	104.6000	0.0000	0.1724	PENRECO/KARNS CITY
PA	Butler	42019	420190021	111	4	10300602	55.00	MANEVU2002	0.6914	0.0000	0.0019	MERCER LIME & STONE /BRANCHTON
PA	Butler	42019	420190022	032	1	10200401	55.00	SCC Descriptio	14.9718	0.0000	0.0543	CROMPTON CORP/PETROLIA
PA	Butler	42019	420190022	032	2	10200602	55.00	SCC Descriptio	9.2582	0.0000	0.0092	CROMPTON CORP/PETROLIA
PA	Butler	42019	420190022	033	1	10200602	55.00	SCC Descriptio	14.0500	0.0000	0.0232	CROMPTON CORP/PETROLIA
PA	Butler	42019	420190022	034	1	10200401	55.00	SCC Descriptio	33.8996	0.0000	0.1416	CROMPTON CORP/PETROLIA
PA	Butler	42019	420190022	034	2	10200602	55.00	SCC Descriptio	3.7004	0.0000	0.0041	CROMPTON CORP/PETROLIA

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PA	Butler	42019	420190022	035	1	10200401	55.00	SCC Descriptio	19.7355	0.0000	0.0759	CROMPTON CORP/PETROLIA
PA	Butler	42019	420190022	035	2	10200602	55.00	SCC Descriptio	0.9245	0.0000	0.0010	CROMPTON CORP/PETROLIA
PA	Butler	42019	420190026	035	1	10200602	12.80	MANEVU2002	6.9400	0.0000	0.0145	INDSPEC CHEM CORP/PETROLIA
PA	Butler	42019	420190026	036	1	10200602	12.80	MANEVU2002	7.0800	0.0000	0.0148	INDSPEC CHEM CORP/PETROLIA
PA	Butler	42019	420190026	038	1	10200601	141.00	MANEVU2002	9.5000	0.0000	0.0282	INDSPEC CHEM CORP/PETROLIA
PA	Butler	42019	420190026	039	1	10200601	202.00	MANEVU2002	20.2000	0.0000	0.0533	INDSPEC CHEM CORP/PETROLIA
PA	Butler	42019	420190026	040	1	10200601	200.00	MANEVU2002	12.1300	0.0000	0.0160	INDSPEC CHEM CORP/PETROLIA
PA	Butler	42019	420190029	031	1	10200602	10.50	MANEVU2002	1.6800	0.0000	0.0000	CASTLE RUBBER LLC/EAST BUTLER BORO
PA	Butler	42019	420190029	032	1	10200602	10.50	MANEVU2002	1.6800	0.0000	0.0000	CASTLE RUBBER LLC/EAST BUTLER BORO
PA	Butler	42019	420190029	033	1	10200602	10.50	MANEVU2002	0.4880	0.0000	0.0041	CASTLE RUBBER LLC/EAST BUTLER BORO
PA	Butler	42019	420190030	032	1	10200602	7.50	MANEVU2002	1.1312	0.0000	0.0034	NAPCO INC/VALENCIA
PA	Butler	42019	420190030	033	1	10200602	9.00	MANEVU2002	1.3550	0.0000	0.0040	NAPCO INC/VALENCIA
PA	Butler	42019	420190030	C01	1	10200602	55.00	MANEVU2002	4.4088	0.0000	0.0131	NAPCO INC/VALENCIA
PA	Butler	42019	420190035	102	1	10200603	5.00	MANEVU2002	0.3900	0.0000	0.0012	THREE RIVERS ALUM CO/TRACO
PA	Butler	42019	420190078	101	1	10300603	5.00	SCC Descriptio	0.2052	0.0000	0.0005	MINTEQ INTL/ZEDMARK DIV SLIPPERY ROCK
PA	Butler	42019	420190078	102	1	10300603	5.00	SCC Descriptio	1.2258	0.0000	0.0039	MINTEQ INTL/ZEDMARK DIV SLIPPERY ROCK
PA	Butler	42019	420190516	102	1	10200603	5.00	SCC Descriptio	0.0614	0.0000	0.0001	RESOLITE STABILIT AMER/ZELIENOPLE
PA	Butler	42019	420190615	721	1	10200602	14.60	MANEVU2002	1.5000	0.0000	0.0033	BASF EVANS CITY OPS
PA	Butler	42019	420190991	031	1	10200603	0.50	MANEVU2002	0.3863	0.0000	0.0011	FB LEOPOLD CO/ZELIENOPLE
PA	Cambria	42021	420210003	031	1	10300208	26.80	MANEVU2002	2.8215	0.0000	0.0000	PA DEPT OF LABOR & IND/HIRAM ANDREWS REHAB CTR
PA	Cambria	42021	420210003	032	1	10300208	26.80	MANEVU2002	1.9190	0.0000	0.0000	PA DEPT OF LABOR & IND/HIRAM ANDREWS REHAB CTR
PA	Cambria	42021	420210020	036	1	10200602	55.00	SCC Descriptio	16.5900	0.0000	0.0310	JOHNSTOWN CORP/JOHNSTOWN
PA	Cambria	42021	420210027	031	2	10300208	14.90	MANEVU2002	11.8205	0.0000	0.0403	CONEMAUGH VALLEY MEM/JOHNSTOWN
PA	Cambria	42021	420210027	032	2	10300208	14.90	MANEVU2002	8.1327	0.0000	0.0000	CONEMAUGH VALLEY MEM/JOHNSTOWN
PA	Cambria	42021	420210029	031	1	10300603	5.00	SCC Descriptio	0.1460	0.0000	0.0001	UNITED METAL FABRICA/JOHNSTOWN
PA	Cambria	42021	420210030	031	1	10200602	44.40	MANEVU2002	0.9506	0.0000	0.0002	JOHNSTOWN AMER CORP/NO 5 CAR SHOP
PA	Cambria	42021	420210031	031	1	10200602	187.00	MANEVU2002	4.5721	0.0000	0.0040	JOHNSTOWN AMER CORP/FRANKLIN
PA	Cambria	42021	420210033	032	1	10300602	61.20	MANEVU2002	0.9735	0.0000	0.0026	EBENSBURG POWER CO/EBENSBURG COGENERATION PLT
PA	Cambria	42021	420210034	032	1	10301002	28.00	MANEVU2002	0.3486	0.0000	0.0004	INTER POWER AHLCON L/COLVER POWER PROJ
PA	Cambria	42021	420210657	031	1	10300602	182.00	MANEVU2002	4.6000	0.0000	0.0131	GAUTIER STEEL LTD/JOHNSTOWN PLT
PA	Cambria	42021	420210657	032	1	10300602	34.40	MANEVU2002	0.5260	0.0000	0.0016	GAUTIER STEEL LTD/JOHNSTOWN PLT
PA	Cambria	42021	420210657	033	1	10300602	47.30	MANEVU2002	0.2330	0.0000	0.0006	GAUTIER STEEL LTD/JOHNSTOWN PLT
PA	Cameron	42023	420230550	035	1	10200603	5.00	SCC Descriptio	0.1000	0.0000	0.0003	COLUMBIA GAS TRANS CORP/EMPORIUM STATION
PA	Cameron	42023	420230550	036	1	10200603	5.00	SCC Descriptio	0.0100	0.0000	0.0000	COLUMBIA GAS TRANS CORP/EMPORIUM STATION
PA	Carbon	42025	420250001	031	1	10200401	21.00	MANEVU2002	5.9300	0.0000	0.0078	ALTADIS USA INC/MCADOO PLT
PA	Carbon	42025	420250001	032	1	10200401	99.00	MANEVU2002	4.9000	0.0000	0.0005	ALTADIS USA INC/MCADOO PLT
PA	Carbon	42025	420250001	034	1	10200401	57.60	MANEVU2002	36.3900	0.0000	0.1080	ALTADIS USA INC/MCADOO PLT
PA	Carbon	42025	420250009	035	1	10200602	12.90	MANEVU2002	1.4700	0.0000	0.0058	HORSEHEAD CORP/EAST PLT
PA	Carbon	42025	420250011	031	1	10200503	6.30	MANEVU2002	0.4000	0.0000	0.0000	KOVATCH MOBILE EQUIP/NESQUEHONING PLT
PA	Carbon	42025	420250011	033	1	10200503	8.40	MANEVU2002	0.6000	0.0000	0.0000	KOVATCH MOBILE EQUIP/NESQUEHONING PLT
PA	Carbon	42025	420250013	031	1	10200602	12.00	John Hulsberg	3.7100	0.0000	0.0100	HORSEHEAD RESOURCE DEV/PALMERTON FAC
PA	Carbon	42025	420250013	032	2	10200602	19.00	John Hulsberg	2.1200	0.0000	0.0057	HORSEHEAD RESOURCE DEV/PALMERTON FAC
PA	Carbon	42025	420250100	031	1	10300501	5.00	MANEVU2002	1.3000	0.0000	0.0000	SILBERLINE MFG CO/LANSFORD PLT
PA	Carbon	42025	420250100	032	1	10300501	2.60	MANEVU2002	0.2000	0.0000	0.0012	SILBERLINE MFG CO/LANSFORD PLT
PA	Centre	42027	420270002	031	1	10300208	25.00	MANEVU2002	3.9700	0.0000	0.0009	PA DEPT OF CORR/ROCKVIEW SCI
PA	Centre	42027	420270002	032	1	10300208	47.00	MANEVU2002	28.6900	0.0000	0.0126	PA DEPT OF CORR/ROCKVIEW SCI
PA	Centre	42027	420270002	033	1	10300208	25.00	MANEVU2002	6.1800	0.0000	0.0027	PA DEPT OF CORR/ROCKVIEW SCI
PA	Centre	42027	420270017	031	1	10300208	143.00	MANEVU2002	80.7059	0.0000	0.1951	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	031	2	10300601	143.00	MANEVU2002	2.7741	0.0000	0.0296	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	032	1	10300208	143.00	MANEVU2002	77.2098	0.0000	0.1103	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	032	2	10300601	143.00	MANEVU2002	2.4842	0.0000	0.0218	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	033	1	10300602	67.50	MANEVU2002	1.4390	0.0000	0.0046	PA STATE UNIV/UNIV PARK CAMPUS

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PA	Centre	42027	420270017	034	1	10300207	155.00	MANEVU2002	53.1952	0.0000	0.1111	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	034	2	10300602	155.00	MANEVU2002	0.5248	0.0000	0.0029	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	035	1	10300207	143.00	MANEVU2002	70.1796	0.0000	0.0077	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	035	2	10300602	143.00	MANEVU2002	0.0963	0.0000	0.0000	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	036	1	10300602	130.00	MANEVU2002	1.3581	0.0000	0.0036	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	036	2	10300501	130.00	MANEVU2002	0.0316	0.0000	0.0000	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	037	1	10300602	130.00	MANEVU2002	2.3718	0.0000	0.0060	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	037	2	10300501	130.00	MANEVU2002	0.2442	0.0000	0.0000	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	CU038	1	10300501	55.00	SCC Descriptio	3.5880	0.0000	0.0099	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	CU038	2	10300602	55.00	SCC Descriptio	11.1410	0.0000	0.0306	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	CU038	4	10301002	55.00	SCC Descriptio	0.6263	0.0000	0.0017	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	CU038	3	10300209	55.00	SCC Descriptio	0.3847	0.0000	0.0011	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270020	031	1	10200602	14.60	John Hulsberg	1.4000	0.0000	0.0038	RUETGERS ORGANICS CO/STATE COLLEGE
PA	Centre	42027	420270020	032	1	10200602	14.60	John Hulsberg	1.4000	0.0000	0.0038	RUETGERS ORGANICS CO/STATE COLLEGE
PA	Centre	42027	420270021	P106	1	10300602	55.00	SCC Descriptio	17.1000	0.0000	0.0470	CORNING ASAHI VIDEO PROD CO/STATE COLLEGE
PA	Centre	42027	420270719	032	1	10200602	55.00	MANEVU2002	5.5220	0.0000	0.0000	CERRO METAL PROD CO/PLT 1 & 4
PA	Centre	42027	420270719	033	1	10200602	14.70	MANEVU2002	1.2363	0.0000	0.0000	CERRO METAL PROD CO/PLT 1 & 4
PA	Centre	42027	420270719	033	2	10200501	14.70	MANEVU2002	0.0437	0.0000	0.0000	CERRO METAL PROD CO/PLT 1 & 4
PA	Centre	42027	420270719	034	1	10200603	8.40	MANEVU2002	1.0140	0.0000	0.0006	CERRO METAL PROD CO/PLT 1 & 4
PA	Chester	42029	420290003	031	1	10300102	40.20	MANEVU2002	14.1790	0.0000	0.0000	PA STATE SYS OF HIGHER ED/WEST CHESTER UNIV OF PA
PA	Chester	42029	420290003	032	1	10200501	34.40	MANEVU2002	0.9480	0.0000	0.0000	PA STATE SYS OF HIGHER ED/WEST CHESTER UNIV OF PA
PA	Chester	42029	420290003	033	1	10300102	26.00	MANEVU2002	3.5600	0.0000	0.0000	PA STATE SYS OF HIGHER ED/WEST CHESTER UNIV OF PA
PA	Chester	42029	420290003	034	1	10300102	40.20	MANEVU2002	5.4670	0.0000	0.0000	PA STATE SYS OF HIGHER ED/WEST CHESTER UNIV OF PA
PA	Chester	42029	420290003	036	1	10300501	24.50	MANEVU2002	2.0640	0.0000	0.0000	PA STATE SYS OF HIGHER ED/WEST CHESTER UNIV OF PA
PA	Chester	42029	420290005	034	2	10200602	29.30	MANEVU2002	9.4280	0.0000	0.0197	NVF CO/KENNETT PLT
PA	Chester	42029	420290005	C02	2	10200602	55.00	MANEVU2002	3.4000	0.0000	0.0097	NVF CO/KENNETT PLT
PA	Chester	42029	420290009	031	2	10200602	25.20	MANEVU2002	4.6900	0.0000	0.0124	QUEBECOR WORLD INC/ATGLEN
PA	Chester	42029	420290009	032A	1	10200602	11.70	MANEVU2002	0.8000	0.0000	0.0020	QUEBECOR WORLD INC/ATGLEN
PA	Chester	42029	420290009	033	2	10200602	29.40	MANEVU2002	0.2500	0.0000	0.0000	QUEBECOR WORLD INC/ATGLEN
PA	Chester	42029	420290009	034	2	10200602	29.40	MANEVU2002	2.1700	0.0000	0.0060	QUEBECOR WORLD INC/ATGLEN
PA	Chester	42029	420290009	035	1	10300602	32.60	MANEVU2002	1.3700	0.0000	0.0036	QUEBECOR WORLD INC/ATGLEN
PA	Chester	42029	420290011	034	1	10300501	17.70	MANEVU2002	4.3900	0.0000	0.0048	PA DPW/EMBREEVILLE CTR
PA	Chester	42029	420290011	036	1	10300501	25.10	MANEVU2002	1.0100	0.0000	0.0000	PA DPW/EMBREEVILLE CTR
PA	Chester	42029	420290011	037	1	10200501	22.00	MANEVU2002	2.6900	0.0000	0.0086	PA DPW/EMBREEVILLE CTR
PA	Chester	42029	420290012	036	1	10300603	2.40	MANEVU2002	0.4120	0.0000	0.0003	PA DEPT OF MILITARY /SOUTHEASTERN VETERANS CTR
PA	Chester	42029	420290012	037	1	10300603	1.70	MANEVU2002	0.1790	0.0000	0.0012	PA DEPT OF MILITARY /SOUTHEASTERN VETERANS CTR
PA	Chester	42029	420290012	039	1	10300602	12.00	MANEVU2002	0.5330	0.0000	0.0008	PA DEPT OF MILITARY /SOUTHEASTERN VETERANS CTR
PA	Chester	42029	420290012	040	1	10300602	12.00	MANEVU2002	0.6000	0.0000	0.0014	PA DEPT OF MILITARY /SOUTHEASTERN VETERANS CTR
PA	Chester	42029	420290015	031	1	10200401	105.00	MANEVU2002	0.2900	0.0000	0.0000	SONOCO PROD CO/DOWNINGTOWN
PA	Chester	42029	420290015	031	2	10200501	105.00	MANEVU2002	0.2320	0.0000	0.0000	SONOCO PROD CO/DOWNINGTOWN
PA	Chester	42029	420290015	032A	1	10200202	196.90	MANEVU2002	201.0150	0.0000	0.5964	SONOCO PROD CO/DOWNINGTOWN
PA	Chester	42029	420290015	032A	2	10200602	196.90	MANEVU2002	2.3750	0.0000	0.0089	SONOCO PROD CO/DOWNINGTOWN
PA	Chester	42029	420290015	033	1	10200401	105.00	MANEVU2002	0.2380	0.0000	0.0000	SONOCO PROD CO/DOWNINGTOWN
PA	Chester	42029	420290015	033	2	10200501	105.00	MANEVU2002	0.2353	0.0000	0.0000	SONOCO PROD CO/DOWNINGTOWN
PA	Chester	42029	420290023	035	1	10300603	5.80	MANEVU2002	0.0100	0.0000	0.0000	EXELON GENERATION CO/CROMBY GENERATION STATION
PA	Chester	42029	420290024	033	1	10200602	27.30	MANEVU2002	3.5800	0.0000	0.0071	ISG PLATE LLC/COATESVILLE
PA	Chester	42029	420290024	034	1	10200602	27.30	MANEVU2002	1.3700	0.0000	0.0000	ISG PLATE LLC/COATESVILLE
PA	Chester	42029	420290024	055	1	10200602	62.30	MANEVU2002	9.1900	0.0000	0.0273	ISG PLATE LLC/COATESVILLE
PA	Chester	42029	420290024	056	1	10200602	10.00	MANEVU2002	0.2100	0.0000	0.0006	ISG PLATE LLC/COATESVILLE
PA	Chester	42029	420290024	058	1	10200602	9.90	MANEVU2002	0.4600	0.0000	0.0012	ISG PLATE LLC/COATESVILLE
PA	Chester	42029	420290029	035	1	10200602	33.50	MANEVU2002	1.0600	0.0000	0.0030	WYETH PHARMACEUTICALS/WEST CHESTER
PA	Chester	42029	420290029	036	1	10200602	33.50	MANEVU2002	0.8500	0.0000	0.0008	WYETH PHARMACEUTICALS/WEST CHESTER

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PA	Chester	42029	420290030	106	2	10200602	22.00	MANEVU2002	0.5455	0.0000	0.0000	WYETH PHARMACEUTICALS/FRAZER
PA	Chester	42029	420290030	106	3	10200504	22.00	MANEVU2002	0.2345	0.0000	0.0000	WYETH PHARMACEUTICALS/FRAZER
PA	Chester	42029	420290030	106A	2	10200602	22.00	MANEVU2002	0.0400	0.0000	0.0000	WYETH PHARMACEUTICALS/FRAZER
PA	Chester	42029	420290030	107	2	10300799	1.50	MANEVU2002	0.0050	0.0000	0.0000	WYETH PHARMACEUTICALS/FRAZER
PA	Chester	42029	420290030	111	1	10300603	13.50	MANEVU2002	1.2295	0.0000	0.0041	WYETH PHARMACEUTICALS/FRAZER
PA	Chester	42029	420290030	111	2	10300503	13.50	MANEVU2002	0.0005	0.0000	0.0000	WYETH PHARMACEUTICALS/FRAZER
PA	Chester	42029	420290039	031	1	10200401	26.90	MANEVU2002	12.1900	0.0000	0.0000	LINCOLN UNIV/LOWER OXFORD
PA	Chester	42029	420290039	032	1	10200404	15.60	MANEVU2002	0.6161	0.0000	0.0000	LINCOLN UNIV/LOWER OXFORD
PA	Chester	42029	420290039	032	2	10200401	15.60	MANEVU2002	2.2539	0.0000	0.0000	LINCOLN UNIV/LOWER OXFORD
PA	Chester	42029	420290039	035	1	10301002	6.00	MANEVU2002	0.0700	0.0000	0.0000	LINCOLN UNIV/LOWER OXFORD
PA	Chester	42029	420290040	032	1	10300603	2.90	MANEVU2002	1.3300	0.0000	0.0031	HENRY CO/KIMBERTON PLANT
PA	Chester	42029	420290043	031	1	10200603	14.60	MANEVU2002	0.5600	0.0000	0.0010	HUHTAMAKI FLEXIBLES /MALVERN
PA	Chester	42029	420290043	032	1	10200603	14.60	MANEVU2002	0.1800	0.0000	0.0000	HUHTAMAKI FLEXIBLES /MALVERN
PA	Chester	42029	420290046	031	2	10200601	6.70	MANEVU2002	3.7600	0.0000	0.0103	REYNOLDS METALS CO/DOWNINGTOWN
PA	Chester	42029	420290046	032	1	10300602	55.00	SCC Descriptio	0.2600	0.0000	0.0007	REYNOLDS METALS CO/DOWNINGTOWN
PA	Chester	42029	420290046	107	1	10300602	55.00	MANEVU2002	0.0900	0.0000	0.0002	REYNOLDS METALS CO/DOWNINGTOWN
PA	Chester	42029	420290046	111	4	10300602	55.00	MANEVU2002	0.2185	0.0000	0.0006	REYNOLDS METALS CO/DOWNINGTOWN
PA	Chester	42029	420290046	111	1	10300602	55.00	MANEVU2002	0.0115	0.0000	0.0000	REYNOLDS METALS CO/DOWNINGTOWN
PA	Chester	42029	420290046	C03	1	10300602	55.00	MANEVU2002	0.0600	0.0000	0.0002	REYNOLDS METALS CO/DOWNINGTOWN
PA	Chester	42029	420290046	C04	1	10300602	55.00	MANEVU2002	0.0040	0.0000	0.0000	REYNOLDS METALS CO/DOWNINGTOWN
PA	Chester	42029	420290046	C06	1	10300602	55.00	SCC Descriptio	0.1130	0.0000	0.0003	REYNOLDS METALS CO/DOWNINGTOWN
PA	Chester	42029	420290047	045	1	10300603	5.00	SCC Descriptio	0.9400	0.0000	0.0000	TRANSCONTINENTAL GAS/FRAZER STA 200
PA	Chester	42029	420290054	031	1	10200602	14.60	MANEVU2002	1.0500	0.0000	0.0018	DOPACO INC/DOWNINGTOWN
PA	Chester	42029	420290054	111A	1	10200603	5.00	SCC Descriptio	0.2300	0.0000	0.0004	DOPACO INC/DOWNINGTOWN
PA	Chester	42029	420290056	031	2	10200602	14.60	MANEVU2002	3.7674	0.0000	0.0046	SARTOMER CO INC/WEST CHESTER
PA	Chester	42029	420290056	031	1	10200501	14.60	MANEVU2002	0.0326	0.0000	0.0001	SARTOMER CO INC/WEST CHESTER
PA	Chester	42029	420290056	032	2	10200602	14.70	MANEVU2002	3.7764	0.0000	0.0033	SARTOMER CO INC/WEST CHESTER
PA	Chester	42029	420290056	032	1	10200501	14.70	MANEVU2002	0.0236	0.0000	0.0001	SARTOMER CO INC/WEST CHESTER
PA	Chester	42029	420290056	033	1	10200602	14.60	MANEVU2002	0.4000	0.0000	0.0001	SARTOMER CO INC/WEST CHESTER
PA	Chester	42029	420290059	031	1	10300603	4.20	MANEVU2002	0.2600	0.0000	0.0007	PEPPERIDGE FARM INC/DOWNINGTOWN
PA	Chester	42029	420290059	032	1	10300603	6.30	MANEVU2002	0.3900	0.0000	0.0011	PEPPERIDGE FARM INC/DOWNINGTOWN
PA	Chester	42029	420290059	033	1	10300603	5.20	MANEVU2002	0.3300	0.0000	0.0009	PEPPERIDGE FARM INC/DOWNINGTOWN
PA	Chester	42029	420290059	106	1	10300603	5.00	SCC Descriptio	0.5000	0.0000	0.0014	PEPPERIDGE FARM INC/DOWNINGTOWN
PA	Chester	42029	420290059	108	1	10300603	4.60	MANEVU2002	0.2900	0.0000	0.0008	PEPPERIDGE FARM INC/DOWNINGTOWN
PA	Chester	42029	420290059	109	1	10300603	4.60	MANEVU2002	0.2900	0.0000	0.0008	PEPPERIDGE FARM INC/DOWNINGTOWN
PA	Chester	42029	420290066	101	1	10301002	10.10	MANEVU2002	0.3200	0.0000	0.0006	GRACO CHILDRENS PROD/ELVERSON
PA	Chester	42029	420290066	101	2	10301002	10.10	MANEVU2002	0.3200	0.0000	0.0006	GRACO CHILDRENS PROD/ELVERSON
PA	Chester	42029	420290066	101	3	10301002	10.10	MANEVU2002	0.3200	0.0000	0.0006	GRACO CHILDRENS PROD/ELVERSON
PA	Chester	42029	420290066	101	4	10301002	10.10	MANEVU2002	0.3200	0.0000	0.0006	GRACO CHILDRENS PROD/ELVERSON
PA	Chester	42029	420290066	101	5	10301002	10.10	MANEVU2002	0.3200	0.0000	0.0006	GRACO CHILDRENS PROD/ELVERSON
PA	Chester	42029	420290108	031	3	10200602	25.10	MANEVU2002	0.2816	0.0000	0.0007	CHESTER CNTY HOSP/WEST CHESTER
PA	Chester	42029	420290108	031	2	10300401	25.10	MANEVU2002	4.9184	0.0000	0.0000	CHESTER CNTY HOSP/WEST CHESTER
PA	Chester	42029	420290108	032	3	10200602	25.10	MANEVU2002	0.2816	0.0000	0.0007	CHESTER CNTY HOSP/WEST CHESTER
PA	Chester	42029	420290108	032	2	10300401	25.10	MANEVU2002	4.9184	0.0000	0.0000	CHESTER CNTY HOSP/WEST CHESTER
PA	Chester	42029	420290119	031	1	10300602	16.80	MANEVU2002	1.3700	0.0000	0.0029	CENTOCOR INC/MALVERN
PA	Chester	42029	420290119	032	1	10300603	4.30	MANEVU2002	0.2100	0.0000	0.0002	CENTOCOR INC/MALVERN
PA	Chester	42029	420290119	033	1	10300603	1.00	MANEVU2002	0.2500	0.0000	0.0005	CENTOCOR INC/MALVERN
PA	Chester	42029	420290119	035	1	10300602	16.70	MANEVU2002	0.8100	0.0000	0.0019	CENTOCOR INC/MALVERN
PA	Chester	42029	420290119	036	1	10300602	20.90	MANEVU2002	0.8100	0.0000	0.0019	CENTOCOR INC/MALVERN
PA	Chester	42029	420290119	037	2	10300501	18.90	MANEVU2002	1.0200	0.0000	0.0028	CENTOCOR INC/MALVERN
PA	Chester	42029	420290127	031	1	10300602	10.50	MANEVU2002	0.1800	0.0000	0.0000	WORTHINGTON STEEL CO/MALVERN PLT
PA	Chester	42029	420290127	032	1	10300602	12.60	MANEVU2002	0.1100	0.0000	0.0000	WORTHINGTON STEEL CO/MALVERN PLT

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Chester	42029	420290127	032	2	10300602	12.60	MANEVU2002	0.1100	0.0000	0.0000	WORTHINGTON STEEL CO/MALVERN PLT
PA	Chester	42029	420290127	034	1	10200602	40.50	MANEVU2002	1.4700	0.0000	0.0003	WORTHINGTON STEEL CO/MALVERN PLT
PA	Chester	42029	420290129	113	1	10200602	4.50	MANEVU2002	0.0900	0.0000	0.0000	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	115	1	10200602	2.00	MANEVU2002	0.2600	0.0000	0.0007	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	116	1	10200602	2.00	MANEVU2002	0.2600	0.0000	0.0008	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	117	1	10200602	55.00	SCC Descriptio	1.0472	0.0000	0.0066	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	117	3	10200602	55.00	SCC Descriptio	1.0164	0.0000	0.0064	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	117	5	10200602	55.00	SCC Descriptio	1.0164	0.0000	0.0064	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	118	1	10200602	55.00	SCC Descriptio	0.5250	0.0000	0.0010	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	118	3	10200602	55.00	SCC Descriptio	0.5250	0.0000	0.0010	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	119	1	10200602	55.00	SCC Descriptio	0.1190	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	119	3	10200602	55.00	SCC Descriptio	0.1155	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	119	5	10200602	55.00	SCC Descriptio	0.1155	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	120	1	10200602	55.00	SCC Descriptio	0.3162	0.0000	0.0009	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	120	3	10200602	55.00	SCC Descriptio	0.3069	0.0000	0.0008	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	120	5	10200602	55.00	SCC Descriptio	0.3069	0.0000	0.0008	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	121	1	10200602	55.00	SCC Descriptio	0.1500	0.0000	0.0004	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	122	1	10200602	55.00	SCC Descriptio	0.0400	0.0000	0.0001	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	123	1	10200602	55.00	SCC Descriptio	0.0700	0.0000	0.0002	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	124	1	10200602	55.00	SCC Descriptio	0.7800	0.0000	0.0022	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	124	3	10200602	55.00	SCC Descriptio	0.2652	0.0000	0.0008	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	124	5	10200602	55.00	SCC Descriptio	0.2652	0.0000	0.0008	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	124	7	10200602	55.00	SCC Descriptio	0.2496	0.0000	0.0007	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	125	1	10200602	55.00	SCC Descriptio	0.6200	0.0000	0.0017	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	125	11	10200602	55.00	SCC Descriptio	0.1240	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	125	3	10200602	55.00	SCC Descriptio	0.1240	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	125	5	10200602	55.00	SCC Descriptio	0.1240	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	125	7	10200602	55.00	SCC Descriptio	0.1240	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	125	9	10200602	55.00	SCC Descriptio	0.1240	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	126	1	10200602	55.00	SCC Descriptio	0.6350	0.0000	0.0017	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	126	11	10200602	55.00	SCC Descriptio	0.1270	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	126	3	10200602	55.00	SCC Descriptio	0.1270	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	126	5	10200602	55.00	SCC Descriptio	0.1270	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	126	7	10200602	55.00	SCC Descriptio	0.1270	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	126	9	10200602	55.00	SCC Descriptio	0.1270	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	127	1	10200602	55.00	SCC Descriptio	0.4600	0.0000	0.0015	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	127	3	10200602	55.00	SCC Descriptio	0.1564	0.0000	0.0005	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	127	5	10200602	55.00	SCC Descriptio	0.1564	0.0000	0.0005	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	127	7	10200602	55.00	SCC Descriptio	0.1472	0.0000	0.0005	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	130	1	10200602	55.00	SCC Descriptio	0.4850	0.0000	0.0017	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	130	3	10200602	55.00	SCC Descriptio	0.4850	0.0000	0.0017	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290269	110	1	10200603	1.00	MANEVU2002	0.1300	0.0000	0.0004	MCAVOY VITRIFIED BRICK CO/PHOENIXVILLE
PA	Chester	42029	420290313	031	1	10200603	6.30	MANEVU2002	0.3000	0.0000	0.0007	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	032	1	10200603	1.50	MANEVU2002	0.0800	0.0000	0.0002	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	033	1	10200603	1.50	MANEVU2002	0.0800	0.0000	0.0002	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	034	1	10200603	1.00	MANEVU2002	0.0500	0.0000	0.0001	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	035	1	10200603	0.40	MANEVU2002	0.0200	0.0000	0.0000	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	039	1	10200603	5.60	MANEVU2002	0.1000	0.0000	0.0000	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	040	1	10200603	0.70	MANEVU2002	0.0200	0.0000	0.0000	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	041	1	10200603	1.90	MANEVU2002	0.0500	0.0000	0.0002	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	101	1	10200603	5.00	SCC Descriptio	0.2500	0.0000	0.0007	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	102	5	10200603	5.00	SCC Descriptio	0.0782	0.0000	0.0002	TASTY BAKING/OXFORD PLT

									2002 NOx Emissions			
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PA	Chester	42029	420290313	102	1	10200603	5.00	SCC Descriptio	0.0759	0.0000	0.0002	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	102	3	10200603	5.00	SCC Descriptio	0.0759	0.0000	0.0002	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	G01	1	10200603	3.40	MANEVU2002	0.0600	0.0000	0.0000	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290398	001	1	10200602	55.00	SCC Descriptio	0.0002	0.0000	0.0000	LNP/THORNDALE
PA	Chester	42029	420290624	031	1	10200603	0.30	MANEVU2002	0.1000	0.0000	0.0002	OBERTHUR CARD SYSTEMS INC/EXTON
PA	Chester	42029	420290791	031	1	10200401	46.00	MANEVU2002	1.3897	0.0000	0.0029	SEALED AIR CORP/MODENA
PA	Chester	42029	420290791	031	2	10200602	46.00	MANEVU2002	0.0863	0.0000	0.0004	SEALED AIR CORP/MODENA
PA	Chester	42029	420290900	731	2	10200602	40.00	MANEVU2002	1.9389	0.0000	0.0000	SANOFI SYNTHELABO INC/GREAT VALLEY
PA	Chester	42029	420290900	731	4	10200602	40.00	MANEVU2002	1.9389	0.0000	0.0034	SANOFI SYNTHELABO INC/GREAT VALLEY
PA	Chester	42029	420290900	731	1	10200501	40.00	MANEVU2002	0.0001	0.0000	0.0000	SANOFI SYNTHELABO INC/GREAT VALLEY
PA	Chester	42029	420290900	731	3	10200501	40.00	MANEVU2002	0.0001	0.0000	0.0000	SANOFI SYNTHELABO INC/GREAT VALLEY
PA	Chester	42029	420291019	031	2	10200602	12.30	MANEVU2002	1.5314	0.0000	0.0035	PHOENIXVILLE HOSP INC/PHOENIXVILLE
PA	Chester	42029	420291019	032	1	10200602	16.80	MANEVU2002	0.2014	0.0000	0.0008	PHOENIXVILLE HOSP INC/PHOENIXVILLE
PA	Chester	42029	420291019	033	3	10200602	5.20	MANEVU2002	0.0044	0.0000	0.0000	PHOENIXVILLE HOSP INC/PHOENIXVILLE
PA	Chester	42029	420292028	031	2	10300602	28.40	MANEVU2002	2.0123	0.0000	0.0000	US VETERANS ADMIN/COATESVILLE VA MED CTR
PA	Chester	42029	420292028	031	1	10300501	28.40	MANEVU2002	0.0137	0.0000	0.0000	US VETERANS ADMIN/COATESVILLE VA MED CTR
PA	Chester	42029	420292028	032	3	10300601	28.40	MANEVU2002	2.0729	0.0000	0.0000	US VETERANS ADMIN/COATESVILLE VA MED CTR
PA	Chester	42029	420292028	032	1	10300501	28.40	MANEVU2002	0.0011	0.0000	0.0000	US VETERANS ADMIN/COATESVILLE VA MED CTR
PA	Chester	42029	420292028	033	1	10300501	56.00	MANEVU2002	0.0009	0.0000	0.0000	US VETERANS ADMIN/COATESVILLE VA MED CTR
PA	Chester	42029	420292028	033	2	10300601	56.00	MANEVU2002	0.6731	0.0000	0.0000	US VETERANS ADMIN/COATESVILLE VA MED CTR
PA	Chester	42029	420292028	034	1	10300501	56.00	MANEVU2002	0.0008	0.0000	0.0000	US VETERANS ADMIN/COATESVILLE VA MED CTR
PA	Chester	42029	420292028	034	2	10300601	56.00	MANEVU2002	1.4592	0.0000	0.0000	US VETERANS ADMIN/COATESVILLE VA MED CTR
PA	Clarion	42031	420310004	031	1	10200906	6.30	MANEVU2002	0.0262	0.0000	0.0000	OEM ENTERPRISES INC/REDBANK PLT
PA	Clarion	42031	420310556	031	1	10300903	25.00	MANEVU2002	3.2200	0.0000	0.0039	GEORGIA PACIFIC CORP/MARBLE
PA	Clinton	42035	420350008	033	1	10200204	291.90	MANEVU2002	112.6569	0.0000	0.0000	INTL PAPER CO/LOCK HAVEN MILL
PA	Clinton	42035	420350008	034	1	10200204	291.90	MANEVU2002	83.9460	0.0000	0.0000	INTL PAPER CO/LOCK HAVEN MILL
PA	Clinton	42035	420350010	038	1	10200603	3.30	MANEVU2002	0.0067	0.0000	0.0000	DOMINION TRANS INC/FINNEFROCK STATION
PA	Clinton	42035	420350010	039	1	10200603	2.80	MANEVU2002	1.4000	0.0000	0.0029	DOMINION TRANS INC/FINNEFROCK STATION
PA	Clinton	42035	420350010	040	1	10200603	1.20	MANEVU2002	0.0061	0.0000	0.0000	DOMINION TRANS INC/FINNEFROCK STATION
PA	Clinton	42035	420350011	047	1	10200603	40.00	MANEVU2002	10.8000	0.0000	0.0047	DOMINION TRANS INC/LEIDY STATION
PA	Clinton	42035	420350011	048	1	10200603	40.00	MANEVU2002	9.4000	0.0000	0.0062	DOMINION TRANS INC/LEIDY STATION
PA	Clinton	42035	420350011	049	1	10200603	40.00	MANEVU2002	10.5000	0.0000	0.0046	DOMINION TRANS INC/LEIDY STATION
PA	Clinton	42035	420350012	031	1	10200501	62.50	MANEVU2002	0.2100	0.0000	0.0003	WOOLRICH INC/WOOLRICH PLT
PA	Clinton	42035	420350012	032	3	10200601	41.60	MANEVU2002	2.7700	0.0000	0.0046	WOOLRICH INC/WOOLRICH PLT
PA	Clinton	42035	420350014	CU031	1	10200603	8.40	MANEVU2002	0.8000	0.0000	0.0024	ARMSTRONG WORLD IND /BEECH CREEK PLT
PA	Clinton	42035	420350014	CU032	1	10200603	8.40	MANEVU2002	0.2000	0.0000	0.0002	ARMSTRONG WORLD IND /BEECH CREEK PLT
PA	Clinton	42035	420350016	037	1	10200603	5.00	SCC Descriptio	0.3000	0.0000	0.0000	COLUMBIA GAS TRANS CORP/RENOVO STATION
PA	Clinton	42035	420350016	039	1	10200603	5.00	SCC Descriptio	0.0200	0.0000	0.0001	COLUMBIA GAS TRANS CORP/RENOVO STATION
PA	Clinton	42035	420350016	040	1	10200603	5.00	SCC Descriptio	0.1000	0.0000	0.0002	COLUMBIA GAS TRANS CORP/RENOVO STATION
PA	Clinton	42035	420350812	001	1	10200602	14.60	MANEVU2002	1.0477	0.0000	0.0036	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	001	2	10200502	14.60	MANEVU2002	0.0323	0.0000	0.0000	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	002	1	10200602	4.20	MANEVU2002	0.3232	0.0000	0.0007	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	002	2	10200502	4.20	MANEVU2002	0.0068	0.0000	0.0000	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	003	1	10200602	14.60	MANEVU2002	1.5573	0.0000	0.0036	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	003	2	10200502	14.60	MANEVU2002	0.0327	0.0000	0.0000	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	004	1	10200602	55.00	SCC Descriptio	0.3133	0.0000	0.0007	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	004	2	10200502	55.00	SCC Descriptio	0.0067	0.0000	0.0000	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	005	1	10200602	55.00	SCC Descriptio	0.1679	0.0000	0.0004	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	005	2	10200502	55.00	SCC Descriptio	0.0021	0.0000	0.0000	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	006	1	10200602	1.60	MANEVU2002	0.1200	0.0000	0.0003	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	007	1	10200602	14.60	MANEVU2002	0.0100	0.0000	0.0000	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	P115	1	10200502	55.00	SCC Descriptio	0.1300	0.0000	0.0005	CRODA INC/DRAKETOWN ROAD

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PA	Columbia	42037	420370002	031	1	10300102	26.40	MANEVU2002	1.4000	0.0000	0.0000	PA STATE SYS OF HIGHED ED/BLOOMSBURG UNIV PA
PA	Columbia	42037	420370002	032	1	10300102	26.40	MANEVU2002	11.6900	0.0000	0.0257	PA STATE SYS OF HIGHED ED/BLOOMSBURG UNIV PA
PA	Columbia	42037	420370002	033	1	10300102	26.40	MANEVU2002	13.4000	0.0000	0.0059	PA STATE SYS OF HIGHED ED/BLOOMSBURG UNIV PA
PA	Columbia	42037	420370002	035	1	10300102	26.40	MANEVU2002	1.5300	0.0000	0.0000	PA STATE SYS OF HIGHED ED/BLOOMSBURG UNIV PA
PA	Columbia	42037	420370002	036	1	10300602	21.30	MANEVU2002	0.0012	0.0000	0.0000	PA STATE SYS OF HIGHED ED/BLOOMSBURG UNIV PA
PA	Columbia	42037	420370007	032	1	10200504	77.00	MANEVU2002	0.5630	0.0000	0.0002	MAGEE RIETER AUTO SYS/BLOOMSBURG PLT
PA	Columbia	42037	420370007	033	1	10200504	77.00	MANEVU2002	0.0385	0.0000	0.0001	MAGEE RIETER AUTO SYS/BLOOMSBURG PLT
PA	Columbia	42037	420370007	034	1	10200104	60.00	MANEVU2002	26.7100	0.0000	0.0264	MAGEE RIETER AUTO SYS/BLOOMSBURG PLT
PA	Columbia	42037	420370007	035	1	10200104	86.60	MANEVU2002	37.5100	0.0000	0.0701	MAGEE RIETER AUTO SYS/BLOOMSBURG PLT
PA	Columbia	42037	420370010	031	2	10200602	26.60	MANEVU2002	5.1365	0.0000	0.0000	DLM FOODS LLC/BLOOMSBURG PLT
PA	Columbia	42037	420370010	031	1	10200401	26.60	MANEVU2002	0.0235	0.0000	0.0000	DLM FOODS LLC/BLOOMSBURG PLT
PA	Columbia	42037	420370010	032	2	10200602	26.60	MANEVU2002	3.9110	0.0000	0.0000	DLM FOODS LLC/BLOOMSBURG PLT
PA	Columbia	42037	420370010	032	1	10200401	26.60	MANEVU2002	0.0290	0.0000	0.0001	DLM FOODS LLC/BLOOMSBURG PLT
PA	Columbia	42037	420370010	034	1	10200602	50.30	MANEVU2002	9.5876	0.0000	0.0179	DLM FOODS LLC/BLOOMSBURG PLT
PA	Columbia	42037	420370010	034	2	10200501	50.30	MANEVU2002	0.0324	0.0000	0.0000	DLM FOODS LLC/BLOOMSBURG PLT
PA	Columbia	42037	420370010	035	1	10200602	50.30	MANEVU2002	12.1721	0.0000	0.0281	DLM FOODS LLC/BLOOMSBURG PLT
PA	Columbia	42037	420370010	035	2	10200501	50.30	MANEVU2002	0.0179	0.0000	0.0000	DLM FOODS LLC/BLOOMSBURG PLT
PA	Columbia	42037	420370036	032	1	10200602	14.30	MANEVU2002	2.0100	0.0000	0.0053	FOAM FABRICATORS INC/BLOOMSBURG PLT
PA	Columbia	42037	420370037	CU031	1	10200602	55.00	SCC Descriptio	0.1800	0.0000	0.0003	HADDON CRAFTSMEN/BLOOMSBURG PLT
PA	Columbia	42037	420370037	CU032	1	10200601	150.00	SCC Descriptio	0.1800	0.0000	0.0003	HADDON CRAFTSMEN/BLOOMSBURG PLT
PA	Columbia	42037	420370037	CU033	1	10200601	150.00	SCC Descriptio	0.3500	0.0000	0.0011	HADDON CRAFTSMEN/BLOOMSBURG PLT
PA	Crawford	42039	420390006	001	1	10200603	5.00	SCC Descriptio	0.7821	0.0000	0.0001	US BRONZE FOUNDRY & /US BRONZE
PA	Crawford	42039	420390013	001	1	10200603	6.70	MANEVU2002	0.1485	0.0000	0.0009	LORD CORP/SAEGERTOWN
PA	Crawford	42039	420390013	004	1	10200603	6.70	MANEVU2002	0.5237	0.0000	0.0009	LORD CORP/SAEGERTOWN
PA	Crawford	42039	420390014	031	1	10200603	8.40	MANEVU2002	0.2830	0.0000	0.0004	LORD CORP/MECH PROD DIV
PA	Crawford	42039	420390014	035	1	10200603	12.60	MANEVU2002	0.2360	0.0000	0.0010	LORD CORP/MECH PROD DIV
PA	Crawford	42039	420390502	B 1	1	10200603	4.20	MANEVU2002	0.5000	0.0000	0.0017	MOLDED FIBERGLASS CO/LINESVILLE
PA	Crawford	42039	420390502	B 2	1	10200603	4.20	MANEVU2002	0.3540	0.0000	0.0005	MOLDED FIBERGLASS CO/LINESVILLE
PA	Cumberland	42041	420410003	032	1	10300102	47.00	MANEVU2002	20.8000	0.0000	0.0251	PA DEPT OF CORR/CAMP HILL SCI
PA	Cumberland	42041	420410003	033	1	10300102	47.00	MANEVU2002	25.6100	0.0000	0.0450	PA DEPT OF CORR/CAMP HILL SCI
PA	Cumberland	42041	420410003	038	1	10300501	63.90	MANEVU2002	1.6100	0.0000	0.0108	PA DEPT OF CORR/CAMP HILL SCI
PA	Cumberland	42041	420410005	033	1	10200602	24.50	MANEVU2002	0.0900	0.0000	0.0003	AHLSTROM TECH SPECIALTIES/MT HOLLY SPRINGS PLT
PA	Cumberland	42041	420410005	034	2	10200601	24.50	MANEVU2002	3.2593	0.0000	0.0093	AHLSTROM TECH SPECIALTIES/MT HOLLY SPRINGS PLT
PA	Cumberland	42041	420410005	034	1	10200401	24.50	MANEVU2002	0.6407	0.0000	0.0014	AHLSTROM TECH SPECIALTIES/MT HOLLY SPRINGS PLT
PA	Cumberland	42041	420410008	031	2	10300602	12.50	MANEVU2002	0.0029	0.0000	0.0000	CARLISLE SYNTEC INC/CARLISLE
PA	Cumberland	42041	420410008	031	1	10200401	12.50	MANEVU2002	1.6971	0.0000	0.0041	CARLISLE SYNTEC INC/CARLISLE
PA	Cumberland	42041	420410008	032	2	10300602	12.50	MANEVU2002	0.0018	0.0000	0.0000	CARLISLE SYNTEC INC/CARLISLE
PA	Cumberland	42041	420410008	032	1	10200401	12.50	MANEVU2002	3.0982	0.0000	0.0071	CARLISLE SYNTEC INC/CARLISLE
PA	Cumberland	42041	420410008	034	1	10300603	8.40	MANEVU2002	0.2000	0.0000	0.0000	CARLISLE SYNTEC INC/CARLISLE
PA	Cumberland	42041	420410008	034	2	10300603	8.40	MANEVU2002	0.2000	0.0000	0.0000	CARLISLE SYNTEC INC/CARLISLE
PA	Cumberland	42041	420410009	033	2	10200602	50.20	MANEVU2002	8.4516	0.0000	0.0000	CARLISLE TIRE & WHEEL/COLLEGE STREET
PA	Cumberland	42041	420410009	033	1	10200401	50.20	MANEVU2002	5.0484	0.0000	0.0139	CARLISLE TIRE & WHEEL/COLLEGE STREET
PA	Cumberland	42041	420410010	032	2	10200602	57.40	MANEVU2002	2.1087	0.0000	0.0000	LEAR OPR CORP/CARLISLE
PA	Cumberland	42041	420410010	032	1	10200501	57.40	MANEVU2002	0.1213	0.0000	0.0002	LEAR OPR CORP/CARLISLE
PA	Cumberland	42041	420410010	033A	2	10200602	38.50	MANEVU2002	1.5018	0.0000	0.0000	LEAR OPR CORP/CARLISLE
PA	Cumberland	42041	420410010	033A	1	10200501	38.50	MANEVU2002	0.0082	0.0000	0.0000	LEAR OPR CORP/CARLISLE
PA	Cumberland	42041	420410013	031	1	10200602	25.10	John Hulsberg	1.6100	0.0000	0.0044	PPG IND INC/WORKS NO 6
PA	Cumberland	42041	420410013	032	1	10200602	25.10	John Hulsberg	2.0100	0.0000	0.0054	PPG IND INC/WORKS NO 6
PA	Cumberland	42041	420410013	033	1	10200602	25.10	John Hulsberg	2.0700	0.0000	0.0056	PPG IND INC/WORKS NO 6
PA	Cumberland	42041	420410026	031	1	10200602	13.00	MANEVU2002	0.1700	0.0000	0.0004	MH TECHNOLOGIES LLC/MT HOLLY SPRINGS
PA	Cumberland	42041	420410026	032	2	10200602	29.30	MANEVU2002	1.1729	0.0000	0.0000	MH TECHNOLOGIES LLC/MT HOLLY SPRINGS
PA	Cumberland	42041	420410026	032	1	10200401	29.30	MANEVU2002	0.1571	0.0000	0.0004	MH TECHNOLOGIES LLC/MT HOLLY SPRINGS

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PA	Cumberland	42041	420410026	034	2	10200602	29.30	MANEVU2002	3.1350	0.0000	0.0000	MH TECHNOLOGIES LLC/MT HOLLY SPRINGS
PA	Cumberland	42041	420410026	034	1	10200401	29.30	MANEVU2002	0.1050	0.0000	0.0002	MH TECHNOLOGIES LLC/MT HOLLY SPRINGS
PA	Cumberland	42041	420410028	031	1	10300102	32.40	MANEVU2002	9.7000	0.0000	0.0000	PA STATE SYS OF HIGHER ED/SHIPPENSBURG UNIV OF PA
PA	Cumberland	42041	420410028	032	1	10300102	32.40	MANEVU2002	6.3000	0.0000	0.0000	PA STATE SYS OF HIGHER ED/SHIPPENSBURG UNIV OF PA
PA	Cumberland	42041	420410028	033	1	10300102	38.80	MANEVU2002	10.1000	0.0000	0.0000	PA STATE SYS OF HIGHER ED/SHIPPENSBURG UNIV OF PA
PA	Cumberland	42041	420410028	034	1	10300102	32.40	MANEVU2002	7.3000	0.0000	0.0000	PA STATE SYS OF HIGHER ED/SHIPPENSBURG UNIV OF PA
PA	Cumberland	42041	420410029	031	1	10200602	14.60	MANEVU2002	1.7800	0.0000	0.0047	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	032	1	10200602	14.60	MANEVU2002	1.4500	0.0000	0.0038	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	033	1	10200602	14.60	MANEVU2002	1.6400	0.0000	0.0043	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	035	1	10200602	31.50	MANEVU2002	1.6800	0.0000	0.0041	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	036	1	10200602	31.50	MANEVU2002	1.5300	0.0000	0.0042	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	037	1	10200602	31.50	MANEVU2002	1.4400	0.0000	0.0043	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	102	1	10200602	55.00	MANEVU2002	0.0504	0.0000	0.0000	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	103	1	10200602	55.00	SCC Descriptio	0.5740	0.0000	0.0017	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	104	1	10200602	55.00	SCC Descriptio	1.0100	0.0000	0.0020	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	105	1	10200602	55.00	SCC Descriptio	1.0400	0.0000	0.0031	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410030	127	1	10200602	55.00	MANEVU2002	0.3000	0.0000	0.0008	FROG SWITCH & MFG CO/CARLISLE
PA	Cumberland	42041	420410322	031	2	10300602	15.50	MANEVU2002	0.8100	0.0000	0.0000	US ARMY/CARLISLE BARRACKS
PA	Cumberland	42041	420410322	032	2	10300602	25.50	MANEVU2002	2.1900	0.0000	0.0000	US ARMY/CARLISLE BARRACKS
PA	Cumberland	42041	420410322	033	2	10300602	12.60	MANEVU2002	0.0300	0.0000	0.0000	US ARMY/CARLISLE BARRACKS
PA	Cumberland	42041	420410322	034	1	10300501	5.90	MANEVU2002	0.0400	0.0000	0.0000	US ARMY/CARLISLE BARRACKS
PA	Cumberland	42041	420410322	035	1	10300603	51.00	MANEVU2002	1.9500	0.0000	0.0024	US ARMY/CARLISLE BARRACKS
PA	Cumberland	42041	420410329	031	1	10300501	14.70	MANEVU2002	1.3500	0.0000	0.0000	NAVAL SUPPORT ACTIVI/MECHANICSBURG
PA	Cumberland	42041	420410329	032	1	10300501	14.70	MANEVU2002	0.1500	0.0000	0.0000	NAVAL SUPPORT ACTIVI/MECHANICSBURG
PA	Cumberland	42041	420410329	034	2	10200501	96.80	John Hulsberg	18.7700	0.0000	0.0516	NAVAL SUPPORT ACTIVI/MECHANICSBURG
PA	Cumberland	42041	420410329	035	2	10200501	1.30	MANEVU2002	0.4200	0.0000	0.0000	NAVAL SUPPORT ACTIVI/MECHANICSBURG
PA	Cumberland	42041	420410329	036	2	10200501	1.30	MANEVU2002	0.0700	0.0000	0.0000	NAVAL SUPPORT ACTIVI/MECHANICSBURG
PA	Cumberland	42041	420410329	037	1	10300603	16.80	John Hulsberg	0.9830	0.0000	0.0005	NAVAL SUPPORT ACTIVI/MECHANICSBURG
PA	Dauphin	42043	420430018	032	2	10200601	200.00	John Hulsberg	22.2100	0.0000	0.0613	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	034	1	10200602	55.00	SCC Descriptio	4.7900	0.0000	0.0129	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	232C	1	10200601	150.00	SCC Descriptio	6.4065	0.0000	0.0177	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	301	1	10200602	55.00	SCC Descriptio	1.0272	0.0000	0.0028	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	301	3	10200602	55.00	SCC Descriptio	1.0272	0.0000	0.0028	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	301	5	10200602	55.00	SCC Descriptio	1.0272	0.0000	0.0028	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	301	7	10200602	55.00	SCC Descriptio	1.0272	0.0000	0.0028	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	401	10	10200602	55.00	SCC Descriptio	7.3848	0.0000	0.0200	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	401	2	10200602	55.00	SCC Descriptio	7.3848	0.0000	0.0200	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	401	4	10200602	55.00	SCC Descriptio	7.3848	0.0000	0.0200	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	401	6	10200602	55.00	SCC Descriptio	7.3848	0.0000	0.0200	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	401	8	10200602	55.00	SCC Descriptio	7.3848	0.0000	0.0200	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	401	12	10200602	55.00	SCC Descriptio	6.5160	0.0000	0.0176	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430022	031	2	10201002	11.00	MANEVU2002	5.7700	0.0000	0.0146	MI METALS INC/MILLERSBURG
PA	Dauphin	42043	420430023	031	1	10200603	6.30	MANEVU2002	0.7800	0.0000	0.0021	STROEHMANN BAKERIES /CAPITOL BAKERY
PA	Dauphin	42043	420430023	032	1	10200603	0.50	MANEVU2002	0.0800	0.0000	0.0001	STROEHMANN BAKERIES /CAPITOL BAKERY
PA	Dauphin	42043	420430023	C01	1	10200603	5.00	SCC Descriptio	0.3800	0.0000	0.0011	STROEHMANN BAKERIES /CAPITOL BAKERY
PA	Dauphin	42043	420430024	031	1	10200401	0.00		7.1600	0.0000	0.0181	HARSCO CORP/TAYLOR WHARTON GAS EQUIPMENT D
PA	Dauphin	42043	420430026	033	1	10200602	21.90	MANEVU2002	0.1710	0.0000	0.0000	AMES TRUE TEMPER INC/HARRISBURG
PA	Dauphin	42043	420430026	101	1	10200603	5.00	MANEVU2002	0.3830	0.0000	0.0006	AMES TRUE TEMPER INC/HARRISBURG
PA	Dauphin	42043	420430026	103	1	10200603	5.00	MANEVU2002	0.0290	0.0000	0.0000	AMES TRUE TEMPER INC/HARRISBURG
PA	Dauphin	42043	420430026	203	1	10200603	5.00	SCC Descriptio	0.1620	0.0000	0.0002	AMES TRUE TEMPER INC/HARRISBURG
PA	Dauphin	42043	420430049	103	1	10200603	5.00	SCC Descriptio	6.1200	0.0000	0.0161	DAYTON PARTS LLC/HARRISBURG
PA	Dauphin	42043	420430049	104	1	10200603	5.00	SCC Descriptio	0.4700	0.0000	0.0012	DAYTON PARTS LLC/HARRISBURG

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PA	Dauphin	42043	420430049	105	1	10200603	5.00	SCC Descriptio	0.4400	0.0000	0.0012	DAYTON PARTS LLC/HARRISBURG
PA	Dauphin	42043	420430071	035	1	10200601	155.00	John Hulsberg	2.5000	0.0000	0.0069	HERSHEY FOODS CORP/EAST PLT
PA	Dauphin	42043	420430071	036	3	10200601	99.00	John Hulsberg	4.1000	0.0000	0.0113	HERSHEY FOODS CORP/EAST PLT
PA	Dauphin	42043	420430071	037	3	10200601	99.00	John Hulsberg	4.8000	0.0000	0.0132	HERSHEY FOODS CORP/EAST PLT
PA	Dauphin	42043	420430071	190	1	10200603	5.00	SCC Descriptio	0.3000	0.0000	0.0008	HERSHEY FOODS CORP/EAST PLT
PA	Dauphin	42043	420430071	199	2	10200603	5.00	SCC Descriptio	3.2000	0.0000	0.0082	HERSHEY FOODS CORP/EAST PLT
PA	Dauphin	42043	420430698	031	2	10300602	24.50	MANEVU2002	1.1520	0.0000	0.0053	PA DPW/HARRISBURG STATE HOSP
PA	Dauphin	42043	420430698	032	1	10300602	48.80	MANEVU2002	1.6190	0.0000	0.0000	PA DPW/HARRISBURG STATE HOSP
PA	Dauphin	42043	420430698	033	2	10300602	48.80	MANEVU2002	1.0210	0.0000	0.0000	PA DPW/HARRISBURG STATE HOSP
PA	Delaware	42045	420450002	031	2	10200602	76.50	John Hulsberg	2.6000	0.0000	0.0070	STONEY CREEK TECH/TRAINER
PA	Delaware	42045	420450002	033	2	10200602	94.00	John Hulsberg	7.2000	0.0000	0.0195	STONEY CREEK TECH/TRAINER
PA	Delaware	42045	420450012	031	1	10300602	25.10	MANEVU2002	11.8000	0.0000	0.0000	CROZER CHESTER MED CTR/UPLAND
PA	Delaware	42045	420450012	033	1	10300602	22.00	MANEVU2002	7.3000	0.0000	0.0545	CROZER CHESTER MED CTR/UPLAND
PA	Delaware	42045	420450014	042	1	10300603	8.80	MANEVU2002	0.0480	0.0000	0.0001	EXELON GENERATION CO/EDDYSTONE
PA	Delaware	42045	420450016	033	1	10200601	198.00	John Hulsberg	14.4000	0.0000	0.0397	KIMBERLY CLARK PA LLC/CHESTER OPERATIONS
PA	Delaware	42045	420450016	034	2	10200601	249.00	John Hulsberg	15.5000	0.0000	0.0428	KIMBERLY CLARK PA LLC/CHESTER OPERATIONS
PA	Delaware	42045	420450016	103	1	10200602	55.00	SCC Descriptio	3.8860	0.0000	0.0105	KIMBERLY CLARK PA LLC/CHESTER OPERATIONS
PA	Delaware	42045	420450016	103	3	10200602	55.00	SCC Descriptio	1.9140	0.0000	0.0052	KIMBERLY CLARK PA LLC/CHESTER OPERATIONS
PA	Delaware	42045	420450016	104	1	10200602	55.00	SCC Descriptio	4.4530	0.0000	0.0120	KIMBERLY CLARK PA LLC/CHESTER OPERATIONS
PA	Delaware	42045	420450016	104	3	10200602	55.00	SCC Descriptio	2.8470	0.0000	0.0077	KIMBERLY CLARK PA LLC/CHESTER OPERATIONS
PA	Delaware	42045	420450017	035	1	10200602	10.00	MANEVU2002	0.9000	0.0000	0.0030	PQ CORP/CHESTER
PA	Delaware	42045	420450017	103	1	10200603	5.00	MANEVU2002	1.2000	0.0000	0.0030	PQ CORP/CHESTER
PA	Delaware	42045	420450017	105	1	10200602	16.60	MANEVU2002	0.4000	0.0000	0.0017	PQ CORP/CHESTER
PA	Delaware	42045	420450021	031	1	10200401	29.50	MANEVU2002	1.8288	0.0000	0.0058	VILLANOVA UNIV/MAIN CAMPUS
PA	Delaware	42045	420450021	031	2	10200602	29.50	MANEVU2002	3.8312	0.0000	0.0114	VILLANOVA UNIV/MAIN CAMPUS
PA	Delaware	42045	420450021	032	2	10200602	29.50	MANEVU2002	3.1721	0.0000	0.0010	VILLANOVA UNIV/MAIN CAMPUS
PA	Delaware	42045	420450021	032	1	10200401	29.50	MANEVU2002	1.1879	0.0000	0.0046	VILLANOVA UNIV/MAIN CAMPUS
PA	Delaware	42045	420450021	033	2	10200602	25.00	MANEVU2002	0.0005	0.0000	0.0000	VILLANOVA UNIV/MAIN CAMPUS
PA	Delaware	42045	420450021	033	1	10200401	25.00	MANEVU2002	4.0895	0.0000	0.0229	VILLANOVA UNIV/MAIN CAMPUS
PA	Delaware	42045	420450021	034	1	10200401	50.00	MANEVU2002	14.9819	0.0000	0.0362	VILLANOVA UNIV/MAIN CAMPUS
PA	Delaware	42045	420450021	034	2	10200602	50.00	MANEVU2002	3.5781	0.0000	0.0004	VILLANOVA UNIV/MAIN CAMPUS
PA	Delaware	42045	420450023	031	1	10200501	20.90	MANEVU2002	1.3300	0.0000	0.0013	SUNOCO PARTNERS MKT & TERM LP/FT MIFFLIN
PA	Delaware	42045	420450023	032	1	10200501	20.90	MANEVU2002	1.3300	0.0000	0.0013	SUNOCO PARTNERS MKT & TERM LP/FT MIFFLIN
PA	Delaware	42045	420450025	087	1	10200401	170.00	MANEVU2002	5.1118	0.0000	0.0000	SUNOCO INC (R&M)/MARCUS HOOK REFINERY
PA	Delaware	42045	420450025	087	2	10200701	170.00	MANEVU2002	24.7882	0.0000	0.0599	SUNOCO INC (R&M)/MARCUS HOOK REFINERY
PA	Delaware	42045	420450025	088	2	10200701	246.00	MANEVU2002	99.2000	0.0000	0.2834	SUNOCO INC (R&M)/MARCUS HOOK REFINERY
PA	Delaware	42045	420450025	089	1	10200701	245.00	MANEVU2002	103.6000	0.0000	0.1708	SUNOCO INC (R&M)/MARCUS HOOK REFINERY
PA	Delaware	42045	420450025	092	1	10200701	237.00	MANEVU2002	5.8000	0.0000	0.0064	SUNOCO INC (R&M)/MARCUS HOOK REFINERY
PA	Delaware	42045	420450029	031	1	10200401	26.50	MANEVU2002	2.8000	0.0000	0.0000	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	032	1	10200401	26.50	MANEVU2002	2.8000	0.0000	0.0000	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	033	2	10200602	42.00	MANEVU2002	2.1114	0.0000	0.0000	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	033	1	10200401	42.00	MANEVU2002	6.8886	0.0000	0.0522	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	035	1	10200401	86.00	MANEVU2002	28.5000	0.0000	0.0000	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	036	1	10200401	86.00	MANEVU2002	14.0000	0.0000	0.0000	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	037	1	10200401	35.70	MANEVU2002	12.4693	0.0000	0.0397	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	037	2	10200602	35.70	MANEVU2002	0.6307	0.0000	0.0011	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	039	2	10200602	42.00	MANEVU2002	0.6399	0.0000	0.0000	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	039	1	10200401	42.00	MANEVU2002	14.2601	0.0000	0.0658	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450030	031	1	10200401	180.00	MANEVU2002	67.2730	0.0000	0.0665	CONOCOPHILLIPS CO/TRAINER REF
PA	Delaware	42045	420450030	032	1	10200401	335.00	MANEVU2002	201.4200	0.0000	0.2877	CONOCOPHILLIPS CO/TRAINER REF
PA	Delaware	42045	420450030	033	1	10200701	335.00	MANEVU2002	57.4061	0.0000	0.2019	CONOCOPHILLIPS CO/TRAINER REF
PA	Delaware	42045	420450040	031	1	10200603	10.50	MANEVU2002	1.2700	0.0000	0.0001	FOAMEX LP/EDDYSTONE PLT

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PA	Delaware	42045	420450040	032	1	10200603	10.50	MANEVU2002	1.1450	0.0000	0.0008	FOAMEX LP/EDDYSTONE PLT
PA	Delaware	42045	420450040	033	1	10200504	18.80	MANEVU2002	0.0040	0.0000	0.0000	FOAMEX LP/EDDYSTONE PLT
PA	Delaware	42045	420450041	031	1	10300602	14.70	MANEVU2002	0.1964	0.0000	0.0004	DEGUSSA CORP/CHESTER
PA	Delaware	42045	420450041	031	2	10301002	14.70	MANEVU2002	0.0036	0.0000	0.0000	DEGUSSA CORP/CHESTER
PA	Delaware	42045	420450041	032	1	10300603	10.00	MANEVU2002	0.9915	0.0000	0.0028	DEGUSSA CORP/CHESTER
PA	Delaware	42045	420450041	032	2	10301002	10.00	MANEVU2002	0.0085	0.0000	0.0000	DEGUSSA CORP/CHESTER
PA	Delaware	42045	420450041	109	7	10300602	55.00	SCC Descriptio	1.8739	0.0000	0.0070	DEGUSSA CORP/CHESTER
PA	Delaware	42045	420450041	109	8	10301002	55.00	SCC Descriptio	0.0261	0.0000	0.0000	DEGUSSA CORP/CHESTER
PA	Delaware	42045	420450041	112	1	10300602	55.00	SCC Descriptio	5.1511	0.0000	0.0187	DEGUSSA CORP/CHESTER
PA	Delaware	42045	420450041	112	2	10301002	55.00	SCC Descriptio	0.0489	0.0000	0.0000	DEGUSSA CORP/CHESTER
PA	Delaware	42045	420450049	033	1	10200603	6.30	John Hulsberg	0.4000	0.0000	0.0010	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	051	1	10200602	25.10	MANEVU2002	1.4000	0.0000	0.0000	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	052	1	10200602	25.00	MANEVU2002	2.3000	0.0000	0.0000	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	102	3	10200603	5.00	SCC Descriptio	0.0089	0.0000	0.0000	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	109	1	10200603	5.00	SCC Descriptio	1.2000	0.0000	0.0033	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	110	1	10200602	55.00	SCC Descriptio	1.6000	0.0000	0.0044	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	111	1	10200602	55.00	SCC Descriptio	2.2000	0.0000	0.0056	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	112	1	10200602	55.00	SCC Descriptio	5.6000	0.0000	0.0142	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	C02	2	10300602	55.00	SCC Descriptio	0.0045	0.0000	0.0000	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	C05	1	10200601	150.00	SCC Descriptio	6.3000	0.0000	0.0145	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450170	031	2	10300603	25.10	MANEVU2002	0.3400	0.0000	0.0000	TAYLOR HOSP/RIDLEY PARK
PA	Delaware	42045	420450170	031	1	10300501	25.10	MANEVU2002	0.6460	0.0000	0.0008	TAYLOR HOSP/RIDLEY PARK
PA	Delaware	42045	420450215	031	2	10200602	55.00	SCC Descriptio	1.4300	0.0000	0.0000	PA DEPT OF CORR/CHESTER SCI
PA	Delaware	42045	420450215	031	1	10200501	55.00	SCC Descriptio	0.0060	0.0000	0.0000	PA DEPT OF CORR/CHESTER SCI
PA	Delaware	42045	420450215	032	2	10300602	55.00	SCC Descriptio	1.2150	0.0000	0.0000	PA DEPT OF CORR/CHESTER SCI
PA	Delaware	42045	420450215	032	1	10300501	55.00	SCC Descriptio	0.0023	0.0000	0.0000	PA DEPT OF CORR/CHESTER SCI
PA	Delaware	42045	420450623	031	1	10300603	9.00	MANEVU2002	3.5460	0.0000	0.0004	UNITED PARCEL SVC INC/PHILA AIR HUB
PA	Delaware	42045	420450661	104	1	10300603	6.30	MANEVU2002	0.9000	0.0000	0.0026	EPSILON PROD CO/PLANT 1 & 2
PA	Delaware	42045	420450838	017	2	10300603	10.00	MANEVU2002	0.7210	0.0000	0.0003	SWARTHMORE COLL/SWARTHMORE
PA	Delaware	42045	420450875	106	1	10200603	3.70	MANEVU2002	0.2100	0.0000	0.0000	FRANKLIN MINT/FRANKLIN CENTER
PA	Delaware	42045	420450903	031	1	10200603	4.20	MANEVU2002	0.6000	0.0000	0.0035	HAVERFORD COLL/HAVERFORD COLLEGE
PA	Delaware	42045	420450903	032	2	10200602	14.70	MANEVU2002	0.4000	0.0000	0.0001	HAVERFORD COLL/HAVERFORD COLLEGE
PA	Delaware	42045	420450903	033	2	10200602	14.70	MANEVU2002	0.8000	0.0000	0.0000	HAVERFORD COLL/HAVERFORD COLLEGE
PA	Delaware	42045	420450903	034	2	10200602	14.70	MANEVU2002	0.9000	0.0000	0.0000	HAVERFORD COLL/HAVERFORD COLLEGE
PA	Delaware	42045	420450903	035	1	10200501	1.60	MANEVU2002	0.1000	0.0000	0.0000	HAVERFORD COLL/HAVERFORD COLLEGE
PA	Delaware	42045	420450903	036	1	10200602	21.90	MANEVU2002	0.4000	0.0000	0.0001	HAVERFORD COLL/HAVERFORD COLLEGE
PA	Delaware	42045	420450903	038	1	10300602	7.80	MANEVU2002	0.1000	0.0000	0.0005	HAVERFORD COLL/HAVERFORD COLLEGE
PA	Delaware	42045	420450948	031	1	10200602	18.20	MANEVU2002	3.1400	0.0000	0.0069	RIDDLE MEM HOSP/BALT PIKE
PA	Delaware	42045	420450954	030	2	10200602	20.90	MANEVU2002	3.8843	0.0000	0.0102	JEFFERSON SMURFIT CO/ASTON CONTAINER DIV
PA	Delaware	42045	420450954	030	3	10200502	20.90	MANEVU2002	0.1098	0.0000	0.0000	JEFFERSON SMURFIT CO/ASTON CONTAINER DIV
PA	Delaware	42045	420450966	031	2	10300602	12.80	MANEVU2002	1.0500	0.0000	0.0000	DELAWARE CNTY MEM HOSP/DREXEL HILL
PA	Delaware	42045	420450966	032	1	10300603	7.30	MANEVU2002	0.5100	0.0000	0.0040	DELAWARE CNTY MEM HOSP/DREXEL HILL
PA	Delaware	42045	420450966	033	2	10300602	12.50	MANEVU2002	0.7900	0.0000	0.0004	DELAWARE CNTY MEM HOSP/DREXEL HILL
PA	Delaware	42045	420450985	01	1	10200602	55.00	SCC Descriptio	0.0136	0.0000	0.0000	LYONDELL CHEMICAL CO/NEWTOWN SQUARE
PA	Delaware	42045	420450985	01	2	10300501	55.00	SCC Descriptio	0.2264	0.0000	0.0000	LYONDELL CHEMICAL CO/NEWTOWN SQUARE
PA	Delaware	42045	420450985	031	2	10200602	34.00	MANEVU2002	2.9900	0.0000	0.0039	LYONDELL CHEMICAL CO/NEWTOWN SQUARE
PA	Delaware	42045	420450985	032	2	10200602	34.00	MANEVU2002	4.5000	0.0000	0.0054	LYONDELL CHEMICAL CO/NEWTOWN SQUARE
PA	Delaware	42045	420450985	033	1	10200501	34.00	MANEVU2002	0.0700	0.0000	0.0000	LYONDELL CHEMICAL CO/NEWTOWN SQUARE
PA	Delaware	42045	420451010	034	1	10200501	17.80	MANEVU2002	3.3000	0.0000	0.0029	PPL INTERSTATE ENERGY/MARCUS HOOK PUMP STATION
PA	Delaware	42045	420451042	031	2	10300602	50.40	MANEVU2002	3.0457	0.0000	0.0023	RUBENSTEIN CO LP/RADNOR
PA	Delaware	42045	420451042	032	2	10300602	33.40	MANEVU2002	2.4325	0.0000	0.0094	RUBENSTEIN CO LP/RADNOR
PA	Elk	42047	420470001	500	1	10200601	150.00	SCC Descriptio	5.5000	0.0000	0.0066	CARBONE AMER/BENZINGER TWP PLT

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PA	Elk	42047	420470004	002	1	10200602	31.00	John Hulsberg	6.2150	0.0000	0.0168	CG ELECTRODES LLC/ST MARYS
PA	Elk	42047	420470005	037A	1	10200601	530.00	MANEVU2002	26.4134	0.0000	0.0348	WEYERHAEUSER/JOHNSONBURG MILL
PA	Elk	42047	420470005	039	1	10200602	180.00	MANEVU2002	15.9700	0.0000	0.0246	WEYERHAEUSER/JOHNSONBURG MILL
PA	Elk	42047	420470005	040	3	10200601	249.90	MANEVU2002	16.6771	0.0000	0.0458	WEYERHAEUSER/JOHNSONBURG MILL
PA	Elk	42047	420470005	040	2	10200501	249.90	MANEVU2002	1.0987	0.0000	0.0034	WEYERHAEUSER/JOHNSONBURG MILL
PA	Elk	42047	420470005	040	1	10200202	249.90	MANEVU2002	435.2242	0.0000	1.1000	WEYERHAEUSER/JOHNSONBURG MILL
PA	Elk	42047	420470005	041	3	10200601	249.90	MANEVU2002	17.1138	0.0000	0.0470	WEYERHAEUSER/JOHNSONBURG MILL
PA	Elk	42047	420470005	041	2	10200501	249.90	MANEVU2002	2.3987	0.0000	0.0050	WEYERHAEUSER/JOHNSONBURG MILL
PA	Elk	42047	420470005	041	1	10200202	249.90	MANEVU2002	424.4875	0.0000	1.2128	WEYERHAEUSER/JOHNSONBURG MILL
PA	Elk	42047	420470173	C101	1	10200601	150.00	SCC Descriptio	7.5300	0.0000	0.0182	ONYX GREENTREE LANDFILL
PA	Elk	42047	420470546	C101	1	10300603	5.40	MANEVU2002	4.8000	0.0000	0.0000	METAL POWDER PROD/ST MARYS
PA	Elk	42047	420470546	P103	1	10300603	5.00	SCC Descriptio	1.5000	0.0000	0.0040	METAL POWDER PROD/ST MARYS
PA	Erie	42049	420490004	035	1	10200202	214.00	MANEVU2002	91.6993	0.0000	0.0000	INTL PAPER CO/ERIE MILL
PA	Erie	42049	420490004	035	2	10200601	214.00	MANEVU2002	10.0907	0.0000	0.0000	INTL PAPER CO/ERIE MILL
PA	Erie	42049	420490004	036	1	10200202	214.00	MANEVU2002	121.2079	0.0000	0.0000	INTL PAPER CO/ERIE MILL
PA	Erie	42049	420490004	036	2	10200601	214.00	MANEVU2002	10.5121	0.0000	0.0000	INTL PAPER CO/ERIE MILL
PA	Erie	42049	420490004	037	1	10200204	326.00	MANEVU2002	47.6521	0.0000	0.0000	INTL PAPER CO/ERIE MILL
PA	Erie	42049	420490004	037	2	10200901	326.00	MANEVU2002	7.7679	0.0000	0.0000	INTL PAPER CO/ERIE MILL
PA	Erie	42049	420490004	039	1	10200601	244.00	MANEVU2002	1.7100	0.0000	0.0000	INTL PAPER CO/ERIE MILL
PA	Erie	42049	420490007	203	1	10200802	0.00	MANEVU2002	1.1019	0.0000	0.0035	URICK FOUNDRY CO/ERIE
PA	Erie	42049	420490007	C203A	1	10200601	150.00	MANEVU2002	0.3500	0.0000	0.0009	URICK FOUNDRY CO/ERIE
PA	Erie	42049	420490009	031	1	10200204	217.00	MANEVU2002	256.1020	0.0000	0.7036	GE CO/ERIE PLT
PA	Erie	42049	420490009	033	1	10200204	145.20	MANEVU2002	162.6460	0.0000	0.2502	GE CO/ERIE PLT
PA	Erie	42049	420490009	035	1	10200204	241.00	MANEVU2002	271.1115	0.0000	0.4171	GE CO/ERIE PLT
PA	Erie	42049	420490010	031	1	10200903	20.70	MANEVU2002	4.0659	0.0000	0.0076	ETHAN ALLEN INC CHER/UNION CITY PLT
PA	Erie	42049	420490026	001	1	10200602	55.00	MANEVU2002	2.6761	0.0000	0.0112	ERIE WWTP
PA	Erie	42049	420490026	002	1	10200602	55.00	MANEVU2002	2.1300	0.0000	0.0000	ERIE WWTP
PA	Erie	42049	420490027	CU001	1	10200603	8.40	John Hulsberg	1.7000	0.0000	0.0044	ENGELHARD CORP/CALSICAT DIV ERIE
PA	Erie	42049	420490027	CU002	1	10200603	8.40	John Hulsberg	1.5700	0.0000	0.0040	ENGELHARD CORP/CALSICAT DIV ERIE
PA	Erie	42049	420490027	CU003	1	10200603	3.50	John Hulsberg	0.4000	0.0000	0.0010	ENGELHARD CORP/CALSICAT DIV ERIE
PA	Erie	42049	420490027	CU004	1	10200603	10.50	John Hulsberg	2.3200	0.0000	0.0060	ENGELHARD CORP/CALSICAT DIV ERIE
PA	Erie	42049	420490029	033	1	10200602	20.90	MANEVU2002	1.9500	0.0000	0.0054	LORD CORP/ERIE
PA	Erie	42049	420490029	034	1	10200602	20.90	MANEVU2002	2.1500	0.0000	0.0059	LORD CORP/ERIE
PA	Erie	42049	420490031	031	2	10200802	60.00	MANEVU2002	18.8653	0.0000	0.0394	ERIE COKE CORP/ERIE PLT
PA	Erie	42049	420490031	031	1	10200707	60.00	MANEVU2002	7.8947	0.0000	0.0078	ERIE COKE CORP/ERIE PLT
PA	Erie	42049	420490031	032	2	10200802	77.20	MANEVU2002	18.2604	0.0000	0.0582	ERIE COKE CORP/ERIE PLT
PA	Erie	42049	420490031	032	1	10200707	77.20	MANEVU2002	10.5896	0.0000	0.0384	ERIE COKE CORP/ERIE PLT
PA	Erie	42049	420490036	001	1	10200603	5.00	SCC Descriptio	1.6200	0.0000	0.0007	ERIE FORGE & STEEL/ERIE PLT
PA	Erie	42049	420490036	103	1	10200602	55.00	SCC Descriptio	1.2000	0.0000	0.0030	ERIE FORGE & STEEL/ERIE PLT
PA	Erie	42049	420490038	034	1	10200401	66.00	MANEVU2002	3.9700	0.0000	0.0000	QUIN T CORP/16TH ST PLT
PA	Erie	42049	420490040	031	1	10200603	0.10	MANEVU2002	0.1700	0.0000	0.0001	CORRY CONTRACT INC/CORRY
PA	Erie	42049	420490040	032	1	10200603	5.00	MANEVU2002	0.4700	0.0000	0.0000	CORRY CONTRACT INC/CORRY
PA	Erie	42049	420490040	104	1	10200603	5.00	SCC Descriptio	0.1900	0.0000	0.0004	CORRY CONTRACT INC/CORRY
PA	Erie	42049	420490040	109	1	10200603	5.00	SCC Descriptio	0.1100	0.0000	0.0001	CORRY CONTRACT INC/CORRY
PA	Erie	42049	420490045	107	1	10200602	55.00	SCC Descriptio	4.9416	0.0000	0.0136	CORRY FORGE CO/CORRY
PA	Erie	42049	420490045	108	1	10200602	55.00	SCC Descriptio	0.0073	0.0000	0.0000	CORRY FORGE CO/CORRY
PA	Erie	42049	420490045	706	1	10200602	55.00	SCC Descriptio	0.0018	0.0000	0.0000	CORRY FORGE CO/CORRY
PA	Erie	42049	420490090	BLR01	1	10200603	5.00	MANEVU2002	0.2100	0.0000	0.0006	INSUL BOARD/ERIE
PA	Erie	42049	420490153	031	1	10300602	33.40	MANEVU2002	0.0033	0.0000	0.0000	PA DEPT OF CORR/ALBION SCI
PA	Erie	42049	420490153	035	1	10300603	8.20	MANEVU2002	0.0008	0.0000	0.0000	PA DEPT OF CORR/ALBION SCI
PA	Erie	42049	420490154	001	1	10200603	2.50	MANEVU2002	0.1600	0.0000	0.0004	APW ERIE/ERIE
PA	Erie	42049	420490503	B01	1	10200603	15.60	MANEVU2002	1.0900	0.0000	0.0019	MOLDED FIBERGLASS CO/UNION CITY

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PA	Erie	42049	420490503	BO2	1	10200603	1.80	MANEVU2002	0.6600	0.0000	0.0009	MOLDED FIBERGLASS CO/UNION CITY
PA	Erie	42049	420490508	031	1	10200603	4.20	MANEVU2002	0.3000	0.0000	0.0005	HAYSITE REINFORCED PLASTICS/ERIE
PA	Erie	42049	420490508	032	1	10200603	4.40	MANEVU2002	0.3000	0.0000	0.0005	HAYSITE REINFORCED PLASTICS/ERIE
PA	Erie	42049	420490509	001	1	10200603	37.00	MANEVU2002	2.5200	0.0000	0.0006	FOAMEX LP/CORRY
PA	Erie	42049	420490514	AIRMU	1	10200603	5.00	SCC Descriptio	0.5200	0.0000	0.0000	ASSOC SPRING BARNES /CORRY DIV
PA	Erie	42049	420490514	BLR01	1	10200603	5.00	SCC Descriptio	0.2500	0.0000	0.0000	ASSOC SPRING BARNES /CORRY DIV
PA	Erie	42049	420490514	BLR02	1	10200603	8.00	MANEVU2002	0.2500	0.0000	0.0000	ASSOC SPRING BARNES /CORRY DIV
PA	Erie	42049	420490514	BLR03	1	10200603	5.00	SCC Descriptio	0.4800	0.0000	0.0013	ASSOC SPRING BARNES /CORRY DIV
PA	Erie	42049	420490514	OVENS	1	10200603	5.00	SCC Descriptio	0.7800	0.0000	0.0021	ASSOC SPRING BARNES /CORRY DIV
PA	Erie	42049	420490664	BLRA6	1	10200603	8.40	MANEVU2002	1.0900	0.0000	0.0024	FOAM FABRICATORS INC/ERIE
PA	Erie	42049	420490877	031	1	10200602	20.90	MANEVU2002	3.7760	0.0000	0.0062	HAMOT MED CTR/HAMOT MEDICAL CENTER
PA	Erie	42049	420490995	031	1	10200906	3.40	MANEVU2002	0.0776	0.0000	0.0001	LOGER IND INC/LAKE CITY PLT
PA	Fayette	42051	420510020	108	1	10200602	16.00	MANEVU2002	0.9600	0.0000	0.0027	ANCHOR GLASS CONTAINER/PLT 5
PA	Fayette	42051	420510020	109	1	10200603	5.00	SCC Descriptio	1.2500	0.0000	0.0041	ANCHOR GLASS CONTAINER/PLT 5
PA	Fayette	42051	420510020	110	1	10200603	5.00	SCC Descriptio	1.7940	0.0000	0.0049	ANCHOR GLASS CONTAINER/PLT 5
PA	Fayette	42051	420510020	111	1	10200603	5.00	SCC Descriptio	0.9000	0.0000	0.0033	ANCHOR GLASS CONTAINER/PLT 5
PA	Fayette	42051	420510072	032	1	10200602	10.00	MANEVU2002	1.2265	0.0000	0.0000	CROWN CORK & SEAL CO/SOUTH CONNELLSVILLE
PA	Fayette	42051	420510072	033	1	10200603	5.00	MANEVU2002	0.5480	0.0000	0.0020	CROWN CORK & SEAL CO/SOUTH CONNELLSVILLE
PA	Fayette	42051	420510167	031	1	10300603	5.00	SCC Descriptio	0.2500	0.0000	0.0002	DOMINION TRANS INC/NORTH SUMMIT
PA	Fayette	42051	420510167	032	1	10200603	10.50	MANEVU2002	5.4000	0.0000	0.0154	DOMINION TRANS INC/NORTH SUMMIT
PA	Franklin	42055	420550006	052	1	10300501	5.00	MANEVU2002	0.2620	0.0000	0.0000	US DEPT OF DEFENSE/LETTERKENNY ARMY DEPOT
PA	Franklin	42055	420550006	053	1	10300501	5.00	MANEVU2002	0.1510	0.0000	0.0000	US DEPT OF DEFENSE/LETTERKENNY ARMY DEPOT
PA	Franklin	42055	420550006	060	1	10300501	32.00	MANEVU2002	3.7610	0.0000	0.0000	US DEPT OF DEFENSE/LETTERKENNY ARMY DEPOT
PA	Franklin	42055	420550006	061	1	10300501	32.00	MANEVU2002	3.7610	0.0000	0.0000	US DEPT OF DEFENSE/LETTERKENNY ARMY DEPOT
PA	Franklin	42055	420550006	062	1	10300501	16.70	MANEVU2002	1.4190	0.0000	0.0156	US DEPT OF DEFENSE/LETTERKENNY ARMY DEPOT
PA	Franklin	42055	420550006	073	1	10300501	4.30	MANEVU2002	0.4060	0.0000	0.0000	US DEPT OF DEFENSE/LETTERKENNY ARMY DEPOT
PA	Franklin	42055	420550006	099	1	10300501	8.00	MANEVU2002	6.1630	0.0000	0.0007	US DEPT OF DEFENSE/LETTERKENNY ARMY DEPOT
PA	Franklin	42055	420550013	101	1	10200603	5.00	MANEVU2002	0.0217	0.0000	0.0000	CASTING TECH INC/WAYNESBORO
PA	Franklin	42055	420550016	033	1	10200602	21.00	MANEVU2002	2.0000	0.0000	0.0022	UNOVA IND AUTOMATION/LANDIS GARDNER DIV
PA	Franklin	42055	420550016	034	1	10200602	20.90	MANEVU2002	2.0000	0.0000	0.0022	UNOVA IND AUTOMATION/LANDIS GARDNER DIV
PA	Franklin	42055	420550018	031	1	10200602	16.80	MANEVU2002	1.4670	0.0000	0.0003	YORK REFRIG (FRICK)/WAYNESBORO
PA	Franklin	42055	420550018	032	1	10200602	10.50	MANEVU2002	0.2670	0.0000	0.0000	YORK REFRIG (FRICK)/WAYNESBORO
PA	Fulton	42057	420570001	031	1	10300603	29.60	MANEVU2002	4.1880	0.0000	0.0060	JLG IND/MCCONNELLSBURG
PA	Fulton	42057	420570001	130	1	10300501	0.00		0.1090	0.0000	0.0000	JLG IND/MCCONNELLSBURG
PA	Greene	42059	420590021	034	1	10200603	0.50	MANEVU2002	0.2000	0.0000	0.0005	DOMINION TRANS INC/CRAYNE STA
PA	Greene	42059	420590484	031	1	10200603	1.50	MANEVU2002	1.7000	0.0000	0.0026	KYOWA AMER CORP/WAYNESBURG PLT
PA	Greene	42059	420590634	031	1	10200602	21.00	MANEVU2002	4.3000	0.0000	0.0000	CONSOL COAL CO/ROBENA PREP PLT
PA	Huntingdon	42061	420610010	104	1	10300602	55.00	SCC Descriptio	6.5800	0.0000	0.0163	US SILICA/MAPLETON DEPOT PLT
PA	Huntingdon	42061	420610012	031	1	10200206	25.60	MANEVU2002	7.6100	0.0000	0.0318	PA DEPT OF CORR/HUNTINGDON SCI
PA	Huntingdon	42061	420610012	032	1	10200206	25.60	MANEVU2002	9.3500	0.0000	0.0144	PA DEPT OF CORR/HUNTINGDON SCI
PA	Huntingdon	42061	420610012	034	1	10200206	38.50	MANEVU2002	10.3600	0.0000	0.0011	PA DEPT OF CORR/HUNTINGDON SCI
PA	Huntingdon	42061	420610014	031	2	10300602	12.50	MANEVU2002	0.6900	0.0000	0.0005	CONTAINMENT SOLUTIONS/MT UNION PLT
PA	Huntingdon	42061	420610014	032	2	10300602	12.50	MANEVU2002	0.7200	0.0000	0.0011	CONTAINMENT SOLUTIONS/MT UNION PLT
PA	Huntingdon	42061	420610015	031	1	10200206	17.50	MANEVU2002	2.9300	0.0000	0.0000	PA DEPT OF CORR/SMITHFIELD SCI
PA	Huntingdon	42061	420610015	032	1	10200206	17.50	MANEVU2002	1.3900	0.0000	0.0000	PA DEPT OF CORR/SMITHFIELD SCI
PA	Huntingdon	42061	420610015	033	1	10200206	17.50	MANEVU2002	6.3300	0.0000	0.0313	PA DEPT OF CORR/SMITHFIELD SCI
PA	Huntingdon	42061	420610016	031	1	10200602	18.50	John Hulsberg	1.4000	0.0000	0.0038	AGY HUNTINGDON LLC/HUNTINGDON
PA	Huntingdon	42061	420610016	032	1	10200602	18.50	John Hulsberg	1.3000	0.0000	0.0035	AGY HUNTINGDON LLC/HUNTINGDON
PA	Huntingdon	42061	420610032	101	1	10200602	55.00	SCC Descriptio	0.7310	0.0000	0.0020	OWENS CORNING/HUNTINGDON MAT PLANT
PA	Huntingdon	42061	420610032	101	5	10200602	55.00	SCC Descriptio	0.7310	0.0000	0.0020	OWENS CORNING/HUNTINGDON MAT PLANT
PA	Huntingdon	42061	420610032	101	3	10200602	55.00	SCC Descriptio	0.2380	0.0000	0.0006	OWENS CORNING/HUNTINGDON MAT PLANT
PA	Huntingdon	42061	420610032	102	1	10200602	55.00	SCC Descriptio	0.6450	0.0000	0.0017	OWENS CORNING/HUNTINGDON MAT PLANT

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PA	Huntingdon	42061	420610032	102	5	10200602	55.00	SCC Descriptio	0.6450	0.0000	0.0017	OWENS CORNING/HUNTINGDON MAT PLANT
PA	Huntingdon	42061	420610032	102	3	10200602	55.00	SCC Descriptio	0.2100	0.0000	0.0006	OWENS CORNING/HUNTINGDON MAT PLANT
PA	Huntingdon	42061	420610032	103	1	10200602	55.00	SCC Descriptio	1.8460	0.0000	0.0050	OWENS CORNING/HUNTINGDON MAT PLANT
PA	Huntingdon	42061	420610032	103	3	10200602	55.00	SCC Descriptio	0.7540	0.0000	0.0020	OWENS CORNING/HUNTINGDON MAT PLANT
PA	Huntingdon	42061	420610466	001	2	10200501	2.10	MANEVU2002	0.3800	0.0000	0.0004	MEADWESTVACO/BLAIR PLT ALEXANDRIA
PA	Indiana	42063	420630014	031	1	10200603	70.00	MANEVU2002	15.0600	0.0000	0.0397	SPECIALTY TIRES AMER/INDIANA PLT
PA	Indiana	42063	420630018	039	3	10300602	30.10	MANEVU2002	0.1320	0.0000	0.0000	PA STATE SYS OF HIGHER ED/INDIANA UNIV
PA	Indiana	42063	420630018	040	3	10300602	30.10	MANEVU2002	0.2040	0.0000	0.0000	PA STATE SYS OF HIGHER ED/INDIANA UNIV
PA	Indiana	42063	420630027	031	1	10300603	5.00	SCC Descriptio	0.0353	0.0000	0.0001	DOMINION TRANS INC/ROCHESTER MILLS
PA	Indiana	42063	420630027	031	2	10300603	5.00	SCC Descriptio	0.0353	0.0000	0.0001	DOMINION TRANS INC/ROCHESTER MILLS
PA	Indiana	42063	420630074	031	1	10300603	0.30	MANEVU2002	0.0567	0.0000	0.0002	DOMINION TRANS INC/CHERRY TREE STA
PA	Indiana	42063	420630074	031	2	10300603	0.30	MANEVU2002	0.0567	0.0000	0.0002	DOMINION TRANS INC/CHERRY TREE STA
PA	Indiana	42063	420630094	031	1	10300603	5.00	SCC Descriptio	0.0181	0.0000	0.0001	SOMERSET GAS TRANS/COOKPORT STATION AEP
PA	Indiana	42063	420630094	031	2	10300603	5.00	SCC Descriptio	0.0181	0.0000	0.0001	SOMERSET GAS TRANS/COOKPORT STATION AEP
PA	Jefferson	42065	420650001	106	1	10200603	5.00	SCC Descriptio	0.4000	0.0000	0.0011	NAC CARBON PRODUCTS INC/PUNXSUTAWNEY
PA	Jefferson	42065	420650001	128	1	10300602	55.00	SCC Descriptio	0.4000	0.0000	0.0011	NAC CARBON PRODUCTS INC/PUNXSUTAWNEY
PA	Jefferson	42065	420650007	031	1	10200602	10.00	MANEVU2002	1.2000	0.0000	0.0000	OWENS BROCKWAY GLASS/CRENSHAW
PA	Jefferson	42065	420650032	034	1	10300603	5.50	MANEVU2002	0.6000	0.0000	0.0003	DOMINION TRANS INC/PUNXSUTAWNEY
PA	Jefferson	42065	420650041	134	1	10300603	5.00	SCC Descriptio	0.2000	0.0000	0.0005	DOMINION TRANS INC/STONEY RUN
PA	Jefferson	42065	420650520	032	1	10200603	5.00	SCC Descriptio	0.2995	0.0000	0.0008	BROOKVILLE WOOD PROD/BROOKVILLE
PA	Jefferson	42065	420650520	033	1	10200603	5.00	SCC Descriptio	0.6480	0.0000	0.0018	BROOKVILLE WOOD PROD/BROOKVILLE
PA	Jefferson	42065	420650535	031	1	10200603	5.00	SCC Descriptio	1.3420	0.0000	0.0031	HUNTINGTON FOAM CORP/BROCKWAY
PA	Juniata	42067	420670002	031	1	10301002	0.00		2.7000	0.0000	0.0021	ARMSTRONG CABINET PROD/THOMPSONTOWN
PA	Lackawanna	42069	420690010	031	1	10200602	18.00	John Hulsberg	1.1635	0.0000	0.0031	CHAMBERLAIN MFG CORP/SCRANTON
PA	Lackawanna	42069	420690010	032	1	10200602	18.00	John Hulsberg	0.6075	0.0000	0.0016	CHAMBERLAIN MFG CORP/SCRANTON
PA	Lackawanna	42069	420690010	033	1	10200602	34.00	John Hulsberg	0.9325	0.0000	0.0025	CHAMBERLAIN MFG CORP/SCRANTON
PA	Lackawanna	42069	420690022	G04	1	10300503	9.20	MANEVU2002	0.7750	0.0000	0.0000	PEI POWER CORP/ARCHBALD
PA	Lackawanna	42069	420690022	G04	2	10300503	9.20	MANEVU2002	0.7750	0.0000	0.0000	PEI POWER CORP/ARCHBALD
PA	Lackawanna	42069	420690029	B031	2	10200602	19.40	MANEVU2002	2.6100	0.0000	0.0052	GENTEX CORP/SIMPSON PROT CLOTHING
PA	Lackawanna	42069	420690029	B032	2	10200602	19.40	MANEVU2002	2.6100	0.0000	0.0052	GENTEX CORP/SIMPSON PROT CLOTHING
PA	Lackawanna	42069	420690032	031	2	10300602	42.00	MANEVU2002	14.8772	0.0000	0.1635	CASCADES TISSUE GRP PA INC/RANSOM PLT
PA	Lackawanna	42069	420690032	031	1	10300401	42.00	MANEVU2002	0.0228	0.0000	0.0001	CASCADES TISSUE GRP PA INC/RANSOM PLT
PA	Lackawanna	42069	420690032	032	2	10300602	42.00	MANEVU2002	12.9895	0.0000	0.1427	CASCADES TISSUE GRP PA INC/RANSOM PLT
PA	Lackawanna	42069	420690032	032	1	10300401	42.00	MANEVU2002	0.0105	0.0000	0.0000	CASCADES TISSUE GRP PA INC/RANSOM PLT
PA	Lackawanna	42069	420690032	033	1	10200602	15.00	MANEVU2002	5.9900	0.0000	0.0165	CASCADES TISSUE GRP PA INC/RANSOM PLT
PA	Lackawanna	42069	420690032	034	1	10300602	14.00	MANEVU2002	5.8200	0.0000	0.0141	CASCADES TISSUE GRP PA INC/RANSOM PLT
PA	Lackawanna	42069	420690092	031	1	10300602	60.30	MANEVU2002	3.0800	0.0000	0.0058	MOSES TAYLOR HOSP/SCRANTON
PA	Lackawanna	42069	420690096	031	1	10200602	12.50	MANEVU2002	0.2659	0.0000	0.0002	SANDVIK MATERIALS TECHNOLOGY/ SCOTT TWP
PA	Lackawanna	42069	420690096	032	1	10200602	12.50	MANEVU2002	2.8250	0.0000	0.0087	SANDVIK MATERIALS TECHNOLOGY/ SCOTT TWP
PA	Lackawanna	42069	420690125	032	1	10300602	25.20	MANEVU2002	1.3699	0.0000	0.0039	POLY HI SOLIDUR INC/SCRANTON PLT LAUREL LINE
PA	Lackawanna	42069	420690125	033	1	10300602	25.20	MANEVU2002	1.4973	0.0000	0.0043	POLY HI SOLIDUR INC/SCRANTON PLT LAUREL LINE
PA	Lackawanna	42069	420690205	031	1	10300102	24.60	MANEVU2002	7.1000	0.0000	0.0008	PA DPW/CLARKS SUMMIT STATE HOSP
PA	Lackawanna	42069	420690205	032	1	10300102	24.60	MANEVU2002	8.8245	0.0000	0.0000	PA DPW/CLARKS SUMMIT STATE HOSP
PA	Lackawanna	42069	420690208	031	1	10200602	41.80	MANEVU2002	1.6900	0.0000	0.0000	COMM CTL ENERGY CORP/BOILER HOUSE AT SCRANTON HIGH
PA	Lackawanna	42069	420690208	032	1	10200602	50.40	MANEVU2002	0.1900	0.0000	0.0000	COMM CTL ENERGY CORP/BOILER HOUSE AT SCRANTON HIGH
PA	Lackawanna	42069	420690618	032	1	10300603	9.80	MANEVU2002	0.1598	0.0000	0.0002	GLOBAL METALFORM/DAVIS ST PLT
PA	Lackawanna	42069	420690618	461618	1	10300603	9.90	MANEVU2002	0.3200	0.0000	0.0005	GLOBAL METALFORM/DAVIS ST PLT
PA	Lackawanna	42069	420690678	031	1	10300602	10.50	MANEVU2002	0.2250	0.0000	0.0000	CINRAM MFG INC/OLYPHANT
PA	Lackawanna	42069	420690678	032	1	10300602	12.60	MANEVU2002	0.3100	0.0000	0.0000	CINRAM MFG INC/OLYPHANT
PA	Lackawanna	42069	420690678	034	1	10300603	2.20	MANEVU2002	0.0575	0.0000	0.0000	CINRAM MFG INC/OLYPHANT
PA	Lackawanna	42069	420690678	035	1	10300603	2.20	MANEVU2002	0.0575	0.0000	0.0000	CINRAM MFG INC/OLYPHANT
PA	Lackawanna	42069	420690678	036	1	10300603	3.00	MANEVU2002	0.0775	0.0000	0.0000	CINRAM MFG INC/OLYPHANT

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PA	Lackawanna	42069	420690686	032	1	10200603	8.40	MANEVU2002	0.7800	0.0000	0.0015	METSO PAPER USA INC/SERVICE CENTER
PA	Lackawanna	42069	420690718	CU031	2	10200601	58.30	MANEVU2002	1.0790	0.0000	0.0011	THOMSON NO 1 LLC/SCRANTON DUNMORE FACILITY
PA	Lackawanna	42069	420690718	CU031	3	10200501	58.30	MANEVU2002	0.0030	0.0000	0.0000	THOMSON NO 1 LLC/SCRANTON DUNMORE FACILITY
PA	Lackawanna	42069	420690718	CU032	1	10200602	58.30	MANEVU2002	1.0820	0.0000	0.0019	THOMSON NO 1 LLC/SCRANTON DUNMORE FACILITY
PA	Lackawanna	42069	420690765	476571	2	10300602	35.70	MANEVU2002	5.2380	0.0000	0.0144	MERCY HOSP/SCRANTON
PA	Lackawanna	42069	420690765	476571	1	10300501	35.70	MANEVU2002	0.2520	0.0000	0.0005	MERCY HOSP/SCRANTON
PA	Lackawanna	42069	420692011	106	1	10200603	3.50	MANEVU2002	0.1662	0.0000	0.0001	EUREKA SECURITY PRIN/JESSUP
PA	Lackawanna	42069	420692115	032	1	10200602	25.00	MANEVU2002	1.6787	0.0000	0.0044	POLY HI SOLIDUR INC/KEYSER VLY CTR
PA	Lancaster	42071	420710014	031	2	10200602	91.40	John Hulsberg	6.3141	0.0000	0.0162	MASTERFOODS USA DIV OF MARS INC/ELIZABETHTOWN CANDY PLT
PA	Lancaster	42071	420710014	031	1	10200501	91.40	John Hulsberg	0.0109	0.0000	0.0000	MASTERFOODS USA DIV OF MARS INC/ELIZABETHTOWN CANDY PLT
PA	Lancaster	42071	420710014	032	2	10200602	78.50	MANEVU2002	2.5844	0.0000	0.0009	MASTERFOODS USA DIV OF MARS INC/ELIZABETHTOWN CANDY PLT
PA	Lancaster	42071	420710014	032	3	10200501	78.50	MANEVU2002	4.1996	0.0000	0.0000	MASTERFOODS USA DIV OF MARS INC/ELIZABETHTOWN CANDY PLT
PA	Lancaster	42071	420710014	033	2	10200602	14.30	MANEVU2002	2.4527	0.0000	0.0067	MASTERFOODS USA DIV OF MARS INC/ELIZABETHTOWN CANDY PLT
PA	Lancaster	42071	420710014	033	1	10200501	14.30	MANEVU2002	0.0033	0.0000	0.0000	MASTERFOODS USA DIV OF MARS INC/ELIZABETHTOWN CANDY PLT
PA	Lancaster	42071	420710014	034	1	10200602	55.00	SCC Descriptio	0.9450	0.0000	0.0030	MASTERFOODS USA DIV OF MARS INC/ELIZABETHTOWN CANDY PLT
PA	Lancaster	42071	420710035	031	1	10200601	185.00	John Hulsberg	1.4000	0.0000	0.0039	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	032	1	10200104	200.00	John Hulsberg	101.6000	0.0000	0.2791	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	033	3	10200601	215.00	John Hulsberg	0.2000	0.0000	0.0006	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	035	1	10200603	6.00	MANEVU2002	0.2000	0.0000	0.0006	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	036	1	10200603	5.00	SCC Descriptio	0.4000	0.0000	0.0013	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	341	1	10200602	55.00	SCC Descriptio	0.1000	0.0000	0.0003	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	351	2	10200603	5.00	SCC Descriptio	2.6000	0.0000	0.0067	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	360	1	10200603	5.00	SCC Descriptio	0.0190	0.0000	0.0000	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	430	1	10200603	5.00	SCC Descriptio	0.0415	0.0000	0.0001	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	540	2	10200603	5.00	SCC Descriptio	0.0305	0.0000	0.0001	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	541	2	10200603	5.00	SCC Descriptio	0.0305	0.0000	0.0001	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	550	1	10200603	5.00	SCC Descriptio	0.2000	0.0000	0.0005	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	610	1	10200603	5.00	SCC Descriptio	0.4000	0.0000	0.0010	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	620	1	10200603	5.00	SCC Descriptio	1.0890	0.0000	0.0028	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	620	3	10200603	5.00	SCC Descriptio	0.0110	0.0000	0.0000	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	630	1	10200603	5.00	SCC Descriptio	0.4000	0.0000	0.0010	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	C310	1	10200603	5.00	SCC Descriptio	2.5000	0.0000	0.0064	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	C340	1	10200602	55.00	SCC Descriptio	0.9000	0.0000	0.0024	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	C350	1	10200602	55.00	SCC Descriptio	1.3000	0.0000	0.0035	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710036	102A	1	10200602	55.00	SCC Descriptio	4.4154	0.0000	0.0116	ARMSTRONG WORLD IND /MARIETTA CEILING PLT
PA	Lancaster	42071	420710036	102A	3	10200602	55.00	SCC Descriptio	2.2077	0.0000	0.0058	ARMSTRONG WORLD IND /MARIETTA CEILING PLT
PA	Lancaster	42071	420710036	104	1	10200602	55.00	SCC Descriptio	23.4950	0.0000	0.0635	ARMSTRONG WORLD IND /MARIETTA CEILING PLT
PA	Lancaster	42071	420710036	104	2	10200602	55.00	SCC Descriptio	23.4950	0.0000	0.0635	ARMSTRONG WORLD IND /MARIETTA CEILING PLT
PA	Lancaster	42071	420710036	250	1	10200602	55.00	SCC Descriptio	5.4100	0.0000	0.0146	ARMSTRONG WORLD IND /MARIETTA CEILING PLT
PA	Lancaster	42071	420710036	251	1	10200602	55.00	SCC Descriptio	4.4300	0.0000	0.0120	ARMSTRONG WORLD IND /MARIETTA CEILING PLT
PA	Lancaster	42071	420710036	485	1	10200602	55.00	SCC Descriptio	0.7100	0.0000	0.0019	ARMSTRONG WORLD IND /MARIETTA CEILING PLT
PA	Lancaster	42071	420710036	504	1	10200602	55.00	SCC Descriptio	0.9900	0.0000	0.0026	ARMSTRONG WORLD IND /MARIETTA CEILING PLT
PA	Lancaster	42071	420710037	031	1	10300208	19.00	MANEVU2002	7.5140	0.0000	0.0066	MASONIC HOMES/ELIZABETHTOWN
PA	Lancaster	42071	420710037	032	1	10300208	19.00	MANEVU2002	2.2940	0.0000	0.0000	MASONIC HOMES/ELIZABETHTOWN
PA	Lancaster	42071	420710037	033	1	10300208	12.40	MANEVU2002	1.9760	0.0000	0.0000	MASONIC HOMES/ELIZABETHTOWN
PA	Lancaster	42071	420710037	034	1	10300602	12.60	MANEVU2002	0.4099	0.0000	0.0012	MASONIC HOMES/ELIZABETHTOWN
PA	Lancaster	42071	420710056	1001	1	10300603	5.00	SCC Descriptio	0.0438	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	1001	3	10300603	5.00	SCC Descriptio	0.0219	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	1001	5	10300603	5.00	SCC Descriptio	0.0219	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	101	1	10300225	150.00	SCC Descriptio	20.0327	0.0000	0.0484	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	101	2	10300601	150.00	SCC Descriptio	0.1673	0.0000	0.0004	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	1011	1	10300603	5.00	SCC Descriptio	0.0298	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER

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PA	Lancaster	42071	420710056	1011	3	10300603	5.00	SCC Descriptio	0.0289	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	1011	5	10300603	5.00	SCC Descriptio	0.0289	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	134	1	10200603	5.00	SCC Descriptio	0.6000	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	135	1	10200501	0.00		0.1000	0.0000	0.0002	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	136A	1	10300501	0.00		0.0033	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	621	1	10300603	5.00	SCC Descriptio	0.0114	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	621	3	10300603	5.00	SCC Descriptio	0.0114	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	621	5	10300603	5.00	SCC Descriptio	0.0114	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	621	7	10300603	5.00	SCC Descriptio	0.0114	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	631	1	10300603	5.00	SCC Descriptio	0.0177	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	631	3	10300603	5.00	SCC Descriptio	0.0177	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	631	5	10300603	5.00	SCC Descriptio	0.0177	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	631	7	10300603	5.00	SCC Descriptio	0.0177	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	902	11	10300603	5.00	SCC Descriptio	0.0408	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	902	14	10300603	5.00	SCC Descriptio	0.0408	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	902	2	10300603	5.00	SCC Descriptio	0.0408	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	902	5	10300603	5.00	SCC Descriptio	0.0408	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	902	8	10300603	5.00	SCC Descriptio	0.0408	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710066	033	1	10200603	2.90	MANEVU2002	0.4200	0.0000	0.0012	ANVIL INTL INC/COLUMBIA FKA GRINNELL
PA	Lancaster	42071	420710066	034	1	10200602	55.00	SCC Descriptio	11.7500	0.0000	0.0220	ANVIL INTL INC/COLUMBIA FKA GRINNELL
PA	Lancaster	42071	420710066	202	1	10200602	25.10	MANEVU2002	0.0100	0.0000	0.0000	ANVIL INTL INC/COLUMBIA FKA GRINNELL
PA	Lancaster	42071	420710071	133	1	10200602	55.00	MANEVU2002	9.9700	0.0000	0.0252	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	133	3	10200602	55.00	MANEVU2002	9.9700	0.0000	0.0252	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	134	1	10200602	55.00	MANEVU2002	10.2950	0.0000	0.0249	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	134	3	10200602	55.00	MANEVU2002	10.2950	0.0000	0.0249	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	137	1	10200602	55.00	MANEVU2002	7.4850	0.0000	0.0230	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	137	3	10200602	55.00	MANEVU2002	7.4850	0.0000	0.0230	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	139	1	10200602	55.00	MANEVU2002	7.6500	0.0000	0.0202	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	139	3	10200602	55.00	MANEVU2002	7.6500	0.0000	0.0202	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	143	1	10200603	5.00	MANEVU2002	8.4000	0.0000	0.0249	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	144	1	10200603	5.00	MANEVU2002	10.1900	0.0000	0.0246	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	149	1	10200603	5.00	MANEVU2002	22.3500	0.0000	0.0639	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	150	1	10200603	5.00	MANEVU2002	16.0000	0.0000	0.0422	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	151	1	10200602	55.00	MANEVU2002	14.3010	0.0000	0.0314	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	151	3	10200602	55.00	MANEVU2002	1.5890	0.0000	0.0035	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	152	1	10200603	5.00	SCC Descriptio	1.9900	0.0000	0.0033	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	153	3	10200603	5.00	SCC Descriptio	0.8600	0.0000	0.0036	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	C01	1	10200603	10.80	MANEVU2002	4.5800	0.0000	0.0126	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	P103	1	10200603	5.00	SCC Descriptio	2.4700	0.0000	0.0057	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	P201	1	10200603	5.00	SCC Descriptio	0.9800	0.0000	0.0016	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	P202	1	10200603	5.00	SCC Descriptio	0.4400	0.0000	0.0019	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	P203	1	10200603	5.00	SCC Descriptio	1.1900	0.0000	0.0030	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	P701	1	10200603	5.00	SCC Descriptio	0.6700	0.0000	0.0015	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710073	039	1	10200602	25.00	MANEVU2002	0.0759	0.0000	0.0001	CNH AMERICA/NEW HOLLAND
PA	Lancaster	42071	420710073	039	2	10201002	25.00	MANEVU2002	0.0041	0.0000	0.0000	CNH AMERICA/NEW HOLLAND
PA	Lancaster	42071	420710073	049	1	10200602	25.00	MANEVU2002	3.8168	0.0000	0.0042	CNH AMERICA/NEW HOLLAND
PA	Lancaster	42071	420710073	049	2	10201002	25.00	MANEVU2002	0.0732	0.0000	0.0002	CNH AMERICA/NEW HOLLAND
PA	Lancaster	42071	420710074	033	1	10200104	45.00	MANEVU2002	1.5400	0.0000	0.0000	BURLE IND INC/LANCASTER
PA	Lancaster	42071	420710074	034	2	10200602	45.00	MANEVU2002	8.4500	0.0000	0.0158	BURLE IND INC/LANCASTER
PA	Lancaster	42071	420710079	099	1	10301002	0.00		1.3000	0.0000	0.0009	RUTT HANDCRAFTED CABINETRY LLC/EAST EARL
PA	Lancaster	42071	420710080	030	1	10200602	25.10	MANEVU2002	5.4600	0.0000	0.0162	RR DONNELLEY & SONS CO/NORTHEASTERN DIV LANCASTER EAST
PA	Lancaster	42071	420710080	C100	1	10200603	5.00	MANEVU2002	2.3900	0.0000	0.0071	RR DONNELLEY & SONS CO/NORTHEASTERN DIV LANCASTER EAST

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Lancaster	42071	420710084	031	1	10200602	34.00	MANEVU2002	1.1200	0.0000	0.0028	BOLLMAN HAT CO/MAIN ST FACILITY
PA	Lancaster	42071	420710084	032	1	10200602	51.30	MANEVU2002	1.3300	0.0000	0.0025	BOLLMAN HAT CO/MAIN ST FACILITY
PA	Lancaster	42071	420710086	100	1	10300603	5.00	SCC Descriptio	8.4200	0.0000	0.0028	HIGH STEEL STRUCTURES/LANCASTER FACILITY
PA	Lancaster	42071	420710087	031	1	10200602	25.10	MANEVU2002	8.9429	0.0000	0.0246	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	031	2	10200501	25.10	MANEVU2002	0.2271	0.0000	0.0000	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	032	1	10200602	25.10	MANEVU2002	8.9429	0.0000	0.0246	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	032	2	10200501	25.10	MANEVU2002	0.2271	0.0000	0.0000	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	033	1	10200602	25.10	MANEVU2002	8.9429	0.0000	0.0246	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	033	2	10200501	25.10	MANEVU2002	0.2271	0.0000	0.0000	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	034	1	10200602	29.30	MANEVU2002	8.9324	0.0000	0.0245	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	034	2	10200501	29.30	MANEVU2002	0.2376	0.0000	0.0000	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	035	1	10200602	12.50	MANEVU2002	2.0800	0.0000	0.0055	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	036	1	10200602	12.50	MANEVU2002	2.0800	0.0000	0.0053	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	037	1	10200602	29.30	MANEVU2002	8.1168	0.0000	0.0223	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	037	2	10200501	29.30	MANEVU2002	0.2032	0.0000	0.0000	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	038	1	10200602	29.30	MANEVU2002	8.1168	0.0000	0.0223	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	038	2	10200501	29.30	MANEVU2002	0.2032	0.0000	0.0000	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	039	1	10200602	29.30	MANEVU2002	8.1168	0.0000	0.0223	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	039	2	10200501	29.30	MANEVU2002	0.2032	0.0000	0.0000	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	040	1	10200602	55.00	SCC Descriptio	0.3200	0.0000	0.0005	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	041	1	10200602	55.00	SCC Descriptio	0.3500	0.0000	0.0015	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	042	1	10200501	0.00		0.0203	0.0000	0.0001	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	C301	1	10200602	55.00	SCC Descriptio	1.6100	0.0000	0.0041	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	C401	1	10200602	55.00	SCC Descriptio	1.6100	0.0000	0.0041	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710089	031	1	10200602	1.70	MANEVU2002	0.1000	0.0000	0.0000	HERITAGE CUSTOM CABI/NEW HOLLAND
PA	Lancaster	42071	420710089	075	1	10200603	5.00	SCC Descriptio	0.0034	0.0000	0.0000	HERITAGE CUSTOM CABI/NEW HOLLAND
PA	Lancaster	42071	420710089	100	1	10200603	5.00	MANEVU2002	0.0123	0.0000	0.0000	HERITAGE CUSTOM CABI/NEW HOLLAND
PA	Lancaster	42071	420710089	110	1	10200603	5.00	SCC Descriptio	0.3000	0.0000	0.0001	HERITAGE CUSTOM CABI/NEW HOLLAND
PA	Lancaster	42071	420710091	031	1	10300501	5.00	SCC Descriptio	0.1732	0.0000	0.0000	VERSATEK ENT LLC/LITITZ
PA	Lancaster	42071	420710091	031	2	10300603	5.00	SCC Descriptio	0.0328	0.0000	0.0000	VERSATEK ENT LLC/LITITZ
PA	Lancaster	42071	420710092	BC04	1	10200603	43.60	MANEVU2002	0.0420	0.0000	0.0001	QUALITY CUSTOM CABIN/EARL
PA	Lancaster	42071	420710092	BC07	1	10200603	0.70	MANEVU2002	0.0420	0.0000	0.0001	QUALITY CUSTOM CABIN/EARL
PA	Lancaster	42071	420710092	BC11	1	10200603	0.70	MANEVU2002	0.3750	0.0000	0.0010	QUALITY CUSTOM CABIN/EARL
PA	Lancaster	42071	420710094	031	1	10200602	6.30	MANEVU2002	0.6000	0.0000	0.0015	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	032	1	10200602	6.30	MANEVU2002	0.6000	0.0000	0.0015	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	033	1	10200602	6.00	MANEVU2002	0.5000	0.0000	0.0012	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	101	1	10200602	55.00	MANEVU2002	0.5000	0.0000	0.0012	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	102	1	10200602	55.00	MANEVU2002	0.5000	0.0000	0.0012	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	103	1	10200602	55.00	MANEVU2002	0.5000	0.0000	0.0012	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	C01	1	10200602	55.00	MANEVU2002	0.4000	0.0000	0.0010	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	C02	1	10200602	55.00	MANEVU2002	0.6000	0.0000	0.0015	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	C03	1	10200602	55.00	MANEVU2002	0.4000	0.0000	0.0010	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	C04	1	10200602	55.00	MANEVU2002	0.4000	0.0000	0.0010	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710096	032	1	10300603	7.90	MANEVU2002	0.2600	0.0000	0.0005	BOLLMAN HAT CO/WILLOW ST FACILITY
PA	Lancaster	42071	420710096	033	1	10300603	5.00	SCC Descriptio	0.1700	0.0000	0.0002	BOLLMAN HAT CO/WILLOW ST FACILITY
PA	Lancaster	42071	420710106	031	1	10200501	0.00		0.3857	0.0000	0.0011	CONESTOGA WOOD SPECIALTIES/EAST EARL
PA	Lancaster	42071	420710106	031	2	10201002	0.00		0.9143	0.0000	0.0025	CONESTOGA WOOD SPECIALTIES/EAST EARL
PA	Lancaster	42071	420710111	031	1	10300603	3.90	MANEVU2002	0.3000	0.0000	0.0008	INTELLIGENCER PRINTING/INTELL PRINTING LANCASTER CNTY
PA	Lancaster	42071	420710111	032	1	10300603	3.40	MANEVU2002	0.3000	0.0000	0.0008	INTELLIGENCER PRINTING/INTELL PRINTING LANCASTER CNTY
PA	Lancaster	42071	420710121	031	2	10200602	22.00	MANEVU2002	1.9100	0.0000	0.0048	HERSHEY FOODS CORP/Y & S CANDIES
PA	Lancaster	42071	420710121	032	2	10200603	1.60	MANEVU2002	0.0035	0.0000	0.0000	HERSHEY FOODS CORP/Y & S CANDIES
PA	Lancaster	42071	420710121	032	1	10200602	1.60	MANEVU2002	0.0065	0.0000	0.0000	HERSHEY FOODS CORP/Y & S CANDIES

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PA	Lancaster	42071	420710121	033	1	10200603	2.10	MANEVU2002	0.0230	0.0000	0.0001	HERSHEY FOODS CORP/Y & S CANDIES
PA	Lancaster	42071	420710121	C0001	2	10200602	45.00	MANEVU2002	4.1900	0.0000	0.0106	HERSHEY FOODS CORP/Y & S CANDIES
PA	Lancaster	42071	420710122	030	2	10300602	55.00	SCC Descriptio	0.6200	0.0000	0.0001	RR DONNELLEY & SONS /NORTHEASTERN DIV LANCASTER WES
PA	Lancaster	42071	420710294	031	1	10200602	66.00	John Hulsberg	14.0000	0.0000	0.0378	KELLOGG USA INC/EAST HEMPFIELD
PA	Lancaster	42071	420710294	032	1	10200602	66.00	John Hulsberg	14.0000	0.0000	0.0378	KELLOGG USA INC/EAST HEMPFIELD
PA	Lancaster	42071	420710294	100	1	10200603	5.00	SCC Descriptio	8.6000	0.0000	0.0221	KELLOGG USA INC/EAST HEMPFIELD
PA	Lancaster	42071	420710306	110	1	10301002	0.00		1.4000	0.0000	0.0006	BUCK CO INC/QUARRYVILLE
PA	Lancaster	42071	420710307	031	1	10200602	41.50	MANEVU2002	4.7000	0.0000	0.0129	MT JOY WIRE CORP/MT JOY
PA	Lancaster	42071	420710307	034	1	10200602	55.00	SCC Descriptio	2.7000	0.0000	0.0074	MT JOY WIRE CORP/MT JOY
PA	Lancaster	42071	420710317	031	1	10300603	6.30	MANEVU2002	0.0400	0.0000	0.0000	RR DONNELLEY & SONS /LANCASTER STEELWAY FACILITY
PA	Lancaster	42071	420710317	032	1	10200602	10.50	MANEVU2002	0.7000	0.0000	0.0012	RR DONNELLEY & SONS /LANCASTER STEELWAY FACILITY
PA	Lancaster	42071	420710456	031	1	10200603	4.30	MANEVU2002	0.3000	0.0000	0.0000	MORGAN CORP/EPHRATA PLT
PA	Lancaster	42071	420710468	031	1	10200602	33.50	John Hulsberg	0.0220	0.0000	0.0000	DART CONTAINER CORP/EAST LAMPETER WAREHOUSE
PA	Lancaster	42071	420710468	032	1	10200602	33.50	John Hulsberg	0.0080	0.0000	0.0000	DART CONTAINER CORP/EAST LAMPETER WAREHOUSE
PA	Lancaster	42071	420710470	04	1	10301002	2.40	MANEVU2002	0.0140	0.0000	0.0000	MARK LINE IND OF PA /EPHRATA
PA	Lancaster	42071	420710486	104	1	10301002	0.00		0.2600	0.0000	0.0000	LIPPERT COMPONENTS I/DENVER
PA	Lancaster	42071	420710610	031	1	10300603	6.80	MANEVU2002	1.3100	0.0000	0.0024	LANCASTER LAB/LANCASTER
PA	Lancaster	42071	420710680	031	1	10200401	29.30	MANEVU2002	12.5400	0.0000	0.0000	LANCASTER HEALTH ALL/LANCASTER GEN HOSP
PA	Lancaster	42071	420710680	032	1	10200401	16.70	MANEVU2002	3.6528	0.0000	0.0265	LANCASTER HEALTH ALL/LANCASTER GEN HOSP
PA	Lancaster	42071	420710680	032	2	10200602	16.70	MANEVU2002	0.3472	0.0000	0.0021	LANCASTER HEALTH ALL/LANCASTER GEN HOSP
PA	Lancaster	42071	420710723	031	1	10200602	71.00	MANEVU2002	7.6600	0.0000	0.0177	PFIZER INC/LITITZ
PA	Lancaster	42071	420710723	033	1	10300501	2.30	MANEVU2002	0.1400	0.0000	0.0004	PFIZER INC/LITITZ
PA	Lancaster	42071	420710754	032	1	10300602	55.00	SCC Descriptio	6.4193	0.0000	0.0169	ARMSTRONG WORLD IND /INNOVATION CENTER-CORPORATE CAMPUS
PA	Lancaster	42071	420710754	032	2	10200501	55.00	SCC Descriptio	0.5607	0.0000	0.0000	ARMSTRONG WORLD IND /INNOVATION CENTER-CORPORATE CAMPUS
PA	Lancaster	42071	420710772	031	1	10200401	33.50	MANEVU2002	7.6247	0.0000	0.0034	VALLEY PROTEINS INC/TERRE HILL PLT
PA	Lancaster	42071	420710772	032	1	10200401	33.50	MANEVU2002	7.5885	0.0000	0.0033	VALLEY PROTEINS INC/TERRE HILL PLT
PA	Lancaster	42071	420712119	031	1	10200602	13.80	MANEVU2002	1.1500	0.0000	0.0032	PEPPERIDGE FARM INC/EAST COCALICO TWP PLT
PA	Lawrence	42073	420730023	033	1	10200602	42.00	MANEVU2002	0.8400	0.0000	0.0024	ELLWOOD QUALITY STEELS CO/NEW CASTLE PLT
PA	Lawrence	42073	420730023	034	1	10200602	10.40	MANEVU2002	3.2500	0.0000	0.0036	ELLWOOD QUALITY STEELS CO/NEW CASTLE PLT
PA	Lawrence	42073	420730023	102	1	10200602	55.00	SCC Descriptio	6.2397	0.0000	0.0171	ELLWOOD QUALITY STEELS CO/NEW CASTLE PLT
PA	Lawrence	42073	420730023	102	2	10200602	55.00	SCC Descriptio	0.6933	0.0000	0.0019	ELLWOOD QUALITY STEELS CO/NEW CASTLE PLT
PA	Lawrence	42073	420730023	132	1	10200603	5.00	SCC Descriptio	1.7000	0.0000	0.0045	ELLWOOD QUALITY STEELS CO/NEW CASTLE PLT
PA	Lawrence	42073	420730524	300	1	10200603	5.00	SCC Descriptio	15.4000	0.0000	0.0694	ELLWOOD CITY FORGE/ELLWOOD CITY
PA	Lawrence	42073	420730524	341	1	10200603	5.00	SCC Descriptio	1.0000	0.0000	0.0021	ELLWOOD CITY FORGE/ELLWOOD CITY
PA	Lawrence	42073	420730524	500A	1	10200603	5.00	SCC Descriptio	2.5000	0.0000	0.0063	ELLWOOD CITY FORGE/ELLWOOD CITY
PA	Lawrence	42073	420730524	500B	1	10200603	5.00	SCC Descriptio	4.1000	0.0000	0.0117	ELLWOOD CITY FORGE/ELLWOOD CITY
PA	Lawrence	42073	420730525	114	1	10300603	5.00	SCC Descriptio	1.9453	0.0000	0.0036	FLOWLINE DIV MARKOVI/NEW CASTLE
PA	Lebanon	42075	420750019	032	1	10200602	37.00	MANEVU2002	0.1100	0.0000	0.0000	ALCOA INC/LEBANON WORKS
PA	Lebanon	42075	420750019	034	1	10300603	3.00	MANEVU2002	0.6300	0.0000	0.0000	ALCOA INC/LEBANON WORKS
PA	Lebanon	42075	420750387	031A	1	10301002	22.50	MANEVU2002	1.3400	0.0000	0.0028	PA DEPT OF MILITARY /FT INDIANTOWN GAP
PA	Lebanon	42075	420750387	032A	1	10300103	9.60	MANEVU2002	0.0500	0.0000	0.0000	PA DEPT OF MILITARY /FT INDIANTOWN GAP
PA	Lebanon	42075	420750387	034A	1	10300501	285.00	MANEVU2002	9.3100	0.0000	0.0041	PA DEPT OF MILITARY /FT INDIANTOWN GAP
PA	Lebanon	42075	420750555	031	1	10300602	8.40	MANEVU2002	5.0400	0.0000	0.0105	QUAKER ALLOY INC/MYERSTOWN
PA	Lehigh	42077	420770003	033	1	10200401	76.00	John Hulsberg	12.3000	0.0000	0.0341	GEO SPECIALTY CHEM/TRIMET PROD GROUP
PA	Lehigh	42077	420770003	034	1	10200401	76.00	John Hulsberg	18.8000	0.0000	0.0521	GEO SPECIALTY CHEM/TRIMET PROD GROUP
PA	Lehigh	42077	420770003	035	1	10200401	30.60	John Hulsberg	13.4000	0.0000	0.0371	GEO SPECIALTY CHEM/TRIMET PROD GROUP
PA	Lehigh	42077	420770010	034	2	10200602	37.90	MANEVU2002	0.3169	0.0000	0.0000	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770010	034	1	10200401	37.90	MANEVU2002	0.0831	0.0000	0.0001	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770010	035	2	10200602	63.00	MANEVU2002	0.9074	0.0000	0.0000	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770010	035	1	10200401	63.00	MANEVU2002	0.0926	0.0000	0.0005	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770010	036	2	10200602	75.00	MANEVU2002	5.6154	0.0000	0.0000	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770010	036	4	10200602	75.00	MANEVU2002	1.4927	0.0000	0.0020	AGERE SYSTEMS INC/ALLENTOWN

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PA	Lehigh	42077	420770010	036	1	10200401	75.00	MANEVU2002	0.1516	0.0000	0.0000	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770010	036	3	10200401	75.00	MANEVU2002	0.0403	0.0000	0.0001	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770010	037	2	10200602	75.00	MANEVU2002	9.3906	0.0000	0.0000	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770010	037	1	10200401	75.00	MANEVU2002	0.1094	0.0000	0.0003	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770011	031	1	10200104	13.40	John Hulsberg	10.0000	0.0000	0.0275	PA DPW/ALLENTOWN STATE HOSP
PA	Lehigh	42077	420770011	032	1	10200104	13.40	John Hulsberg	2.8000	0.0000	0.0077	PA DPW/ALLENTOWN STATE HOSP
PA	Lehigh	42077	420770011	034	1	10200104	13.40	John Hulsberg	6.1000	0.0000	0.0168	PA DPW/ALLENTOWN STATE HOSP
PA	Lehigh	42077	420770013	101A	1	10200602	55.00	MANEVU2002	1.1540	0.0000	0.0033	BOURAS ACQUISITION INC/PRIOR COATED METALS
PA	Lehigh	42077	420770013	C02	1	10200603	5.00	MANEVU2002	0.0011	0.0000	0.0000	BOURAS ACQUISITION INC/PRIOR COATED METALS
PA	Lehigh	42077	420770019	031	1	10300501	6.30	MANEVU2002	1.1000	0.0000	0.0000	LAFARGE CORP/WHITEHALL PLT
PA	Lehigh	42077	420770019	101	1	10300501	0.00	MANEVU2002	1.3474	0.0000	0.0028	LAFARGE CORP/WHITEHALL PLT
PA	Lehigh	42077	420770019	114	1	10300501	0.00	MANEVU2002	0.7364	0.0000	0.0017	LAFARGE CORP/WHITEHALL PLT
PA	Lehigh	42077	420770027	031	1	10200602	10.40	MANEVU2002	3.6200	0.0000	0.0084	RANSOM IND LP/MACUNGIE
PA	Lehigh	42077	420770032	031	1	10200401	67.10	MANEVU2002	10.5000	0.0000	0.0092	MACK TRUCKS INC/MACUNGIE
PA	Lehigh	42077	420770032	032	1	10200401	67.10	MANEVU2002	11.1000	0.0000	0.0171	MACK TRUCKS INC/MACUNGIE
PA	Lehigh	42077	420770035	034	2	10200602	57.50	MANEVU2002	1.2000	0.0000	0.0000	NESTLE PURINA/PETCARE PLT
PA	Lehigh	42077	420770035	035	2	10200602	92.90	MANEVU2002	7.6418	0.0000	0.0000	NESTLE PURINA/PETCARE PLT
PA	Lehigh	42077	420770035	035	1	10200401	92.90	MANEVU2002	5.5582	0.0000	0.0177	NESTLE PURINA/PETCARE PLT
PA	Lehigh	42077	420770041	031	1	10200602	20.10	John Hulsberg	2.4446	0.0000	0.0066	APOLLO METALS LTD/BETHLEHEM
PA	Lehigh	42077	420770041	032	1	10200602	16.70	John Hulsberg	2.4029	0.0000	0.0065	APOLLO METALS LTD/BETHLEHEM
PA	Lehigh	42077	420770041	032	2	10300504	16.70	John Hulsberg	0.1317	0.0000	0.0004	APOLLO METALS LTD/BETHLEHEM
PA	Lehigh	42077	420770052	031	2	10200602	76.90	John Hulsberg	1.3675	0.0000	0.0037	DIAGEO TOTAL LOGISTIC CONTROL LEHIGH VALLEY
PA	Lehigh	42077	420770052	032	2	10200602	76.90	John Hulsberg	1.5300	0.0000	0.0041	DIAGEO TOTAL LOGISTIC CONTROL LEHIGH VALLEY
PA	Lehigh	42077	420770052	033	1	10200602	97.50	John Hulsberg	1.4900	0.0000	0.0040	DIAGEO TOTAL LOGISTIC CONTROL LEHIGH VALLEY
PA	Lehigh	42077	420770052	034	1	10200501	11.10	MANEVU2002	0.0052	0.0000	0.0000	DIAGEO TOTAL LOGISTIC CONTROL LEHIGH VALLEY
PA	Lehigh	42077	420770053	031	1	10200602	29.00	MANEVU2002	3.7198	0.0000	0.0102	SAPUTO CHEESE /WHITEHALL
PA	Lehigh	42077	420770053	031	2	10200501	29.00	MANEVU2002	0.0992	0.0000	0.0000	SAPUTO CHEESE /WHITEHALL
PA	Lehigh	42077	420770053	032	1	10200602	29.00	MANEVU2002	3.7200	0.0000	0.0102	SAPUTO CHEESE /WHITEHALL
PA	Lehigh	42077	420770053	032	2	10200501	29.00	MANEVU2002	0.0980	0.0000	0.0000	SAPUTO CHEESE /WHITEHALL
PA	Lehigh	42077	420770065	031	2	10200602	77.60	MANEVU2002	5.5500	0.0000	0.0146	KRAFT FOODS NORTH AMERICA INC
PA	Lehigh	42077	420770065	032	1	10200602	77.60	MANEVU2002	0.9100	0.0000	0.0000	KRAFT FOODS NORTH AMERICA INC
PA	Lehigh	42077	420770068	102	1	10200603	5.00	SCC Descriptio	0.1700	0.0000	0.0004	STANLEY VIDMAR INC/STORAGE TECH
PA	Lehigh	42077	420770068	C01	1	10200603	5.00	SCC Descriptio	0.0500	0.0000	0.0001	STANLEY VIDMAR INC/STORAGE TECH
PA	Lehigh	42077	420770071	031	1	10200504	5.00	MANEVU2002	0.5000	0.0000	0.0000	ALLEN ORGAN CO/MACUNGIE
PA	Lehigh	42077	420770076	001	1	10300602	10.50	MANEVU2002	1.2390	0.0000	0.0000	SACRED HEART HOSP/BOILER HOUSE
PA	Lehigh	42077	420770076	002	1	10300602	10.50	MANEVU2002	0.7000	0.0000	0.0022	SACRED HEART HOSP/BOILER HOUSE
PA	Lehigh	42077	420770076	003	1	10300602	10.50	MANEVU2002	0.5600	0.0000	0.0040	SACRED HEART HOSP/BOILER HOUSE
PA	Lehigh	42077	420770076	004	1	10300602	10.50	MANEVU2002	1.0920	0.0000	0.0000	SACRED HEART HOSP/BOILER HOUSE
PA	Lehigh	42077	420770146	031	1	10200603	4.20	John Hulsberg	0.5116	0.0000	0.0013	INSULATION CORP AMER/ALLENTOWN
PA	Lehigh	42077	420770174	032	1	10200602	9.90	MANEVU2002	0.7700	0.0000	0.0016	CARPENTER CO/UPPER MACUNGIE
PA	Lehigh	42077	420770393	031	1	10300504	16.70	MANEVU2002	0.8600	0.0000	0.0024	SYNTHETIC THREAD CO /BETHLEHEM
PA	Lehigh	42077	420770562	002	2	10200603	7.70	MANEVU2002	1.4400	0.0000	0.0032	ST LUKES HOSP/MAIN BOILER PLT
PA	Lehigh	42077	420770562	003	2	10200603	7.70	MANEVU2002	2.1880	0.0000	0.0041	ST LUKES HOSP/MAIN BOILER PLT
PA	Lehigh	42077	420770562	004	2	10200603	7.70	MANEVU2002	1.2830	0.0000	0.0032	ST LUKES HOSP/MAIN BOILER PLT
PA	Lehigh	42077	420770562	005	1	10200603	6.50	MANEVU2002	3.0320	0.0000	0.0073	ST LUKES HOSP/MAIN BOILER PLT
PA	Lehigh	42077	420770562	006	1	10200603	6.50	MANEVU2002	2.5300	0.0000	0.0044	ST LUKES HOSP/MAIN BOILER PLT
PA	Lehigh	42077	420770565	002	2	10200602	21.00	MANEVU2002	3.7005	0.0000	0.0000	LEHIGH VALLEY HOSP/17TH & CHEW STS
PA	Lehigh	42077	420770565	003	1	10200603	10.50	MANEVU2002	0.9978	0.0000	0.0082	LEHIGH VALLEY HOSP/17TH & CHEW STS
PA	Lehigh	42077	420770566	001	1	10200602	16.70	MANEVU2002	0.8800	0.0000	0.0000	CEDAR CREST COLL/BOILER HOUSE
PA	Lehigh	42077	420770566	002	1	10200602	16.70	MANEVU2002	0.3700	0.0000	0.0000	CEDAR CREST COLL/BOILER HOUSE
PA	Lehigh	42077	420770566	003	1	10200602	2.50	MANEVU2002	0.1200	0.0000	0.0008	CEDAR CREST COLL/BOILER HOUSE
PA	Lehigh	42077	420770567	001	1	10200602	29.30	MANEVU2002	2.0068	0.0000	0.0040	HAB IND INC/ALLENTOWN PLT

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PA	Lehigh	42077	420770567	002	1	10200602	29.30	MANEVU2002	2.0072	0.0000	0.0040	HAB IND INC/ALLENTOWN PLT
PA	Lehigh	42077	420770589	032	2	10200602	49.00	MANEVU2002	0.5295	0.0000	0.0000	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	032	1	10200501	49.00	MANEVU2002	0.0005	0.0000	0.0000	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	033	2	10200602	13.40	MANEVU2002	0.7732	0.0000	0.0068	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	033	1	10200501	13.40	MANEVU2002	0.0068	0.0000	0.0000	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	035	2	10200602	21.50	MANEVU2002	0.8560	0.0000	0.0011	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	035	1	10200501	21.50	MANEVU2002	0.1440	0.0000	0.0002	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	037	2	10200602	50.10	MANEVU2002	4.4347	0.0000	0.0297	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	037	1	10200501	50.10	MANEVU2002	0.0953	0.0000	0.0001	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	040	2	10200602	41.90	MANEVU2002	2.3355	0.0000	0.0121	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	040	1	10200501	41.90	MANEVU2002	0.0045	0.0000	0.0000	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	041	2	10200602	35.00	MANEVU2002	0.4800	0.0000	0.0003	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	042	1	10200603	0.50	MANEVU2002	0.0031	0.0000	0.0000	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	043	1	10200501	0.80	MANEVU2002	0.0300	0.0000	0.0000	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770590	031	1	10200602	18.10	MANEVU2002	2.4932	0.0000	0.0142	TRIQUINT OPTOELECTRONICS INC
PA	Lehigh	42077	420770590	031	2	10200501	18.10	MANEVU2002	0.0168	0.0000	0.0000	TRIQUINT OPTOELECTRONICS INC
PA	Lehigh	42077	420770590	032	1	10200602	29.40	MANEVU2002	2.7666	0.0000	0.0000	TRIQUINT OPTOELECTRONICS INC
PA	Lehigh	42077	420770590	032	2	10200501	29.40	MANEVU2002	0.0434	0.0000	0.0000	TRIQUINT OPTOELECTRONICS INC
PA	Lehigh	42077	420770590	033	1	10200602	29.40	MANEVU2002	3.8010	0.0000	0.0000	TRIQUINT OPTOELECTRONICS INC
PA	Lehigh	42077	420770590	033	2	10200501	29.40	MANEVU2002	0.0290	0.0000	0.0000	TRIQUINT OPTOELECTRONICS INC
PA	Lehigh	42077	420770593	031	1	10200602	13.40	MANEVU2002	1.1550	0.0000	0.0019	HOUGHTON INTL INC/ALLENTOWN FACILITY
PA	Lehigh	42077	420770593	032	1	10200602	13.40	MANEVU2002	1.1550	0.0000	0.0019	HOUGHTON INTL INC/ALLENTOWN FACILITY
PA	Lehigh	42077	420770594	C05	1	10300603	5.00	SCC Descriptio	0.1900	0.0000	0.0003	VICTAULIC CO AMER/ALBURTIS FAC
PA	Lehigh	42077	420770671	001	3	10200501	25.00	MANEVU2002	0.1943	0.0000	0.0000	LEHIGH VALLEY HOSP/S CEDAR CREST
PA	Lehigh	42077	420770671	001	4	10200602	25.00	MANEVU2002	3.1727	0.0000	0.0000	LEHIGH VALLEY HOSP/S CEDAR CREST
PA	Lehigh	42077	420770671	002	3	10200602	25.00	MANEVU2002	3.5295	0.0000	0.0264	LEHIGH VALLEY HOSP/S CEDAR CREST
PA	Lehigh	42077	420770671	002	2	10200501	25.00	MANEVU2002	0.1912	0.0000	0.0005	LEHIGH VALLEY HOSP/S CEDAR CREST
PA	Lehigh	42077	420770671	003	1	10200602	27.00	MANEVU2002	5.3354	0.0000	0.0076	LEHIGH VALLEY HOSP/S CEDAR CREST
PA	Lehigh	42077	420770671	003	2	10200501	27.00	MANEVU2002	0.3266	0.0000	0.0022	LEHIGH VALLEY HOSP/S CEDAR CREST
PA	Luzerne	42079	420790008	032	1	10300603	5.00	John Hulsberg	0.4137	0.0000	0.0011	BPB MFG INC/ HARDING
PA	Luzerne	42079	420790008	C01A	1	10300602	55.00	SCC Descriptio	0.5744	0.0000	0.0016	BPB MFG INC/ HARDING
PA	Luzerne	42079	420790013	001	1	10300603	8.00	MANEVU2002	1.3179	0.0000	0.0006	CERTAIN TEED PROD CO/MOUNTAINTOP
PA	Luzerne	42079	420790013	003	1	10200602	55.00	SCC Descriptio	1.0427	0.0000	0.0027	CERTAIN TEED PROD CO/MOUNTAINTOP
PA	Luzerne	42079	420790014	033	2	10200202	31.20	MANEVU2002	447.3957	0.0000	1.1799	UGI DEVELOPMENT CO/HUNLOCK POWER STA
PA	Luzerne	42079	420790027	031	1	10300102	47.00	MANEVU2002	13.1000	0.0000	0.0072	PA DEPT OF CORR/DALLAS SCI
PA	Luzerne	42079	420790027	032	1	10300102	47.00	MANEVU2002	17.9500	0.0000	0.0355	PA DEPT OF CORR/DALLAS SCI
PA	Luzerne	42079	420790035	033	1	10300102	27.10	MANEVU2002	3.8655	0.0000	0.0000	PA DPW/WHITE HAVEN CTR
PA	Luzerne	42079	420790035	034	1	10300102	27.10	MANEVU2002	16.8570	0.0000	0.0074	PA DPW/WHITE HAVEN CTR
PA	Luzerne	42079	420790035	035	1	10300102	16.50	MANEVU2002	5.8050	0.0000	0.0364	PA DPW/WHITE HAVEN CTR
PA	Luzerne	42079	420790058	031	1	10200603	5.00	SCC Descriptio	21.9400	0.0000	0.0313	TRANSCONTINENTAL GAS/BEAR CREEK STA 515
PA	Luzerne	42079	420790058	041	1	10300603	4.00	MANEVU2002	0.6200	0.0000	0.0000	TRANSCONTINENTAL GAS/BEAR CREEK STA 515
PA	Luzerne	42079	420790059	031	2	10200601	20.90	MANEVU2002	8.5989	0.0000	0.0208	HERSHEY FOODS CORP/HAZLETON PLT
PA	Luzerne	42079	420790059	031	3	10200401	20.90	MANEVU2002	0.0011	0.0000	0.0000	HERSHEY FOODS CORP/HAZLETON PLT
PA	Luzerne	42079	420790062	031	1	10200602	12.60	MANEVU2002	1.4773	0.0000	0.0024	FAIRCHILD SEMICONDUCTOR CORP/ WRIGHT TWP
PA	Luzerne	42079	420790062	032	1	10200602	12.60	MANEVU2002	1.4773	0.0000	0.0024	FAIRCHILD SEMICONDUCTOR CORP/ WRIGHT TWP
PA	Luzerne	42079	420790066	001	1	10200603	5.20	John Hulsberg	0.6500	0.0000	0.0017	OFFSET PAPERBACK MFG/DALLAS
PA	Luzerne	42079	420790067	201	1	10200603	6.90	MANEVU2002	1.3192	0.0000	0.0045	STROEHMANN BAKERIES/VALMONT
PA	Luzerne	42079	420790067	202	1	10200603	4.20	MANEVU2002	0.6830	0.0000	0.0000	STROEHMANN BAKERIES/VALMONT
PA	Luzerne	42079	420790068	105	1	10200601	150.00	SCC Descriptio	0.0850	0.0000	0.0004	BERWICK OFFRAY LLC/BERWICK
PA	Lycoming	42081	420810011	031	1	10200602	41.00	John Hulsberg	5.2400	0.0000	0.0142	LONZA INC/WILLIAMSPORT PLT
PA	Lycoming	42081	420810011	032	1	10200602	41.00	John Hulsberg	8.3000	0.0000	0.0224	LONZA INC/WILLIAMSPORT PLT
PA	Lycoming	42081	420810011	033	1	10200603	5.00	John Hulsberg	1.0860	0.0000	0.0028	LONZA INC/WILLIAMSPORT PLT

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PA	Lycoming	42081	420810011	034	1	10200603	3.00	John Hulsberg	0.6510	0.0000	0.0017	LONZA INC/WILLIAMSPORT PLT
PA	Lycoming	42081	420810011	035	1	10200603	3.10	John Hulsberg	0.3650	0.0000	0.0009	LONZA INC/WILLIAMSPORT PLT
PA	Lycoming	42081	420810013	041	1	10200401	16.80	John Hulsberg	2.7300	0.0000	0.0076	KOPPERS IND/RR TIE PLT
PA	Lycoming	42081	420810021	032	1	10200603	8.40	MANEVU2002	0.3000	0.0000	0.0000	ANDRITZ INC/MUNCY FOUNDRY
PA	Lycoming	42081	420810021	037	1	10200602	12.00	John Hulsberg	0.5000	0.0000	0.0014	ANDRITZ INC/MUNCY FOUNDRY
PA	Lycoming	42081	420810021	038	1	10200602	12.00	John Hulsberg	0.4000	0.0000	0.0011	ANDRITZ INC/MUNCY FOUNDRY
PA	Lycoming	42081	420810021	039	1	10200602	55.00	SCC Descriptio	4.3000	0.0000	0.0057	ANDRITZ INC/MUNCY FOUNDRY
PA	Lycoming	42081	420810036	036	1	10200603	3.50	MANEVU2002	0.9800	0.0000	0.0000	TRANSCONTINENTAL GAS/SALLADASBURG STATION 520
PA	Lycoming	42081	420810043	031	1	10200603	4.20	John Hulsberg	0.1500	0.0000	0.0004	STROEHMANN BAKERIES/LYCOMING CREEK ROLL PLT
PA	Lycoming	42081	420810043	032	1	10200603	5.30	John Hulsberg	0.3700	0.0000	0.0010	STROEHMANN BAKERIES/LYCOMING CREEK ROLL PLT
PA	Lycoming	42081	420810044	031	1	10200907	173.20	MANEVU2002	208.3000	0.0000	0.6409	KOPPERS IND/COGEN PLT
PA	Lycoming	42081	420810424	031	1	10200603	2.40	MANEVU2002	0.1350	0.0000	0.0000	ROCHELLE FURNITURE/MONTGOMERY PLT
PA	Lycoming	42081	420810821	031	1	10200602	25.00	MANEVU2002	5.5400	0.0000	0.0000	DIVINE PROVIDENCE HOSP/WILLIAMSPORT
PA	Lycoming	42081	420810821	032	1	10200602	25.00	MANEVU2002	0.1430	0.0000	0.0002	DIVINE PROVIDENCE HOSP/WILLIAMSPORT
PA	Lycoming	42081	420810821	033	1	10200602	12.50	MANEVU2002	0.5080	0.0000	0.0036	DIVINE PROVIDENCE HOSP/WILLIAMSPORT
PA	Lycoming	42081	420810821	035	1	10300501	2.90	MANEVU2002	0.0675	0.0000	0.0000	DIVINE PROVIDENCE HOSP/WILLIAMSPORT
PA	Lycoming	42081	420810979	031	1	10200602	55.00	SCC Descriptio	0.5810	0.0000	0.0013	MUNCY VALLEY HOSPITAL/MUNCY VALLEY HOSPITAL
PA	Lycoming	42081	420810980	031	1	10200602	21.00	MANEVU2002	8.9600	0.0000	0.0256	WILLIAMSPORT HOSP/WILLIAMSPORT
PA	Lycoming	42081	420810980	033	1	10300603	5.00	SCC Descriptio	0.9200	0.0000	0.0011	WILLIAMSPORT HOSP/WILLIAMSPORT
PA	Lycoming	42081	420810980	034	1	10300603	5.00	SCC Descriptio	0.6370	0.0000	0.0001	WILLIAMSPORT HOSP/WILLIAMSPORT
PA	McKean	42083	420830002	211	1	10300603	5.00	SCC Descriptio	0.8000	0.0000	0.0027	PGH CORNING CORP/PORT ALLEGANY
PA	McKean	42083	420830003	031A	3	10200202	108.00	MANEVU2002	205.8092	0.0000	0.5428	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	031A	1	10200202	108.00	MANEVU2002	110.8204	0.0000	0.0609	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	031A	4	10200404	108.00	MANEVU2002	1.9958	0.0000	0.0053	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	031A	2	10200404	108.00	MANEVU2002	1.0746	0.0000	0.0006	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	032A	3	10200202	84.00	MANEVU2002	104.3791	0.0000	0.2982	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	032A	1	10200202	84.00	MANEVU2002	56.2041	0.0000	0.0185	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	032A	4	10200404	84.00	MANEVU2002	2.2209	0.0000	0.0063	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	032A	2	10200404	84.00	MANEVU2002	1.1959	0.0000	0.0004	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	033A	4	10200204	90.00	MANEVU2002	45.2383	0.0000	0.1094	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	033A	1	10200204	90.00	MANEVU2002	24.3591	0.0000	0.0562	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	033A	5	10200404	90.00	MANEVU2002	6.1619	0.0000	0.0156	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	033A	2	10200404	90.00	MANEVU2002	3.3179	0.0000	0.0080	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	033A	6	10200602	90.00	MANEVU2002	0.6648	0.0000	0.0015	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	033A	3	10200602	90.00	MANEVU2002	0.3580	0.0000	0.0009	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	034A	2	10200404	59.10	MANEVU2002	5.2650	0.0000	0.0197	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	034A	1	10200404	59.10	MANEVU2002	2.8350	0.0000	0.0106	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	043A	1	10200603	2.60	MANEVU2002	0.2000	0.0000	0.0006	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	044	2	10200602	8.70	MANEVU2002	0.6226	0.0000	0.0000	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	044	1	10200501	8.70	MANEVU2002	0.3774	0.0000	0.0010	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	048	1	10200603	1.20	MANEVU2002	2.5000	0.0000	0.0077	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830004	033	2	10200701	99.00	MANEVU2002	15.7383	0.0000	0.0052	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	033	1	10200602	99.00	MANEVU2002	1.7817	0.0000	0.0069	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	034	2	10200701	99.00	MANEVU2002	1.6620	0.0000	0.0002	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	034	1	10200602	99.00	MANEVU2002	0.8180	0.0000	0.0026	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	037	1	10200204	169.00	MANEVU2002	169.3500	0.0000	0.4466	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	041	1	10200701	33.40	MANEVU2002	7.2153	0.0000	0.0254	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	043	2	10200701	40.00	MANEVU2002	8.2600	0.0000	0.0254	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	044	2	10200701	14.30	MANEVU2002	3.1700	0.0000	0.0087	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	046	2	10200701	14.00	MANEVU2002	2.8900	0.0000	0.0089	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	047	2	10200603	3.00	MANEVU2002	1.3200	0.0000	0.0036	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	048	2	10200603	3.80	MANEVU2002	0.0042	0.0000	0.0000	AMER REF GROUP/BRADFORD

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	McKean	42083	420830498	025	1	10200602	20.00	MANEVU2002	0.8000	0.0000	0.0020	TEMPLE INLAND FOREST/MT JEWETT COMPLEX
PA	Mercer	42085	420850019	031	1	10200602	14.70	MANEVU2002	2.4273	0.0000	0.0061	WHEATLAND TUBE DIV/SHARON PLT
PA	Mercer	42085	420850019	101	1	10200602	55.00	SCC Descriptio	29.0000	0.0000	0.0829	WHEATLAND TUBE DIV/SHARON PLT
PA	Mercer	42085	420850019	102	1	10200602	55.00	SCC Descriptio	3.2600	0.0000	0.0097	WHEATLAND TUBE DIV/SHARON PLT
PA	Mercer	42085	420850019	103	1	10200602	55.00	SCC Descriptio	2.1400	0.0000	0.0056	WHEATLAND TUBE DIV/SHARON PLT
PA	Mercer	42085	420850020	031	1	10200602	13.40	MANEVU2002	3.5250	0.0000	0.0097	GE CO/GROVE CITY
PA	Mercer	42085	420850022	031	1	10200603	3.50	MANEVU2002	0.4900	0.0000	0.0007	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	032	1	10200603	3.50	MANEVU2002	0.4900	0.0000	0.0007	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	033	1	10200603	3.50	MANEVU2002	0.4900	0.0000	0.0007	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	034	1	10200603	3.50	MANEVU2002	0.4900	0.0000	0.0007	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	035	1	10200603	4.20	MANEVU2002	1.3400	0.0000	0.0034	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	036	1	10200603	4.20	MANEVU2002	1.3400	0.0000	0.0034	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	037	1	10200603	5.20	MANEVU2002	1.6500	0.0000	0.0042	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	038	1	10200603	6.30	MANEVU2002	0.8800	0.0000	0.0032	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	039	1	10200603	6.30	MANEVU2002	0.8800	0.0000	0.0032	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	103	2	10200603	8.40	MANEVU2002	2.6800	0.0000	0.0068	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850023	031	1	10200603	5.40	MANEVU2002	0.5277	0.0000	0.0014	SALEM TUBE INC/SALEM TUBE INC
PA	Mercer	42085	420850046	001	1	10200603	5.00	SCC Descriptio	2.6800	0.0000	0.0074	GREENVILLE METALS INC/TRANSFER
PA	Mercer	42085	420850060	031	1	10200205	20.90	MANEVU2002	10.2083	0.0000	0.0000	GROVE CITY COLL/GROVE CITY
PA	Mercer	42085	420850060	031	3	10200502	20.90	MANEVU2002	0.0017	0.0000	0.0000	GROVE CITY COLL/GROVE CITY
PA	Mercer	42085	420850060	032	1	10200205	20.90	MANEVU2002	6.9989	0.0000	0.0000	GROVE CITY COLL/GROVE CITY
PA	Mercer	42085	420850060	032	2	10200502	20.90	MANEVU2002	0.0011	0.0000	0.0000	GROVE CITY COLL/GROVE CITY
PA	Mercer	42085	420850060	033	2	10200502	20.90	MANEVU2002	0.1710	0.0000	0.0000	GROVE CITY COLL/GROVE CITY
PA	Mercer	42085	420850060	033	1	10200602	20.90	MANEVU2002	0.0001	0.0000	0.0000	GROVE CITY COLL/GROVE CITY
PA	Mercer	42085	420850060	034	1	10300603	5.00	SCC Descriptio	0.2585	0.0000	0.0009	GROVE CITY COLL/GROVE CITY
PA	Mercer	42085	420850332	031	1	10200602	25.20	MANEVU2002	1.8650	0.0000	0.0045	WHEATLAND TUBE CO DI/WHEATLAND TUBE DIV
PA	Mercer	42085	420850332	032	1	10200602	16.80	MANEVU2002	1.2450	0.0000	0.0030	WHEATLAND TUBE CO DI/WHEATLAND TUBE DIV
PA	Mercer	42085	420850332	033	1	10200602	42.00	MANEVU2002	3.1795	0.0000	0.0087	WHEATLAND TUBE CO DI/WHEATLAND TUBE DIV
PA	Mercer	42085	420850332	101	1	10200602	55.00	SCC Descriptio	42.1000	0.0000	0.1110	WHEATLAND TUBE CO DI/WHEATLAND TUBE DIV
PA	Mercer	42085	420850409	031	1	10300602	33.50	MANEVU2002	2.1400	0.0000	0.0054	DUFERCO FARRELL CORP/FARRELL PLT
PA	Mercer	42085	420850522	031	1	10200603	5.30	MANEVU2002	0.7783	0.0000	0.0018	DAMASCUS BISHOP TUBE/GREENVILLE
PA	Mercer	42085	420850522	102	1	10200602	55.00	SCC Descriptio	0.4519	0.0000	0.0014	DAMASCUS BISHOP TUBE/GREENVILLE
PA	Mifflin	42087	420870003	032	1	10200603	6.00	MANEVU2002	1.2560	0.0000	0.0000	STD STEEL/BURNHAM
PA	Mifflin	42087	420870003	037	1	10200602	19.90	MANEVU2002	1.7350	0.0000	0.0000	STD STEEL/BURNHAM
PA	Mifflin	42087	420870003	038	1	10200602	12.00	MANEVU2002	0.9850	0.0000	0.0000	STD STEEL/BURNHAM
PA	Mifflin	42087	420870010	032	1	10200602	15.00	MANEVU2002	1.0200	0.0000	0.0020	CNH AMER LLC/BELLEVILLE
PA	Mifflin	42087	420870010	033	1	10200602	15.00	MANEVU2002	1.2000	0.0000	0.0038	CNH AMER LLC/BELLEVILLE
PA	Mifflin	42087	420870010	099	4	10200603	5.00	SCC Descriptio	7.2000	0.0000	0.0063	CNH AMER LLC/BELLEVILLE
PA	Mifflin	42087	420870013	031	1	10300603	11.60	MANEVU2002	0.0082	0.0000	0.0000	TRINITY PKG/LEWISTOWN DIV
PA	Mifflin	42087	420870030	099	1	10200603	5.00	SCC Descriptio	1.2400	0.0000	0.0012	DONSCO/BELLEVILLE
PA	Monroe	42089	420890008	030	1	10300602	55.00	SCC Descriptio	8.9100	0.0000	0.0069	US DEPT DEFENSE/TOBYHANA ARMY DEPOT
PA	Monroe	42089	420890008	038	1	10300503	5.00	SCC Descriptio	2.2300	0.0000	0.0000	US DEPT DEFENSE/TOBYHANA ARMY DEPOT
PA	Monroe	42089	420890008	040	1	10300503	5.00	SCC Descriptio	0.3100	0.0000	0.0001	US DEPT DEFENSE/TOBYHANA ARMY DEPOT
PA	Monroe	42089	420890018	031	1	10200601	72.40	MANEVU2002	0.7634	0.0000	0.0007	ROCK TENN CO/DELAWARE WATER GAP
PA	Monroe	42089	420890018	033	1	10200602	98.50	MANEVU2002	6.0786	0.0000	0.0174	ROCK TENN CO/DELAWARE WATER GAP
PA	Monroe	42089	420890018	033	2	10200501	98.50	MANEVU2002	0.0014	0.0000	0.0000	ROCK TENN CO/DELAWARE WATER GAP
PA	Monroe	42089	420890020	C01	1	10200603	5.00	SCC Descriptio	0.0045	0.0000	0.0000	MACK PRINTING CO/HUGHES PRINTING DIV
PA	Monroe	42089	420890539	031	1	10200401	21.00	MANEVU2002	11.2000	0.0000	0.0271	AVENTIS PASTEUR/SWIFTWATER FAC
PA	Monroe	42089	420890539	032	1	10200401	21.00	MANEVU2002	10.1000	0.0000	0.0433	AVENTIS PASTEUR/SWIFTWATER FAC
PA	Monroe	42089	420890539	036	1	10200401	29.50	MANEVU2002	11.8000	0.0000	0.0246	AVENTIS PASTEUR/SWIFTWATER FAC
PA	Monroe	42089	420890539	037	1	10200401	14.70	MANEVU2002	1.8000	0.0000	0.0000	AVENTIS PASTEUR/SWIFTWATER FAC
PA	Monroe	42089	420890539	038	1	10200401	14.70	MANEVU2002	0.2318	0.0000	0.0000	AVENTIS PASTEUR/SWIFTWATER FAC

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Montgomery	42091	420250106	031	2	10200602	55.00	SCC Descriptio	2.1733	0.0000	0.0060	PENN COLOR/HATFIELD
PA	Montgomery	42091	420250106	031	1	10200501	55.00	SCC Descriptio	1.4367	0.0000	0.0039	PENN COLOR/HATFIELD
PA	Montgomery	42091	420910006	031	1	10200501	4.10	MANEVU2002	0.0039	0.0000	0.0000	JEFFERSON SMURFIT CO/NORTH WALES
PA	Montgomery	42091	420910006	031	2	10200603	4.10	MANEVU2002	0.0251	0.0000	0.0000	JEFFERSON SMURFIT CO/NORTH WALES
PA	Montgomery	42091	420910006	032	1	10200501	6.30	MANEVU2002	0.0208	0.0000	0.0000	JEFFERSON SMURFIT CO/NORTH WALES
PA	Montgomery	42091	420910006	032	2	10200603	6.30	MANEVU2002	0.1862	0.0000	0.0000	JEFFERSON SMURFIT CO/NORTH WALES
PA	Montgomery	42091	420910007	035	2	10300602	56.20	MANEVU2002	10.2300	0.0000	0.0214	PA DPW/NORRISTOWN STATE HOSP
PA	Montgomery	42091	420910007	036	2	10300602	56.20	MANEVU2002	0.0791	0.0000	0.0000	PA DPW/NORRISTOWN STATE HOSP
PA	Montgomery	42091	420910007	036	1	10300501	56.20	MANEVU2002	0.0009	0.0000	0.0000	PA DPW/NORRISTOWN STATE HOSP
PA	Montgomery	42091	420910008	041	1	10200104	21.20	MANEVU2002	23.0000	0.0000	0.0733	PA DEPT OF CORR/GRATERFORD SCI
PA	Montgomery	42091	420910008	042	1	10200104	21.20	MANEVU2002	15.3000	0.0000	0.0000	PA DEPT OF CORR/GRATERFORD SCI
PA	Montgomery	42091	420910008	043	1	10200104	21.20	MANEVU2002	17.2000	0.0000	0.0151	PA DEPT OF CORR/GRATERFORD SCI
PA	Montgomery	42091	420910009	031	3	10200501	25.10	MANEVU2002	0.0036	0.0000	0.0000	CABOT SUPERMETALS/BOYERTOWN
PA	Montgomery	42091	420910009	031	2	10200602	25.10	MANEVU2002	0.4864	0.0000	0.0013	CABOT SUPERMETALS/BOYERTOWN
PA	Montgomery	42091	420910009	032	2	10200602	50.30	MANEVU2002	4.4095	0.0000	0.0000	CABOT SUPERMETALS/BOYERTOWN
PA	Montgomery	42091	420910009	032	1	10200401	50.30	MANEVU2002	5.8005	0.0000	0.0312	CABOT SUPERMETALS/BOYERTOWN
PA	Montgomery	42091	420910009	034	1	10200602	62.80	MANEVU2002	2.0100	0.0000	0.0007	CABOT SUPERMETALS/BOYERTOWN
PA	Montgomery	42091	420910011	031	1	10200602	14.80	MANEVU2002	3.6800	0.0000	0.0065	KNOLL INC/EAST GREENVILLE MFG
PA	Montgomery	42091	420910011	032	1	10200602	14.80	MANEVU2002	1.2100	0.0000	0.0021	KNOLL INC/EAST GREENVILLE MFG
PA	Montgomery	42091	420910028	031	1	10200502	49.40	John Hulsberg	0.2000	0.0000	0.0005	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	032	1	10200502	49.40	John Hulsberg	0.2000	0.0000	0.0005	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	033	2	10200601	112.00	John Hulsberg	8.7996	0.0000	0.0226	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	033	1	10200501	112.00	John Hulsberg	0.0004	0.0000	0.0000	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	034	2	10200601	122.40	John Hulsberg	1.3948	0.0000	0.0036	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	034	1	10200501	122.40	John Hulsberg	0.0052	0.0000	0.0000	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	035	1	10200602	93.40	John Hulsberg	30.2893	0.0000	0.0819	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	035	2	10200502	93.40	John Hulsberg	0.0107	0.0000	0.0000	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	038	1	10200601	206.00	MANEVU2002	0.0055	0.0000	0.0000	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	041	2	10200601	168.80	MANEVU2002	9.5997	0.0000	0.0000	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	041	1	10200501	168.80	MANEVU2002	0.0003	0.0000	0.0000	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	042	2	10200601	249.00	John Hulsberg	21.6846	0.0000	0.0167	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	042	1	10200501	249.00	John Hulsberg	0.3154	0.0000	0.0007	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	C100	1	10200602	55.00	SCC Descriptio	0.4000	0.0000	0.0010	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	C161	1	10200602	55.00	SCC Descriptio	0.4000	0.0000	0.0010	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910034	033	1	10300501	2.70	MANEVU2002	0.4500	0.0000	0.0013	HIGHWAY MATERIALS INC/PLYMOUTH MEETING QUARRY
PA	Montgomery	42091	420910037	101	1	10200602	55.00	SCC Descriptio	1.9779	0.0000	0.0043	GREENE TWEED & CO INC/KULPSVILLE
PA	Montgomery	42091	420910037	101	2	10200401	55.00	SCC Descriptio	0.0121	0.0000	0.0000	GREENE TWEED & CO INC/KULPSVILLE
PA	Montgomery	42091	420910040	031	1	10200401	20.00	MANEVU2002	3.0681	0.0000	0.0128	SUPERIOR TUBE CO/LOWER PROVIDENCE
PA	Montgomery	42091	420910040	031	2	10200602	20.00	MANEVU2002	0.3919	0.0000	0.0000	SUPERIOR TUBE CO/LOWER PROVIDENCE
PA	Montgomery	42091	420910040	032	1	10200401	25.00	MANEVU2002	5.1843	0.0000	0.0057	SUPERIOR TUBE CO/LOWER PROVIDENCE
PA	Montgomery	42091	420910040	032	2	10200602	25.00	MANEVU2002	0.7457	0.0000	0.0000	SUPERIOR TUBE CO/LOWER PROVIDENCE
PA	Montgomery	42091	420910041	031	2	10200602	22.00	MANEVU2002	5.3428	0.0000	0.0000	ROHM & HAAS CO/SPRINGHOUSE
PA	Montgomery	42091	420910041	031	1	10200501	22.00	MANEVU2002	0.2072	0.0000	0.0001	ROHM & HAAS CO/SPRINGHOUSE
PA	Montgomery	42091	420910041	032	2	10200602	22.00	MANEVU2002	0.1541	0.0000	0.0000	ROHM & HAAS CO/SPRINGHOUSE
PA	Montgomery	42091	420910041	032	1	10200501	22.00	MANEVU2002	0.0109	0.0000	0.0001	ROHM & HAAS CO/SPRINGHOUSE
PA	Montgomery	42091	420910041	033	2	10200602	25.00	MANEVU2002	1.0606	0.0000	0.0000	ROHM & HAAS CO/SPRINGHOUSE
PA	Montgomery	42091	420910041	033	1	10200501	25.00	MANEVU2002	0.1844	0.0000	0.0004	ROHM & HAAS CO/SPRINGHOUSE
PA	Montgomery	42091	420910041	034	2	10200602	25.00	MANEVU2002	4.5826	0.0000	0.0000	ROHM & HAAS CO/SPRINGHOUSE
PA	Montgomery	42091	420910041	034	1	10200501	25.00	MANEVU2002	0.2574	0.0000	0.0005	ROHM & HAAS CO/SPRINGHOUSE
PA	Montgomery	42091	420910045	031	1	10300602	14.60	MANEVU2002	1.0100	0.0000	0.0007	UNISYS CORP/BLUE BELL
PA	Montgomery	42091	420910045	032	2	10300602	14.60	MANEVU2002	0.0100	0.0000	0.0000	UNISYS CORP/BLUE BELL
PA	Montgomery	42091	420910054	001A	3	10200603	5.00	MANEVU2002	0.7078	0.0000	0.0019	UPPER MORELAND HATBORO JT SEW AUTH/WILLOW GROVE

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PA	Montgomery	42091	420910054	001A	1	10200603	5.00	MANEVU2002	0.0071	0.0000	0.0000	UPPER MORELAND HATBORO JT SEW AUTH/WILLOW GROVE
PA	Montgomery	42091	420910054	C03	1	10200603	5.00	MANEVU2002	1.1113	0.0000	0.0031	UPPER MORELAND HATBORO JT SEW AUTH/WILLOW GROVE
PA	Montgomery	42091	420910058	011	1	10200602	98.00	MANEVU2002	2.4628	0.0000	0.0035	OCCIDENTAL CHEM CORP/POTTSTOWN
PA	Montgomery	42091	420910058	011	2	10200502	98.00	MANEVU2002	0.0172	0.0000	0.0000	OCCIDENTAL CHEM CORP/POTTSTOWN
PA	Montgomery	42091	420910058	012	1	10200602	98.00	MANEVU2002	5.8034	0.0000	0.0147	OCCIDENTAL CHEM CORP/POTTSTOWN
PA	Montgomery	42091	420910058	012	2	10200502	98.00	MANEVU2002	0.0066	0.0000	0.0000	OCCIDENTAL CHEM CORP/POTTSTOWN
PA	Montgomery	42091	420910058	013	1	10200602	98.00	MANEVU2002	5.3363	0.0000	0.0141	OCCIDENTAL CHEM CORP/POTTSTOWN
PA	Montgomery	42091	420910058	013	2	10200502	98.00	MANEVU2002	0.0137	0.0000	0.0000	OCCIDENTAL CHEM CORP/POTTSTOWN
PA	Montgomery	42091	420910065	031	1	10200401	25.40	MANEVU2002	4.0600	0.0000	0.0076	MOYER PACKING CO/SOUDERTON RENDERING DIV
PA	Montgomery	42091	420910065	033	1	10200401	56.40	MANEVU2002	24.4795	0.0000	0.0646	MOYER PACKING CO/SOUDERTON RENDERING DIV
PA	Montgomery	42091	420910065	033	2	10200602	56.40	MANEVU2002	1.7475	0.0000	0.0058	MOYER PACKING CO/SOUDERTON RENDERING DIV
PA	Montgomery	42091	420910065	034	1	10200401	56.40	MANEVU2002	24.0251	0.0000	0.0634	MOYER PACKING CO/SOUDERTON RENDERING DIV
PA	Montgomery	42091	420910065	034	2	10200602	56.40	MANEVU2002	1.6149	0.0000	0.0059	MOYER PACKING CO/SOUDERTON RENDERING DIV
PA	Montgomery	42091	420910065	102	1	10300602	55.00	SCC Descriptio	0.0012	0.0000	0.0000	MOYER PACKING CO/SOUDERTON RENDERING DIV
PA	Montgomery	42091	420910067	210	1	10300603	4.20	MANEVU2002	0.4500	0.0000	0.0013	PALMER PROD INC/SKIPPACK
PA	Montgomery	42091	420910067	220	1	10300603	0.60	MANEVU2002	0.0430	0.0000	0.0001	PALMER PROD INC/SKIPPACK
PA	Montgomery	42091	420910067	230	1	10300501	0.80	MANEVU2002	0.0400	0.0000	0.0000	PALMER PROD INC/SKIPPACK
PA	Montgomery	42091	420910067	240	1	10300603	3.00	MANEVU2002	0.1150	0.0000	0.0000	PALMER PROD INC/SKIPPACK
PA	Montgomery	42091	420910070	031	1	10300603	5.00	SCC Descriptio	1.0000	0.0000	0.0001	ALLEGRO MICRO SYS INC/WILLOW GROVE
PA	Montgomery	42091	420910070	032	1	10300501	0.00		0.2000	0.0000	0.0001	ALLEGRO MICRO SYS INC/WILLOW GROVE
PA	Montgomery	42091	420910073	031	1	10200603	3.40	MANEVU2002	1.0700	0.0000	0.0022	COLORCON/UPPER GWYNEDD
PA	Montgomery	42091	420910074	031	1	10200501	16.00	MANEVU2002	4.2300	0.0000	0.0139	COOPERS CREEK CHEM CORP/CONSHOHOCKEN
PA	Montgomery	42091	420910075	031	1	10200602	5.00	MANEVU2002	0.7440	0.0000	0.0000	TORQUE TRACTION MFG TECH INC/POTTSTOWN
PA	Montgomery	42091	420910075	201	1	10200602	17.50	MANEVU2002	3.7000	0.0000	0.0085	TORQUE TRACTION MFG TECH INC/POTTSTOWN
PA	Montgomery	42091	420910075	202	1	10200602	17.50	MANEVU2002	3.7000	0.0000	0.0085	TORQUE TRACTION MFG TECH INC/POTTSTOWN
PA	Montgomery	42091	420910078	099	1	10200603	5.00	MANEVU2002	1.5000	0.0000	0.0005	VISTEON SYSTEMS LLC/N PENN ELECTRONICS DIV
PA	Montgomery	42091	420910081	031	1	10200603	5.30	MANEVU2002	0.6781	0.0000	0.0008	HANDY & HARMAN TUBE /EAST NORRITON
PA	Montgomery	42091	420910081	032	1	10200603	4.20	MANEVU2002	0.5086	0.0000	0.0006	HANDY & HARMAN TUBE /EAST NORRITON
PA	Montgomery	42091	420910081	033	1	10200603	4.20	MANEVU2002	0.5086	0.0000	0.0006	HANDY & HARMAN TUBE /EAST NORRITON
PA	Montgomery	42091	420910090	104	2	10300603	0.60	MANEVU2002	0.0400	0.0000	0.0001	PRECISION TUBE COMPANY
PA	Montgomery	42091	420910090	106	2	10300603	2.50	MANEVU2002	0.2840	0.0000	0.0008	PRECISION TUBE COMPANY
PA	Montgomery	42091	420910098	031	1	10200603	2.90	MANEVU2002	0.0080	0.0000	0.0001	UNIFORM TUBES INC/COLLEGEVILLE
PA	Montgomery	42091	420910098	032	1	10200603	2.90	MANEVU2002	0.4300	0.0000	0.0006	UNIFORM TUBES INC/COLLEGEVILLE
PA	Montgomery	42091	420910098	033	1	10200603	1.40	MANEVU2002	0.3670	0.0000	0.0004	UNIFORM TUBES INC/COLLEGEVILLE
PA	Montgomery	42091	420910102	031	2	10200602	21.00	MANEVU2002	2.4580	0.0000	0.0086	ORTHO MCNEIL PHARMACEUTICALS/L GWYNEDD
PA	Montgomery	42091	420910102	032	2	10200602	21.00	MANEVU2002	0.5420	0.0000	0.0029	ORTHO MCNEIL PHARMACEUTICALS/L GWYNEDD
PA	Montgomery	42091	420910102	033	2	10200602	25.10	MANEVU2002	1.2670	0.0000	0.0029	ORTHO MCNEIL PHARMACEUTICALS/L GWYNEDD
PA	Montgomery	42091	420910103	032	1	10200504	9.00	MANEVU2002	0.9000	0.0000	0.0000	FINNAREN & HALEY/CONSHOHOCKEN
PA	Montgomery	42091	420910104	031	5	10300501	5.00	MANEVU2002	0.0140	0.0000	0.0000	MARKEL CORP/NORRISTOWN
PA	Montgomery	42091	420910104	032	2	10300603	5.00	MANEVU2002	0.4100	0.0000	0.0000	MARKEL CORP/NORRISTOWN
PA	Montgomery	42091	420910107	C01	1	10200602	55.00	SCC Descriptio	0.3000	0.0000	0.0008	MOYCO TECH INC/MONTGOMERYVILLE
PA	Montgomery	42091	420910112	030	1	10200602	48.00	MANEVU2002	0.0005	0.0000	0.0000	SPS TECH INC/ABINGTON
PA	Montgomery	42091	420910112	030	2	10200404	48.00	MANEVU2002	4.8795	0.0000	0.0000	SPS TECH INC/ABINGTON
PA	Montgomery	42091	420910112	037	4	10300603	1.00	MANEVU2002	1.4700	0.0000	0.0040	SPS TECH INC/ABINGTON
PA	Montgomery	42091	420910112	039	4	10200602	27.00	MANEVU2002	1.8352	0.0000	0.0000	SPS TECH INC/ABINGTON
PA	Montgomery	42091	420910112	039	3	10200404	27.00	MANEVU2002	4.9848	0.0000	0.0121	SPS TECH INC/ABINGTON
PA	Montgomery	42091	420910115	031	1	10200603	6.00	MANEVU2002	0.5955	0.0000	0.0000	BROWN PRINTING CO/EAST GREENVILLE
PA	Montgomery	42091	420910115	031	2	10201002	6.00	MANEVU2002	0.0745	0.0000	0.0002	BROWN PRINTING CO/EAST GREENVILLE
PA	Montgomery	42091	420910115	C04	1	10200602	55.00	SCC Descriptio	0.0160	0.0000	0.0000	BROWN PRINTING CO/EAST GREENVILLE
PA	Montgomery	42091	420910115	C04	3	10200602	55.00	SCC Descriptio	0.0160	0.0000	0.0000	BROWN PRINTING CO/EAST GREENVILLE
PA	Montgomery	42091	420910115	C05	1	10200602	55.00	SCC Descriptio	1.2782	0.0000	0.0034	BROWN PRINTING CO/EAST GREENVILLE
PA	Montgomery	42091	420910115	C05	2	10201002	55.00	SCC Descriptio	0.0164	0.0000	0.0000	BROWN PRINTING CO/EAST GREENVILLE

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PA	Montgomery	42091	420910115	C06	1	10200602	55.00	SCC Descriptio	1.7139	0.0000	0.0051	BROWN PRINTING CO/EAST GREENVILLE
PA	Montgomery	42091	420910115	C07	1	10200602	55.00	SCC Descriptio	0.3100	0.0000	0.0008	BROWN PRINTING CO/EAST GREENVILLE
PA	Montgomery	42091	420910117	119	1	10300501	2.20	MANEVU2002	0.0109	0.0000	0.0000	GASBOY INTL INC/LANSDALE
PA	Montgomery	42091	420910120	031	2	10200602	25.00	MANEVU2002	1.9820	0.0000	0.0000	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	031	1	10200401	25.00	MANEVU2002	0.0580	0.0000	0.0002	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	032	2	10200602	49.00	MANEVU2002	3.1609	0.0000	0.0000	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	032	1	10200401	49.00	MANEVU2002	0.0391	0.0000	0.0001	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	033	2	10200602	49.00	MANEVU2002	7.4500	0.0000	0.0098	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	034	2	10200602	25.00	MANEVU2002	1.4355	0.0000	0.0000	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	034	1	10200401	25.00	MANEVU2002	0.0045	0.0000	0.0000	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	037	2	10200602	34.50	MANEVU2002	2.8000	0.0000	0.0040	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	038	2	10200602	34.50	MANEVU2002	3.3400	0.0000	0.0073	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	039	2	10200602	34.50	MANEVU2002	4.1100	0.0000	0.0086	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	042	2	10200602	25.10	MANEVU2002	1.2400	0.0000	0.0041	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	043	2	10200602	25.10	MANEVU2002	3.2100	0.0000	0.0063	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	051	1	10300602	33.50	MANEVU2002	0.7100	0.0000	0.0010	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	052	1	10300602	33.50	MANEVU2002	0.3700	0.0000	0.0012	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910121	031	1	10200603	5.00	MANEVU2002	0.7900	0.0000	0.0015	STROEHMANN BAKERIES LC
PA	Montgomery	42091	420910121	032	1	10200603	5.00	MANEVU2002	0.7800	0.0000	0.0029	STROEHMANN BAKERIES LC
PA	Montgomery	42091	420910158	031	1	10200602	12.50	MANEVU2002	0.3830	0.0000	0.0000	HILL SCH/POTTSTOWN
PA	Montgomery	42091	420910158	032	2	10200602	31.00	MANEVU2002	0.0050	0.0000	0.0000	HILL SCH/POTTSTOWN
PA	Montgomery	42091	420910158	033	1	10200602	2.50	MANEVU2002	0.1340	0.0000	0.0001	HILL SCH/POTTSTOWN
PA	Montgomery	42091	420910158	034	2	10200602	12.50	MANEVU2002	0.1780	0.0000	0.0000	HILL SCH/POTTSTOWN
PA	Montgomery	42091	420910158	035	2	10200602	12.50	MANEVU2002	0.2280	0.0000	0.0000	HILL SCH/POTTSTOWN
PA	Montgomery	42091	420910158	036	1	10200602	1.50	MANEVU2002	0.0140	0.0000	0.0001	HILL SCH/POTTSTOWN
PA	Montgomery	42091	420910158	071	2	10200602	1.30	MANEVU2002	0.5750	0.0000	0.0000	HILL SCH/POTTSTOWN
PA	Montgomery	42091	420910177	031	1	10200602	26.40	MANEVU2002	0.7178	0.0000	0.0001	TYCO HEALTHCARE RETAIL GROUP/FKA CONFAB MFG PLT
PA	Montgomery	42091	420910177	032	1	10200602	26.40	MANEVU2002	0.7178	0.0000	0.0001	TYCO HEALTHCARE RETAIL GROUP/FKA CONFAB MFG PLT
PA	Montgomery	42091	420910177	033	1	10200603	9.00	MANEVU2002	0.2337	0.0000	0.0000	TYCO HEALTHCARE RETAIL GROUP/FKA CONFAB MFG PLT
PA	Montgomery	42091	420910179	001	1	10200501	57.10	MANEVU2002	5.1700	0.0000	0.0023	EXELON GENERATION CO/LIMERICK GENERATING STATION
PA	Montgomery	42091	420910179	002	1	10200501	57.10	MANEVU2002	2.6100	0.0000	0.0000	EXELON GENERATION CO/LIMERICK GENERATING STATION
PA	Montgomery	42091	420910179	003	1	10200501	57.10	MANEVU2002	1.3000	0.0000	0.0000	EXELON GENERATION CO/LIMERICK GENERATING STATION
PA	Montgomery	42091	420910182	031	1	10200501	23.50	MANEVU2002	0.0018	0.0000	0.0000	USAF/WILLOW GROVE AIR RESERVE STA
PA	Montgomery	42091	420910182	031	2	10200602	23.50	MANEVU2002	0.5982	0.0000	0.0000	USAF/WILLOW GROVE AIR RESERVE STA
PA	Montgomery	42091	420910182	032	1	10200501	23.50	MANEVU2002	0.0018	0.0000	0.0000	USAF/WILLOW GROVE AIR RESERVE STA
PA	Montgomery	42091	420910182	032	2	10200602	23.50	MANEVU2002	0.5982	0.0000	0.0000	USAF/WILLOW GROVE AIR RESERVE STA
PA	Montgomery	42091	420910182	033	1	10200603	6.60	MANEVU2002	0.3000	0.0000	0.0000	USAF/WILLOW GROVE AIR RESERVE STA
PA	Montgomery	42091	420910185	032	2	10200603	8.40	John Hulsberg	0.4000	0.0000	0.0010	JOHN MIDDLETON INC/KING OF PRUSSIA
PA	Montgomery	42091	420910185	C01	3	10200602	55.00	SCC Descriptio	10.3800	0.0000	0.0281	JOHN MIDDLETON INC/KING OF PRUSSIA
PA	Montgomery	42091	420910234	C01	1	10200602	12.50	MANEVU2002	0.0400	0.0000	0.0000	PHILA NEWSPAPER INC/SCHUYLKILL PRINTING PLT
PA	Montgomery	42091	420910234	C02	1	10200602	12.60	MANEVU2002	0.1000	0.0000	0.0000	PHILA NEWSPAPER INC/SCHUYLKILL PRINTING PLT
PA	Montgomery	42091	420910234	C03	1	10200602	12.60	MANEVU2002	0.1100	0.0000	0.0000	PHILA NEWSPAPER INC/SCHUYLKILL PRINTING PLT
PA	Montgomery	42091	420910234	C04	1	10200602	18.70	MANEVU2002	0.5500	0.0000	0.0000	PHILA NEWSPAPER INC/SCHUYLKILL PRINTING PLT
PA	Montgomery	42091	420910234	MC30	1	10300603	1.20	MANEVU2002	0.2600	0.0000	0.0002	PHILA NEWSPAPER INC/SCHUYLKILL PRINTING PLT
PA	Montgomery	42091	420910240	031	1	10300501	14.00	MANEVU2002	0.0019	0.0000	0.0000	PLYMOUTH MTG MALL/PLYMOUTH MEETING
PA	Montgomery	42091	420910240	031	2	10300603	14.00	MANEVU2002	0.3281	0.0000	0.0000	PLYMOUTH MTG MALL/PLYMOUTH MEETING
PA	Montgomery	42091	420910240	032	1	10300501	14.00	John Hulsberg	0.0001	0.0000	0.0000	PLYMOUTH MTG MALL/PLYMOUTH MEETING
PA	Montgomery	42091	420910240	032	2	10300601	14.00	John Hulsberg	0.4599	0.0000	0.0000	PLYMOUTH MTG MALL/PLYMOUTH MEETING
PA	Montgomery	42091	420910251	031	2	10200603	6.30	MANEVU2002	0.7300	0.0000	0.0017	TSG INC/(DIV OF SYNFIN IND) NORTH WALES
PA	Montgomery	42091	420910251	032	2	10200602	10.50	MANEVU2002	1.2170	0.0000	0.0028	TSG INC/(DIV OF SYNFIN IND) NORTH WALES
PA	Montgomery	42091	420910251	102	1	10200603	9.00	MANEVU2002	0.2530	0.0000	0.0006	TSG INC/(DIV OF SYNFIN IND) NORTH WALES
PA	Montgomery	42091	420910269	101	1	10200602	32.90	MANEVU2002	1.3290	0.0000	0.0007	LOWER MERION SCH DIST/ARDMORE

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PA	Montgomery	42091	420910271	101	2	10300602	16.80	MANEVU2002	0.0452	0.0000	0.0001	US DEPT OF AGRIC/EASTERN REGIONAL RESEARCH CTR
PA	Montgomery	42091	420910271	101	1	10300401	16.80	MANEVU2002	2.0648	0.0000	0.0052	US DEPT OF AGRIC/EASTERN REGIONAL RESEARCH CTR
PA	Montgomery	42091	420910271	102	1	10200602	17.30	MANEVU2002	0.0599	0.0000	0.0000	US DEPT OF AGRIC/EASTERN REGIONAL RESEARCH CTR
PA	Montgomery	42091	420910271	102	2	10300401	17.30	MANEVU2002	0.4181	0.0000	0.0011	US DEPT OF AGRIC/EASTERN REGIONAL RESEARCH CTR
PA	Montgomery	42091	420910294	C01	1	10200602	55.00	SCC Descriptio	0.4800	0.0000	0.0013	GLOBAL PKG/OAKS
PA	Montgomery	42091	420910310	031	2	10200602	31.40	MANEVU2002	1.8499	0.0000	0.0000	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	031	1	10200501	31.40	MANEVU2002	0.0001	0.0000	0.0000	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	032	2	10200602	56.80	MANEVU2002	2.1369	0.0000	0.0000	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	032	1	10200501	56.80	MANEVU2002	0.0131	0.0000	0.0000	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	033	2	10200602	56.80	MANEVU2002	4.3560	0.0000	0.0000	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	033	1	10200501	56.80	MANEVU2002	0.0140	0.0000	0.0000	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	034	2	10200602	56.80	MANEVU2002	4.0880	0.0000	0.0305	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	034	1	10200501	56.80	MANEVU2002	0.0320	0.0000	0.0000	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	035	1	10200501	1.30	MANEVU2002	0.0400	0.0000	0.0001	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	041	1	10200501	18.90	MANEVU2002	0.2100	0.0000	0.0004	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910384	B01	1	10200602	25.10	MANEVU2002	1.4699	0.0000	0.0027	MCNEIL CONSUMER & SPECIALTY PHARMACEUTICAL/FORT WASHINGTON
PA	Montgomery	42091	420910384	B01	2	10200504	25.10	MANEVU2002	0.4101	0.0000	0.0000	MCNEIL CONSUMER & SPECIALTY PHARMACEUTICAL/FORT WASHINGTON
PA	Montgomery	42091	420910384	B02	1	10200602	25.00	MANEVU2002	3.0687	0.0000	0.0084	MCNEIL CONSUMER & SPECIALTY PHARMACEUTICAL/FORT WASHINGTON
PA	Montgomery	42091	420910384	B02	2	10200504	25.00	MANEVU2002	0.9813	0.0000	0.0000	MCNEIL CONSUMER & SPECIALTY PHARMACEUTICAL/FORT WASHINGTON
PA	Montgomery	42091	420910384	B04	2	10200602	13.00	MANEVU2002	0.6209	0.0000	0.0000	MCNEIL CONSUMER & SPECIALTY PHARMACEUTICAL/FORT WASHINGTON
PA	Montgomery	42091	420910384	B04	1	10200504	13.00	MANEVU2002	1.3191	0.0000	0.0029	MCNEIL CONSUMER & SPECIALTY PHARMACEUTICAL/FORT WASHINGTON
PA	Montgomery	42091	420910384	B06	1	10200602	25.00	MANEVU2002	1.3164	0.0000	0.0027	MCNEIL CONSUMER & SPECIALTY PHARMACEUTICAL/FORT WASHINGTON
PA	Montgomery	42091	420910384	B06	2	10200504	25.00	MANEVU2002	0.5636	0.0000	0.0000	MCNEIL CONSUMER & SPECIALTY PHARMACEUTICAL/FORT WASHINGTON
PA	Montgomery	42091	420910390	031	1	10300603	5.00	MANEVU2002	0.3700	0.0000	0.0007	A TALONE INC/ARDMORE
PA	Montgomery	42091	420910394	001	1	10200602	55.00	SCC Descriptio	18.9000	0.0000	0.0457	LONZA INC/RIVERSIDE
PA	Montgomery	42091	420910394	106	1	10200602	55.00	SCC Descriptio	6.5000	0.0000	0.0179	LONZA INC/RIVERSIDE
PA	Montgomery	42091	420910394	C30	1	10200602	25.10	MANEVU2002	2.9200	0.0000	0.0006	LONZA INC/RIVERSIDE
PA	Montgomery	42091	420910394	C31	1	10200602	25.10	MANEVU2002	2.8200	0.0000	0.0003	LONZA INC/RIVERSIDE
PA	Montgomery	42091	420910414	031	2	10200602	27.40	MANEVU2002	1.3900	0.0000	0.0000	ABINGTON MEM HOSP/ABINGTON
PA	Montgomery	42091	420910414	032	2	10200602	20.80	MANEVU2002	0.9700	0.0000	0.0048	ABINGTON MEM HOSP/ABINGTON
PA	Montgomery	42091	420910414	033	2	10200602	20.80	MANEVU2002	1.1600	0.0000	0.0076	ABINGTON MEM HOSP/ABINGTON
PA	Montgomery	42091	420910414	034	2	10200602	39.20	MANEVU2002	4.1300	0.0000	0.0000	ABINGTON MEM HOSP/ABINGTON
PA	Montgomery	42091	420910462	031	2	10300602	14.70	MANEVU2002	2.6195	0.0000	0.0075	MONTGOMERY CNTY GERIATRIC & REHAB CTR/ROYERSFORD
PA	Montgomery	42091	420910462	031	3	10300501	14.70	MANEVU2002	0.0105	0.0000	0.0000	MONTGOMERY CNTY GERIATRIC & REHAB CTR/ROYERSFORD
PA	Montgomery	42091	420910462	034	1	10300603	2.90	MANEVU2002	0.2993	0.0000	0.0000	MONTGOMERY CNTY GERIATRIC & REHAB CTR/ROYERSFORD
PA	Montgomery	42091	420910462	034	2	10300501	2.90	MANEVU2002	0.0007	0.0000	0.0000	MONTGOMERY CNTY GERIATRIC & REHAB CTR/ROYERSFORD
PA	Montgomery	42091	420910490	CU 90	1	10200501	45.00	MANEVU2002	0.0390	0.0000	0.0000	US DEPT NAVY/NAVAL AIR STA JNT RES BASE
PA	Montgomery	42091	420910490	CU 90	2	10200602	45.00	MANEVU2002	2.2610	0.0000	0.0000	US DEPT NAVY/NAVAL AIR STA JNT RES BASE
PA	Montgomery	42091	420910490	CU 91	2	10200602	45.00	MANEVU2002	1.1000	0.0000	0.0000	US DEPT NAVY/NAVAL AIR STA JNT RES BASE
PA	Montgomery	42091	420910490	CU2	1	10300603	0.50	MANEVU2002	0.3000	0.0000	0.0001	US DEPT NAVY/NAVAL AIR STA JNT RES BASE
PA	Montgomery	42091	420910493	031	2	10301002	0.00		0.0007	0.0000	0.0000	BLOMMER CHOC CO/E GREENVILLE PLT
PA	Montgomery	42091	420910493	032	1	10300603	6.60	John Hulsberg	2.2400	0.0000	0.0059	BLOMMER CHOC CO/E GREENVILLE PLT
PA	Montgomery	42091	420910493	109	5	10300603	5.00	SCC Descriptio	0.4590	0.0000	0.0012	BLOMMER CHOC CO/E GREENVILLE PLT
PA	Montgomery	42091	420910493	109	1	10300603	5.00	SCC Descriptio	0.4455	0.0000	0.0012	BLOMMER CHOC CO/E GREENVILLE PLT
PA	Montgomery	42091	420910493	109	3	10300603	5.00	SCC Descriptio	0.4455	0.0000	0.0012	BLOMMER CHOC CO/E GREENVILLE PLT
PA	Montgomery	42091	420910529	031	2	10200602	66.00	MANEVU2002	0.7296	0.0000	0.0000	WYETH PHARMACEUTICALS/COLLEGEVILLE
PA	Montgomery	42091	420910529	031	1	10200501	66.00	MANEVU2002	3.7704	0.0000	0.0112	WYETH PHARMACEUTICALS/COLLEGEVILLE
PA	Montgomery	42091	420910529	032	2	10200602	66.00	MANEVU2002	5.6936	0.0000	0.0000	WYETH PHARMACEUTICALS/COLLEGEVILLE
PA	Montgomery	42091	420910529	032	1	10200501	66.00	MANEVU2002	0.0064	0.0000	0.0000	WYETH PHARMACEUTICALS/COLLEGEVILLE
PA	Montgomery	42091	420910529	033	2	10200602	66.00	MANEVU2002	2.8985	0.0000	0.0006	WYETH PHARMACEUTICALS/COLLEGEVILLE
PA	Montgomery	42091	420910529	033	3	10200501	66.00	MANEVU2002	0.0015	0.0000	0.0000	WYETH PHARMACEUTICALS/COLLEGEVILLE
PA	Montgomery	42091	420910529	038	1	10200603	29.40	MANEVU2002	0.2000	0.0000	0.0000	WYETH PHARMACEUTICALS/COLLEGEVILLE

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PA	Montgomery	42091	420910586	101	1	10300603	5.00	SCC Descriptio	0.0382	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	101	3	10300603	5.00	SCC Descriptio	0.0382	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	102	1	10300603	5.00	SCC Descriptio	0.0360	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	103	1	10300603	5.00	SCC Descriptio	0.0240	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	103	3	10300603	5.00	SCC Descriptio	0.0240	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	104	1	10300603	5.00	SCC Descriptio	0.0223	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	104	3	10300603	5.00	SCC Descriptio	0.0223	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	105	1	10300603	5.00	SCC Descriptio	0.0205	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	105	3	10300603	5.00	SCC Descriptio	0.0205	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	106	1	10300603	5.00	SCC Descriptio	0.0222	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	106	3	10300603	5.00	SCC Descriptio	0.0222	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910592	100	1	10300602	14.70	MANEVU2002	1.0170	0.0000	0.0020	TENET HEALTH SYSTEM /ELKINS PARK HOSP
PA	Montgomery	42091	420910592	101	1	10300602	25.10	MANEVU2002	0.1740	0.0000	0.0003	TENET HEALTH SYSTEM /ELKINS PARK HOSP
PA	Montgomery	42091	420910592	102	1	10300501	0.00		0.1570	0.0000	0.0003	TENET HEALTH SYSTEM /ELKINS PARK HOSP
PA	Montgomery	42091	420910592	103	1	10300501	0.00		0.1200	0.0000	0.0003	TENET HEALTH SYSTEM /ELKINS PARK HOSP
PA	Montgomery	42091	420910619	031	1	10300504	8.10	MANEVU2002	0.7110	0.0000	0.0000	SPARTECH VY CAL PLASTICS/VY-CAL PLT
PA	Montgomery	42091	420910619	032	1	10300504	7.30	MANEVU2002	0.4770	0.0000	0.0027	SPARTECH VY CAL PLASTICS/VY-CAL PLT
PA	Montgomery	42091	420910660	031	1	10200401	50.00	MANEVU2002	25.5908	0.0000	0.0703	HATFIELD QUALITY MEATS INC
PA	Montgomery	42091	420910660	031	2	10200602	50.00	MANEVU2002	0.9092	0.0000	0.0000	HATFIELD QUALITY MEATS INC
PA	Montgomery	42091	420910660	032	1	10200401	27.40	MANEVU2002	1.0970	0.0000	0.0030	HATFIELD QUALITY MEATS INC
PA	Montgomery	42091	420910660	032	2	10200602	27.40	MANEVU2002	1.6230	0.0000	0.0041	HATFIELD QUALITY MEATS INC
PA	Montgomery	42091	420910660	033	1	10200401	27.40	MANEVU2002	14.3000	0.0000	0.0361	HATFIELD QUALITY MEATS INC
PA	Montgomery	42091	420910749	101	1	10300601	150.00	SCC Descriptio	1.8400	0.0000	0.0069	GLASGOW INC/SPRINGHOUSE ASPHALT PLANT/OLD
PA	Montgomery	42091	420910810	033	2	10300602	24.30	MANEVU2002	0.8800	0.0000	0.0020	GEORGIA PACIFIC CORP/PHILADELPHIA BOX PLT
PA	Montgomery	42091	420910826	031	2	10200602	33.50	MANEVU2002	2.3687	0.0000	0.0000	LOCKHEED MARTIN CORP/MISSILES & SPACE OPR
PA	Montgomery	42091	420910826	031	1	10200501	33.50	MANEVU2002	0.0013	0.0000	0.0000	LOCKHEED MARTIN CORP/MISSILES & SPACE OPR
PA	Montgomery	42091	420910826	032	1	10200602	33.50	MANEVU2002	0.1300	0.0000	0.0000	LOCKHEED MARTIN CORP/MISSILES & SPACE OPR
PA	Montgomery	42091	420910826	033	1	10200602	33.50	MANEVU2002	0.5500	0.0000	0.0005	LOCKHEED MARTIN CORP/MISSILES & SPACE OPR
PA	Montgomery	42091	420910859	CU002	1	10200602	25.10	MANEVU2002	3.4940	0.0000	0.0061	MAIN LINE HOSPITALS INC DBA THE LANKENAU HOSP
PA	Montgomery	42091	420910859	CU002	2	10300504	25.10	MANEVU2002	0.0060	0.0000	0.0000	MAIN LINE HOSPITALS INC DBA THE LANKENAU HOSP
PA	Montgomery	42091	420910859	CU003	1	10200602	25.10	MANEVU2002	3.4940	0.0000	0.0061	MAIN LINE HOSPITALS INC DBA THE LANKENAU HOSP
PA	Montgomery	42091	420910859	CU003	2	10300504	25.10	MANEVU2002	0.0060	0.0000	0.0000	MAIN LINE HOSPITALS INC DBA THE LANKENAU HOSP
PA	Montgomery	42091	420910859	CU004	1	10200602	25.10	MANEVU2002	3.4940	0.0000	0.0061	MAIN LINE HOSPITALS INC DBA THE LANKENAU HOSP
PA	Montgomery	42091	420910859	CU004	2	10300504	25.10	MANEVU2002	0.0060	0.0000	0.0000	MAIN LINE HOSPITALS INC DBA THE LANKENAU HOSP
PA	Montgomery	42091	420910871	031	1	10200602	25.10	MANEVU2002	1.0000	0.0000	0.0020	MAIN LINE HOSPITALS INC/BRYN MAWR HOSP
PA	Montgomery	42091	420910871	032	3	10200602	25.10	MANEVU2002	2.1422	0.0000	0.0085	MAIN LINE HOSPITALS INC/BRYN MAWR HOSP
PA	Montgomery	42091	420910871	032	4	10300401	25.10	MANEVU2002	2.7368	0.0000	0.0000	MAIN LINE HOSPITALS INC/BRYN MAWR HOSP
PA	Montgomery	42091	420910871	033	2	10300602	31.30	MANEVU2002	1.4419	0.0000	0.0000	MAIN LINE HOSPITALS INC/BRYN MAWR HOSP
PA	Montgomery	42091	420910871	033	1	10200401	31.30	MANEVU2002	1.8651	0.0000	0.0059	MAIN LINE HOSPITALS INC/BRYN MAWR HOSP
PA	Montgomery	42091	420910874	031	1	10200602	29.60	MANEVU2002	4.3700	0.0000	0.0086	ATOFINA CHEM INC/KING OF PRUSSIA
PA	Montgomery	42091	420910886	CU1	1	10300602	10.40	MANEVU2002	0.4540	0.0000	0.0034	HOLY REDEEMER HOSP & MED CTR/ABINGTON
PA	Montgomery	42091	420910886	CU2	1	10300602	10.40	MANEVU2002	2.4500	0.0000	0.0000	HOLY REDEEMER HOSP & MED CTR/ABINGTON
PA	Montgomery	42091	420910886	CU3	3	10300602	17.30	MANEVU2002	1.4500	0.0000	0.0000	HOLY REDEEMER HOSP & MED CTR/ABINGTON
PA	Montgomery	42091	420911000	031	1	10300401	12.00	MANEVU2002	1.4000	0.0000	0.0126	URSINUS COLL/COLLEGEVILLE
PA	Montgomery	42091	420911000	032	1	10300401	12.00	MANEVU2002	10.6000	0.0000	0.0128	URSINUS COLL/COLLEGEVILLE
PA	Montgomery	42091	420911000	033	1	10300504	2.70	MANEVU2002	0.3000	0.0000	0.0003	URSINUS COLL/COLLEGEVILLE
PA	Montgomery	42091	420911000	034	1	10200501	0.70	MANEVU2002	0.7000	0.0000	0.0003	URSINUS COLL/COLLEGEVILLE
PA	Montgomery	42091	420912002	031	2	10200602	16.70	MANEVU2002	0.3430	0.0000	0.0000	POTTSTOWN MEM MED CTR/POTTSTOWN
PA	Montgomery	42091	420912002	032	2	10200602	20.90	MANEVU2002	0.7865	0.0000	0.0000	POTTSTOWN MEM MED CTR/POTTSTOWN
PA	Montgomery	42091	420912002	032	1	10200401	20.90	MANEVU2002	0.3655	0.0000	0.0008	POTTSTOWN MEM MED CTR/POTTSTOWN
PA	Montgomery	42091	420912002	033	2	10200602	20.90	MANEVU2002	0.7868	0.0000	0.0000	POTTSTOWN MEM MED CTR/POTTSTOWN
PA	Montgomery	42091	420912002	033	1	10200401	20.90	MANEVU2002	0.3652	0.0000	0.0008	POTTSTOWN MEM MED CTR/POTTSTOWN

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PA	Montgomery	42091	420912055	031	1	10200501	0.00		0.6360	0.0000	0.0004	SPRAY PRODUCTS CORPORATION
PA	Montour	42093	420930004	031	1	10300102	28.60	MANEVU2002	7.1800	0.0000	0.0000	PA DPW/DANVILLE STATE HOSP
PA	Montour	42093	420930004	032	1	10300102	28.60	MANEVU2002	5.8130	0.0000	0.0000	PA DPW/DANVILLE STATE HOSP
PA	Montour	42093	420930004	033	1	10300102	28.60	MANEVU2002	4.1900	0.0000	0.0000	PA DPW/DANVILLE STATE HOSP
PA	Montour	42093	420930004	035	1	10300501	25.60	MANEVU2002	4.3000	0.0000	0.0132	PA DPW/DANVILLE STATE HOSP
PA	Montour	42093	420930015	CU031	1	10200602	38.00	MANEVU2002	10.1000	0.0000	0.0178	GEISINGER MED CTR/DANVILLE
PA	Northampton	42095	420950006	039	1	10200501	2.90	MANEVU2002	0.2400	0.0000	0.0002	HERCULES CEMENT CO LP/STOCKERTOWN
PA	Northampton	42095	420950006	040	1	10200501	2.90	MANEVU2002	0.2400	0.0000	0.0002	HERCULES CEMENT CO LP/STOCKERTOWN
PA	Northampton	42095	420950012	101	1	10300501	0.00	MANEVU2002	2.8711	0.0000	0.0110	KEYSTONE PORTLAND CEMENT/EAST ALLEN
PA	Northampton	42095	420950012	102	1	10300501	0.00	MANEVU2002	2.6516	0.0000	0.0061	KEYSTONE PORTLAND CEMENT/EAST ALLEN
PA	Northampton	42095	420950019	001	2	10200602	10.00	MANEVU2002	0.3300	0.0000	0.0002	GAF PREMIUM PROD INC/WIND GAP
PA	Northampton	42095	420950019	002	2	10200602	11.70	MANEVU2002	0.3900	0.0000	0.0002	GAF PREMIUM PROD INC/WIND GAP
PA	Northampton	42095	420950020	032	1	10300401	30.00	MANEVU2002	1.1001	0.0000	0.0000	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	032	3	10300602	30.00	MANEVU2002	0.8599	0.0000	0.0000	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	033	1	10300401	30.00	MANEVU2002	0.8211	0.0000	0.0000	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	033	2	10300602	30.00	MANEVU2002	0.1789	0.0000	0.0000	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	035	2	10300501	1.00	MANEVU2002	0.1300	0.0000	0.0001	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	036	1	10300602	0.50	MANEVU2002	0.3000	0.0000	0.0001	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	037	1	10300401	37.50	MANEVU2002	9.3213	0.0000	0.0000	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	037	2	10300602	37.50	MANEVU2002	0.0587	0.0000	0.0000	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	038	1	10300401	37.50	MANEVU2002	7.1108	0.0000	0.0000	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	038	2	10300602	37.50	MANEVU2002	0.4392	0.0000	0.0000	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950023	01	1	10200501	5.80	MANEVU2002	0.9230	0.0000	0.0000	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	89	1	10200602	55.00	MANEVU2002	0.0339	0.0000	0.0001	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	89	3	10200602	55.00	MANEVU2002	0.0339	0.0000	0.0001	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	91	1	10200602	55.00	MANEVU2002	0.0872	0.0000	0.0002	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	91	3	10200602	55.00	MANEVU2002	0.0872	0.0000	0.0002	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	92	1	10200602	55.00	MANEVU2002	0.0132	0.0000	0.0000	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	92	3	10200602	55.00	MANEVU2002	0.0132	0.0000	0.0000	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	96	1	10200602	55.00	MANEVU2002	0.0136	0.0000	0.0000	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	96	3	10200602	55.00	MANEVU2002	0.0136	0.0000	0.0000	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	97	1	10200602	55.00	SCC Descriptio	0.0129	0.0000	0.0000	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	98	1	10200602	55.00	MANEVU2002	0.0307	0.0000	0.0001	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950029	031	2	10200602	16.80	John Hulsberg	2.0450	0.0000	0.0055	AMER NICKELOID CO/WALNUTPORT
PA	Northampton	42095	420950029	032	2	10200602	29.30	John Hulsberg	0.2120	0.0000	0.0006	AMER NICKELOID CO/WALNUTPORT
PA	Northampton	42095	420950035	033	2	10200602	25.10	MANEVU2002	1.6710	0.0000	0.0084	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	034	2	10200602	36.40	MANEVU2002	5.1800	0.0000	0.0074	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	109	1	10200603	5.00	SCC Descriptio	0.0420	0.0000	0.0001	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	110	1	10200603	5.00	SCC Descriptio	0.7600	0.0000	0.0021	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	112	1	10200603	5.00	SCC Descriptio	0.7600	0.0000	0.0021	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	113	1	10200603	5.00	SCC Descriptio	0.7600	0.0000	0.0021	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	114	1	10200603	5.00	SCC Descriptio	0.7600	0.0000	0.0021	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	115	1	10200603	5.00	SCC Descriptio	0.7600	0.0000	0.0021	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	351A	1	10200603	5.00	SCC Descriptio	0.5700	0.0000	0.0015	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	351A	3	10200603	5.00	SCC Descriptio	0.5700	0.0000	0.0015	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950047	101A	1	10200802	5.00	MANEVU2002	24.1948	0.0000	0.0585	MFS INC/MINERAL WOOL PLT 1
PA	Northampton	42095	420950047	101A	2	10300603	5.00	MANEVU2002	0.6568	0.0000	0.0015	MFS INC/MINERAL WOOL PLT 1
PA	Northampton	42095	420950047	103A	1	10200802	5.00	MANEVU2002	24.1948	0.0000	0.0585	MFS INC/MINERAL WOOL PLT 1
PA	Northampton	42095	420950047	103A	2	10300603	5.00	MANEVU2002	0.6568	0.0000	0.0015	MFS INC/MINERAL WOOL PLT 1
PA	Northampton	42095	420950054	102	1	10200603	8.60	MANEVU2002	0.0800	0.0000	0.0002	CF MARTIN & CO INC/U NAZARETH
PA	Northampton	42095	420950054	103	1	10300602	55.00	SCC Descriptio	1.1000	0.0000	0.0027	CF MARTIN & CO INC/U NAZARETH
PA	Northampton	42095	420950056	031	1	10200603	6.30	John Hulsberg	0.1800	0.0000	0.0005	STROEHMANN BAKERIES/PALMER

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PA	Northampton	42095	420950056	032	1	10200603	6.30	MANEVU2002	0.3600	0.0000	0.0002	STROEHMANN BAKERIES/PALMER
PA	Northampton	42095	420950056	034	1	10300602	55.00	SCC Descriptio	0.0081	0.0000	0.0000	STROEHMANN BAKERIES/PALMER
PA	Northampton	42095	420950056	103	1	10200603	5.00	MANEVU2002	0.7600	0.0000	0.0023	STROEHMANN BAKERIES/PALMER
PA	Northampton	42095	420950057	031	1	10300401	48.50	MANEVU2002	3.2437	0.0000	0.0000	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	031	2	10300602	48.50	MANEVU2002	1.2563	0.0000	0.0000	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	032	2	10300602	48.50	MANEVU2002	2.7661	0.0000	0.0000	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	032	1	10300401	48.50	MANEVU2002	11.3339	0.0000	0.0747	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	033	1	10300401	48.50	MANEVU2002	17.3800	0.0000	0.0000	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	034	1	10200401	48.50	MANEVU2002	11.1793	0.0000	0.0000	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	034	2	10200602	48.50	MANEVU2002	0.7207	0.0000	0.0000	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	035	2	10200602	48.50	MANEVU2002	1.2600	0.0000	0.0084	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	036	2	10200602	44.00	MANEVU2002	0.4656	0.0000	0.0000	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	036	1	10200401	44.00	MANEVU2002	10.1044	0.0000	0.0122	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950064	001	1	10200501	5.20	MANEVU2002	0.8790	0.0000	0.0021	FEDCHEM LLC
PA	Northampton	42095	420950064	002	1	10200501	0.80	MANEVU2002	0.1300	0.0000	0.0003	FEDCHEM LLC
PA	Northampton	42095	420950108	031	2	10200602	10.40	MANEVU2002	1.4070	0.0000	0.0037	JUST BORN INC/BETHLEHEM
PA	Northampton	42095	420950108	032	2	10200602	10.40	MANEVU2002	1.5480	0.0000	0.0041	JUST BORN INC/BETHLEHEM
PA	Northampton	42095	420950108	033	2	10200602	11.70	MANEVU2002	2.4630	0.0000	0.0065	JUST BORN INC/BETHLEHEM
PA	Northampton	42095	420950108	034	2	10200602	16.70	MANEVU2002	3.0260	0.0000	0.0080	JUST BORN INC/BETHLEHEM
PA	Northampton	42095	420950110	231	1	10200602	55.00	SCC Descriptio	11.2000	0.0000	0.0303	LEHIGH FORGE CORP/BETHLEHEM
PA	Northampton	42095	420950110	264	1	10200602	55.00	SCC Descriptio	1.0600	0.0000	0.0029	LEHIGH FORGE CORP/BETHLEHEM
PA	Northampton	42095	420950110	499	1	10201002	0.00		0.1300	0.0000	0.0004	LEHIGH FORGE CORP/BETHLEHEM
PA	Northampton	42095	420950110	540	1	10200602	55.00	SCC Descriptio	11.8500	0.0000	0.0320	LEHIGH FORGE CORP/BETHLEHEM
PA	Northampton	42095	420950127	031	1	10200501	4.90	John Hulsberg	1.0800	0.0000	0.0028	ESSROC/NAZARETH CEMENT PLT 3
PA	Northampton	42095	420950127	101	3	10200501	0.00		1.0104	0.0000	0.0026	ESSROC/NAZARETH CEMENT PLT 3
PA	Northampton	42095	420950127	102	3	10200501	0.00		0.9111	0.0000	0.0023	ESSROC/NAZARETH CEMENT PLT 3
PA	Northampton	42095	420950127	103	3	10200501	0.00		0.7601	0.0000	0.0020	ESSROC/NAZARETH CEMENT PLT 3
PA	Northampton	42095	420950127	104	3	10200501	0.00		1.0203	0.0000	0.0026	ESSROC/NAZARETH CEMENT PLT 3
PA	Northampton	42095	420950158	001	2	10200602	14.30	MANEVU2002	1.6330	0.0000	0.0052	EASTON HOSP/EASTON
PA	Northampton	42095	420950158	002	1	10200602	14.30	MANEVU2002	1.6793	0.0000	0.0046	EASTON HOSP/EASTON
PA	Northampton	42095	420950158	003	2	10200602	14.30	MANEVU2002	1.5293	0.0000	0.0025	EASTON HOSP/EASTON
PA	Northampton	42095	420950158	004	1	10200603	8.30	MANEVU2002	1.2425	0.0000	0.0046	EASTON HOSP/EASTON
PA	Northampton	42095	420950158	005	1	10200603	2.30	MANEVU2002	0.1820	0.0000	0.0002	EASTON HOSP/EASTON
PA	Northampton	42095	420950158	006	1	10200603	2.30	MANEVU2002	0.0616	0.0000	0.0001	EASTON HOSP/EASTON
PA	Northampton	42095	420950253	031	1	10300603	5.00	SCC Descriptio	0.1500	0.0000	0.0001	UNITED PANEL INC/MT BETHEL
PA	Northampton	42095	420950568	001	1	10300501	21.00	MANEVU2002	2.9600	0.0000	0.0081	NORTHAMPTON CNTY/GRACEDALE CNTY HOME BOILER PLT
PA	Northampton	42095	420950568	002	1	10300501	35.00	MANEVU2002	1.4800	0.0000	0.0041	NORTHAMPTON CNTY/GRACEDALE CNTY HOME BOILER PLT
PA	Northampton	42095	420950568	003	1	10300501	42.00	MANEVU2002	1.4800	0.0000	0.0041	NORTHAMPTON CNTY/GRACEDALE CNTY HOME BOILER PLT
PA	Northampton	42095	420950835	05	1	10300501	1.30	MANEVU2002	0.1300	0.0000	0.0000	GRAND CTL SANI LDFL /PLAINFIELD
PA	Northumberland	42097	420970001	031	1	10200501	16.80	MANEVU2002	2.4600	0.0000	0.0054	RESILITE SPORTS PROD/NORTHUMBERLAND PLT
PA	Northumberland	42097	420970006	P103	1	10200602	55.00	SCC Descriptio	0.2900	0.0000	0.0006	ACF IND/AMCAR DIV
PA	Northumberland	42097	420970013	036	1	10200601	108.00	MANEVU2002	3.3800	0.0000	0.0033	CONAGRA/MILTON PLT
PA	Northumberland	42097	420970013	037	1	10200602	32.00	MANEVU2002	0.9000	0.0000	0.0008	CONAGRA/MILTON PLT
PA	Northumberland	42097	420970013	039	1	10200601	92.00	MANEVU2002	13.7000	0.0000	0.0301	CONAGRA/MILTON PLT
PA	Northumberland	42097	420970013	040	1	10200602	96.80	MANEVU2002	5.9700	0.0000	0.0125	CONAGRA/MILTON PLT
PA	Northumberland	42097	420970013	043	1	10200601	150.00	SCC Descriptio	9.1300	0.0000	0.0251	CONAGRA/MILTON PLT
PA	Northumberland	42097	420970014	CU035	2	10300601	150.00	SCC Descriptio	6.3975	0.0000	0.0000	MERCK & CO/CHEROKEE PLT
PA	Northumberland	42097	420970014	CU035	1	10300501	150.00	SCC Descriptio	0.0025	0.0000	0.0000	MERCK & CO/CHEROKEE PLT
PA	Northumberland	42097	420970014	CU036	2	10300601	150.00	SCC Descriptio	9.1975	0.0000	0.0000	MERCK & CO/CHEROKEE PLT
PA	Northumberland	42097	420970014	CU036	1	10300501	150.00	SCC Descriptio	0.0025	0.0000	0.0000	MERCK & CO/CHEROKEE PLT
PA	Northumberland	42097	420970014	CU037	2	10300601	150.00	SCC Descriptio	8.3946	0.0000	0.0341	MERCK & CO/CHEROKEE PLT
PA	Northumberland	42097	420970014	CU037	1	10300501	150.00	SCC Descriptio	0.0054	0.0000	0.0000	MERCK & CO/CHEROKEE PLT

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Northumberland	42097	420970020	031	1	10200602	35.00	MANEVU2002	8.0400	0.0000	0.0062	SUNBURY PROPERTY/KNIGHT CELOTEX/SUNBURY PLT
PA	Northumberland	42097	420970020	032	1	10200602	35.00	MANEVU2002	8.0500	0.0000	0.0469	SUNBURY PROPERTY/KNIGHT CELOTEX/SUNBURY PLT
PA	Northumberland	42097	420970032	031	1	10200603	8.30	John Hulsberg	0.1673	0.0000	0.0004	BUTTER KRUST BAKING CO INC/SUNBURY PLT #1
PA	Northumberland	42097	420970032	033	1	10200603	0.90	John Hulsberg	0.1571	0.0000	0.0004	BUTTER KRUST BAKING CO INC/SUNBURY PLT #1
PA	Northumberland	42097	420970032	034	1	10200603	5.00	SCC Descriptio	0.1954	0.0000	0.0000	BUTTER KRUST BAKING CO INC/SUNBURY PLT #1
PA	Northumberland	42097	420970032	035	1	10200603	5.00	SCC Descriptio	0.0837	0.0000	0.0000	BUTTER KRUST BAKING CO INC/SUNBURY PLT #1
PA	Philadelphia	42101	4210101501	020	2	10200701	495.00	TITLE V PERM	178.3000	0.4898	0.4898	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101501	020	1	10200401	495.00	TITLE V PERM	65.0000	0.1786	0.1786	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101501	021	2	10200701	495.00	TITLE V PERM	135.2000	0.3714	0.3714	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101501	021	1	10200401	495.00	TITLE V PERM	49.3000	0.1354	0.1354	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101501	022	2	10200701	495.00	TITLE V PERM	178.3000	0.4898	0.4898	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101501	022	1	10200401	495.00	TITLE V PERM	65.0000	0.1786	0.1786	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101501	023	2	10200701	660.00	TITLE V PERM	265.0000	0.7280	0.7280	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101501	023	1	10200401	660.00	TITLE V PERM	96.7000	0.2657	0.2657	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101501	538	1	10200701	165.00	TITLE V PERM	1.3000	0.0010	0.0010	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101531	024	1	10200602	55.00	SCC Descriptio	1.6750	0.0037	0.0037	ROHM & HAAS COMPANY
PA	Philadelphia	42101	4210101531	024	3	10200501	55.00	SCC Descriptio	0.4220	0.0009	0.0009	ROHM & HAAS COMPANY
PA	Philadelphia	42101	4210101531	025	1	10200602	55.00	SCC Descriptio	1.6750	0.0037	0.0037	ROHM & HAAS COMPANY
PA	Philadelphia	42101	4210101531	025	3	10200501	55.00	SCC Descriptio	0.4220	0.0009	0.0009	ROHM & HAAS COMPANY
PA	Philadelphia	42101	4210101551	050	2	10200601	260.00	TOM WEIR FIL	9.5598	0.0263	0.0263	SUNOCO CHEMICALS (FORMER ALLIED SIGNAL)
PA	Philadelphia	42101	4210101551	050	1	10200401	260.00	TOM WEIR FIL	5.2782	0.0001	0.0001	SUNOCO CHEMICALS (FORMER ALLIED SIGNAL)
PA	Philadelphia	42101	4210101551	051	2	10200601	260.00	TOM WEIR FIL	9.6456	0.0265	0.0265	SUNOCO CHEMICALS (FORMER ALLIED SIGNAL)
PA	Philadelphia	42101	4210101551	051	1	10200401	260.00	TOM WEIR FIL	0.3330	0.0009	0.0009	SUNOCO CHEMICALS (FORMER ALLIED SIGNAL)
PA	Philadelphia	42101	4210101551	052	1	10200401	381.00	TOM WEIR FIL	20.6100	0.0566	0.0566	SUNOCO CHEMICALS (FORMER ALLIED SIGNAL)
PA	Philadelphia	42101	4210101551	052	2	10200601	381.00	TOM WEIR FIL	56.5872	0.1555	0.1555	SUNOCO CHEMICALS (FORMER ALLIED SIGNAL)
PA	Philadelphia	42101	4210101551	053	1	10300501	0.00		0.0331	0.0001	0.0001	SUNOCO CHEMICALS (FORMER ALLIED SIGNAL)
PA	Philadelphia	42101	4210101564	001	1	10200401	0.00		1.2280	0.0000	0.0034	THE BUDD CO
PA	Philadelphia	42101	4210101564	002	1	10200401	87.30	TOM WEIR FIL	17.5300	0.0000	0.0485	THE BUDD CO
PA	Philadelphia	42101	4210101564	002	2	10200602	87.30	TOM WEIR FIL	3.9527	0.0000	0.0107	THE BUDD CO
PA	Philadelphia	42101	4210101569	029	1	10300603	5.00	SCC Descriptio	0.7715	0.0026	0.0026	KVAERNER PHILADELPHIA SHIPYARD, INC.
PA	Philadelphia	42101	4210101569	031	1	10200602	55.00	SCC Descriptio	0.2803	0.0009	0.0009	KVAERNER PHILADELPHIA SHIPYARD, INC.
PA	Philadelphia	42101	4210101569	031	2	10200602	55.00	SCC Descriptio	0.2803	0.0009	0.0009	KVAERNER PHILADELPHIA SHIPYARD, INC.
PA	Philadelphia	42101	4210101569	041	1	10300603	0.40	EP DESCRIPTI	0.0694	0.0002	0.0002	KVAERNER PHILADELPHIA SHIPYARD, INC.
PA	Philadelphia	42101	4210101569	042	1	10300603	0.30	EP DESCRIPTI	0.0489	0.0002	0.0002	KVAERNER PHILADELPHIA SHIPYARD, INC.
PA	Philadelphia	42101	4210101569	043	1	10300603	1.80	EP DESCRIPTI	0.3145	0.0010	0.0010	KVAERNER PHILADELPHIA SHIPYARD, INC.
PA	Philadelphia	42101	4210101569	044	1	10300603	0.40	EP DESCRIPTI	0.0694	0.0002	0.0002	KVAERNER PHILADELPHIA SHIPYARD, INC.
PA	Philadelphia	42101	4210101569	045	1	10300603	0.40	EP DESCRIPTI	0.0694	0.0002	0.0002	KVAERNER PHILADELPHIA SHIPYARD, INC.
PA	Philadelphia	42101	4210101585	124	1	10200603	5.00	SCC Descriptio	1.5950	0.0000	0.0041	KURZ-HASTINGS INC
PA	Philadelphia	42101	4210101585	124	2	10201002	5.00	SCC Descriptio	0.1431	0.0003	0.0003	KURZ-HASTINGS INC
PA	Philadelphia	42101	4210101585	125	1	10300603	5.00	SCC Descriptio	0.0040	0.0000	0.0000	KURZ-HASTINGS INC
PA	Philadelphia	42101	4210101585	125	2	10301002	5.00	SCC Descriptio	0.0002	0.0000	0.0000	KURZ-HASTINGS INC
PA	Philadelphia	42101	4210101591	001	2	10200601	1.90	EU DESCRIPT	0.3802	0.0050	0.0050	PERFECSEAL
PA	Philadelphia	42101	4210101591	001	9	10200501	1.90	EU DESCRIPT	0.0780	0.0000	0.0002	PERFECSEAL
PA	Philadelphia	42101	4210101591	010	1	10200601	150.00	SCC Descriptio	0.0473	0.0002	0.0002	PERFECSEAL
PA	Philadelphia	42101	4210101617	003	2	10200603	5.00	SCC Descriptio	0.0960	0.0003	0.0003	PUROLITE INC.
PA	Philadelphia	42101	4210101617	004	2	10200603	5.00	SCC Descriptio	1.3400	0.0039	0.0039	PUROLITE INC.
PA	Philadelphia	42101	4210101617	005	2	10200603	5.00	SCC Descriptio	1.3400	0.0039	0.0039	PUROLITE INC.
PA	Philadelphia	42101	4210102005	002	2	10200603	5.00	SCC Descriptio	0.2695	0.0000	0.0007	M A BRUDER & SONS
PA	Philadelphia	42101	4210102005	007	1	10200603	5.00	SCC Descriptio	0.1652	0.0000	0.0004	M A BRUDER & SONS
PA	Philadelphia	42101	4210102051	004	2	10200401	5.60	EU DESCRIPT	0.4512	0.0013	0.0013	SMURFIT-STONE CONTAINER CORPORATION
PA	Philadelphia	42101	4210102051	004	1	10200602	5.60	EU DESCRIPT	0.1984	0.0006	0.0006	SMURFIT-STONE CONTAINER CORPORATION
PA	Philadelphia	42101	4210102054	001	2	10200401	15.00	EU DESCRIPT	0.7985	0.0000	0.0022	TASTY BAKING CO

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Philadelphia	42101	4210102054	001	1	10200602	15.00	EU DESCRIPT	0.4170	0.0000	0.0012	TASTY BAKING CO
PA	Philadelphia	42101	4210102054	002	1	10200602	42.00	EU DESCRIPT	3.0990	0.0162	0.0162	TASTY BAKING CO
PA	Philadelphia	42101	4210102054	002	2	10200401	42.00	EU DESCRIPT	6.9713	0.0009	0.0009	TASTY BAKING CO
PA	Philadelphia	42101	4210102059	001	1	10200401	12.50	TOM WEIR FIL	6.3399	0.0176	0.0176	INOLEX CHEMICAL COMPANY
PA	Philadelphia	42101	4210102059	001	3	10200602	12.50	TOM WEIR FIL	1.1484	0.0015	0.0015	INOLEX CHEMICAL COMPANY
PA	Philadelphia	42101	4210102059	002	1	10200401	52.00	TOM WEIR FIL	25.3596	0.1077	0.1077	INOLEX CHEMICAL COMPANY
PA	Philadelphia	42101	4210102059	002	3	10200602	52.00	TOM WEIR FIL	4.5940	0.0069	0.0069	INOLEX CHEMICAL COMPANY
PA	Philadelphia	42101	4210102059	003	3	10300603	5.00	SCC Descriptio	0.9449	0.0007	0.0007	INOLEX CHEMICAL COMPANY
PA	Philadelphia	42101	4210102065	001	1	10200603	5.00	SCC Descriptio	1.5372	0.0010	0.0010	E I DUPONT MARSHALL LABORATORY
PA	Philadelphia	42101	4210102074	011	1	10200503	5.00	SCC Descriptio	0.1833	0.0000	0.0005	LAWRENCE MCFADDEN CO.
PA	Philadelphia	42101	4210102074	012	1	10200503	5.00	SCC Descriptio	0.0266	0.0000	0.0001	LAWRENCE MCFADDEN CO.
PA	Philadelphia	42101	4210102131	001	1	10300602	55.00	SCC Descriptio	0.0360	0.0000	0.0001	ANGELICA TEXTILE SERVICES
PA	Philadelphia	42101	4210102131	002	1	10300501	55.00	SCC Descriptio	0.6238	0.0000	0.0017	ANGELICA TEXTILE SERVICES
PA	Philadelphia	42101	4210102131	002	2	10300602	55.00	SCC Descriptio	1.0820	0.0000	0.0027	ANGELICA TEXTILE SERVICES
PA	Philadelphia	42101	4210102255	002	1	10200501	1.40	EP DESCRIPTI	0.3727	0.0000	0.0010	SMITH- EDWARDS- DUNLAP COMPANY
PA	Philadelphia	42101	4210102255	002	2	10200501	1.40	EP DESCRIPTI	0.0414	0.0000	0.0001	SMITH- EDWARDS- DUNLAP COMPANY
PA	Philadelphia	42101	4210102260	002	2	10200603	5.00	SCC Descriptio	0.0814	0.0000	0.0002	GRAPHIC ARTS, INCORPORATED
PA	Philadelphia	42101	4210103048	003	1	10200603	5.00	SCC Descriptio	1.2530	0.0093	0.0093	NORTHEAST FOODS - PHILADELPHIA BAKING CO
PA	Philadelphia	42101	4210103058	001	1	10200401	0.00		3.1181	0.0103	0.0103	CALEDONIAN DYE WORKS
PA	Philadelphia	42101	4210103062	001	2	10200603	5.00	SCC Descriptio	0.5015	0.0049	0.0049	ASHLAND CHEMICAL-PHILADELPHIA CPD PLANT
PA	Philadelphia	42101	4210103062	001	1	10200501	5.00	SCC Descriptio	0.0049	0.0002	0.0002	ASHLAND CHEMICAL-PHILADELPHIA CPD PLANT
PA	Philadelphia	42101	4210103062	004	2	10200602	55.00	SCC Descriptio	1.3373	0.0061	0.0061	ASHLAND CHEMICAL-PHILADELPHIA CPD PLANT
PA	Philadelphia	42101	4210103062	004	1	10200501	55.00	SCC Descriptio	0.0130	0.0005	0.0005	ASHLAND CHEMICAL-PHILADELPHIA CPD PLANT
PA	Philadelphia	42101	4210103103	001	1	10200603	5.00	SCC Descriptio	0.2000	0.0009	0.0009	FABRICON PRODUCTS INC.
PA	Philadelphia	42101	4210103103	001	2	10200501	5.00	SCC Descriptio	0.0240	0.0001	0.0001	FABRICON PRODUCTS INC.
PA	Philadelphia	42101	4210103103	002	1	10200603	5.00	SCC Descriptio	0.0400	0.0002	0.0002	FABRICON PRODUCTS INC.
PA	Philadelphia	42101	4210103164	004	1	10200603	5.00	SCC Descriptio	0.6609	0.0020	0.0020	LA FRANCE CORPORATION
PA	Philadelphia	42101	4210103175	001	1	10200504	0.00		1.4309	0.0045	0.0045	LUITHLEN DYE CO
PA	Philadelphia	42101	4210103175	002	1	10200504	0.00		1.4309	0.0045	0.0045	LUITHLEN DYE CO
PA	Philadelphia	42101	4210103201	075	1	10200603	5.00	SCC Descriptio	0.1891	0.0010	0.0010	KRAFT FOODS N.A., INC. - NABISCO
PA	Philadelphia	42101	4210103201	07A	1	10200602	55.00	SCC Descriptio	1.6686	0.0000	0.0045	KRAFT FOODS N.A., INC. - NABISCO
PA	Philadelphia	42101	4210103201	07B	1	10201002	0.00		0.5940	0.0000	0.0016	KRAFT FOODS N.A., INC. - NABISCO
PA	Philadelphia	42101	4210103201	08A	1	10200602	55.00	SCC Descriptio	0.9188	0.0071	0.0071	KRAFT FOODS N.A., INC. - NABISCO
PA	Philadelphia	42101	4210103201	08B	1	10201002	0.00		0.5940	0.0000	0.0016	KRAFT FOODS N.A., INC. - NABISCO
PA	Philadelphia	42101	4210103201	08C	1	10200401	0.00		2.6312	0.0000	0.0073	KRAFT FOODS N.A., INC. - NABISCO
PA	Philadelphia	42101	4210103217	019	1	10200602	55.00	SCC Descriptio	0.1045	0.0005	0.0005	GEII INSPECTION & REPAIR SERVICES
PA	Philadelphia	42101	4210103281	001	1	10300603	5.00	SCC Descriptio	0.3470	0.0000	0.0009	ROYAL-PIONEER CO
PA	Philadelphia	42101	4210103294	003	1	10200602	55.00	SCC Descriptio	0.1540	0.0000	0.0004	SEAGULL LIGHTING
PA	Philadelphia	42101	4210103462	001	1	10200401	21.60	EU DESCRIPT	5.8100	0.0161	0.0161	DELAWARE VALLEY WOOL SCOURING CO.
PA	Philadelphia	42101	4210103487	001	1	10200603	5.00	SCC Descriptio	0.0213	0.0000	0.0001	ARDEX LABORATORIES, INC.
PA	Philadelphia	42101	4210103487	003	1	10200603	5.00	SCC Descriptio	0.0259	0.0000	0.0001	ARDEX LABORATORIES, INC.
PA	Philadelphia	42101	4210103531	001	1	10200401	13.40	TOM WEIR FIL	7.2277	0.0280	0.0280	REGAL CORRUGATED BOX COMPANY INC.
PA	Philadelphia	42101	4210103531	002	1	10200401	0.00		0.3055	0.0055	0.0055	REGAL CORRUGATED BOX COMPANY INC.
PA	Philadelphia	42101	4210103811	001	2	10300603	5.00	SCC Descriptio	0.2500	0.0000	0.0007	ARBILL INDUSTRIES, INC.
PA	Philadelphia	42101	4210103811	002	2	10300603	5.00	SCC Descriptio	0.2626	0.0023	0.0023	ARBILL INDUSTRIES, INC.
PA	Philadelphia	42101	4210103820	001	1	10300603	8.40	EU DESCRIPT	0.1826	0.0004	0.0004	RICHARDSAPEX INC - PHILADELPHIA FACILITY
PA	Philadelphia	42101	4210103820	001	2	10300404	8.40	EU DESCRIPT	0.8824	0.0038	0.0038	RICHARDSAPEX INC - PHILADELPHIA FACILITY
PA	Philadelphia	42101	4210103887	004	5	10301002	0.00		0.0217	0.0000	0.0001	CARDONE INDUSTRIES INC.
PA	Philadelphia	42101	4210104172	007	1	10200603	5.00	SCC Descriptio	1.7078	0.0004	0.0004	SEPTA BERRIDGE/COURTLAND MAINT SHOP
PA	Philadelphia	42101	4210104902	001	1	10200401	283.00	TOM WEIR FIL	23.9000	0.0000	0.0662	TRIGEN - EDISON
PA	Philadelphia	42101	4210104902	002	1	10200401	283.00	TOM WEIR FIL	19.5000	0.0000	0.0540	TRIGEN - EDISON
PA	Philadelphia	42101	4210104902	003	1	10200401	335.00	TOM WEIR FIL	42.7000	0.0000	0.1182	TRIGEN - EDISON

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PA	Philadelphia	42101	4210104902	004	1	10200401	335.00	TOM WEIR FIL	44.4000	0.0000	0.1230	TRIGEN - EDISON
PA	Philadelphia	42101	4210104907	004	1	10200603	5.00	SCC Descriptio	0.5300	0.0384	0.0384	PECO ELECTRIC SHOP - OREGON
PA	Philadelphia	42101	4210104921	006	1	10200603	5.00	SCC Descriptio	0.3194	0.0001	0.0001	PHILADELPHIA GAS WORKS - PASSYUNK PLANT
PA	Philadelphia	42101	4210104921	007	1	10200603	5.00	SCC Descriptio	0.3690	0.0000	0.0009	PHILADELPHIA GAS WORKS - PASSYUNK PLANT
PA	Philadelphia	42101	4210104921	020	1	10200602	55.00	SCC Descriptio	1.9840	0.0000	0.0054	PHILADELPHIA GAS WORKS - PASSYUNK PLANT
PA	Philadelphia	42101	4210104921	021	1	10200602	55.00	SCC Descriptio	0.5402	0.0000	0.0015	PHILADELPHIA GAS WORKS - PASSYUNK PLANT
PA	Philadelphia	42101	4210104921	022	1	10200602	55.00	SCC Descriptio	3.1580	0.0000	0.0085	PHILADELPHIA GAS WORKS - PASSYUNK PLANT
PA	Philadelphia	42101	4210104922	010	2	10200603	5.00	SCC Descriptio	0.0741	0.0000	0.0002	PHILADELPHIA GAS WORKS - RICHMOND PLANT
PA	Philadelphia	42101	4210104922	010	1	10200603	5.00	SCC Descriptio	0.0453	0.0000	0.0001	PHILADELPHIA GAS WORKS - RICHMOND PLANT
PA	Philadelphia	42101	4210105003	001	1	10200501	0.00		1.3800	0.0059	0.0059	KINDER-MORGAN LIQUID TERMINALS CORPORATI
PA	Philadelphia	42101	4210105003	109	1	10200501	0.00		2.7500	0.0054	0.0054	KINDER-MORGAN LIQUID TERMINALS CORPORATI
PA	Philadelphia	42101	4210105013	023	2	10200602	55.00	SCC Descriptio	2.3018	0.0017	0.0017	ST SERVICES PHILADELPHIA TERMINAL
PA	Philadelphia	42101	4210105811	010	1	10200602	55.00	SCC Descriptio	1.9665	0.0143	0.0143	INTERSTATE BRANDS CORPORATION
PA	Philadelphia	42101	4210105811	010	3	10200401	55.00	SCC Descriptio	1.6958	0.0012	0.0012	INTERSTATE BRANDS CORPORATION
PA	Philadelphia	42101	4210105811	011	1	10200602	55.00	SCC Descriptio	1.9665	0.0146	0.0146	INTERSTATE BRANDS CORPORATION
PA	Philadelphia	42101	4210105811	011	3	10200401	55.00	SCC Descriptio	1.6958	0.0012	0.0012	INTERSTATE BRANDS CORPORATION
PA	Philadelphia	42101	4210106512	002	1	10300504	5.60	EU DESCRIPT	0.9130	0.0000	0.0025	PHILADELPHIAN CONDOMINIUMS
PA	Philadelphia	42101	4210106512	003	1	10300504	5.60	EU DESCRIPT	0.8494	0.0000	0.0023	PHILADELPHIAN CONDOMINIUMS
PA	Philadelphia	42101	4210106512	004	1	10300504	1.90	EU DESCRIPT	0.7340	0.0037	0.0037	PHILADELPHIAN CONDOMINIUMS
PA	Philadelphia	42101	4210106513	001	2	10300501	55.00	SCC Descriptio	1.1000	0.0002	0.0002	BELLEVUE
PA	Philadelphia	42101	4210106513	001	1	10300602	55.00	SCC Descriptio	0.2100	0.0000	0.0006	BELLEVUE
PA	Philadelphia	42101	4210106513	002	1	10300602	55.00	SCC Descriptio	0.0700	0.0000	0.0002	BELLEVUE
PA	Philadelphia	42101	4210106526	001	2	10300504	5.60	EP DESCRIPTI	0.1950	0.0000	0.0005	PARK TOWNE PLACE APARTMENTS
PA	Philadelphia	42101	4210106526	001	1	10300602	5.60	EP DESCRIPTI	0.5503	0.0000	0.0015	PARK TOWNE PLACE APARTMENTS
PA	Philadelphia	42101	4210106526	002	2	10300504	55.00	SCC Descriptio	0.3900	0.0000	0.0010	PARK TOWNE PLACE APARTMENTS
PA	Philadelphia	42101	4210106526	002	1	10300602	55.00	SCC Descriptio	1.1006	0.0000	0.0030	PARK TOWNE PLACE APARTMENTS
PA	Philadelphia	42101	4210107297	001	1	10300603	5.00	SCC Descriptio	0.2507	0.0002	0.0002	LAUREL LINEN SERVICE INC.
PA	Philadelphia	42101	4210107297	001	2	10300401	5.00	SCC Descriptio	0.7130	0.0063	0.0063	LAUREL LINEN SERVICE INC.
PA	Philadelphia	42101	4210107721	002	1	10300501	1.10	EP DESCRIPTI	0.0723	0.0000	0.0002	PEARL PRESSMAN LIBERTY
PA	Philadelphia	42101	4210108008	001	2	10300504	3.80	EU DESCRIPT	1.0997	0.0000	0.0027	NAZARETH HOSPITAL
PA	Philadelphia	42101	4210108008	001	1	10300602	3.80	EU DESCRIPT	2.2330	0.0134	0.0134	NAZARETH HOSPITAL
PA	Philadelphia	42101	4210108008	002	1	10300603	2.30	EU DESCRIPT	0.0218	0.0045	0.0045	NAZARETH HOSPITAL
PA	Philadelphia	42101	4210108008	002	2	10300504	2.30	EU DESCRIPT	0.0220	0.0000	0.0001	NAZARETH HOSPITAL
PA	Philadelphia	42101	4210108008	003	1	10300602	4.70	EU DESCRIPT	2.0277	0.0061	0.0061	NAZARETH HOSPITAL
PA	Philadelphia	42101	4210108008	003	2	10300504	4.70	EU DESCRIPT	0.0515	0.0000	0.0001	NAZARETH HOSPITAL
PA	Philadelphia	42101	4210108009	001	1	10300401	4.70	EU DESCRIPT	1.6431	0.0044	0.0044	JOHN F. KENNEDY MEDICAL CENTER
PA	Philadelphia	42101	4210108009	002	1	10300401	4.70	EU DESCRIPT	1.6431	0.0044	0.0044	JOHN F. KENNEDY MEDICAL CENTER
PA	Philadelphia	42101	4210108011	001	2	10300504	55.00	SCC Descriptio	3.7272	0.0000	0.0092	JEANES HOSPITAL
PA	Philadelphia	42101	4210108011	001	1	10300602	55.00	SCC Descriptio	0.0218	0.0019	0.0019	JEANES HOSPITAL
PA	Philadelphia	42101	4210108011	002	2	10300504	55.00	SCC Descriptio	1.5607	0.0042	0.0042	JEANES HOSPITAL
PA	Philadelphia	42101	4210108011	003	2	10300504	55.00	SCC Descriptio	3.2676	0.0071	0.0071	JEANES HOSPITAL
PA	Philadelphia	42101	4210108011	003	1	10300602	55.00	SCC Descriptio	0.0289	0.0000	0.0001	JEANES HOSPITAL
PA	Philadelphia	42101	4210108016	002	1	10300602	55.00	SCC Descriptio	1.6419	0.0317	0.0317	SAINT AGNES HOSPITAL
PA	Philadelphia	42101	4210108016	003	1	10300602	55.00	SCC Descriptio	1.6191	0.0029	0.0029	SAINT AGNES HOSPITAL
PA	Philadelphia	42101	4210108016	004	1	10300602	55.00	SCC Descriptio	0.0225	0.0000	0.0001	SAINT AGNES HOSPITAL
PA	Philadelphia	42101	4210108023	001	1	10200602	55.00	SCC Descriptio	1.0810	0.0000	0.0029	PRESBYTERIAN MEDICAL CENTER
PA	Philadelphia	42101	4210108023	002	1	10200602	55.00	SCC Descriptio	0.7205	0.0000	0.0019	PRESBYTERIAN MEDICAL CENTER
PA	Philadelphia	42101	4210108023	003	1	10200602	55.00	SCC Descriptio	1.1930	0.0051	0.0051	PRESBYTERIAN MEDICAL CENTER
PA	Philadelphia	42101	4210108024	001	1	10300602	55.00	SCC Descriptio	0.1807	0.0008	0.0008	KIRKBRIDE CENTER
PA	Philadelphia	42101	4210108024	001	2	10300501	55.00	SCC Descriptio	0.0240	0.0000	0.0001	KIRKBRIDE CENTER
PA	Philadelphia	42101	4210108024	002	1	10300602	55.00	SCC Descriptio	0.1807	0.0008	0.0008	KIRKBRIDE CENTER
PA	Philadelphia	42101	4210108024	002	2	10300501	55.00	SCC Descriptio	0.0120	0.0000	0.0000	KIRKBRIDE CENTER

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PA	Philadelphia	42101	4210108024	003	2	10300501	55.00	SCC Descriptio	0.1200	0.0000	0.0003	KIRKBRIDE CENTER
PA	Philadelphia	42101	4210108031	001	2	10300401	0.00		3.0501	0.0044	0.0044	FRIENDS HOSPITAL
PA	Philadelphia	42101	4210108031	001	3	10300401	0.00		3.0501	0.0044	0.0044	FRIENDS HOSPITAL
PA	Philadelphia	42101	4210108031	001	1	10300401	0.00		3.1425	0.0045	0.0045	FRIENDS HOSPITAL
PA	Philadelphia	42101	4210108034	001	2	10300602	55.00	SCC Descriptio	1.2500	0.0074	0.0074	ALBERT EINSTEIN MEDICAL CENTER
PA	Philadelphia	42101	4210108034	001	1	10300401	55.00	SCC Descriptio	0.0200	0.0001	0.0001	ALBERT EINSTEIN MEDICAL CENTER
PA	Philadelphia	42101	4210108034	002	2	10300602	2.80	EU DESCRIPT	1.2500	0.0082	0.0082	ALBERT EINSTEIN MEDICAL CENTER
PA	Philadelphia	42101	4210108034	002	1	10300401	2.80	EU DESCRIPT	1.5200	0.0100	0.0100	ALBERT EINSTEIN MEDICAL CENTER
PA	Philadelphia	42101	4210108034	003	2	10300602	2.80	EU DESCRIPT	1.2500	0.0177	0.0177	ALBERT EINSTEIN MEDICAL CENTER
PA	Philadelphia	42101	4210108034	004	1	10200401	8.40	EU DESCRIPT	7.1700	0.0230	0.0230	ALBERT EINSTEIN MEDICAL CENTER
PA	Philadelphia	42101	4210108034	004	2	10300602	8.40	EU DESCRIPT	3.5900	0.0115	0.0115	ALBERT EINSTEIN MEDICAL CENTER
PA	Philadelphia	42101	4210108037	001	1	10300602	55.00	SCC Descriptio	0.1555	0.0003	0.0003	TENET - MEDICAL COL. OF PA - MAIN CAMPUS
PA	Philadelphia	42101	4210108037	001	2	10300401	55.00	SCC Descriptio	0.0541	0.0010	0.0010	TENET - MEDICAL COL. OF PA - MAIN CAMPUS
PA	Philadelphia	42101	4210108037	002	1	10300602	55.00	SCC Descriptio	0.1760	0.0004	0.0004	TENET - MEDICAL COL. OF PA - MAIN CAMPUS
PA	Philadelphia	42101	4210108037	003	1	10300504	0.00		3.0550	0.0000	0.0084	TENET - MEDICAL COL. OF PA - MAIN CAMPUS
PA	Philadelphia	42101	4210108037	004	1	10300504	0.00		2.2200	0.0000	0.0061	TENET - MEDICAL COL. OF PA - MAIN CAMPUS
PA	Philadelphia	42101	4210108037	005	1	10300603	5.00	SCC Descriptio	0.2340	0.0049	0.0049	TENET - MEDICAL COL. OF PA - MAIN CAMPUS
PA	Philadelphia	42101	4210108039	001	1	10300602	20.10	EU DESCRIPT	0.0996	0.0000	0.0002	GERMANTOWN COMMUNITY HEALTH SERVICES
PA	Philadelphia	42101	4210108039	002	1	10300602	20.10	EU DESCRIPT	0.0845	0.0000	0.0002	GERMANTOWN COMMUNITY HEALTH SERVICES
PA	Philadelphia	42101	4210108039	003	1	10300602	11.70	EU DESCRIPT	0.0550	0.0000	0.0001	GERMANTOWN COMMUNITY HEALTH SERVICES
PA	Philadelphia	42101	4210108043	001	2	10300602	22.30	EU DESCRIPT	0.0137	0.0000	0.0000	MERCY HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108043	002	2	10300602	12.10	EU DESCRIPT	0.0103	0.0001	0.0001	MERCY HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108043	003	3	10300501	22.30	EU DESCRIPT	1.2228	0.0000	0.0033	MERCY HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108053	001	1	10300602	55.00	SCC Descriptio	0.3270	0.0042	0.0042	TEMPLE UNIV HOSPITAL - EPISCOPAL CAMPUS
PA	Philadelphia	42101	4210108053	001	2	10300401	55.00	SCC Descriptio	2.2485	0.0057	0.0057	TEMPLE UNIV HOSPITAL - EPISCOPAL CAMPUS
PA	Philadelphia	42101	4210108053	002	1	10300602	55.00	SCC Descriptio	1.3635	0.0231	0.0231	TEMPLE UNIV HOSPITAL - EPISCOPAL CAMPUS
PA	Philadelphia	42101	4210108054	002	1	10300501	0.00		0.1880	0.0000	0.0005	HAHNEMANN HOSP
PA	Philadelphia	42101	4210108054	003	1	10300501	0.00		0.1337	0.0000	0.0004	HAHNEMANN HOSP
PA	Philadelphia	42101	4210108054	004	1	10300602	55.00	SCC Descriptio	0.0766	0.0000	0.0002	HAHNEMANN HOSP
PA	Philadelphia	42101	4210108054	005	1	10300602	55.00	SCC Descriptio	0.0195	0.0000	0.0000	HAHNEMANN HOSP
PA	Philadelphia	42101	4210108069	003	2	10200501	55.00	SCC Descriptio	1.7921	0.0000	0.0044	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	003	1	10300602	55.00	SCC Descriptio	0.7947	0.0000	0.0020	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	004	2	10200501	55.00	SCC Descriptio	1.5219	0.0043	0.0043	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	004	1	10300602	55.00	SCC Descriptio	0.6222	0.0018	0.0018	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	005	2	10200501	55.00	SCC Descriptio	1.5772	0.0085	0.0085	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	005	1	10300602	55.00	SCC Descriptio	0.6895	0.0037	0.0037	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	006	2	10200501	55.00	SCC Descriptio	0.4189	0.0000	0.0010	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	006	1	10300602	55.00	SCC Descriptio	0.1554	0.0000	0.0004	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	015	2	10300502	55.00	SCC Descriptio	0.0020	0.0000	0.0000	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	016	2	10300502	55.00	SCC Descriptio	0.0017	0.0000	0.0000	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	017	2	10300502	55.00	SCC Descriptio	0.0022	0.0000	0.0000	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108576	001	1	10300603	1.90	EU DESCRIPT	0.2905	0.0000	0.0008	SAINT CHRISTOPHERS HOSPITAL FOR CHILDREN
PA	Philadelphia	42101	4210108576	002	1	10300603	2.80	EU DESCRIPT	1.2130	0.0000	0.0032	SAINT CHRISTOPHERS HOSPITAL FOR CHILDREN
PA	Philadelphia	42101	4210108576	002	2	10300504	2.80	EU DESCRIPT	0.0492	0.0000	0.0001	SAINT CHRISTOPHERS HOSPITAL FOR CHILDREN
PA	Philadelphia	42101	4210108576	003	2	10300504	4.70	EU DESCRIPT	0.4579	0.0000	0.0012	SAINT CHRISTOPHERS HOSPITAL FOR CHILDREN
PA	Philadelphia	42101	4210108576	003	1	10300601	4.70	EU DESCRIPT	0.6846	0.0000	0.0019	SAINT CHRISTOPHERS HOSPITAL FOR CHILDREN
PA	Philadelphia	42101	4210108904	001	2	10300501	55.00	SCC Descriptio	1.1623	0.0020	0.0020	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108904	001	1	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0001	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108904	002	2	10300501	55.00	SCC Descriptio	2.4158	0.0017	0.0017	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108904	002	1	10300602	55.00	SCC Descriptio	0.3900	0.0000	0.0010	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108904	006	2	10300501	5.00	SCC Descriptio	0.3011	0.0000	0.0008	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108904	006	1	10300603	5.00	SCC Descriptio	0.3070	0.0000	0.0008	SAINT JOSEPH`S UNIVERSITY

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PA	Philadelphia	42101	4210108904	007	1	10300603	5.00	SCC Descriptio	0.0223	0.0000	0.0001	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108904	008	1	10300603	5.00	SCC Descriptio	0.0015	0.0000	0.0000	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108904	009	1	10300501	55.00	SCC Descriptio	0.5534	0.0000	0.0015	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108904	009	2	10300602	55.00	SCC Descriptio	0.2750	0.0000	0.0007	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108905	001	1	10300501	5.00	SCC Descriptio	0.0433	0.0000	0.0001	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	001	2	10300603	5.00	SCC Descriptio	0.2030	0.0000	0.0005	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	005	1	10300603	5.00	SCC Descriptio	0.1225	0.0001	0.0001	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	006	1	10300603	5.00	SCC Descriptio	0.6505	0.0000	0.0017	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	008	2	10300602	41.20	TOM WEIR FIL	4.6080	0.0148	0.0148	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	008	1	10300401	41.20	TOM WEIR FIL	5.7240	0.0184	0.0184	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	009	2	10300602	41.20	TOM WEIR FIL	3.5600	0.0107	0.0107	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	009	1	10300401	41.20	TOM WEIR FIL	13.6500	0.0410	0.0410	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	010	2	10300602	41.20	TOM WEIR FIL	2.1610	0.0036	0.0036	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	010	1	10300401	41.20	TOM WEIR FIL	12.9780	0.0216	0.0216	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	011	2	10300602	43.80	TOM WEIR FIL	1.5250	0.0003	0.0003	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	011	1	10300401	43.80	TOM WEIR FIL	7.7650	0.0017	0.0017	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	014	1	10300501	5.00	SCC Descriptio	0.6302	0.0000	0.0017	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	014	2	10300603	5.00	SCC Descriptio	1.7095	0.0000	0.0045	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	015	1	10300603	5.00	SCC Descriptio	0.6650	0.0000	0.0018	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	016	1	10300501	55.00	SCC Descriptio	0.2101	0.0000	0.0006	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	016	2	10300602	55.00	SCC Descriptio	0.5700	0.0000	0.0014	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	017	1	10300501	55.00	SCC Descriptio	0.2101	0.0002	0.0002	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	017	2	10300602	55.00	SCC Descriptio	0.5700	0.0004	0.0004	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	018	1	10300501	55.00	SCC Descriptio	0.2101	0.0002	0.0002	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	018	2	10300602	55.00	SCC Descriptio	0.5700	0.0004	0.0004	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108906	001	1	10300602	50.00	TOM WEIR FIL	1.6400	0.0024	0.0024	TEMPLE UNIVERSITY HEALTH SCIENCES CAMPUS
PA	Philadelphia	42101	4210108906	001	2	10300401	50.00	TOM WEIR FIL	24.6800	0.0356	0.0356	TEMPLE UNIVERSITY HEALTH SCIENCES CAMPUS
PA	Philadelphia	42101	4210108906	002	1	10300602	76.40	TOM WEIR FIL	2.5800	0.0052	0.0052	TEMPLE UNIVERSITY HEALTH SCIENCES CAMPUS
PA	Philadelphia	42101	4210108906	002	2	10300401	76.40	TOM WEIR FIL	7.4700	0.0149	0.0149	TEMPLE UNIVERSITY HEALTH SCIENCES CAMPUS
PA	Philadelphia	42101	4210108906	003	1	10300602	50.00	TOM WEIR FIL	1.4500	0.0032	0.0032	TEMPLE UNIVERSITY HEALTH SCIENCES CAMPUS
PA	Philadelphia	42101	4210108906	003	2	10300401	50.00	TOM WEIR FIL	20.6700	0.0459	0.0459	TEMPLE UNIVERSITY HEALTH SCIENCES CAMPUS
PA	Philadelphia	42101	4210108906	005	1	10300603	5.00	SCC Descriptio	0.0180	0.0000	0.0000	TEMPLE UNIVERSITY HEALTH SCIENCES CAMPUS
PA	Philadelphia	42101	4210108906	006	1	10300603	5.00	SCC Descriptio	0.0700	0.0000	0.0002	TEMPLE UNIVERSITY HEALTH SCIENCES CAMPUS
PA	Philadelphia	42101	4210108912	002	1	10300603	5.00	SCC Descriptio	0.1250	0.0000	0.0003	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	003	1	10300603	5.00	SCC Descriptio	0.0566	0.0000	0.0001	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	004	1	10300603	5.00	SCC Descriptio	0.0840	0.0000	0.0002	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	005	1	10300603	5.00	SCC Descriptio	0.0228	0.0000	0.0001	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	006	1	10300603	5.00	SCC Descriptio	0.0885	0.0000	0.0002	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	007	1	10300603	5.00	SCC Descriptio	0.0843	0.0000	0.0002	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	008	1	10300603	5.00	SCC Descriptio	0.0247	0.0000	0.0001	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	009	3	10200503	5.00	SCC Descriptio	0.0610	0.0000	0.0002	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	009	4	10300603	5.00	SCC Descriptio	0.0576	0.0000	0.0002	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	014	1	10300603	5.00	SCC Descriptio	0.0840	0.0000	0.0002	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108918	001	1	10300602	6.80	EU DESCRIPT	1.0280	0.0000	0.0025	GIRARD COLLEGE POWER PLANT
PA	Philadelphia	42101	4210108918	002	1	10300602	6.80	EU DESCRIPT	0.6730	0.0000	0.0017	GIRARD COLLEGE POWER PLANT
PA	Philadelphia	42101	4210108918	003	1	10300602	6.80	EU DESCRIPT	1.0990	0.0000	0.0027	GIRARD COLLEGE POWER PLANT
PA	Philadelphia	42101	4210108927	001	1	10300602	55.00	SCC Descriptio	0.7491	0.0007	0.0007	WISTAR INSTITUTE
PA	Philadelphia	42101	4210108927	002	1	10300602	55.00	SCC Descriptio	0.7337	0.0024	0.0024	WISTAR INSTITUTE
PA	Philadelphia	42101	4210108927	003	1	10300602	55.00	SCC Descriptio	0.7335	0.0020	0.0020	WISTAR INSTITUTE
PA	Philadelphia	42101	4210109039	001	1	10300501	5.00	SCC Descriptio	1.3620	0.0000	0.0036	CONVENT OF THE SISTERS OF ST JOSEPH
PA	Philadelphia	42101	4210109039	002	1	10300501	55.00	SCC Descriptio	1.7434	0.0000	0.0047	CONVENT OF THE SISTERS OF ST JOSEPH
PA	Philadelphia	42101	4210109039	002	2	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	CONVENT OF THE SISTERS OF ST JOSEPH

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Philadelphia	42101	4210109039	003	1	10300501	55.00	SCC Descriptio	0.7627	0.0000	0.0020	CONVENT OF THE SISTERS OF ST JOSEPH
PA	Philadelphia	42101	4210109039	003	2	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	CONVENT OF THE SISTERS OF ST JOSEPH
PA	Philadelphia	42101	4210109039	004	1	10300603	5.00	SCC Descriptio	0.0300	0.0000	0.0001	CONVENT OF THE SISTERS OF ST JOSEPH
PA	Philadelphia	42101	4210109039	005	1	10300603	5.00	SCC Descriptio	0.0084	0.0000	0.0000	CONVENT OF THE SISTERS OF ST JOSEPH
PA	Philadelphia	42101	4210109502	001	1	10300501	55.00	SCC Descriptio	1.4411	0.0000	0.0038	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	001	2	10300602	55.00	SCC Descriptio	0.2768	0.0037	0.0037	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	002	1	10300501	55.00	SCC Descriptio	1.4378	0.0009	0.0009	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	002	2	10300602	55.00	SCC Descriptio	0.2835	0.0037	0.0037	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	003	1	10300501	55.00	SCC Descriptio	1.3524	0.0013	0.0013	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	003	2	10300602	55.00	SCC Descriptio	0.2800	0.0037	0.0037	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	004	1	10300501	55.00	SCC Descriptio	0.6504	0.0000	0.0017	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	004	2	10300602	55.00	SCC Descriptio	0.3819	0.0000	0.0009	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	005	1	10300501	55.00	SCC Descriptio	0.6502	0.0000	0.0017	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	005	2	10300602	55.00	SCC Descriptio	0.3818	0.0000	0.0009	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	006	3	10300601	150.00	SCC Descriptio	0.9387	0.0000	0.0025	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	007	2	10300601	150.00	SCC Descriptio	0.9387	0.0000	0.0025	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	008	2	10300601	150.00	SCC Descriptio	0.2173	0.0000	0.0006	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	009	2	10300601	150.00	SCC Descriptio	0.0811	0.0000	0.0002	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	010	2	10300601	150.00	SCC Descriptio	0.0811	0.0000	0.0002	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	011	2	10300602	55.00	SCC Descriptio	0.0586	0.0000	0.0001	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	021	1	10300501	150.00	SCC Descriptio	0.6574	0.0000	0.0018	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	021	2	10300601	150.00	SCC Descriptio	1.0692	0.0000	0.0029	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109513	004	1	10300501	0.00		0.0975	0.0000	0.0003	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	005	1	10300603	5.00	SCC Descriptio	0.0028	0.0001	0.0001	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	006	1	10300603	5.00	SCC Descriptio	0.0079	0.0001	0.0001	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	007	1	10300603	5.00	SCC Descriptio	0.1631	0.0001	0.0001	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	008	2	10300701	0.00		0.3073	0.0000	0.0008	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	008	1	10300501	0.00		0.0001	0.0000	0.0000	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	009	2	10300701	0.00		0.1312	0.0000	0.0004	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	009	1	10300501	0.00		0.0001	0.0000	0.0000	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	010	2	10300701	0.00		0.0009	0.0000	0.0000	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	010	1	10300501	0.00		0.0001	0.0000	0.0000	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	011	2	10300701	5.00	SCC Descriptio	0.4132	0.0000	0.0011	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	011	3	10300603	5.00	SCC Descriptio	0.1273	0.0000	0.0003	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	012	2	10300701	5.00	SCC Descriptio	0.3554	0.0000	0.0009	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	012	3	10300603	5.00	SCC Descriptio	0.0149	0.0000	0.0000	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	012	1	10300501	5.00	SCC Descriptio	0.0020	0.0000	0.0000	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	013	2	10300701	5.00	SCC Descriptio	0.6082	0.0000	0.0016	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	013	3	10300603	5.00	SCC Descriptio	0.2043	0.0006	0.0006	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	013	1	10300501	5.00	SCC Descriptio	0.0002	0.0000	0.0000	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	015	1	10300799	0.00		0.2777	0.0008	0.0008	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	016	1	10300799	0.00		0.2777	0.0008	0.0008	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	017	1	10300799	0.00		0.2777	0.0008	0.0008	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	018	1	10300799	0.00		0.2777	0.0008	0.0008	NORTHEAST WPCP
PA	Philadelphia	42101	4210109515	008	1	10300501	0.00		0.0516	0.0000	0.0001	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	008	2	10300701	0.00		0.0431	0.0000	0.0001	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	009	1	10300501	0.00		0.0274	0.0000	0.0001	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	009	2	10300701	0.00		0.0018	0.0000	0.0000	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	010	2	10300701	0.00		0.5625	0.0002	0.0002	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	010	1	10300501	0.00		0.1902	0.0001	0.0001	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	011	2	10300701	0.00		1.0319	0.0002	0.0002	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	011	1	10300501	0.00		0.2037	0.0001	0.0001	PHILADELPHIA WATER DEPT. (S W / B R C)

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Philadelphia	42101	4210109515	012	2	10300701	0.00		0.5261	0.0002	0.0002	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	012	1	10300501	0.00		0.0615	0.0001	0.0001	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	014	1	10300501	0.00		0.5099	0.0000	0.0014	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	015	1	10300501	0.00		0.1553	0.0000	0.0004	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	016	2	10300603	5.00	SCC Descriptio	0.1135	0.0000	0.0003	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	017	1	10300799	0.00		0.3831	0.0014	0.0014	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	018	1	10300799	0.00		0.3831	0.0014	0.0014	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	019	1	10300799	0.00		0.3831	0.0014	0.0014	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	020	1	10300799	0.00		0.3831	0.0014	0.0014	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109519	001	2	10300603	5.00	SCC Descriptio	0.4020	0.0075	0.0075	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109519	005	2	10300603	5.00	SCC Descriptio	2.8740	0.0000	0.0076	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109519	016	2	10300603	5.00	SCC Descriptio	1.4955	0.0125	0.0125	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109519	024	2	10300603	5.00	SCC Descriptio	0.2270	0.0008	0.0008	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109519	032	1	10300603	5.00	SCC Descriptio	0.7910	0.0015	0.0015	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109519	044	1	10300603	5.00	SCC Descriptio	0.2465	0.0005	0.0005	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109519	046	2	10300603	5.00	SCC Descriptio	0.1215	0.0003	0.0003	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109519	050	2	10300603	5.00	SCC Descriptio	0.1245	0.0003	0.0003	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109519	053	1	10300501	0.00		0.1687	0.0000	0.0005	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109703	001	1	10200603	5.00	SCC Descriptio	0.0049	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	001	2	10200603	5.00	SCC Descriptio	0.0037	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	002	1	10200603	5.00	SCC Descriptio	0.0029	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	002	2	10200603	5.00	SCC Descriptio	0.0045	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	003	1	10200603	5.00	SCC Descriptio	0.0196	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	003	2	10200603	5.00	SCC Descriptio	0.0004	0.0000	0.0000	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	004	1	10200603	5.00	SCC Descriptio	0.0063	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	004	2	10200603	5.00	SCC Descriptio	0.0176	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	005	1	10200603	5.00	SCC Descriptio	0.0184	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	005	2	10200603	5.00	SCC Descriptio	0.0043	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	006	1	10200603	5.00	SCC Descriptio	0.0005	0.0000	0.0000	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	007	1	10200603	5.00	SCC Descriptio	0.0055	0.0000	0.0000	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	008	1	10200603	5.00	SCC Descriptio	0.0245	0.0001	0.0001	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	009	1	10200603	5.00	SCC Descriptio	0.2466	0.0008	0.0008	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	010	1	10200603	5.00	SCC Descriptio	0.2016	0.0007	0.0007	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	011	1	10200603	5.00	SCC Descriptio	0.2562	0.0009	0.0009	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	012	1	10200603	5.00	SCC Descriptio	0.1049	0.0003	0.0003	UNITED STATES MINT
PA	Philadelphia	42101	4210109705	001	1	10300501	29.40	EU DESCRIPT	4.3560	0.0056	0.0056	V A MEDICAL CENTER
PA	Philadelphia	42101	4210109705	002	1	10300501	29.40	EU DESCRIPT	4.3560	0.0056	0.0056	V A MEDICAL CENTER
PA	Philadelphia	42101	4210109705	003	1	10300501	29.40	EU DESCRIPT	4.3560	0.0056	0.0056	V A MEDICAL CENTER
PA	Philadelphia	42101	4210109705	006	3	10300603	5.00	SCC Descriptio	0.4403	0.0007	0.0007	V A MEDICAL CENTER
PA	Philadelphia	42101	4210109705	006	1	10300603	5.00	SCC Descriptio	0.4875	0.0002	0.0002	V A MEDICAL CENTER
PA	Philadelphia	42101	4210109707	001	1	10200402	55.00	SCC Descriptio	4.4374	0.0000	0.0122	NAVAL SUPPORT ACTIVITY , PHILADELPHIA
PA	Philadelphia	42101	4210109707	003	2	10200602	55.00	SCC Descriptio	0.0021	0.0000	0.0000	NAVAL SUPPORT ACTIVITY , PHILADELPHIA
PA	Philadelphia	42101	4210109707	005	1	10300501	0.00		0.0173	0.0000	0.0000	NAVAL SUPPORT ACTIVITY , PHILADELPHIA
PA	Philadelphia	42101	4210109707	006	1	10301002	0.00		0.0151	0.0001	0.0001	NAVAL SUPPORT ACTIVITY , PHILADELPHIA
PA	Philadelphia	42101	4210109707	007	1	10300501	0.00		0.0082	0.0000	0.0000	NAVAL SUPPORT ACTIVITY , PHILADELPHIA
PA	Philadelphia	42101	4210109707	019	1	10300603	5.00	SCC Descriptio	0.0004	0.0000	0.0000	NAVAL SUPPORT ACTIVITY , PHILADELPHIA
PA	Philadelphia	42101	4210109707	020	1	10300603	5.00	SCC Descriptio	0.0021	0.0000	0.0000	NAVAL SUPPORT ACTIVITY , PHILADELPHIA
PA	Philadelphia	42101	4210109715	001	1	10200401	207.00	TOM WEIR FIL	13.7520	0.0000	0.0381	PAID BOILER STEAM PLANT
PA	Philadelphia	42101	4210109715	001	2	10200601	207.00	TOM WEIR FIL	0.5467	0.0000	0.0015	PAID BOILER STEAM PLANT
PA	Philadelphia	42101	4210109715	002	1	10200401	207.00	TOM WEIR FIL	0.1444	0.0000	0.0004	PAID BOILER STEAM PLANT
PA	Philadelphia	42101	4210109715	002	2	10200601	207.00	TOM WEIR FIL	0.0006	0.0000	0.0000	PAID BOILER STEAM PLANT
PA	Philadelphia	42101	4210109715	003	1	10200401	207.00	TOM WEIR FIL	14.8853	0.0000	0.0412	PAID BOILER STEAM PLANT

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PA	Philadelphia	42101	4210109715	003	2	10200601	207.00	TOM WEIR FIL	0.0464	0.0000	0.0001	PAID BOILER STEAM PLANT
PA	Philadelphia	42101	4210109723	001	1	10300501	6.60	EU DESCRIPT	3.0000	0.0000	0.0080	WILLIAM J. GREEN FEDERAL BUILDING - GSA
PA	Philadelphia	42101	4210109723	002	1	10300501	6.60	EU DESCRIPT	1.8000	0.0000	0.0048	WILLIAM J. GREEN FEDERAL BUILDING - GSA
PA	Philadelphia	42101	4210109723	003	1	10300501	6.60	EU DESCRIPT	0.9000	0.0000	0.0024	WILLIAM J. GREEN FEDERAL BUILDING - GSA
PA	Philadelphia	42101	4210109723	004	1	10300501	1.20	EU DESCRIPT	0.3600	0.0000	0.0010	WILLIAM J. GREEN FEDERAL BUILDING - GSA
PA	Philadelphia	42101	4210109724	001	1	10200501	0.00		0.0055	0.0000	0.0000	NAVAL SURFACE WARFARE CENTER CD-SSES
PA	Philadelphia	42101	4210109724	010	1	10300603	5.00	SCC Descriptio	0.0090	0.0002	0.0002	NAVAL SURFACE WARFARE CENTER CD-SSES
PA	Philadelphia	42101	4210109724	012	1	10200501	0.00		0.0060	0.0000	0.0000	NAVAL SURFACE WARFARE CENTER CD-SSES
PA	Philadelphia	42101	4210109724	013	1	10200501	0.00		0.0060	0.0000	0.0000	NAVAL SURFACE WARFARE CENTER CD-SSES
PA	Philadelphia	42101	4210109724	014	1	10200501	0.00		0.0638	0.0000	0.0002	NAVAL SURFACE WARFARE CENTER CD-SSES
PA	Philadelphia	42101	4210109724	015	1	10200501	0.00		0.0002	0.0000	0.0000	NAVAL SURFACE WARFARE CENTER CD-SSES
PA	Philadelphia	42101	4210109724	019	1	10300603	5.00	SCC Descriptio	0.2323	0.0000	0.0006	NAVAL SURFACE WARFARE CENTER CD-SSES
PA	Potter	42105	421050002	031A	1	10300603	3.30	MANEVU2002	1.2000	0.0000	0.0040	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	033A	1	10300603	5.10	MANEVU2002	0.2000	0.0000	0.0003	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	041	1	10200603	10.00	MANEVU2002	1.4000	0.0000	0.0060	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	042	1	10200603	10.00	MANEVU2002	0.3000	0.0000	0.0006	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	043	1	10200603	10.00	MANEVU2002	2.2000	0.0000	0.0085	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	044	1	10200602	18.00	MANEVU2002	0.4000	0.0000	0.0001	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	045	1	10200602	15.40	MANEVU2002	5.8000	0.0000	0.0147	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	046	1	10200603	6.50	MANEVU2002	2.4000	0.0000	0.0082	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	047	1	10200603	6.50	MANEVU2002	0.4000	0.0000	0.0016	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	051	1	10200602	15.40	MANEVU2002	7.4000	0.0000	0.0211	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	052	1	10200602	15.40	MANEVU2002	4.3000	0.0000	0.0080	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050003	039	1	10200602	14.00	MANEVU2002	2.8000	0.0000	0.0077	DOMINION TRANS INC/HARRISON STATION
PA	Potter	42105	421050003	040	1	10200603	6.50	MANEVU2002	2.8000	0.0000	0.0077	DOMINION TRANS INC/HARRISON STATION
PA	Potter	42105	421050003	041	1	10200603	6.50	MANEVU2002	2.8000	0.0000	0.0077	DOMINION TRANS INC/HARRISON STATION
PA	Potter	42105	421050003	042	1	10200603	6.50	MANEVU2002	6.1000	0.0000	0.0168	DOMINION TRANS INC/HARRISON STATION
PA	Potter	42105	421050003	057	1	10300602	25.20	MANEVU2002	2.2000	0.0000	0.0000	DOMINION TRANS INC/HARRISON STATION
PA	Potter	42105	421050004	041	1	10200603	4.20	MANEVU2002	1.0624	0.0000	0.0006	DOMINION TRANS INC/ELLISBURG STATION
PA	Potter	42105	421050004	042	1	10200602	24.50	MANEVU2002	4.9000	0.0000	0.0000	DOMINION TRANS INC/ELLISBURG STATION
PA	Potter	42105	421050004	043	1	10200602	24.50	MANEVU2002	5.7000	0.0000	0.0000	DOMINION TRANS INC/ELLISBURG STATION
PA	Potter	42105	421050004	044	1	10200602	24.50	MANEVU2002	3.4000	0.0000	0.0000	DOMINION TRANS INC/ELLISBURG STATION
PA	Potter	42105	421050004	045	1	10200602	24.50	MANEVU2002	2.6000	0.0000	0.0000	DOMINION TRANS INC/ELLISBURG STATION
PA	Potter	42105	421050004	052	1	10200602	11.00	MANEVU2002	4.8000	0.0000	0.0132	DOMINION TRANS INC/ELLISBURG STATION
PA	Potter	42105	421050004	053	1	10200602	11.00	MANEVU2002	4.8000	0.0000	0.0132	DOMINION TRANS INC/ELLISBURG STATION
PA	Potter	42105	421050006	031	1	10300602	14.60	MANEVU2002	0.5750	0.0000	0.0013	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050006	031	2	10300602	14.60	MANEVU2002	0.5750	0.0000	0.0013	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050006	032	1	10300602	13.80	MANEVU2002	0.6250	0.0000	0.0014	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050006	032	2	10300602	13.80	MANEVU2002	0.6250	0.0000	0.0014	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050006	033	1	10300602	13.80	MANEVU2002	0.6150	0.0000	0.0014	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050006	033	2	10300602	13.80	MANEVU2002	0.6150	0.0000	0.0014	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050006	035	1	10300602	5.00	MANEVU2002	0.1100	0.0000	0.0000	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050006	P106	1	10300603	5.00	SCC Descriptio	0.4900	0.0000	0.0008	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050006	P108	1	10300603	5.00	SCC Descriptio	0.4900	0.0000	0.0008	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050027	031	1	10200603	7.00	MANEVU2002	1.7000	0.0000	0.0000	DOMINION TRANS INC/STATE LINE STATION
PA	Potter	42105	421050027	033	1	10200603	4.20	MANEVU2002	0.2000	0.0000	0.0013	DOMINION TRANS INC/STATE LINE STATION
PA	Potter	42105	421050027	P203	1	10300603	5.00	SCC Descriptio	0.0010	0.0000	0.0000	DOMINION TRANS INC/STATE LINE STATION
PA	Potter	42105	421050027	P203	2	10300603	5.00	SCC Descriptio	0.0010	0.0000	0.0000	DOMINION TRANS INC/STATE LINE STATION
PA	Schuylkill	42107	421070003	032	1	10200401	23.00	MANEVU2002	2.6000	0.0000	0.0069	GUILFORD MILLS INC/PENN DYE & FINISHING PLT
PA	Schuylkill	42107	421070003	033	1	10200401	47.70	MANEVU2002	6.5100	0.0000	0.0172	GUILFORD MILLS INC/PENN DYE & FINISHING PLT
PA	Schuylkill	42107	421070003	034	1	10300401	53.20	MANEVU2002	7.8100	0.0000	0.0206	GUILFORD MILLS INC/PENN DYE & FINISHING PLT
PA	Schuylkill	42107	421070003	035	2	10301002	6.60	MANEVU2002	0.1355	0.0000	0.0004	GUILFORD MILLS INC/PENN DYE & FINISHING PLT

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Schuylkill	42107	421070003	035	1	10300401	6.60	MANEVU2002	12.9845	0.0000	0.0328	GUILFORD MILLS INC/PENN DYE & FINISHING PLT
PA	Schuylkill	42107	421070003	107	5	10201002	0.00		0.0080	0.0000	0.0000	GUILFORD MILLS INC/PENN DYE & FINISHING PLT
PA	Schuylkill	42107	421070003	107	3	10201002	0.00		0.7920	0.0000	0.0020	GUILFORD MILLS INC/PENN DYE & FINISHING PLT
PA	Schuylkill	42107	421070003	108	5	10201002	0.00		0.0233	0.0000	0.0001	GUILFORD MILLS INC/PENN DYE & FINISHING PLT
PA	Schuylkill	42107	421070003	108	3	10201002	0.00		2.3067	0.0000	0.0063	GUILFORD MILLS INC/PENN DYE & FINISHING PLT
PA	Schuylkill	42107	421070007	031	1	10200401	50.40	MANEVU2002	1.1700	0.0000	0.0030	SARA LEE /RUSH TWP PLT
PA	Schuylkill	42107	421070007	033A	1	10200401	14.60	MANEVU2002	0.5330	0.0000	0.0010	SARA LEE /RUSH TWP PLT
PA	Schuylkill	42107	421070007	034	1	10200401	50.40	MANEVU2002	1.3500	0.0000	0.0030	SARA LEE /RUSH TWP PLT
PA	Schuylkill	42107	421070021	129	2	10300603	5.00	SCC Descriptio	1.0920	0.0000	0.0029	HONEYWELL INC/POTTSVILLE PLT
PA	Schuylkill	42107	421070021	130	3	10300603	5.00	SCC Descriptio	0.1180	0.0000	0.0003	HONEYWELL INC/POTTSVILLE PLT
PA	Schuylkill	42107	421070021	190	1	10300603	8.20	MANEVU2002	1.3270	0.0000	0.0036	HONEYWELL INC/POTTSVILLE PLT
PA	Schuylkill	42107	421070021	220	1	10300603	9.10	MANEVU2002	1.0670	0.0000	0.0029	HONEYWELL INC/POTTSVILLE PLT
PA	Schuylkill	42107	421070021	225	1	10300603	5.00	SCC Descriptio	0.2070	0.0000	0.0006	HONEYWELL INC/POTTSVILLE PLT
PA	Schuylkill	42107	421070021	226	1	10300603	5.00	SCC Descriptio	0.0220	0.0000	0.0000	HONEYWELL INC/POTTSVILLE PLT
PA	Schuylkill	42107	421070024	058	1	10200501	0.00		8.7100	0.0000	0.0019	SCHUYLKILL ENERGY RES/ST NICHOLAS COGEN
PA	Schuylkill	42107	421070024	CU058	1	10200501	87.00	MANEVU2002	8.7100	0.0000	0.0019	SCHUYLKILL ENERGY RES/ST NICHOLAS COGEN
PA	Schuylkill	42107	421070090	CUO1	1	10200501	12.60	John Hulsberg	2.4000	0.0000	0.0062	SILBERLINE MFG CO/LINCOLN DR PLT
PA	Schuylkill	42107	421070090	CUO2	1	10200501	10.50	John Hulsberg	0.1000	0.0000	0.0003	SILBERLINE MFG CO/LINCOLN DR PLT
PA	Schuylkill	42107	421070931	P2	1	10300602	55.00	SCC Descriptio	2.1000	0.0000	0.0055	ALCOA EXTRUSIONS INC/CRESSONA OPR
PA	Schuylkill	42107	421070931	PB02	1	10200602	33.50	MANEVU2002	3.2000	0.0000	0.0000	ALCOA EXTRUSIONS INC/CRESSONA OPR
PA	Schuylkill	42107	421070931	PB03	1	10200602	33.50	MANEVU2002	2.8000	0.0000	0.0000	ALCOA EXTRUSIONS INC/CRESSONA OPR
PA	Schuylkill	42107	421070931	SOW1	1	10200602	2.50	MANEVU2002	0.1401	0.0000	0.0002	ALCOA EXTRUSIONS INC/CRESSONA OPR
PA	Snyder	42109	421090001	031	2	10200903	10.20	MANEVU2002	1.8000	0.0000	0.0095	WOOD MODE INC/KREAMER PLT
PA	Snyder	42109	421090001	032	2	10200603	16.50	MANEVU2002	0.0448	0.0000	0.0001	WOOD MODE INC/KREAMER PLT
PA	Snyder	42109	421090001	033	4	10200903	32.00	MANEVU2002	33.5496	0.0000	0.0147	WOOD MODE INC/KREAMER PLT
PA	Snyder	42109	421090001	033	3	10200602	32.00	MANEVU2002	0.2504	0.0000	0.0004	WOOD MODE INC/KREAMER PLT
PA	Snyder	42109	421090007	031	1	10300208	20.00	MANEVU2002	7.1500	0.0000	0.0244	SUSQUEHANNA UNIV/SELINSGROVE CAMPUS
PA	Snyder	42109	421090007	032	1	10300208	20.00	MANEVU2002	6.8600	0.0000	0.0000	SUSQUEHANNA UNIV/SELINSGROVE CAMPUS
PA	Snyder	42109	421090008	031	1	10300102	60.00	MANEVU2002	12.7318	0.0000	0.0000	PA DPW/SELINSGROVE CTR
PA	Snyder	42109	421090008	032	1	10300102	60.00	MANEVU2002	11.3237	0.0000	0.0000	PA DPW/SELINSGROVE CTR
PA	Snyder	42109	421090008	033	2	10300602	51.00	MANEVU2002	3.0300	0.0000	0.0170	PA DPW/SELINSGROVE CTR
PA	Snyder	42109	421090008	034	1	10300501	0.00		0.0782	0.0000	0.0000	PA DPW/SELINSGROVE CTR
PA	Somerset	42111	421110003	031	1	10300208	27.10	MANEVU2002	10.0253	0.0000	0.0000	PA DEPT OF CORR/LAUREL HIGHLANDS SCI
PA	Somerset	42111	421110003	032	1	10300208	27.10	MANEVU2002	3.7288	0.0000	0.0361	PA DEPT OF CORR/LAUREL HIGHLANDS SCI
PA	Somerset	42111	421110003	033	1	10300208	27.10	MANEVU2002	9.5363	0.0000	0.0000	PA DEPT OF CORR/LAUREL HIGHLANDS SCI
PA	Somerset	42111	421110013	032	1	10200602	55.00	SCC Descriptio	13.3000	0.0000	0.0263	NORTH AMERICAN HOGANAS INC/STONY CREEK PLT
PA	Tioga	42117	421170020	032	1	10200602	16.70	John Hulsberg	0.6450	0.0000	0.0017	OSRAM SYLVANIA PROD /WELLSBORO PLT
PA	Tioga	42117	421170020	033	1	10200602	55.00	SCC Descriptio	0.2830	0.0000	0.0007	OSRAM SYLVANIA PROD /WELLSBORO PLT
PA	Tioga	42117	421170022	031	1	10300603	25.20	MANEVU2002	0.6000	0.0000	0.0002	DOMINION TRANS INC/SABINSVILLE STATION
PA	Tioga	42117	421170023	035	1	10200602	31.60	MANEVU2002	7.4550	0.0000	0.0213	WESTFIELD TANNING CO/WESTFIELD PLT
PA	Tioga	42117	421170023	036	1	10200602	31.60	MANEVU2002	7.4550	0.0000	0.0213	WESTFIELD TANNING CO/WESTFIELD PLT
PA	Tioga	42117	421170048	033	3	10200602	24.20	MANEVU2002	1.2363	0.0000	0.0001	DOMINION TRANS INC/TIOGA STATION
PA	Tioga	42117	421170048	036	1	10200603	2.90	MANEVU2002	0.4000	0.0000	0.0007	DOMINION TRANS INC/TIOGA STATION
PA	Tioga	42117	421170050	033	1	10300603	1.50	MANEVU2002	0.9000	0.0000	0.0000	DOMINION TRANS INC/BOOM STATION
PA	Tioga	42117	421170913	CU031	2	10200602	25.00	MANEVU2002	2.9710	0.0000	0.0000	EAGLE FAMILY FOODS INC/WELLSBORO PLT
PA	Tioga	42117	421170913	CU031	1	10200501	25.00	MANEVU2002	0.0268	0.0000	0.0001	EAGLE FAMILY FOODS INC/WELLSBORO PLT
PA	Tioga	42117	421170913	CU032	1	10200602	11.70	MANEVU2002	2.2330	0.0000	0.0074	EAGLE FAMILY FOODS INC/WELLSBORO PLT
PA	Tioga	42117	421170913	CU033	1	10200501	11.70	MANEVU2002	0.3450	0.0000	0.0011	EAGLE FAMILY FOODS INC/WELLSBORO PLT
PA	Tioga	42117	421170913	CU034	1	10200602	6.20	MANEVU2002	1.2760	0.0000	0.0035	EAGLE FAMILY FOODS INC/WELLSBORO PLT
PA	Union	42119	421190001	031	1	10200906	12.10	MANEVU2002	5.8000	0.0000	0.0045	PA HOUSE/LEWISBURG (EAST BUFFALO) FURNI
PA	Union	42119	421190001	032	1	10200906	9.20	MANEVU2002	11.1000	0.0000	0.0244	PA HOUSE/LEWISBURG (EAST BUFFALO) FURNI
PA	Union	42119	421190001	033	1	10200906	9.20	MANEVU2002	3.1000	0.0000	0.0000	PA HOUSE/LEWISBURG (EAST BUFFALO) FURNI

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PA	Union	42119	421190001	034	1	10200602	10.50	MANEVU2002	0.0187	0.0000	0.0000	PA HOUSE/LEWISBURG (EAST BUFFALO) FURNI
PA	Union	42119	421190001	036	1	10200602	18.80	MANEVU2002	0.1000	0.0000	0.0000	PA HOUSE/LEWISBURG (EAST BUFFALO) FURNI
PA	Union	42119	421190002	034	4	10300602	88.80	MANEVU2002	0.0037	0.0000	0.0000	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	034	3	10300501	88.80	MANEVU2002	0.1863	0.0000	0.0002	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	037	1	10300501	55.00	SCC Descriptio	0.2687	0.0000	0.0001	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	037	2	10300602	55.00	SCC Descriptio	0.0430	0.0000	0.0001	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	037	3	10301002	55.00	SCC Descriptio	0.0283	0.0000	0.0000	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	037A	1	10300501	55.00	SCC Descriptio	0.1664	0.0000	0.0001	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	037A	2	10300602	55.00	SCC Descriptio	0.0436	0.0000	0.0000	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	038	4	10300602	85.20	MANEVU2002	0.3392	0.0000	0.0016	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	038	3	10300501	85.20	MANEVU2002	0.0008	0.0000	0.0000	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	040	1	10300602	92.00	MANEVU2002	2.3200	0.0000	0.0051	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	P103	1	10300501	55.00	SCC Descriptio	0.0051	0.0000	0.0000	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	P103	3	10301002	55.00	SCC Descriptio	0.0029	0.0000	0.0000	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	P103	2	10300602	55.00	SCC Descriptio	0.0001	0.0000	0.0000	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190004	031	1	10200903	5.00	MANEVU2002	1.2000	0.0000	0.0016	YORKTOWNE INC/8TH & WALNUT STS AND 10TH ST
PA	Union	42119	421190007	031	2	10200601	162.50	MANEVU2002	58.4000	0.0000	0.1412	NGC IND/MILTON PLT
PA	Union	42119	421190007	033	2	10200602	68.90	MANEVU2002	0.1100	0.0000	0.0000	NGC IND/MILTON PLT
PA	Union	42119	421190008	037	1	10300602	33.50	MANEVU2002	0.9864	0.0000	0.0007	US DOJ/US PENITENTIARY LEWISBURG
PA	Union	42119	421190008	038	1	10300602	33.50	MANEVU2002	1.4753	0.0000	0.0000	US DOJ/US PENITENTIARY LEWISBURG
PA	Union	42119	421190008	045	1	10200602	16.70	MANEVU2002	0.3046	0.0000	0.0022	US DOJ/US PENITENTIARY LEWISBURG
PA	Union	42119	421190008	046	1	10200602	33.50	MANEVU2002	0.3650	0.0000	0.0005	US DOJ/US PENITENTIARY LEWISBURG
PA	Union	42119	421190008	CU041	1	10300603	3.00	MANEVU2002	0.1330	0.0000	0.0003	US DOJ/US PENITENTIARY LEWISBURG
PA	Union	42119	421190008	CU044	1	10300603	4.00	MANEVU2002	0.1330	0.0000	0.0003	US DOJ/US PENITENTIARY LEWISBURG
PA	Union	42119	421190028	034	1	10300501	0.00		2.1900	0.0000	0.0000	PA DPW/LAURELTON CTR
PA	Union	42119	421190418	CU031	1	10200906	5.00	MANEVU2002	2.7000	0.0000	0.0047	YORKTOWNE INC/IND PARK PLT
PA	Union	42119	421190418	CU032	1	10200906	5.00	MANEVU2002	2.1000	0.0000	0.0002	YORKTOWNE INC/IND PARK PLT
PA	Venango	42121	421210006	035	1	10300208	44.80	MANEVU2002	12.3100	0.0000	0.0000	PA DPW/POLK CTR
PA	Venango	42121	421210006	036	1	10300208	44.80	MANEVU2002	13.6900	0.0000	0.0030	PA DPW/POLK CTR
PA	Venango	42121	421210006	037	1	10300208	44.80	MANEVU2002	9.7500	0.0000	0.0300	PA DPW/POLK CTR
PA	Venango	42121	421210006	038	1	10300603	2.50	MANEVU2002	0.0012	0.0000	0.0000	PA DPW/POLK CTR
PA	Venango	42121	421210009	031	2	10200602	31.70	MANEVU2002	0.2376	0.0000	0.0000	CALUMET LUBRICANTS CO/ROUSEVILLE PLT
PA	Venango	42121	421210009	032	3	10200602	144.40	MANEVU2002	0.2802	0.0000	0.0000	CALUMET LUBRICANTS CO/ROUSEVILLE PLT
PA	Venango	42121	421210009	038	1	10200401	94.00	MANEVU2002	13.2566	0.0000	0.0000	CALUMET LUBRICANTS CO/ROUSEVILLE PLT
PA	Venango	42121	421210009	038	2	10200602	94.00	MANEVU2002	4.5734	0.0000	0.0000	CALUMET LUBRICANTS CO/ROUSEVILLE PLT
PA	Venango	42121	421210010	034	1	10300602	25.00	MANEVU2002	1.7935	0.0000	0.0000	MERISOL ANTIOXIDANTS/OIL CITY
PA	Venango	42121	421210010	101	1	10300602	20.00	MANEVU2002	5.2851	0.0000	0.0157	MERISOL ANTIOXIDANTS/OIL CITY
PA	Venango	42121	421210982	032	1	10200603	37.70	MANEVU2002	1.7700	0.0000	0.0045	OMG AMER/SUGARCREEK TWP
PA	Warren	42123	421230002	031	1	10200204	65.00	MANEVU2002	0.3685	0.0000	0.0027	ELLWOOD NATL FORGE CO/IRVINE
PA	Warren	42123	421230002	032	1	10200602	75.00	MANEVU2002	9.1700	0.0000	0.0121	ELLWOOD NATL FORGE CO/IRVINE
PA	Warren	42123	421230002	103	1	10200602	55.00	MANEVU2002	0.1155	0.0000	0.0003	ELLWOOD NATL FORGE CO/IRVINE
PA	Warren	42123	421230002	111	2	10200602	55.00	MANEVU2002	0.0110	0.0000	0.0000	ELLWOOD NATL FORGE CO/IRVINE
PA	Warren	42123	421230002	112	1	10200602	55.00	MANEVU2002	0.0175	0.0000	0.0000	ELLWOOD NATL FORGE CO/IRVINE
PA	Warren	42123	421230003	031	3	10200404	60.00	MANEVU2002	13.4068	0.0000	0.0413	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	031	2	10200701	60.00	MANEVU2002	4.3932	0.0000	0.0106	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	032	3	10200404	60.00	MANEVU2002	16.6821	0.0000	0.0403	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	032	2	10200701	60.00	MANEVU2002	6.4179	0.0000	0.0141	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	033	3	10200404	80.00	MANEVU2002	20.7892	0.0000	0.0525	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	033	2	10200701	80.00	MANEVU2002	7.2108	0.0000	0.0151	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	034	2	10200701	140.00	MANEVU2002	50.9493	0.0000	0.0168	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	034	1	10200501	140.00	MANEVU2002	3.3507	0.0000	0.0081	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	035	1	10200701	60.00	MANEVU2002	16.1000	0.0000	0.0460	UNITED REFINING CO/WARREN PLT

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PA	Warren	42123	421230003	042	3	10200404	55.00	MANEVU2002	0.5902	0.0000	0.0002	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	049	3	10200404	105.00	MANEVU2002	7.9175	0.0000	0.0157	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	050	3	10200404	125.00	MANEVU2002	50.0144	0.0000	0.1539	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	051	4	10200701	46.00	MANEVU2002	17.3489	0.0000	0.0534	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	051	3	10200404	46.00	MANEVU2002	8.3511	0.0000	0.0257	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	052	4	10200701	112.00	MANEVU2002	10.6150	0.0000	0.0117	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	052	3	10200404	112.00	MANEVU2002	0.3850	0.0000	0.0014	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	053	4	10200701	20.00	MANEVU2002	4.7877	0.0000	0.0116	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	053	3	10200404	20.00	MANEVU2002	0.1123	0.0000	0.0003	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	054	4	10200701	40.00	MANEVU2002	6.5906	0.0000	0.0116	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	054	3	10200404	40.00	MANEVU2002	1.4094	0.0000	0.0040	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	055	4	10200701	35.70	MANEVU2002	4.7540	0.0000	0.0146	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	055	3	10200404	35.70	MANEVU2002	3.8460	0.0000	0.0114	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	056	4	10200701	36.00	MANEVU2002	6.5912	0.0000	0.0246	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	056	3	10200404	36.00	MANEVU2002	2.0088	0.0000	0.0060	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	057	1	10200701	15.00	MANEVU2002	2.7000	0.0000	0.0030	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230006	120	1	10200603	5.00	SCC Descriptio	3.7900	0.0000	0.0079	BERENFIELD CONTAINER/CLARENDON PLT
PA	Warren	42123	421230006	121	1	10200603	5.00	SCC Descriptio	2.2800	0.0000	0.0043	BERENFIELD CONTAINER/CLARENDON PLT
PA	Warren	42123	421230026	031	1	10300903	30.00	MANEVU2002	1.2000	0.0000	0.0011	PA DPW/WARREN STATE HOSP
PA	Warren	42123	421230026	033	1	10300602	28.00	MANEVU2002	2.0800	0.0000	0.0000	PA DPW/WARREN STATE HOSP
PA	Warren	42123	421230026	034	1	10300602	17.00	MANEVU2002	0.9300	0.0000	0.0021	PA DPW/WARREN STATE HOSP
PA	Warren	42123	421230100	031	1	10200602	10.50	MANEVU2002	0.3000	0.0000	0.0000	OSRAM SYLVANIA PROD /WARREN PLT
PA	Warren	42123	421230100	033	1	10200602	25.00	MANEVU2002	0.7000	0.0000	0.0018	OSRAM SYLVANIA PROD /WARREN PLT
PA	Washington	42125	421250001	130	1	10200603	5.00	SCC Descriptio	11.4000	0.0000	0.0288	WORLD KITCHEN INC/CHARLEROI
PA	Washington	42125	421250002	037	1	10200602	60.50	John Hulsberg	2.3000	0.0000	0.0048	WHEELING PGH STEEL/ALLENPORT
PA	Washington	42125	421250002	038	1	10200602	60.50	John Hulsberg	2.0000	0.0000	0.0042	WHEELING PGH STEEL/ALLENPORT
PA	Washington	42125	421250004	032	1	10300602	16.30	MANEVU2002	0.4900	0.0000	0.0000	PA DPW/WESTERN STATE SCH & HOSP
PA	Washington	42125	421250004	033	1	10300602	16.30	MANEVU2002	0.8300	0.0000	0.0000	PA DPW/WESTERN STATE SCH & HOSP
PA	Washington	42125	421250008	031	2	10200602	48.10	MANEVU2002	7.9496	0.0000	0.0769	DYNO NOBEL INC/DONORA
PA	Washington	42125	421250008	031	1	10200501	48.10	MANEVU2002	0.0504	0.0000	0.0000	DYNO NOBEL INC/DONORA
PA	Washington	42125	421250008	033	1	10200602	48.30	MANEVU2002	1.7000	0.0000	0.0187	DYNO NOBEL INC/DONORA
PA	Washington	42125	421250013	031	1	10200603	10.90	MANEVU2002	0.7000	0.0000	0.0008	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	110	1	10200602	55.00	MANEVU2002	1.3106	0.0000	0.0035	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	110	11	10200602	55.00	MANEVU2002	1.3106	0.0000	0.0035	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	110	13	10200602	55.00	MANEVU2002	1.3106	0.0000	0.0035	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	110	3	10200602	55.00	MANEVU2002	1.3106	0.0000	0.0035	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	110	5	10200602	55.00	MANEVU2002	1.3106	0.0000	0.0035	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	110	7	10200602	55.00	MANEVU2002	1.3106	0.0000	0.0035	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	110	9	10200602	55.00	MANEVU2002	1.3106	0.0000	0.0035	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	150	1	10200602	55.00	SCC Descriptio	1.6649	0.0000	0.0024	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	160	1	10200602	55.00	SCC Descriptio	3.4048	0.0000	0.0094	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	180	1	10200602	55.00	SCC Descriptio	0.8838	0.0000	0.0024	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	220	2	10200603	5.00	SCC Descriptio	4.1000	0.0000	0.0050	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250014	035	1	10200602	27.00	MANEVU2002	1.4000	0.0000	0.0038	ALLEGHENY ENERGY SUPPLY CO/MITCHELL POWER STA
PA	Washington	42125	421250025	031	1	10200603	5.00	SCC Descriptio	1.0000	0.0000	0.0026	ALLEGHENY LUDLUM COR/HOUSTON-FITCH WORKS
PA	Washington	42125	421250025	101	1	10200603	5.00	MANEVU2002	0.1000	0.0000	0.0000	ALLEGHENY LUDLUM COR/HOUSTON-FITCH WORKS
PA	Washington	42125	421250025	109	1	10200602	55.00	SCC Descriptio	4.3000	0.0000	0.0113	ALLEGHENY LUDLUM COR/HOUSTON-FITCH WORKS
PA	Washington	42125	421250031	033	1	10300603	50.20	John Hulsberg	8.1000	0.0000	0.0214	FLEXSYS AMER LTD PAR/MONONGAHELA
PA	Washington	42125	421250031	102	1	10300603	3.10	John Hulsberg	0.1000	0.0000	0.0003	FLEXSYS AMER LTD PAR/MONONGAHELA
PA	Washington	42125	421250031	103	1	10200602	12.50	John Hulsberg	2.9000	0.0000	0.0078	FLEXSYS AMER LTD PAR/MONONGAHELA
PA	Washington	42125	421250422	103	1	10200603	5.00	SCC Descriptio	0.8000	0.0000	0.0000	COLUMBIA GAS TRANS CORP/DONEGAL COMPRESSOR STA
PA	Washington	42125	421250422	104	1	10200603	5.00	SCC Descriptio	0.4000	0.0000	0.0000	COLUMBIA GAS TRANS CORP/DONEGAL COMPRESSOR STA

										2002 NOx Emissions			
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PA	Washington	42125	421250629	103	1	10300602	10.10	MANEVU2002	0.5800	0.0000	0.0005	FALCON PLASTICS/WASHINGTON
PA	Washington	42125	421250896	102	1	10200602	55.00	SCC Descriptio	0.4340	0.0000	0.0011	THERM O ROCK INC/NEW EAGLE PLT
PA	Washington	42125	421250896	103	1	10200602	55.00	SCC Descriptio	0.4340	0.0000	0.0011	THERM O ROCK INC/NEW EAGLE PLT
PA	Washington	42125	421250896	105	1	10200602	55.00	SCC Descriptio	0.5450	0.0000	0.0014	THERM O ROCK INC/NEW EAGLE PLT
PA	Washington	42125	421250896	106	1	10200602	55.00	SCC Descriptio	0.5450	0.0000	0.0014	THERM O ROCK INC/NEW EAGLE PLT
PA	Wayne	42127	421270773	031	1	10300102	27.20	MANEVU2002	13.5800	0.0000	0.0522	PA DEPT OF CORR/WAYMART SCI
PA	Wayne	42127	421270773	032	1	10300102	27.20	MANEVU2002	10.8400	0.0000	0.0000	PA DEPT OF CORR/WAYMART SCI
PA	Wayne	42127	421270773	033	1	10300102	27.20	MANEVU2002	11.8800	0.0000	0.0078	PA DEPT OF CORR/WAYMART SCI
PA	Westmoreland	42129	421290007	032	1	10200602	143.00	MANEVU2002	0.6206	0.0000	0.0027	KOPPERS IND/MONESSEN COKE PLT
PA	Westmoreland	42129	421290007	032	2	10200707	143.00	MANEVU2002	66.3694	0.0000	0.1677	KOPPERS IND/MONESSEN COKE PLT
PA	Westmoreland	42129	421290007	805	1	10200707	251.00	Coke Battery	445.2200	0.0000	1.2721	KOPPERS IND/MONESSEN COKE PLT
PA	Westmoreland	42129	421290007	809	1	10200799	0.00		21.4300	0.0000	0.0612	KOPPERS IND/MONESSEN COKE PLT
PA	Westmoreland	42129	421290008	031	1	10200206	16.70	MANEVU2002	5.2580	0.0000	0.0000	ST VINCENT COLL/LATROBE CAMPUS
PA	Westmoreland	42129	421290008	031	2	10200602	16.70	MANEVU2002	0.0093	0.0000	0.0000	ST VINCENT COLL/LATROBE CAMPUS
PA	Westmoreland	42129	421290008	032	1	10200206	16.70	MANEVU2002	4.4432	0.0000	0.0000	ST VINCENT COLL/LATROBE CAMPUS
PA	Westmoreland	42129	421290008	032	2	10200602	16.70	MANEVU2002	0.0365	0.0000	0.0000	ST VINCENT COLL/LATROBE CAMPUS
PA	Westmoreland	42129	421290010	111	1	10300603	5.00	SCC Descriptio	3.1950	0.0000	0.0039	DURALOY TECHNOLOGIES/SCOTTDALE
PA	Westmoreland	42129	421290015	031	1	10200602	40.00	MANEVU2002	4.0900	0.0000	0.0184	STD STEEL/LATROBE
PA	Westmoreland	42129	421290015	033	1	10200602	40.00	MANEVU2002	3.7060	0.0000	0.0020	STD STEEL/LATROBE
PA	Westmoreland	42129	421290015	105	2	10200603	5.00	SCC Descriptio	4.5135	0.0000	0.0099	STD STEEL/LATROBE
PA	Westmoreland	42129	421290015	106	3	10200603	5.00	SCC Descriptio	12.1485	0.0000	0.0227	STD STEEL/LATROBE
PA	Westmoreland	42129	421290015	107	3	10200603	5.00	SCC Descriptio	0.0024	0.0000	0.0000	STD STEEL/LATROBE
PA	Westmoreland	42129	421290015	109	2	10200603	9.50	MANEVU2002	1.1100	0.0000	0.0018	STD STEEL/LATROBE
PA	Westmoreland	42129	421290017	031	1	10200602	24.00	MANEVU2002	3.6400	0.0000	0.0076	TIMKEN LATROBE STEEL CO/LATROBE PLT
PA	Westmoreland	42129	421290017	043	1	10200603	10.00	MANEVU2002	2.2015	0.0000	0.0007	TIMKEN LATROBE STEEL CO/LATROBE PLT
PA	Westmoreland	42129	421290029	031	1	10300208	47.00	MANEVU2002	3.4628	0.0000	0.0008	PA DPW/TORRANCE STATE HOSP
PA	Westmoreland	42129	421290029	032	1	10300208	45.00	MANEVU2002	24.0582	0.0000	0.0449	PA DPW/TORRANCE STATE HOSP
PA	Westmoreland	42129	421290029	034	1	10300208	17.00	MANEVU2002	6.5807	0.0000	0.0058	PA DPW/TORRANCE STATE HOSP
PA	Westmoreland	42129	421290036	031	1	10200602	30.40	MANEVU2002	1.3115	0.0000	0.0019	OMNOVA SOLUTIONS INC/JEANETTE PLT
PA	Westmoreland	42129	421290036	032	1	10200602	30.40	MANEVU2002	1.1085	0.0000	0.0029	OMNOVA SOLUTIONS INC/JEANETTE PLT
PA	Westmoreland	42129	421290036	035	1	10200602	12.50	MANEVU2002	0.1885	0.0000	0.0000	OMNOVA SOLUTIONS INC/JEANETTE PLT
PA	Westmoreland	42129	421290036	036	1	10200602	12.50	John Hulsberg	0.2140	0.0000	0.0000	OMNOVA SOLUTIONS INC/JEANETTE PLT
PA	Westmoreland	42129	421290044	032	1	10200204	66.10	MANEVU2002	0.0275	0.0000	0.0000	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	033	1	10200602	71.40	MANEVU2002	5.0065	0.0000	0.0099	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	035	1	10200603	5.60	MANEVU2002	0.4771	0.0000	0.0005	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	036	1	10200603	24.30	MANEVU2002	0.5760	0.0000	0.0000	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	105A	1	10200602	55.00	SCC Descriptio	8.6446	0.0000	0.0218	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112C	1	10200603	5.00	SCC Descriptio	0.5170	0.0000	0.0009	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112D	5	10200602	55.00	SCC Descriptio	1.2515	0.0000	0.0022	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112D	1	10200602	55.00	SCC Descriptio	1.2147	0.0000	0.0021	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112D	3	10200602	55.00	SCC Descriptio	1.2147	0.0000	0.0021	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112E	11	10200602	55.00	SCC Descriptio	0.7380	0.0000	0.0013	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112E	7	10200602	55.00	SCC Descriptio	0.6970	0.0000	0.0012	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112E	9	10200602	55.00	SCC Descriptio	0.6970	0.0000	0.0012	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112E	1	10200602	55.00	SCC Descriptio	0.6560	0.0000	0.0012	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112E	3	10200602	55.00	SCC Descriptio	0.6560	0.0000	0.0012	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112E	5	10200602	55.00	SCC Descriptio	0.6560	0.0000	0.0012	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113C	1	10200603	5.00	SCC Descriptio	0.8579	0.0000	0.0018	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113D	5	10200602	55.00	SCC Descriptio	1.7773	0.0000	0.0037	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113D	1	10200602	55.00	SCC Descriptio	1.7250	0.0000	0.0036	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113D	3	10200602	55.00	SCC Descriptio	1.7250	0.0000	0.0036	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113E	11	10200602	55.00	SCC Descriptio	0.9750	0.0000	0.0020	ALLEGHENY LUDLUM CORP/WEST LEECHBURG

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PA	Westmoreland	42129	421290044	113E	13	10200602	55.00	SCC Descriptio	0.9750	0.0000	0.0020	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113E	1	10200602	55.00	SCC Descriptio	0.9100	0.0000	0.0019	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113E	3	10200602	55.00	SCC Descriptio	0.9100	0.0000	0.0019	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113E	5	10200602	55.00	SCC Descriptio	0.9100	0.0000	0.0019	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113E	7	10200602	55.00	SCC Descriptio	0.9100	0.0000	0.0019	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113E	9	10200602	55.00	SCC Descriptio	0.9100	0.0000	0.0019	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	114	1	10200602	55.00	SCC Descriptio	0.3500	0.0000	0.0006	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	114	3	10200602	55.00	SCC Descriptio	0.3500	0.0000	0.0006	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	115A	1	10200602	55.00	SCC Descriptio	0.3000	0.0000	0.0005	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	115A	3	10200602	55.00	SCC Descriptio	0.3000	0.0000	0.0005	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	117	1	10200602	55.00	SCC Descriptio	1.2000	0.0000	0.0009	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	117	3	10200602	55.00	SCC Descriptio	1.2000	0.0000	0.0009	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	117	5	10200602	55.00	SCC Descriptio	1.2000	0.0000	0.0009	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	117	7	10200602	55.00	SCC Descriptio	1.2000	0.0000	0.0009	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	117	9	10200602	55.00	SCC Descriptio	1.2000	0.0000	0.0009	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	118	9	10200602	55.00	SCC Descriptio	1.4220	0.0000	0.0038	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	118	5	10200602	55.00	SCC Descriptio	1.3430	0.0000	0.0035	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	118	7	10200602	55.00	SCC Descriptio	1.3430	0.0000	0.0035	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	118	1	10200602	55.00	SCC Descriptio	1.2640	0.0000	0.0033	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	118	11	10200602	55.00	SCC Descriptio	1.2640	0.0000	0.0033	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	118	3	10200602	55.00	SCC Descriptio	1.2640	0.0000	0.0033	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	126	1	10200603	5.00	SCC Descriptio	0.2162	0.0000	0.0005	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	134	1	10200603	5.00	SCC Descriptio	2.3925	0.0000	0.0045	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290062	031	1	10300603	4.00	MANEVU2002	0.1034	0.0000	0.0000	DOMINION TRANS INC/SOUTH OAKFORD STA
PA	Westmoreland	42129	421290062	105	1	10300603	5.00	SCC Descriptio	0.2497	0.0000	0.0001	DOMINION TRANS INC/SOUTH OAKFORD STA
PA	Westmoreland	42129	421290063	103	1	10200602	55.00	SCC Descriptio	0.4681	0.0000	0.0009	SUMMERILL TUBE CORP/SCOTTDALE PLT
PA	Westmoreland	42129	421290064	031	1	10300602	13.40	MANEVU2002	7.1000	0.0000	0.0086	DOMINION TRANS INC/OAKFORD STA
PA	Westmoreland	42129	421290064	032	1	10300602	13.40	MANEVU2002	7.1000	0.0000	0.0109	DOMINION TRANS INC/OAKFORD STA
PA	Westmoreland	42129	421290070	031	1	10300603	6.30	MANEVU2002	0.6366	0.0000	0.0017	CK COMPOSITES INC/MT PLEASANT
PA	Westmoreland	42129	421290071	032	1	10300602	10.00	MANEVU2002	0.9110	0.0000	0.0021	CHESTNUT RIDGE FOAM /LATROBE PLT
PA	Westmoreland	42129	421290073	031	1	10200601	126.00	MANEVU2002	0.6380	0.0000	0.0000	ELLIOTT TURBOMACHINERY/JEANNETTE
PA	Westmoreland	42129	421290073	033	1	10200601	128.00	MANEVU2002	0.2530	0.0000	0.0000	ELLIOTT TURBOMACHINERY/JEANNETTE
PA	Westmoreland	42129	421290073	035	1	10200602	76.10	MANEVU2002	0.3875	0.0000	0.0010	ELLIOTT TURBOMACHINERY/JEANNETTE
PA	Westmoreland	42129	421290073	036	1	10200601	206.00	MANEVU2002	5.5000	0.0000	0.0151	ELLIOTT TURBOMACHINERY/JEANNETTE
PA	Westmoreland	42129	421290074	031	1	10200603	25.00	MANEVU2002	9.5575	0.0000	0.0263	NATL ROLL CO/AVONMORE
PA	Westmoreland	42129	421290074	104	1	10200603	5.00	MANEVU2002	0.0714	0.0000	0.0002	NATL ROLL CO/AVONMORE
PA	Westmoreland	42129	421290074	105	1	10200603	5.00	MANEVU2002	0.7890	0.0000	0.0022	NATL ROLL CO/AVONMORE
PA	Westmoreland	42129	421290081	031	1	10200602	19.00	MANEVU2002	4.1173	0.0000	0.0131	POLY HI SOLIDUR INC/DELMONT PLT
PA	Westmoreland	42129	421290085	031	1	10200602	26.10	MANEVU2002	1.7543	0.0000	0.0044	ALLEGHENY LUDLUM CORP/VANDERGRIFT
PA	Westmoreland	42129	421290085	032	1	10200602	26.10	MANEVU2002	1.7543	0.0000	0.0044	ALLEGHENY LUDLUM CORP/VANDERGRIFT
PA	Westmoreland	42129	421290085	116	1	10200603	5.00	SCC Descriptio	12.9888	0.0000	0.0100	ALLEGHENY LUDLUM CORP/VANDERGRIFT
PA	Westmoreland	42129	421290085	120A	1	10200602	55.00	SCC Descriptio	9.9578	0.0000	0.0285	ALLEGHENY LUDLUM CORP/VANDERGRIFT
PA	Westmoreland	42129	421290085	120E	1	10200603	5.00	SCC Descriptio	0.2858	0.0000	0.0008	ALLEGHENY LUDLUM CORP/VANDERGRIFT
PA	Westmoreland	42129	421290085	121A	1	10200603	5.00	SCC Descriptio	0.5000	0.0000	0.0015	ALLEGHENY LUDLUM CORP/VANDERGRIFT
PA	Westmoreland	42129	421290085	121B	1	10200602	55.00	SCC Descriptio	12.1571	0.0000	0.0361	ALLEGHENY LUDLUM CORP/VANDERGRIFT
PA	Westmoreland	42129	421290110	031	1	10200602	50.00	MANEVU2002	13.2205	0.0000	0.0232	ALCOA INC/UPPER BURREL
PA	Westmoreland	42129	421290129	031	1	10300602	10.20	MANEVU2002	1.2884	0.0000	0.0040	HUNTINGTON FOAM PITT/MT PLEASANT
PA	Westmoreland	42129	421290178	031	1	10200603	3.40	MANEVU2002	0.0526	0.0000	0.0002	DOMINION TRANS INC/TONKIN STA
PA	Westmoreland	42129	421290189	031	1	10200602	35.70	MANEVU2002	4.5820	0.0000	0.0076	LATROBE AREA HOSP/LATROBE
PA	Westmoreland	42129	421290189	032	1	10200602	35.70	MANEVU2002	0.6560	0.0000	0.0032	LATROBE AREA HOSP/LATROBE
PA	Westmoreland	42129	421290233	031	1	10300602	14.00	MANEVU2002	1.5000	0.0000	0.0031	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290233	032	1	10300602	14.00	MANEVU2002	1.5000	0.0000	0.0043	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Westmoreland	42129	421290233	101	1	10200602	55.00	SCC Descriptio	18.7202	0.0000	0.0514	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290233	102	1	10200602	55.00	SCC Descriptio	14.1680	0.0000	0.0389	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290233	103	1	10300602	55.00	SCC Descriptio	1.5000	0.0000	0.0043	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290233	104	1	10300602	55.00	SCC Descriptio	1.9000	0.0000	0.0052	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290233	105	1	10300602	55.00	SCC Descriptio	2.1000	0.0000	0.0058	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290233	106	1	10300602	55.00	SCC Descriptio	0.6000	0.0000	0.0016	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290233	107	1	10300602	55.00	SCC Descriptio	0.6000	0.0000	0.0016	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290233	113	1	10300602	55.00	SCC Descriptio	2.5000	0.0000	0.0071	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290455	031	1	10200602	25.10	MANEVU2002	2.6410	0.0000	0.0067	LATROBE BREWING CO/LATROBE
PA	Westmoreland	42129	421290956	031	1	10200602	20.90	MANEVU2002	1.4124	0.0000	0.0017	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	032	1	10200602	20.90	MANEVU2002	0.2515	0.0000	0.0006	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	033	1	10200602	31.50	MANEVU2002	2.3200	0.0000	0.0048	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	034	1	10200602	31.50	MANEVU2002	3.5513	0.0000	0.0059	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	047	1	10200602	31.40	MANEVU2002	0.9900	0.0000	0.0028	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	051	1	10300603	2.00	MANEVU2002	0.5267	0.0000	0.0014	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	052	1	10300603	1.70	MANEVU2002	0.4478	0.0000	0.0012	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	127	1	10300602	55.00	SCC Descriptio	2.4441	0.0000	0.0062	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	128	1	10300603	5.00	SCC Descriptio	1.2400	0.0000	0.0038	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	129	1	10300603	5.00	SCC Descriptio	2.2391	0.0000	0.0062	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	130	1	10300603	5.00	SCC Descriptio	0.3621	0.0000	0.0010	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	132	1	10200602	55.00	SCC Descriptio	1.9721	0.0000	0.0037	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	139	1	10300603	5.00	SCC Descriptio	0.0351	0.0000	0.0001	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	143	1	10200603	5.00	SCC Descriptio	0.1100	0.0000	0.0003	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	145	1	10300603	5.00	SCC Descriptio	0.2043	0.0000	0.0005	SONY ELECTRONICS INC/NEW STANTON
PA	Wyoming	42131	421310009	031	2	10200601	242.00	John Hulsberg	72.4000	0.0000	0.1997	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	032A	1	10200601	233.00	John Hulsberg	51.7662	0.0000	0.1428	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	032A	2	10200401	233.00	John Hulsberg	5.9338	0.0000	0.0164	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	033A	2	10200602	156.00	John Hulsberg	25.9362	0.0000	0.0701	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	034A	2	10200601	156.00	John Hulsberg	43.5000	0.0000	0.1200	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	036	1	10300602	80.00	MANEVU2002	7.8300	0.0000	0.0207	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	501	2	10200602	55.00	SCC Descriptio	8.6580	0.0000	0.0234	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	501	1	10200602	55.00	SCC Descriptio	3.0420	0.0000	0.0082	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	502	2	10200602	55.00	SCC Descriptio	9.5250	0.0000	0.0257	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	502	1	10200602	55.00	SCC Descriptio	3.1750	0.0000	0.0086	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	503	2	10200602	55.00	SCC Descriptio	8.0660	0.0000	0.0218	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	503	1	10200602	55.00	SCC Descriptio	2.8340	0.0000	0.0077	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	504	2	10200602	55.00	SCC Descriptio	8.5100	0.0000	0.0230	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	504	1	10200602	55.00	SCC Descriptio	2.9900	0.0000	0.0081	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	505	2	10200602	55.00	SCC Descriptio	8.5840	0.0000	0.0232	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	505	1	10200602	55.00	SCC Descriptio	3.0160	0.0000	0.0082	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	506	2	10200602	55.00	SCC Descriptio	8.7320	0.0000	0.0236	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	506	1	10200602	55.00	SCC Descriptio	3.0680	0.0000	0.0083	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310682	031	1	10200906	8.70	MANEVU2002	1.6000	0.0000	0.0044	DEER PARK LUMBER/DEER PARK MFG PLT
PA	York	42133	421330011	031	1	10200602	65.00	MANEVU2002	11.0019	0.0000	0.0290	YORKTOWN PAPER BOARD/SPRING GARDEN
PA	York	42133	421330015	112	1	10200603	5.00	SCC Descriptio	2.2000	0.0000	0.0000	GLEN GERY CORP/YORK DIVISION
PA	York	42133	421330015	113	1	10200603	5.00	SCC Descriptio	0.0798	0.0000	0.0000	GLEN GERY CORP/YORK DIVISION
PA	York	42133	421330015	114	1	10200603	5.00	SCC Descriptio	0.4000	0.0000	0.0000	GLEN GERY CORP/YORK DIVISION
PA	York	42133	421330016	034	2	10200401	363.70	MANEVU2002	2.3177	0.0000	0.0061	PH GLATFELTER CO/SPRING GROVE
PA	York	42133	421330016	034	1	10200202	363.70	MANEVU2002	709.4823	0.0000	0.3898	PH GLATFELTER CO/SPRING GROVE
PA	York	42133	421330016	037	1	10200401	692.40	MANEVU2002	6.5236	0.0000	0.0093	PH GLATFELTER CO/SPRING GROVE
PA	York	42133	421330019	031	1	10200501	50.50	MANEVU2002	6.6700	0.0000	0.0000	EXELON GENERATION CO/PEACH BOTTOM NUCLEAR STATION
PA	York	42133	421330019	032	1	10200501	50.50	MANEVU2002	1.5900	0.0000	0.0002	EXELON GENERATION CO/PEACH BOTTOM NUCLEAR STATION

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	York	42133	421330024	101	1	10200603	5.00	MANEVU2002	1.6000	0.0000	0.0040	NEW YORK WIRE CO/YORK WEAVING PLT
PA	York	42133	421330027	031	1	10300602	12.60	MANEVU2002	0.7500	0.0000	0.0019	ADHESIVES RESEARCH INC/GLEN ROCK
PA	York	42133	421330034	031	1	10200602	50.00	MANEVU2002	5.2660	0.0000	0.0000	UNITED DEFENSE LTD P/YORK
PA	York	42133	421330037	031	2	10200602	52.50	MANEVU2002	10.2950	0.0000	0.0068	YORK INTL CORP/GRANTLEY
PA	York	42133	421330038	031	1	10200504	60.00	MANEVU2002	13.0000	0.0000	0.0000	DEFENSE DISTR SUSQUE/NCAD
PA	York	42133	421330038	032	1	10200504	60.00	MANEVU2002	11.7000	0.0000	0.0000	DEFENSE DISTR SUSQUE/NCAD
PA	York	42133	421330038	033	1	10200504	60.00	MANEVU2002	8.6000	0.0000	0.0000	DEFENSE DISTR SUSQUE/NCAD
PA	York	42133	421330038	034	1	10200504	25.20	MANEVU2002	0.8000	0.0000	0.0000	DEFENSE DISTR SUSQUE/NCAD
PA	York	42133	421330040	031	1	10300501	50.80	MANEVU2002	0.1084	0.0000	0.0000	YORK HOSP/YORK CITY
PA	York	42133	421330040	031	2	10300602	50.80	MANEVU2002	0.2216	0.0000	0.0000	YORK HOSP/YORK CITY
PA	York	42133	421330040	032	1	10300602	38.60	MANEVU2002	2.4871	0.0000	0.0005	YORK HOSP/YORK CITY
PA	York	42133	421330040	032	2	10300501	38.60	MANEVU2002	0.1329	0.0000	0.0000	YORK HOSP/YORK CITY
PA	York	42133	421330040	033	1	10300602	30.50	MANEVU2002	4.4900	0.0000	0.0133	YORK HOSP/YORK CITY
PA	York	42133	421330049	031	1	10200603	6.30	MANEVU2002	1.1200	0.0000	0.0030	CCX IND INC/HANOVER WIRE CLOTH
PA	York	42133	421330049	032	1	10200603	6.30	MANEVU2002	0.6610	0.0000	0.0000	CCX IND INC/HANOVER WIRE CLOTH
PA	York	42133	421330049	116	1	10200603	5.00	SCC Descriptio	0.2100	0.0000	0.0006	CCX IND INC/HANOVER WIRE CLOTH
PA	York	42133	421330049	117	1	10200603	5.00	SCC Descriptio	0.0870	0.0000	0.0002	CCX IND INC/HANOVER WIRE CLOTH
PA	York	42133	421330051	032	1	10200903	12.30	MANEVU2002	0.5729	0.0000	0.0007	YORKTOWNE INC/NO 6 RED LION
PA	York	42133	421330051	032	3	10200602	12.30	MANEVU2002	0.1662	0.0000	0.0000	YORKTOWNE INC/NO 6 RED LION
PA	York	42133	421330051	032	2	10200501	12.30	MANEVU2002	0.0109	0.0000	0.0000	YORKTOWNE INC/NO 6 RED LION
PA	York	42133	421330053	040	2	10200603	1.20	MANEVU2002	0.2800	0.0000	0.0000	TRANSCONTINENTAL GAS/STATION 195
PA	York	42133	421330060	031	1	10200603	3.40	John Hulsberg	0.4100	0.0000	0.0011	LEHIGH CEMENT CO/YORK OPERATIONS
PA	York	42133	421330060	032	1	10200603	6.10	John Hulsberg	0.0700	0.0000	0.0002	LEHIGH CEMENT CO/YORK OPERATIONS
PA	York	42133	421330061	031	1	10200603	9.00	MANEVU2002	0.2000	0.0000	0.0002	YORK CITY SEWER AUTH/YORK CITY WWTP
PA	York	42133	421330061	099	1	10200799	0.00		0.1000	0.0000	0.0002	YORK CITY SEWER AUTH/YORK CITY WWTP
PA	York	42133	421330062	031	1	10200603	8.30	MANEVU2002	0.0901	0.0000	0.0001	YORK GROUP INC/BLACK BRIDGE RD
PA	York	42133	421330062	032	1	10200603	8.30	MANEVU2002	0.1417	0.0000	0.0002	YORK GROUP INC/BLACK BRIDGE RD
PA	York	42133	421330062	033	1	10300903	11.00	MANEVU2002	1.4000	0.0000	0.0034	YORK GROUP INC/BLACK BRIDGE RD
PA	York	42133	421330063	031	1	10200602	44.00	MANEVU2002	3.2202	0.0000	0.0007	HARLEY DAVIDSON MOTOR CO/YORK FACILITY
PA	York	42133	421330063	032	1	10200602	22.00	MANEVU2002	0.6467	0.0000	0.0001	HARLEY DAVIDSON MOTOR CO/YORK FACILITY
PA	York	42133	421330063	033	2	10200602	61.80	MANEVU2002	6.7602	0.0000	0.0163	HARLEY DAVIDSON MOTOR CO/YORK FACILITY
PA	York	42133	421330063	033	3	10200501	61.80	MANEVU2002	0.0198	0.0000	0.0000	HARLEY DAVIDSON MOTOR CO/YORK FACILITY
PA	York	42133	421330063	034	1	10200602	72.00	MANEVU2002	4.6869	0.0000	0.0000	HARLEY DAVIDSON MOTOR CO/YORK FACILITY
PA	York	42133	421330066	031	1	10300602	10.90	MANEVU2002	0.9900	0.0000	0.0014	OSRAM SYLVANIA PROD /YORK BASE PROD PLT
PA	York	42133	421330067	030	1	10200401	85.80	MANEVU2002	0.0337	0.0000	0.0004	HANOVER FOODS CORP/HANOVER CANNERY
PA	York	42133	421330067	030	2	10300602	85.80	MANEVU2002	1.8163	0.0000	0.0042	HANOVER FOODS CORP/HANOVER CANNERY
PA	York	42133	421330067	031	2	10300602	42.00	MANEVU2002	4.7480	0.0000	0.0000	HANOVER FOODS CORP/HANOVER CANNERY
PA	York	42133	421330067	031	1	10200401	42.00	MANEVU2002	0.3120	0.0000	0.0007	HANOVER FOODS CORP/HANOVER CANNERY
PA	York	42133	421330067	032	1	10300602	21.00	MANEVU2002	4.7000	0.0000	0.0108	HANOVER FOODS CORP/HANOVER CANNERY
PA	York	42133	421330067	033	2	10300602	42.00	MANEVU2002	4.7000	0.0000	0.0108	HANOVER FOODS CORP/HANOVER CANNERY
PA	York	42133	421330072	031	1	10200603	5.20	MANEVU2002	0.3000	0.0000	0.0000	LEISTERS FURNITURE/HANOVER BORO
PA	York	42133	421330072	032A	1	10200603	5.00	SCC Descriptio	0.1000	0.0000	0.0002	LEISTERS FURNITURE/HANOVER BORO
PA	York	42133	421330090	032	1	10200602	17.00	MANEVU2002	2.4000	0.0000	0.0066	RH SHEPPARD CO INC/HANOVER
PA	York	42133	421330090	032	2	10300603	17.00	MANEVU2002	2.4000	0.0000	0.0066	RH SHEPPARD CO INC/HANOVER
RI	Bristol	44001	AIR1507	1	1	10200502	55.00	SCC Descriptio	0.0865	0.0000	0.0002	ANCHORAGE, INC., THE
RI	Bristol	44001	AIR1651	1	1	10200602	55.00	SCC Descriptio	0.0275	0.0000	0.0001	WESTFALL MANUFACTURING
RI	Bristol	44001	AIR1822	1	1	10200502	55.00	SCC Descriptio	0.0310	0.0000	0.0001	BLOUNT BOATS, INC.
RI	Bristol	44001	AIR2213	1	1	10200602	55.00	SCC Descriptio	0.0595	0.0000	0.0002	CARROLL MARINE LIMITED
RI	Bristol	44001	AIR3273	1	1	10300602	55.00	SCC Descriptio	0.7728	0.0000	0.0019	R.I. VETERANS HOME
RI	Bristol	44001	AIR3275	1	1	10300502	55.00	SCC Descriptio	0.4350	0.0000	0.0012	ROGER WILLIAMS UNIVERSITY
RI	Bristol	44001	AIR3275	2	2	10300602	55.00	SCC Descriptio	2.0000	0.0000	0.0049	ROGER WILLIAMS UNIVERSITY
RI	Bristol	44001	AIR3275	3	3	10301002	0.00		0.0235	0.0000	0.0001	ROGER WILLIAMS UNIVERSITY

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RI	Bristol	44001	AIR3332	1	1	10200402	55.00	SCC Descriptio	5.8195	0.0000	0.0160	BLOUNT SEAFOOD
RI	Bristol	44001	AIR3332	2	2	10200602	55.00	SCC Descriptio	1.2130	0.0000	0.0033	BLOUNT SEAFOOD
RI	Bristol	44001	AIR3565	1	1	10200502	55.00	SCC Descriptio	0.1049	0.0000	0.0003	I SHALOM CO., INC.
RI	Bristol	44001	AIR3616	1	1	10200504	0.00		1.0450	0.0000	0.0029	RUSS-RUSS REALTY/ROBIN ROY
RI	Bristol	44001	AIR3739	1	1	10200502	55.00	SCC Descriptio	0.0070	0.0000	0.0000	BEACON BOATS, INC.
RI	Bristol	44001	AIR3813	1	1	10200602	55.00	SCC Descriptio	0.1155	0.0000	0.0003	BRISTOL METAL FINISHING
RI	Bristol	44001	AIR3873	1	1	10200602	55.00	SCC Descriptio	0.0445	0.0000	0.0001	OUTERLIMITS POWERBOATS
RI	Bristol	44001	AIR3935	1	1	10300602	55.00	SCC Descriptio	0.5527	0.0000	0.0014	MMF REALTY
RI	Bristol	44001	AIR686	1	1	10200602	55.00	SCC Descriptio	0.0415	0.0000	0.0001	HOLBY MARINE CO.
RI	Bristol	44001	AIR894	1	1	10200502	55.00	SCC Descriptio	0.1720	0.0000	0.0005	LLOYD MFG. CO., INC.
RI	Bristol	44001	AIR894	2	2	10200602	55.00	SCC Descriptio	0.2550	0.0000	0.0007	LLOYD MFG. CO., INC.
RI	Kent	44003	AIR1037	1	1	10200402	55.00	SCC Descriptio	1.4590	0.0000	0.0040	NATCO PRODUCTS CORPORATION (FACTORY ST.)
RI	Kent	44003	AIR1097	1	1	10200602	55.00	SCC Descriptio	0.0183	0.0000	0.0000	EMTEC
RI	Kent	44003	AIR1102	1	1	10200602	55.00	SCC Descriptio	0.0445	0.0000	0.0001	NORTHERN INDUSTRIES INC.
RI	Kent	44003	AIR1168	1	1	10200602	55.00	SCC Descriptio	0.2250	0.0000	0.0006	PEASE & CURREN, INC.
RI	Kent	44003	AIR1316	1	1	10200402	55.00	SCC Descriptio	6.3375	0.0000	0.0174	RIVERPOINT LACE WORKS INC.
RI	Kent	44003	AIR1316	2	2	10200602	55.00	SCC Descriptio	0.0400	0.0000	0.0001	RIVERPOINT LACE WORKS INC.
RI	Kent	44003	AIR1399	1	1	10200602	55.00	SCC Descriptio	0.4150	0.0000	0.0011	SOLUOL CHEMICAL CO., INC.
RI	Kent	44003	AIR1438	1	1	10200401	19.80	TITLE V PERM	12.7105	0.0000	0.0352	STANLEY-BOSTITCH, INC. (EG)
RI	Kent	44003	AIR1438	2	2	10200602	19.80	TITLE V PERM	0.8825	0.0000	0.0024	STANLEY-BOSTITCH, INC. (EG)
RI	Kent	44003	AIR1845	1	1	10200602	55.00	SCC Descriptio	0.0865	0.0000	0.0002	NEW ENGLAND UNION CO., INC.
RI	Kent	44003	AIR1845	2	2	10201002	0.00		0.0795	0.0000	0.0002	NEW ENGLAND UNION CO., INC.
RI	Kent	44003	AIR1846	1	1	10200402	21.00	TITLE V PERM	10.8000	0.0000	0.0297	ORIGINAL BRADFORD SOAP WORKS INC.
RI	Kent	44003	AIR1846	2	2	10200502	21.00	TITLE V PERM	0.0130	0.0000	0.0000	ORIGINAL BRADFORD SOAP WORKS INC.
RI	Kent	44003	AIR1846	3	3	10200602	21.00	TITLE V PERM	0.5315	0.0000	0.0014	ORIGINAL BRADFORD SOAP WORKS INC.
RI	Kent	44003	AIR1871	1	1	10200602	55.00	SCC Descriptio	0.1065	0.0000	0.0003	NATIONAL VELOUR CORPORATION
RI	Kent	44003	AIR1880	1	1	10200602	55.00	SCC Descriptio	0.1350	0.0000	0.0004	WOLVERINE TUBE, INC
RI	Kent	44003	AIR19	1	1	10200602	55.00	SCC Descriptio	0.6504	0.0000	0.0018	A.T. WALL CO.
RI	Kent	44003	AIR213	1	1	10200502	55.00	SCC Descriptio	0.0386	0.0000	0.0001	CAL CHEMICAL CORPORATION
RI	Kent	44003	AIR213	2	2	10200602	55.00	SCC Descriptio	0.0216	0.0000	0.0001	CAL CHEMICAL CORPORATION
RI	Kent	44003	AIR2705	1	1	10200502	55.00	SCC Descriptio	0.0266	0.0000	0.0001	INTERNATIONAL MACHINE & TOOL CORPORATION
RI	Kent	44003	AIR297	1	1	10200502	55.00	SCC Descriptio	0.1220	0.0000	0.0003	CONCORDIA MFG. CO., INC.
RI	Kent	44003	AIR297	2	2	10200602	55.00	SCC Descriptio	0.0730	0.0000	0.0002	CONCORDIA MFG. CO., INC.
RI	Kent	44003	AIR3094	1	1	10300504	0.00		0.4200	0.0000	0.0012	SECURITY CLEANSERS, INC.
RI	Kent	44003	AIR3247	1	1	10200602	55.00	SCC Descriptio	0.6515	0.0000	0.0018	COSMED OF RHODE ISLAND
RI	Kent	44003	AIR3250	1	1	10200602	55.00	SCC Descriptio	6.5130	0.0000	0.0176	IMMUNEX RI CORP, A SUSIDIARY OF AMGEN INC
RI	Kent	44003	AIR3663	1	1	10200402	55.00	SCC Descriptio	2.6275	0.0000	0.0072	NATCO PRODUCTS CORPORATION (B)
RI	Kent	44003	AIR3664	2	2	10200402	55.00	SCC Descriptio	0.7650	0.0000	0.0021	NATCO PRODUCTS CORPORATION
RI	Kent	44003	AIR3665	3	3	10200602	55.00	SCC Descriptio	0.2150	0.0000	0.0006	NATCO PRODUCTS CORPORATION (L)
RI	Kent	44003	AIR40	1	1	10200602	55.00	SCC Descriptio	0.3590	0.0000	0.0010	ADVANCED CHEMICAL CO.
RI	Kent	44003	AIR459	1	1	10200602	55.00	SCC Descriptio	0.2010	0.0000	0.0005	PERKINELMER INC.
RI	Kent	44003	AIR467	1	1	10200602	55.00	SCC Descriptio	0.0835	0.0000	0.0002	VISHAY ELECTRO-FILMS, INC.
RI	Kent	44003	AIR581	1	1	10200602	55.00	SCC Descriptio	0.0590	0.0000	0.0002	GARLAND INDUSTRIES, INC.
RI	Kent	44003	AIR588	1	1	10200602	55.00	SCC Descriptio	0.0152	0.0000	0.0000	GEIB REFINING
RI	Kent	44003	AIR634	1	1	10200601	150.00	SCC Descriptio	0.3555	0.0000	0.0010	GTECH CORPORATION
RI	Kent	44003	AIR684	1	1	10200402	55.00	SCC Descriptio	2.0395	0.0000	0.0056	CLARIANT CORPORATION
RI	Kent	44003	AIR684	2	2	10200602	55.00	SCC Descriptio	13.1675	0.0000	0.0356	CLARIANT CORPORATION
RI	Kent	44003	AIR696	1	1	10200504	0.00		0.7910	0.0000	0.0022	HOPE VALLEY DYEING CORPORATION
RI	Kent	44003	AIR817	1	1	10200402	55.00	SCC Descriptio	1.8500	0.0000	0.0051	KENNEY MANUFACTURING CO.
RI	Kent	44003	AIR817	2	2	10200602	55.00	SCC Descriptio	0.0435	0.0000	0.0001	KENNEY MANUFACTURING CO.
RI	Kent	44003	AIR822	1	1	10200402	55.00	SCC Descriptio	12.2890	0.0000	0.0338	KENT COUNTY MEMORIAL HOSPITAL
RI	Kent	44003	AIR822	2	2	10300602	55.00	SCC Descriptio	0.0130	0.0000	0.0000	KENT COUNTY MEMORIAL HOSPITAL

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RI	Kent	44003	AIR970	1	1	10200502	55.00	SCC Descriptio	0.0670	0.0000	0.0002	MERECO DIVISION
RI	Newport	44005	AIR1044	1	1	10300501	92.50	TITLE V PERM	8.5420	0.0000	0.0228	NAVAL STATION NEWPORT,CODE N8N
RI	Newport	44005	AIR1044	2	2	10300504	92.50	TITLE V PERM	8.3245	0.0000	0.0229	NAVAL STATION NEWPORT,CODE N8N
RI	Newport	44005	AIR1044	3	3	10300602	92.50	TITLE V PERM	24.1455	0.0000	0.0597	NAVAL STATION NEWPORT,CODE N8N
RI	Newport	44005	AIR1075	1	1	10300502	55.00	SCC Descriptio	3.7635	0.0000	0.0103	NEWPORT HOSPITAL
RI	Newport	44005	AIR1075	2	2	10300602	55.00	SCC Descriptio	1.5840	0.0000	0.0039	NEWPORT HOSPITAL
RI	Newport	44005	AIR1271	1	1	10200402	55.00	SCC Descriptio	0.4355	0.0000	0.0012	RAYTHEON COMPANY
RI	Newport	44005	AIR1271	2	2	10200502	55.00	SCC Descriptio	0.7325	0.0000	0.0020	RAYTHEON COMPANY
RI	Newport	44005	AIR1271	3	3	10200602	55.00	SCC Descriptio	0.5295	0.0000	0.0014	RAYTHEON COMPANY
RI	Newport	44005	AIR1349	1	1	10300502	55.00	SCC Descriptio	0.3353	0.0000	0.0009	SALVE REGINA UNIVERSITY
RI	Newport	44005	AIR1349	2	2	10300602	55.00	SCC Descriptio	2.7508	0.0000	0.0068	SALVE REGINA UNIVERSITY
RI	Newport	44005	AIR3135	1	1	10200502	55.00	SCC Descriptio	0.3840	0.0000	0.0011	NEW ENGLAND BOATWORKS INC.
RI	Newport	44005	AIR3274	1	1	10201002	0.00		0.0715	0.0000	0.0002	NAVAL UNDERSEA WARFARE CENTER
RI	Providence	44007	AIR100	1	1	10200602	55.00	SCC Descriptio	1.5140	0.0000	0.0041	ARKWRIGHT, INC.
RI	Providence	44007	AIR1009	1	1	10200502	55.00	SCC Descriptio	0.3320	0.0000	0.0009	MONARCH METAL FINISHING CO., INC.
RI	Providence	44007	AIR1013	1	1	10200502	55.00	SCC Descriptio	0.0500	0.0000	0.0001	MOODY MACHINE PRODUCTS
RI	Providence	44007	AIR1023	1	1	10200402	55.00	SCC Descriptio	1.5540	0.0000	0.0043	MURDOCK WEBBING COMPANY, INC.
RI	Providence	44007	AIR1023	2	2	10200602	55.00	SCC Descriptio	0.6425	0.0000	0.0017	MURDOCK WEBBING COMPANY, INC.
RI	Providence	44007	AIR1028	1	1	10300501	0.00		0.1990	0.0000	0.0005	NARRAGANSETT BAY COMMISSION FIELDS POINT
RI	Providence	44007	AIR104	1	1	10200402	55.00	SCC Descriptio	0.7690	0.0000	0.0021	ARMBRUST INTERNATIONAL
RI	Providence	44007	AIR104	2	2	10200602	55.00	SCC Descriptio	0.2350	0.0000	0.0006	ARMBRUST INTERNATIONAL
RI	Providence	44007	AIR1043	1	1	10200502	55.00	SCC Descriptio	0.3145	0.0000	0.0009	NATIONAL PLATING LLC
RI	Providence	44007	AIR1054	1	1	10200502	55.00	SCC Descriptio	0.0160	0.0000	0.0000	HONEYWELL
RI	Providence	44007	AIR1094	1	1	10200402	55.00	SCC Descriptio	1.9350	0.0000	0.0053	NORTH SAFETY PRODUCTS
RI	Providence	44007	AIR1094	2	2	10201002	0.00		0.0970	0.0000	0.0003	NORTH SAFETY PRODUCTS
RI	Providence	44007	AIR1103	1	1	10200502	55.00	SCC Descriptio	0.0440	0.0000	0.0001	NORTHERN PRODUCTS, INC.
RI	Providence	44007	AIR1109	1	1	10200504	0.00		0.1400	0.0000	0.0004	NULCO MFG. CO.
RI	Providence	44007	AIR1109	2	2	10200602	55.00	SCC Descriptio	0.1810	0.0000	0.0005	NULCO MFG. CO.
RI	Providence	44007	AIR1110	1	1	10200502	55.00	SCC Descriptio	0.0270	0.0000	0.0001	NU-LUSTRE CORPORATION
RI	Providence	44007	AIR1112	1	1	10200402	55.00	SCC Descriptio	3.5025	0.0000	0.0096	HUHTAMAKI - EAST PROVIDENCE (OOB)
RI	Providence	44007	AIR1112	2	2	10200602	55.00	SCC Descriptio	0.2500	0.0000	0.0007	HUHTAMAKI - EAST PROVIDENCE (OOB)
RI	Providence	44007	AIR1148	1	1	10200602	55.00	SCC Descriptio	0.0050	0.0000	0.0000	PARAMOUNT JEWELRY MANUFACTURING
RI	Providence	44007	AIR1151	1	1	10200502	55.00	SCC Descriptio	0.0790	0.0000	0.0002	PARKER MANUFACTURING
RI	Providence	44007	AIR1157	1	1	10200502	55.00	SCC Descriptio	0.0085	0.0000	0.0000	PATTON-MACGUYER INC.
RI	Providence	44007	AIR1177	1	1	10200402	55.00	SCC Descriptio	5.3835	0.0000	0.0148	CCL CUSTOM MFG
RI	Providence	44007	AIR1177	2	2	10200602	55.00	SCC Descriptio	2.7260	0.0000	0.0074	CCL CUSTOM MFG
RI	Providence	44007	AIR1183	1	1	10200502	55.00	SCC Descriptio	0.0790	0.0000	0.0002	PILGRIM SCREW CORPORATION
RI	Providence	44007	AIR1183	2	2	10200602	55.00	SCC Descriptio	0.0140	0.0000	0.0000	PILGRIM SCREW CORPORATION
RI	Providence	44007	AIR1195	1	1	10200602	55.00	SCC Descriptio	0.1485	0.0000	0.0004	POLYTOP CORPORATION
RI	Providence	44007	AIR12	1	1	10200502	55.00	SCC Descriptio	0.0490	0.0000	0.0001	A. HARRISON & CO., INC.
RI	Providence	44007	AIR12	2	2	10201002	0.00		0.0815	0.0000	0.0002	A. HARRISON & CO., INC.
RI	Providence	44007	AIR1201	1	1	10200602	55.00	SCC Descriptio	0.0820	0.0000	0.0002	PRECISION ART COORDINATORS INC.
RI	Providence	44007	AIR1221	1	1	10200502	55.00	SCC Descriptio	0.1090	0.0000	0.0003	PROVIDENCE CHAIN CO.
RI	Providence	44007	AIR1223	1	1	10300402	55.00	SCC Descriptio	14.7240	0.0000	0.0405	PROVIDENCE COLLEGE OFFICE OF ENVIR. HEALTH/SAFETY
RI	Providence	44007	AIR1223	2	2	10300602	55.00	SCC Descriptio	4.6900	0.0000	0.0116	PROVIDENCE COLLEGE OFFICE OF ENVIR. HEALTH/SAFETY
RI	Providence	44007	AIR1225	1	1	10200502	55.00	SCC Descriptio	0.0150	0.0000	0.0000	PROVIDENCE ELECTROPLATING WORKS, INC.
RI	Providence	44007	AIR1228	1	1	10300602	55.00	SCC Descriptio	0.0335	0.0000	0.0001	PROVIDENCE HOUSING AUTH. (HARTFORD PARK)
RI	Providence	44007	AIR1229	1	1	10200402	55.00	SCC Descriptio	0.5485	0.0000	0.0015	PROVIDENCE JOURNAL (FOUNTAIN STREET)
RI	Providence	44007	AIR1229	2	2	10200602	55.00	SCC Descriptio	0.4240	0.0000	0.0011	PROVIDENCE JOURNAL (FOUNTAIN STREET)
RI	Providence	44007	AIR1230	1	1	10200401	55.00	SCC Descriptio	9.6800	0.0250	0.0250	PROVIDENCE METALLIZING CO., INC.
RI	Providence	44007	AIR1237	1	1	10200402	55.00	SCC Descriptio	0.0180	0.0000	0.0000	QUALITY SPRAYING TECHNOLOGIES
RI	Providence	44007	AIR1242	1	1	10200602	55.00	SCC Descriptio	1.4793	0.0000	0.0040	VICTORIA & CO.LTD

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RI	Providence	44007	AIR1245	1	1	10300402	55.00	SCC Descriptio	16.5640	0.0000	0.0455	R.I. SCHOOL OF DESIGN
RI	Providence	44007	AIR1245	2	2	10300502	55.00	SCC Descriptio	0.7355	0.0000	0.0020	R.I. SCHOOL OF DESIGN
RI	Providence	44007	AIR1245	3	3	10300602	55.00	SCC Descriptio	2.0025	0.0000	0.0050	R.I. SCHOOL OF DESIGN
RI	Providence	44007	AIR1247	1	1	10200502	55.00	SCC Descriptio	0.1640	0.0000	0.0005	R.E. STURDY CO.
RI	Providence	44007	AIR1248	1	1	10300401	55.00	TITLE V PERM	11.5400	0.0000	0.0317	R.I. CENTRAL POWER PLANT/CONTIGUOUS PROP
RI	Providence	44007	AIR1248	2	2	10300501	16.20	TITLE V PERM	36.3640	0.8975	0.8975	R.I. CENTRAL POWER PLANT/CONTIGUOUS PROP
RI	Providence	44007	AIR1248	3	3	10300601	16.20	TITLE V PERM	120.0110	0.0000	0.3244	R.I. CENTRAL POWER PLANT/CONTIGUOUS PROP
RI	Providence	44007	AIR1266	1	1	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	R & R POLISHING CO. INC.
RI	Providence	44007	AIR1274	1	1	10200504	55.00	SCC Descriptio	0.6135	0.0000	0.0017	REGAL PLATING CO. INC.
RI	Providence	44007	AIR1283	1	1	10300401	55.00	TITLE V PERM	230.3250	0.0000	0.6328	RHODE ISLAND HOSPITAL
RI	Providence	44007	AIR1283	2	2	10300602	80.40	TITLE V PERM	10.9390	0.0000	0.0270	RHODE ISLAND HOSPITAL
RI	Providence	44007	AIR13	1	1	10200602	55.00	SCC Descriptio	1.1210	0.0000	0.0030	A.T. CROSS COMPANY
RI	Providence	44007	AIR1305	1	1	10200602	55.00	SCC Descriptio	0.4135	0.0000	0.0011	RIBCO MFG. INC. (PROVIDENCE)
RI	Providence	44007	AIR1322	1	1	10300402	55.00	SCC Descriptio	16.5995	0.0000	0.0456	ROGER WILLIAMS HOSPITAL & MEDICAL CENTER
RI	Providence	44007	AIR1322	2	2	10300602	55.00	SCC Descriptio	0.2415	0.0000	0.0006	ROGER WILLIAMS HOSPITAL & MEDICAL CENTER
RI	Providence	44007	AIR1335	1	1	10200402	55.00	SCC Descriptio	10.1235	0.0000	0.0278	AMERICAN INSULATED WIRE CORP.- DARLINGTON
RI	Providence	44007	AIR1335	2	2	10200602	55.00	SCC Descriptio	0.2800	0.0000	0.0008	AMERICAN INSULATED WIRE CORP.- DARLINGTON
RI	Providence	44007	AIR1347	1	1	10200502	55.00	SCC Descriptio	0.0725	0.0000	0.0002	REX REALTY
RI	Providence	44007	AIR1347	2	2	10200602	55.00	SCC Descriptio	0.0180	0.0000	0.0000	REX REALTY
RI	Providence	44007	AIR1359	1	1	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	SARDELLI INTERNATIONAL
RI	Providence	44007	AIR1369	1	1	10200502	55.00	SCC Descriptio	0.0550	0.0000	0.0002	SCOTT'S PLATING
RI	Providence	44007	AIR1384	1	1	10200502	55.00	SCC Descriptio	0.0500	0.0000	0.0001	BLACKHAWK MACHINE PROD.
RI	Providence	44007	AIR1395	1	1	10200402	55.00	SCC Descriptio	14.9745	0.0000	0.0411	SLATER DYE WORKS & SLATER SCREEN PRINT
RI	Providence	44007	AIR1395	2	2	10200602	55.00	SCC Descriptio	0.8470	0.0000	0.0023	SLATER DYE WORKS & SLATER SCREEN PRINT
RI	Providence	44007	AIR141	1	1	10200602	55.00	SCC Descriptio	0.6285	0.0000	0.0017	B.A. BALLOU & CO. INC.
RI	Providence	44007	AIR1410	1	1	10200502	55.00	SCC Descriptio	0.0360	0.0000	0.0001	SPECTRUM COATINGS LABORATORIES, INC.
RI	Providence	44007	AIR1416	1	1	10200502	55.00	SCC Descriptio	0.1905	0.0000	0.0005	SPENCER PLATING CO.
RI	Providence	44007	AIR1426	1	1	10300402	55.00	SCC Descriptio	11.7600	0.0000	0.0323	ST. JOSEPH HOSPITAL/FATIMA UNIT
RI	Providence	44007	AIR1426	2	2	10300602	55.00	SCC Descriptio	0.6820	0.0000	0.0017	ST. JOSEPH HOSPITAL/FATIMA UNIT
RI	Providence	44007	AIR1427	1	1	10300402	55.00	SCC Descriptio	9.7015	0.0000	0.0267	ST. JOSEPH HOSPITAL/PROVIDENCE UNIT
RI	Providence	44007	AIR1432	1	1	10200502	55.00	SCC Descriptio	0.0690	0.0000	0.0002	STACKBIN CORP.
RI	Providence	44007	AIR1478	1	1	10200602	55.00	SCC Descriptio	0.3000	0.0000	0.0008	TACO INC.
RI	Providence	44007	AIR1482	1	1	10200502	55.00	SCC Descriptio	0.1312	0.0000	0.0004	TANURY INDUSTRIES
RI	Providence	44007	AIR1483	1	1	10200602	55.00	SCC Descriptio	0.1370	0.0000	0.0004	TANYA CREATIONS, INC.
RI	Providence	44007	AIR1489	1	1	10200504	0.00		1.0095	0.0000	0.0028	PORTOLA TECH INTERNATIONAL
RI	Providence	44007	AIR1492	1	1	10200602	55.00	SCC Descriptio	0.2266	0.0000	0.0006	TECHNIC INC.
RI	Providence	44007	AIR1495	1	1	10200602	55.00	SCC Descriptio	0.4621	0.0000	0.0012	TECHNICAL MATERIALS, INC.
RI	Providence	44007	AIR1498	1	1	10200502	55.00	SCC Descriptio	0.1150	0.0000	0.0003	TECHNODIC, INC.
RI	Providence	44007	AIR1504	1	1	10200502	55.00	SCC Descriptio	0.0590	0.0000	0.0002	TERCAT TOOL & DIE CO.
RI	Providence	44007	AIR1506	1	1	10200401	0.00		0.1305	0.0000	0.0004	MOTIVA ENTERPRISES LLC.
RI	Providence	44007	AIR1514	1	1	10300402	55.00	SCC Descriptio	20.1760	0.0000	0.0554	MIRIAM HOSPITAL
RI	Providence	44007	AIR1516	1	1	10200602	55.00	SCC Descriptio	0.2100	0.0000	0.0006	OKONITE COMPANY PLANT # 6
RI	Providence	44007	AIR1518	1	1	10200402	55.00	SCC Descriptio	6.2280	0.0000	0.0171	LANDMARK MEDICAL CENTER WOONSOCKET UNIT
RI	Providence	44007	AIR1518	2	2	10200602	55.00	SCC Descriptio	0.8200	0.0000	0.0022	LANDMARK MEDICAL CENTER WOONSOCKET UNIT
RI	Providence	44007	AIR152	1	1	10200502	55.00	SCC Descriptio	0.0545	0.0000	0.0001	BEAUCRAFT, INC.
RI	Providence	44007	AIR1526	1	1	10200502	55.00	SCC Descriptio	0.0470	0.0000	0.0001	TIME PLATING CO.
RI	Providence	44007	AIR1526	2	2	10200602	55.00	SCC Descriptio	0.0490	0.0000	0.0001	TIME PLATING CO.
RI	Providence	44007	AIR1541	1	1	10200502	55.00	SCC Descriptio	0.0525	0.0000	0.0001	PROVIDENCE JOURNAL
RI	Providence	44007	AIR1541	2	2	10200602	55.00	SCC Descriptio	0.7450	0.0000	0.0020	PROVIDENCE JOURNAL
RI	Providence	44007	AIR1547	1	1	10200502	55.00	SCC Descriptio	1.0675	0.0000	0.0029	PACIFIC ANCHOR
RI	Providence	44007	AIR1547	2	2	10200602	55.00	SCC Descriptio	0.0990	0.0000	0.0003	PACIFIC ANCHOR
RI	Providence	44007	AIR1548	1	1	10200504	0.00		0.4950	0.0000	0.0014	TRUEX INC.

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RI	Providence	44007	AIR1567	1	1	10200401	0.00		0.9360	0.0000	0.0026	UNION INDUSTRIES, INC.
RI	Providence	44007	AIR1569	1	1	10200402	55.00	SCC Descriptio	12.0435	0.0000	0.0331	UNION WADDING CO.
RI	Providence	44007	AIR1570	1	1	10200502	55.00	SCC Descriptio	0.2696	0.0000	0.0007	UNIQUE PLATING COMPANY
RI	Providence	44007	AIR1605	1	1	10300502	55.00	SCC Descriptio	0.3270	0.0000	0.0009	VETERANS ADM. MEDICAL CENTER
RI	Providence	44007	AIR1605	2	2	10300602	55.00	SCC Descriptio	3.9825	0.0000	0.0098	VETERANS ADM. MEDICAL CENTER
RI	Providence	44007	AIR1612	1	1	10200504	12.60	TITLE V PERM	1.5870	0.0000	0.0044	VICTORY FINISHING TECHNOLOGIES, INC.
RI	Providence	44007	AIR1660	1	1	10200502	55.00	SCC Descriptio	0.0507	0.0000	0.0001	WHITTET-HIGGINS CO.
RI	Providence	44007	AIR1675	1	1	10200502	55.00	SCC Descriptio	0.1600	0.0000	0.0004	WOONSOCKET CALL, THE
RI	Providence	44007	AIR1680	1	1	10300401	0.00		13.0020	0.0000	0.0357	ZAMBARANO MEMORIAL HOSPITAL
RI	Providence	44007	AIR1689	1	1	10200502	55.00	SCC Descriptio	0.0495	0.0000	0.0001	ORGANIC DYESTUFFS CORPORATION
RI	Providence	44007	AIR1694	1	1	10200602	55.00	SCC Descriptio	0.1650	0.0000	0.0004	JOHN CRANE SEALOL,INC.(CRANSTON)
RI	Providence	44007	AIR1699	1	1	10200602	55.00	SCC Descriptio	0.1240	0.0000	0.0003	M.H. STALLMAN
RI	Providence	44007	AIR1742	1	1	10200502	55.00	SCC Descriptio	0.0365	0.0000	0.0001	SCOPE DISPLAY & BOX CO., INC.
RI	Providence	44007	AIR1801	1	1	10200502	55.00	SCC Descriptio	0.6930	0.0000	0.0019	PARAMOUNT CARDS, INC.
RI	Providence	44007	AIR1801	2	2	10200602	55.00	SCC Descriptio	0.5495	0.0000	0.0015	PARAMOUNT CARDS, INC.
RI	Providence	44007	AIR1815	1	1	10200602	55.00	SCC Descriptio	1.1645	0.0000	0.0031	FLOCK TEX, INC.
RI	Providence	44007	AIR1838	1	1	10200602	55.00	SCC Descriptio	0.0585	0.0000	0.0002	MEL-CO-ED INC.
RI	Providence	44007	AIR1848	1	1	10200502	55.00	SCC Descriptio	0.3575	0.0000	0.0010	METECH INTERNATIONAL INC.
RI	Providence	44007	AIR1848	2	2	10201002	0.00		0.0895	0.0000	0.0002	METECH INTERNATIONAL INC.
RI	Providence	44007	AIR1849	1	1	10200502	55.00	SCC Descriptio	0.2980	0.0000	0.0008	C.N.C. INTERNATIONAL, LP
RI	Providence	44007	AIR1850	1	1	10200502	55.00	SCC Descriptio	0.2210	0.0000	0.0006	TRI-JAY CO. INC.
RI	Providence	44007	AIR1851	1	1	10200502	55.00	SCC Descriptio	1.4680	0.0000	0.0040	INDUPLATE
RI	Providence	44007	AIR1858	1	1	10200504	0.00		0.5000	0.0000	0.0014	LANDMARK MEDICAL CENTER
RI	Providence	44007	AIR1865	1	1	10200504	0.00		0.9975	0.0000	0.0027	VITRUS, A DIVISION OF ENERGY INC.
RI	Providence	44007	AIR1865	2	2	10200602	55.00	SCC Descriptio	0.0764	0.0000	0.0002	VITRUS, A DIVISION OF ENERGY INC.
RI	Providence	44007	AIR187	1	1	10300401	111.80	TITLE V PERM	72.3600	0.0000	0.1988	BROWN UNIVERSITY
RI	Providence	44007	AIR187	2	2	10300501	111.80	TITLE V PERM	0.3095	0.0000	0.0008	BROWN UNIVERSITY
RI	Providence	44007	AIR187	3	3	10300601	111.80	TITLE V PERM	3.8320	0.0000	0.0104	BROWN UNIVERSITY
RI	Providence	44007	AIR188	1	1	10200502	55.00	SCC Descriptio	0.1995	0.0000	0.0005	BRUIN PLASTICS CO.
RI	Providence	44007	AIR197	1	1	10300402	55.00	SCC Descriptio	4.7341	0.0000	0.0130	BUTLER HOSPITAL
RI	Providence	44007	AIR1979	1	1	10300602	55.00	TITLE V PERM	1.0700	0.0000	0.0026	CRANSTON WCF
RI	Providence	44007	AIR1982	1	1	10200602	55.00	SCC Descriptio	0.7812	0.0000	0.0021	HANORA SPINNING INC.
RI	Providence	44007	AIR200	1	1	10200502	55.00	SCC Descriptio	0.1000	0.0000	0.0003	C J FOX COMPANY
RI	Providence	44007	AIR203	1	1	10300504	0.00		2.8543	0.0000	0.0078	SPRAGUE ENERGY CORP.
RI	Providence	44007	AIR214	1	1	10200502	55.00	SCC Descriptio	0.1011	0.0000	0.0003	CALCO PLATING COMPANY
RI	Providence	44007	AIR217	1	1	10200502	55.00	SCC Descriptio	0.1585	0.0000	0.0004	CANNON AND BROWN/SURFACE COATING DIV.
RI	Providence	44007	AIR22	1	1	10200502	55.00	SCC Descriptio	0.4360	0.0000	0.0012	AAFCO INC.
RI	Providence	44007	AIR22	2	2	10200602	55.00	SCC Descriptio	0.0310	0.0000	0.0001	AAFCO INC.
RI	Providence	44007	AIR2251	1	1	10200502	55.00	SCC Descriptio	0.0390	0.0000	0.0001	CONSOLIDATED CONCRETE
RI	Providence	44007	AIR2251	2	2	10200602	55.00	SCC Descriptio	0.1620	0.0000	0.0004	CONSOLIDATED CONCRETE
RI	Providence	44007	AIR228	1	1	10200402	55.00	SCC Descriptio	5.2525	0.0000	0.0144	GENERAL CABLE INDUSTRIES, LLC
RI	Providence	44007	AIR228	2	2	10200602	55.00	SCC Descriptio	2.7560	0.0000	0.0075	GENERAL CABLE INDUSTRIES, LLC
RI	Providence	44007	AIR235	1	1	10200502	55.00	SCC Descriptio	0.0570	0.0000	0.0002	CATHEDRAL ART METAL CO., INC.
RI	Providence	44007	AIR235	2	2	10200602	55.00	SCC Descriptio	0.2445	0.0000	0.0007	CATHEDRAL ART METAL CO., INC.
RI	Providence	44007	AIR2394	1	1	10300602	55.00	SCC Descriptio	0.2660	0.0000	0.0007	EMMA PENDLETON BRADLEY HOSPITAL
RI	Providence	44007	AIR245	1	1	10200502	55.00	SCC Descriptio	0.0719	0.0000	0.0002	CENTRAL TOOLS, INC.
RI	Providence	44007	AIR2470	1	1	10200602	55.00	SCC Descriptio	0.0779	0.0000	0.0002	GRIPNAIL CORPORATION
RI	Providence	44007	AIR249	1	1	10200602	55.00	SCC Descriptio	0.1812	0.0000	0.0005	CHARISMA MANUFACTURING CO.
RI	Providence	44007	AIR2511	1	1	10200502	55.00	SCC Descriptio	0.6895	0.0000	0.0019	HOMESTEAD BAKING CO.
RI	Providence	44007	AIR253	1	1	10200602	55.00	SCC Descriptio	0.2020	0.0000	0.0005	CHEMART COMPANY
RI	Providence	44007	AIR2536	1	1	10200504	55.00	SCC Descriptio	1.4600	0.0000	0.0040	INTERNATIONAL PACKAGING CORP.
RI	Providence	44007	AIR2567	1	1	10300402	55.00	SCC Descriptio	2.1938	0.0000	0.0060	LICHT PROPERTIES

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RI	Providence	44007	AIR2583	1	1	10200402	55.00	SCC Descriptio	2.3393	0.0000	0.0064	KEY CONTAINER CORP.
RI	Providence	44007	AIR26	1	1	10200602	55.00	SCC Descriptio	0.0008	0.0000	0.0000	ACCENT PLATING CO. INC.
RI	Providence	44007	AIR269	1	1	10200502	55.00	SCC Descriptio	0.0995	0.0000	0.0003	CLAYTON COMPANY
RI	Providence	44007	AIR279	1	1	10200602	55.00	SCC Descriptio	0.3023	0.0000	0.0008	CENTRAL SOYA COMPANY
RI	Providence	44007	AIR280	1	1	10200602	55.00	SCC Descriptio	0.1095	0.0000	0.0003	PARK LANE ASSOCIATES, INC.
RI	Providence	44007	AIR2858	1	1	10200502	3.40	TITLE V PERM	0.6590	0.0000	0.0018	R.I. TEXTILE CO.
RI	Providence	44007	AIR2874	1	1	10200602	55.00	SCC Descriptio	0.0430	0.0000	0.0001	E & M ENTERPRISES LTD
RI	Providence	44007	AIR2886	1	1	10200502	55.00	SCC Descriptio	0.0050	0.0000	0.0000	B & E METAL FINISHING, INC.
RI	Providence	44007	AIR2898	1	1	10200402	55.00	SCC Descriptio	2.4120	0.0000	0.0066	PROVIDENCE BRAID COMPANY
RI	Providence	44007	AIR2904	1	1	10200402	55.00	SCC Descriptio	0.5474	0.0000	0.0015	HINDLEY MANUFACTURING CO., INC.
RI	Providence	44007	AIR2904	2	2	10200504	0.00		0.7188	0.0000	0.0020	HINDLEY MANUFACTURING CO., INC.
RI	Providence	44007	AIR2905	1	1	10200502	55.00	SCC Descriptio	0.2200	0.0000	0.0006	STANDARD NUT & BOLT COMPANY
RI	Providence	44007	AIR3	1	1	10200602	55.00	SCC Descriptio	0.1400	0.0000	0.0004	A & F PLATING COMPANY
RI	Providence	44007	AIR3000	1	1	10200602	55.00	SCC Descriptio	2.9130	0.0000	0.0079	PAWTUCKET POWER ASSOCIATES
RI	Providence	44007	AIR301	1	1	10200504	55.00	SCC Descriptio	0.1275	0.0000	0.0004	CONRAD-JARVIS CORP.
RI	Providence	44007	AIR3044	1	1	10200402	55.00	SCC Descriptio	5.6266	0.0000	0.0155	JUST-A-STRETCH OF RI, INC.
RI	Providence	44007	AIR305	1	1	10200602	55.00	SCC Descriptio	0.0710	0.0000	0.0002	CONTRACT SPECIALITIES
RI	Providence	44007	AIR3058	1	1	10200602	55.00	SCC Descriptio	0.1260	0.0000	0.0003	GLENCAIRN MFG. CO
RI	Providence	44007	AIR3063	1	1	10200502	55.00	SCC Descriptio	0.6375	0.0000	0.0018	ARCH SPECIALTY CHEMICALS, INC.
RI	Providence	44007	AIR3063	2	2	10200602	55.00	SCC Descriptio	0.8460	0.0000	0.0023	ARCH SPECIALTY CHEMICALS, INC.
RI	Providence	44007	AIR3095	1	1	10300502	55.00	SCC Descriptio	0.0800	0.0000	0.0002	DEXTER CLEANSERS
RI	Providence	44007	AIR3099	1	1	10300502	55.00	SCC Descriptio	0.1011	0.0000	0.0003	RIVERSIDE CLEANSERS
RI	Providence	44007	AIR3101	1	1	10200502	55.00	SCC Descriptio	0.0585	0.0000	0.0002	B & D PLASTICS, INC.
RI	Providence	44007	AIR3140	1	1	10200602	55.00	SCC Descriptio	0.1225	0.0000	0.0003	EMBLEM & BADGE, INC.
RI	Providence	44007	AIR3141	1	1	10200602	55.00	SCC Descriptio	0.0218	0.0000	0.0001	GA-REL MFG. CO., INC.
RI	Providence	44007	AIR3151	1	1	10200502	55.00	SCC Descriptio	0.0730	0.0000	0.0002	EAGLE TOOL INC.
RI	Providence	44007	AIR3157	1	1	10200602	55.00	SCC Descriptio	0.0240	0.0000	0.0001	HAMILTON TOOL, INC.
RI	Providence	44007	AIR3168	1	1	10200502	55.00	SCC Descriptio	0.0930	0.0000	0.0003	SALVADORE TOOL & FINDINGS INC.
RI	Providence	44007	AIR321	1	1	10200502	55.00	SCC Descriptio	0.3936	0.0000	0.0011	CRANSTON PRINT WORKS CO. (BOILER)
RI	Providence	44007	AIR321	2	2	10200602	55.00	SCC Descriptio	0.8574	0.0000	0.0023	CRANSTON PRINT WORKS CO. (BOILER)
RI	Providence	44007	AIR3246	1	1	10200502	55.00	SCC Descriptio	0.6500	0.0000	0.0018	HOMESTEAD COMPANY
RI	Providence	44007	AIR3249	1	1	10300502	55.00	SCC Descriptio	1.5800	0.0000	0.0043	CENTRAL/CLASSICAL HEATING PLANT
RI	Providence	44007	AIR325	1	1	10200602	55.00	SCC Descriptio	0.0007	0.0000	0.0000	CREST MANUFACTURING CO.
RI	Providence	44007	AIR3264	1	1	10200602	55.00	SCC Descriptio	0.0410	0.0000	0.0001	SANFORD WHITE CO., INC.
RI	Providence	44007	AIR3269	1	1	10300501	55.00	SCC Descriptio	0.1800	0.0000	0.0005	WOONSOCKET WWTF
RI	Providence	44007	AIR3271	1	1	10200602	55.00	SCC Descriptio	0.1605	0.0000	0.0004	POLY-FLEX CIRCUITS
RI	Providence	44007	AIR3277	1	1	10200602	55.00	SCC Descriptio	0.0250	0.0000	0.0001	MUTUAL METALS, INC.
RI	Providence	44007	AIR3280	1	1	10200502	55.00	SCC Descriptio	0.2840	0.0000	0.0008	BRYANT COLLEGE PHYSICAL PLNT &SCIENCE DE
RI	Providence	44007	AIR3280	2	2	10200602	55.00	SCC Descriptio	2.9455	0.0000	0.0080	BRYANT COLLEGE PHYSICAL PLNT &SCIENCE DE
RI	Providence	44007	AIR3282	1	1	10200502	55.00	SCC Descriptio	0.3115	0.0000	0.0009	JOHNSON & WALES UNIVERSITY
RI	Providence	44007	AIR3282	2	2	10300602	55.00	SCC Descriptio	3.2385	0.0000	0.0080	JOHNSON & WALES UNIVERSITY
RI	Providence	44007	AIR3296	1	1	10200502	55.00	SCC Descriptio	0.2560	0.0000	0.0007	TEKNOR COLOR COMPANY
RI	Providence	44007	AIR3296	2	2	10200602	55.00	SCC Descriptio	0.0110	0.0000	0.0000	TEKNOR COLOR COMPANY
RI	Providence	44007	AIR33	1	1	10200402	55.00	SCC Descriptio	4.8265	0.0000	0.0133	ACS INDUSTRIES, INC.
RI	Providence	44007	AIR33	2	2	10200502	55.00	SCC Descriptio	0.1180	0.0000	0.0003	ACS INDUSTRIES, INC.
RI	Providence	44007	AIR3306	1	1	10300602	55.00	SCC Descriptio	0.0419	0.0000	0.0001	TURKS HEAD
RI	Providence	44007	AIR3308	1	1	10300602	55.00	SCC Descriptio	0.6123	0.0000	0.0015	DUNKIN DONUTS CENTER PROVIDENCE
RI	Providence	44007	AIR3310	1	1	10300602	55.00	SCC Descriptio	0.4746	0.0000	0.0012	CITIZENS TRUST COMPANY
RI	Providence	44007	AIR3313	1	1	10300402	55.00	SCC Descriptio	3.7500	0.0000	0.0103	JILL REALTY TRUST
RI	Providence	44007	AIR3314	1	1	10300402	55.00	SCC Descriptio	9.7400	0.0000	0.0268	FALVEY LINEN SUPPLY INC.
RI	Providence	44007	AIR3315	1	1	10200402	55.00	SCC Descriptio	2.1460	0.0000	0.0059	SLATER DYE WORKS CUMBERLAND
RI	Providence	44007	AIR3320	1	1	10200502	55.00	SCC Descriptio	0.1352	0.0000	0.0004	REFINING ONE INC.

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RI	Providence	44007	AIR3326	1	1	10300402	55.00	SCC Descriptio	5.2500	0.0000	0.0144	PROVIDENCE HOUSING AUTH. (MANTON HEIGHT)
RI	Providence	44007	AIR3328	1	1	10300602	55.00	SCC Descriptio	0.0074	0.0000	0.0000	PROVIDENCE HOUSING AUTH. (DEXTER MANOR I)
RI	Providence	44007	AIR3329	1	1	10300602	55.00	SCC Descriptio	0.0230	0.0000	0.0001	PROVIDENCE HOUSING AUTH. (CHAD BROWN)
RI	Providence	44007	AIR3330	1	1	10300602	55.00	SCC Descriptio	0.0051	0.0000	0.0000	PROVIDENCE HOUSING AUTH. (DOMINICA MANOR)
RI	Providence	44007	AIR3333	1	1	10300502	55.00	SCC Descriptio	1.2656	0.0000	0.0035	BRANCH RIVER INDUSTRIAL PARK
RI	Providence	44007	AIR3338	1	1	10300402	55.00	SCC Descriptio	1.8182	0.0000	0.0050	DIOCESE OF PROVIDENCE
RI	Providence	44007	AIR3339	1	1	10200402	55.00	SCC Descriptio	4.9545	0.0000	0.0136	ARMORY REVIVAL CO.
RI	Providence	44007	AIR3342	1	1	10300402	55.00	SCC Descriptio	7.5375	0.0000	0.0207	FLEET BANK
RI	Providence	44007	AIR3344	1	1	10300402	55.00	SCC Descriptio	6.0375	0.0000	0.0166	FOUR DEE REALTY
RI	Providence	44007	AIR3344	2	2	10300602	55.00	SCC Descriptio	0.0456	0.0000	0.0001	FOUR DEE REALTY
RI	Providence	44007	AIR3346	1	1	10300602	55.00	SCC Descriptio	0.6413	0.0000	0.0016	LASALLE ACADEMY
RI	Providence	44007	AIR3347	1	1	10300402	55.00	SCC Descriptio	0.7925	0.0000	0.0022	MOUNT SAINT CHARLES ACADEMY
RI	Providence	44007	AIR3347	2	2	10300602	55.00	SCC Descriptio	0.1706	0.0000	0.0004	MOUNT SAINT CHARLES ACADEMY
RI	Providence	44007	AIR3350	1	1	10200602	55.00	SCC Descriptio	0.4590	0.0000	0.0012	U.S. POSTAL SERVICE / MAIL FACILITY
RI	Providence	44007	AIR3352	1	1	10300504	55.00	SCC Descriptio	0.6800	0.0000	0.0019	MARTIN JUNIOR HIGH SCHOOL
RI	Providence	44007	AIR3354	1	1	10300504	55.00	SCC Descriptio	0.4442	0.0000	0.0012	TEL REALTY
RI	Providence	44007	AIR3367	1	1	10300602	55.00	SCC Descriptio	0.0265	0.0000	0.0001	RI SPCA
RI	Providence	44007	AIR34	1	1	10200402	55.00	SCC Descriptio	2.9155	0.0000	0.0080	ACS INDUSTRIES
RI	Providence	44007	AIR34	2	2	10200602	55.00	SCC Descriptio	0.1720	0.0000	0.0005	ACS INDUSTRIES
RI	Providence	44007	AIR341	1	1	10200602	55.00	SCC Descriptio	0.0724	0.0000	0.0002	CURTIS JEWELRY CO.
RI	Providence	44007	AIR3451	1	1	10200602	55.00	SCC Descriptio	0.3375	0.0000	0.0009	TECHNIC INC., EPD
RI	Providence	44007	AIR3472	1	1	10200602	55.00	SCC Descriptio	0.0893	0.0000	0.0002	UNITED PLATING INC.
RI	Providence	44007	AIR3504	1	1	10200602	55.00	SCC Descriptio	0.7345	0.0000	0.0020	RHODE ISLAND CONVENTION CENTER
RI	Providence	44007	AIR3517	1	1	10200502	55.00	SCC Descriptio	0.0705	0.0000	0.0002	PROVIDENCE CASKET COMPANY
RI	Providence	44007	AIR3538	1	1	10200602	55.00	SCC Descriptio	0.0310	0.0000	0.0001	MAG JEWELRY CO., INC.
RI	Providence	44007	AIR354	1	1	10200602	55.00	SCC Descriptio	0.1777	0.0000	0.0005	DANECRAFT, INC.
RI	Providence	44007	AIR3542	1	1	10200502	55.00	SCC Descriptio	0.2595	0.0000	0.0007	IRA GREEN
RI	Providence	44007	AIR3543	1	1	10200502	55.00	SCC Descriptio	0.0545	0.0000	0.0001	ROYAL OF AMERICA
RI	Providence	44007	AIR355	1	1	10200502	55.00	SCC Descriptio	0.1850	0.0000	0.0005	DARLENE JEWELRY MFG.
RI	Providence	44007	AIR3552	1	1	10200502	55.00	SCC Descriptio	0.0038	0.0000	0.0000	GF HEALTH PRODUCTS, INC.
RI	Providence	44007	AIR3563	1	1	10200502	55.00	SCC Descriptio	0.2565	0.0000	0.0007	BRICKLE REALTY
RI	Providence	44007	AIR3566	1	1	10200602	55.00	SCC Descriptio	0.0695	0.0000	0.0002	MODERN INDUSTRIES INC.
RI	Providence	44007	AIR3568	1	1	10200602	55.00	SCC Descriptio	0.0018	0.0000	0.0000	TRU-KAY MANUFACTURING COMPANY
RI	Providence	44007	AIR3590	1	1	10200402	55.00	SCC Descriptio	0.2855	0.0000	0.0008	TEKNOR APEX CO.
RI	Providence	44007	AIR3590	2	2	10200502	55.00	SCC Descriptio	0.0513	0.0000	0.0001	TEKNOR APEX CO.
RI	Providence	44007	AIR3597	1	1	10200602	55.00	SCC Descriptio	0.0021	0.0000	0.0000	EXCELLENT COFFEE COMPANY, INC
RI	Providence	44007	AIR3598	1	1	10200602	55.00	SCC Descriptio	0.0422	0.0000	0.0001	MILLS COFFEE COMPANY
RI	Providence	44007	AIR3600	1	1	10200602	55.00	SCC Descriptio	0.4030	0.0000	0.0011	UMICOR
RI	Providence	44007	AIR3607	1	1	10200602	55.00	SCC Descriptio	0.0360	0.0000	0.0001	U.S. POSTAL SERVICE/VEHICLE MAINTENANCE
RI	Providence	44007	AIR3643	1	1	10200502	55.00	SCC Descriptio	0.5755	0.0000	0.0016	PROVIDENCE WATER SUPPLY
RI	Providence	44007	AIR3703	1	1	10200602	55.00	SCC Descriptio	0.0085	0.0000	0.0000	INNOVATIVE COATING TECHNOLOGIES, INC.
RI	Providence	44007	AIR3719	1	1	10200502	55.00	SCC Descriptio	0.0265	0.0000	0.0001	ABC REALTY
RI	Providence	44007	AIR3719	2	2	10200504	0.00		0.2565	0.0000	0.0007	ABC REALTY
RI	Providence	44007	AIR3730	1	1	10200502	55.00	SCC Descriptio	0.0630	0.0000	0.0002	ALPHA PLATING
RI	Providence	44007	AIR3731	1	1	10200504	55.00	SCC Descriptio	0.8230	0.0000	0.0023	HOPE GLOBAL (MARTIN ST)
RI	Providence	44007	AIR379	1	1	10200502	55.00	SCC Descriptio	0.1080	0.0000	0.0003	DENISON PHARMACEUTICALS INC.
RI	Providence	44007	AIR3799	1	1	10201003	55.00	SCC Descriptio	3.1790	0.0000	0.0087	TEPPCO PROVIDENCE TERMINAL
RI	Providence	44007	AIR3801	1	1	10200502	55.00	SCC Descriptio	0.0750	0.0000	0.0002	FASHION FINISHING
RI	Providence	44007	AIR3808	1	1	10200602	55.00	SCC Descriptio	0.0848	0.0000	0.0002	TECHNIC, INC.
RI	Providence	44007	AIR3818	1	1	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	A S MANUFACTURING
RI	Providence	44007	AIR3848	1	1	10200502	55.00	SCC Descriptio	0.0074	0.0000	0.0000	FANDETTI FUSION
RI	Providence	44007	AIR3853	1	1	10200602	55.00	SCC Descriptio	0.0115	0.0000	0.0000	HOPE GLOBAL (INDUSTRIAL DR.)

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RI	Providence	44007	AIR3857	1	1	10200502	55.00	SCC Descriptio	0.1000	0.0000	0.0003	SUPERIOR FINISHING
RI	Providence	44007	AIR3869	1	1	10200402	55.00	SCC Descriptio	2.5910	0.0000	0.0071	HUDSON TERMINAL CORP.
RI	Providence	44007	AIR3869	2	2	10200602	55.00	SCC Descriptio	3.4185	0.0000	0.0092	HUDSON TERMINAL CORP.
RI	Providence	44007	AIR3879	1	1	10200504	55.00	SCC Descriptio	0.9263	0.0000	0.0025	INTERNATIONAL ACCESSORIES
RI	Providence	44007	AIR3919	1	1	10300602	55.00	SCC Descriptio	1.8365	0.0000	0.0045	RIPTA
RI	Providence	44007	AIR432	1	1	10200502	55.00	SCC Descriptio	0.0400	0.0000	0.0001	E.E. WELLER CO./ MCS FINISHING
RI	Providence	44007	AIR449	1	1	10200504	0.00		0.2370	0.0000	0.0007	EASTERN COLOR AND CHEMICAL CO.
RI	Providence	44007	AIR469	1	1	10200602	55.00	SCC Descriptio	0.2305	0.0000	0.0006	ELECTROLIZING, INC.
RI	Providence	44007	AIR501	1	1	10200502	55.00	SCC Descriptio	0.3460	0.0000	0.0010	EVANS PLATING CORP.
RI	Providence	44007	AIR503	1	1	10200502	55.00	SCC Descriptio	0.1420	0.0000	0.0004	FO\FERNANDO ORIGINALS, LTD.
RI	Providence	44007	AIR504	1	1	10200502	55.00	SCC Descriptio	0.1960	0.0000	0.0005	EVANS PLATING CORP. (PLANT #2)
RI	Providence	44007	AIR525	1	1	10200502	55.00	SCC Descriptio	0.0250	0.0000	0.0001	MAHR FEDERAL INC.
RI	Providence	44007	AIR525	2	2	10200602	55.00	SCC Descriptio	0.3280	0.0000	0.0009	MAHR FEDERAL INC.
RI	Providence	44007	AIR529	1	1	10200602	55.00	SCC Descriptio	0.0390	0.0000	0.0001	FERGUSON PERFORATING & WIRE CO. INC.
RI	Providence	44007	AIR560	1	1	10200502	55.00	SCC Descriptio	0.0799	0.0000	0.0002	FULLER FINDINGS
RI	Providence	44007	AIR570	1	1	10200502	55.00	SCC Descriptio	0.9422	0.0000	0.0026	G. TANURY PLATING COMPANY
RI	Providence	44007	AIR570	2	2	10200602	55.00	SCC Descriptio	0.0108	0.0000	0.0000	G. TANURY PLATING COMPANY
RI	Providence	44007	AIR572	1	1	10200401	10.50	TITLE V PERM	11.7040	0.0000	0.0324	OSRAM SYLVANIA PRODUCTS INC.
RI	Providence	44007	AIR572	2	2	10200602	10.50	TITLE V PERM	1.0290	0.0000	0.0028	OSRAM SYLVANIA PRODUCTS INC.
RI	Providence	44007	AIR578	1	1	10200602	55.00	SCC Descriptio	0.0513	0.0000	0.0001	GANNON & SCOTT INC.
RI	Providence	44007	AIR599	1	1	10200602	55.00	SCC Descriptio	0.0995	0.0000	0.0003	GENERAL POLYMER, INC.
RI	Providence	44007	AIR624	1	1	10200402	55.00	SCC Descriptio	2.4465	0.0000	0.0067	LENOX , INCORPORATED (OOB)
RI	Providence	44007	AIR624	2	2	10200602	55.00	SCC Descriptio	0.3500	0.0000	0.0009	LENOX , INCORPORATED (OOB)
RI	Providence	44007	AIR655	1	1	10200602	55.00	SCC Descriptio	0.9783	0.0000	0.0026	HANDY & HARMAN (EP)
RI	Providence	44007	AIR664	1	1	10200502	55.00	SCC Descriptio	0.8800	0.0000	0.0024	HASBRO, INC. (NEWPORT AVE. PAWT)
RI	Providence	44007	AIR667	1	1	10200602	55.00	SCC Descriptio	0.2430	0.0000	0.0007	C.I. HAYES,INC.
RI	Providence	44007	AIR673	1	1	10200602	55.00	SCC Descriptio	0.2685	0.0000	0.0007	HERFF JONES INC.
RI	Providence	44007	AIR678	1	1	10200502	55.00	SCC Descriptio	0.0413	0.0000	0.0001	HI-TECH INCORPORATED
RI	Providence	44007	AIR700	1	1	10200502	55.00	SCC Descriptio	0.0262	0.0000	0.0001	HORD CRYSTAL CORPORATION
RI	Providence	44007	AIR715	1	1	10200502	55.00	SCC Descriptio	0.1174	0.0000	0.0003	IDEAL PLATING AND POLISHING INC.
RI	Providence	44007	AIR717	1	1	10200602	55.00	SCC Descriptio	0.0310	0.0000	0.0001	IMPCO, INC.
RI	Providence	44007	AIR73	1	1	10200602	55.00	SCC Descriptio	0.2703	0.0000	0.0007	AMERICAN PLATING
RI	Providence	44007	AIR733	1	1	10200502	55.00	SCC Descriptio	0.2115	0.0000	0.0006	INTERNATIONAL CHROMIUM PLATING
RI	Providence	44007	AIR738	1	1	10200602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	INTERNATIONAL ETCHING INC.
RI	Providence	44007	AIR74	1	1	10200602	55.00	SCC Descriptio	0.0635	0.0000	0.0002	AMERICAN RING CO.
RI	Providence	44007	AIR740	1	1	10200502	55.00	SCC Descriptio	0.0250	0.0000	0.0001	INTERNATIONAL INSIGNIA CORP.
RI	Providence	44007	AIR745	1	1	10200502	55.00	SCC Descriptio	0.4200	0.0000	0.0012	NORTH EAST KNITTING
RI	Providence	44007	AIR768	1	1	10200602	55.00	SCC Descriptio	0.8775	0.0000	0.0024	FIBER MARK
RI	Providence	44007	AIR79	1	1	10200502	55.00	SCC Descriptio	0.0405	0.0000	0.0001	NARRAGANSETT IMAGING
RI	Providence	44007	AIR79	2	2	10200602	55.00	SCC Descriptio	0.3635	0.0000	0.0010	NARRAGANSETT IMAGING
RI	Providence	44007	AIR8	1	1	10200602	55.00	SCC Descriptio	0.0545	0.0000	0.0001	A G & G INC.
RI	Providence	44007	AIR802	1	1	10200502	55.00	SCC Descriptio	0.0140	0.0000	0.0000	JONETTE JEWELRY CO., INC.
RI	Providence	44007	AIR803	1	1	10200602	55.00	SCC Descriptio	0.0174	0.0000	0.0000	JOSEF CREATIONS INC.
RI	Providence	44007	AIR813	1	1	10200602	55.00	SCC Descriptio	0.0450	0.0000	0.0001	KELLEY METALS CORP.
RI	Providence	44007	AIR839	1	1	10200602	55.00	SCC Descriptio	1.1478	0.0000	0.0031	KLITZNER INDUSTRIES, INC.
RI	Providence	44007	AIR874	1	1	10200602	55.00	SCC Descriptio	0.3265	0.0000	0.0009	LEVIN PLATING CO.
RI	Providence	44007	AIR879	1	1	10200502	55.00	SCC Descriptio	0.1705	0.0000	0.0005	LIBERTY PLATING CO., INC.
RI	Providence	44007	AIR88	1	1	10200602	55.00	SCC Descriptio	0.0715	0.0000	0.0002	C & J MFG.
RI	Providence	44007	AIR903	1	1	10200502	55.00	SCC Descriptio	0.2005	0.0000	0.0006	LUTONE PLATING CO.
RI	Providence	44007	AIR91	1	1	10200502	55.00	SCC Descriptio	0.0225	0.0000	0.0001	ANTON ENTERPRISES, INC.
RI	Providence	44007	AIR93	1	1	10200502	55.00	SCC Descriptio	0.5400	0.0000	0.0015	ANTONELLI PLATING CO.
RI	Providence	44007	AIR945	1	1	10200502	55.00	SCC Descriptio	0.6520	0.0000	0.0018	ECOLOGICAL FIBERS INC.

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RI	Providence	44007	AIR959	1	1	10200602	55.00	SCC Descriptio	0.1785	0.0000	0.0005	MEARTHANE PRODUCTS CORPORATION
RI	Providence	44007	AIR964	1	1	10300402	55.00	SCC Descriptio	15.1465	0.0310	0.0310	MEMORIAL HOSPITAL OF RHODE ISLAND
RI	Providence	44007	AIR964	2	2	10300602	55.00	SCC Descriptio	0.8820	0.0000	0.0022	MEMORIAL HOSPITAL OF RHODE ISLAND
RI	Providence	44007	AIR986	1	1	10200402	55.00	SCC Descriptio	11.4220	0.0000	0.0314	MICROFIBRES
RI	Providence	44007	AIR986	2	2	10200602	55.00	SCC Descriptio	1.5875	0.0000	0.0043	MICROFIBRES
RI	Providence	44007	AIR987	1	1	10200502	55.00	SCC Descriptio	0.4295	0.0000	0.0012	MICROFIN CORP.
RI	Providence	44007	AIR987	2	2	10200602	55.00	SCC Descriptio	0.0225	0.0000	0.0001	MICROFIN CORP.
RI	Providence	44007	AIR99	1	1	10200602	55.00	SCC Descriptio	0.0660	0.0000	0.0002	ARDEN JEWELRY MFG. CO INC.
RI	Providence	44007	AIR9999	1	1	10200502	55.00	SCC Descriptio	1.0675	0.0000	0.0029	PACIFIC ANCHOR
RI	Providence	44007	AIR9999	2	2	10200602	55.00	SCC Descriptio	0.0990	0.0000	0.0003	PACIFIC ANCHOR
RI	Washington	44009	AIR1143	1	1	10200502	55.00	SCC Descriptio	0.0900	0.0000	0.0002	PALISADES LTD.
RI	Washington	44009	AIR1143	2	2	10200602	55.00	SCC Descriptio	0.5520	0.0000	0.0015	PALISADES LTD.
RI	Washington	44009	AIR1302	1	1	10300401	0.00		11.1290	0.0000	0.0306	R.I. PORT AUTHORITY STEAM PLANT(CLOSED)
RI	Washington	44009	AIR1400	1	1	10300502	55.00	SCC Descriptio	0.2290	0.0000	0.0006	SOUTH COUNTY HOSPITAL
RI	Washington	44009	AIR1400	2	2	10300504	0.00		0.5370	0.0000	0.0015	SOUTH COUNTY HOSPITAL
RI	Washington	44009	AIR1400	3	3	10300602	55.00	SCC Descriptio	0.7430	0.0000	0.0018	SOUTH COUNTY HOSPITAL
RI	Washington	44009	AIR1439	1	1	10200602	55.00	SCC Descriptio	0.0935	0.0000	0.0003	STANLEY-BOSTITCH, INC. (NK)
RI	Washington	44009	AIR1451	1	1	10300502	55.00	SCC Descriptio	0.0984	0.0000	0.0003	SUBURBAN CLEANERS INC.
RI	Washington	44009	AIR1584	1	1	10300402	55.00	SCC Descriptio	6.3580	0.0000	0.0175	UNIVERSITY OF RHODE ISLAND/CONTIGUOUS
RI	Washington	44009	AIR1584	2	2	10300501	0.00		1.2440	0.0000	0.0033	UNIVERSITY OF RHODE ISLAND/CONTIGUOUS
RI	Washington	44009	AIR1649	1	1	10300504	0.00		2.4270	0.0000	0.0067	WESTERLY HOSPITAL
RI	Washington	44009	AIR1735	1	1	10200502	55.00	SCC Descriptio	0.0285	0.0000	0.0001	COASTAL PLASTICS, INC.
RI	Washington	44009	AIR174	1	1	10200401	115.00	TITLE V PERM	89.0730	0.0000	0.2467	BRADFORD DYEING ASSOCIATION INC.
RI	Washington	44009	AIR1813	1	1	10200504	0.00		0.4955	0.0000	0.0014	GRISWOLD TEXTILE PRINT, INC.
RI	Washington	44009	AIR1813	2	2	10200602	55.00	SCC Descriptio	0.2820	0.0000	0.0008	GRISWOLD TEXTILE PRINT, INC.
RI	Washington	44009	AIR248	1	1	10200502	55.00	SCC Descriptio	6.9330	0.0280	0.0280	CHARBERT INC. DIV. OF NFA
RI	Washington	44009	AIR3052	1	1	10200602	38.60	TITLE V PERM	8.9865	0.0000	0.0243	TORAY PLASTICS AMERICA
RI	Washington	44009	AIR3066	1	1	10200402	55.00	SCC Descriptio	6.6623	0.0000	0.0183	DARLINGTON FABRICS CORP. (BEACH ST.)
RI	Washington	44009	AIR356	1	1	10200402	55.00	SCC Descriptio	27.4960	0.0740	0.0740	DARLINGTON FABRICS CORP. (CANAL ST.)
RI	Washington	44009	AIR356	2	2	10200502	55.00	SCC Descriptio	2.6010	0.0000	0.0071	DARLINGTON FABRICS CORP. (CANAL ST.)
RI	Washington	44009	AIR356	3	3	10200602	55.00	SCC Descriptio	0.6190	0.0000	0.0017	DARLINGTON FABRICS CORP. (CANAL ST.)
RI	Washington	44009	AIR3627	1	1	10200502	55.00	SCC Descriptio	0.1440	0.0000	0.0004	NEW ANNEX PLATING INC.
RI	Washington	44009	AIR3661	1	1	10200602	55.00	SCC Descriptio	0.0680	0.0000	0.0002	CUSTOM DESIGN INCORPORATED
RI	Washington	44009	AIR3809	1	1	10200602	55.00	SCC Descriptio	1.5025	0.0000	0.0041	ARCH SPECIALTY CHEMICALS, INC.
RI	Washington	44009	AIR630	1	1	10200502	55.00	SCC Descriptio	0.0847	0.0000	0.0002	GREENE PLASTICS CORP.
RI	Washington	44009	AIR630	2	2	10200504	0.00		0.1425	0.0000	0.0004	GREENE PLASTICS CORP.
RI	Washington	44009	AIR824	1	1	10200401	33.50	TITLE V PERM	44.6860	0.0000	0.1237	KENYON INDUSTRIES, INC.
VT	Addison	50001	641	1	1	10200402	27.00	TITLE V PERM	24.9700	0.0651	0.0651	AGRIMARK INC.
VT	Addison	50001	641	2	1	10200402	27.00	TITLE V PERM	24.9700	0.0651	0.0651	AGRIMARK INC.
VT	Addison	50001	687	1	1	10201002	0.00		0.3700	0.0010	0.0010	QUESTECH
VT	Addison	50001	687	2	1	10200501	0.00		0.0100	0.0000	0.0000	QUESTECH
VT	Bennington	50003	339	1	1	10201002	0.00		0.4400	0.0005	0.0005	HBH PRESTAIN
VT	Bennington	50003	632	1	1	10201002	0.00		0.0500	0.0001	0.0001	HBH PRESTAIN (FORMER PUTNAM LUMBER YARD), RTE. 7A
VT	Caledonia	50005	688	1	1	10200501	0.00		0.1300	0.0000	0.0000	LYNDON WOODWORKING (LYNDON SOUTH)
VT	Caledonia	50005	688	1	2	10200908	0.00		0.1200	0.0000	0.0000	LYNDON WOODWORKING (LYNDON SOUTH)
VT	Caledonia	50005	9	1	2	10200402	29.30	TITLE V PERM	10.5800	0.0288	0.0288	EHV WEIDMANN INDUSTRIES
VT	Caledonia	50005	9	7	1	10200402	19.40	TITLE V PERM	6.0400	0.0118	0.0118	EHV WEIDMANN INDUSTRIES
VT	Caledonia	50005	9	8	1	10200502	2.70	TITLE V PERM	0.5800	0.0016	0.0016	EHV WEIDMANN INDUSTRIES
VT	Essex	50009	1	1	1	10200504	13.00	EU Net Design	0.2500	0.0000	0.0000	ETHAN ALLEN INC. (BEECHER FALLS DIV.)
VT	Essex	50009	1	2	2	10200903	36.00	EU Net Design	26.8700	0.0117	0.0117	ETHAN ALLEN INC. (BEECHER FALLS DIV.)
VT	Essex	50009	1	2	1	10300504	36.00	EU Net Design	0.1600	0.0000	0.0001	ETHAN ALLEN INC. (BEECHER FALLS DIV.)
VT	Essex	50009	1	3	1	10200903	54.00	EU Net Design	48.1900	0.1152	0.1152	ETHAN ALLEN INC. (BEECHER FALLS DIV.)

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VT	Essex	50009	1	4	1	10300502	2.50	EU Net Design	0.1800	0.0000	0.0000	ETHAN ALLEN INC. (BEECHER FALLS DIV.)
VT	Essex	50009	1	5	1	10300504	20.80	EU Net Design	0.1800	0.0000	0.0000	ETHAN ALLEN INC. (BEECHER FALLS DIV.)
VT	Essex	50009	1	6	1	10200903	3.00	EU Net Design	0.0700	0.0000	0.0000	ETHAN ALLEN INC. (BEECHER FALLS DIV.)
VT	Franklin	50011	134	3	1	10200402	89.00	EU Net Design	3.8200	0.0000	0.0000	ROCK-TENN COMPANY (SHELDON SPRINGS)
VT	Franklin	50011	134	3	2	10200602	89.00	EU Net Design	27.2000	0.0769	0.0769	ROCK-TENN COMPANY (SHELDON SPRINGS)
VT	Franklin	50011	134	5	1	10200402	33.00	EU Net Design	4.7800	0.0000	0.0000	ROCK-TENN COMPANY (SHELDON SPRINGS)
VT	Franklin	50011	134	5	2	10200602	33.00	EU Net Design	3.9500	0.0086	0.0086	ROCK-TENN COMPANY (SHELDON SPRINGS)
VT	Franklin	50011	134	6	1	10200402	31.00	EU Net Design	3.5700	0.0000	0.0000	ROCK-TENN COMPANY (SHELDON SPRINGS)
VT	Franklin	50011	134	6	2	10200602	31.00	EU Net Design	3.2000	0.0101	0.0101	ROCK-TENN COMPANY (SHELDON SPRINGS)
VT	Franklin	50011	689	8	1	10300603	8.40	EU Net Design	0.2500	0.0007	0.0007	BROWN FOUNDRY
VT	Lamoille	50015	89	1	1	10200902	5.00	EU Net Design	0.3000	0.0008	0.0008	VERMONT PRECISION WOODWORKS
VT	Lamoille	50015	89	2	1	10200902	5.00	EU Net Design	1.6900	0.0042	0.0042	VERMONT PRECISION WOODWORKS
VT	Orange	50017	378	4	1	10300501	2.20	EU Net Design	0.3000	0.0008	0.0008	COPELAND FURNITURE
VT	Orange	50017	614	1	1	10300908	3.90	EU Net Design	0.2500	0.0003	0.0003	POMPANOOSUC MILLS CORP.
VT	Orange	50017	8	1	1	10200504	12.50	EU Net Design	1.9000	0.0000	0.0000	ETHAN ALLEN INC. (RANDOLPH DIV.)
VT	Orange	50017	8	2	1	10200504	25.20	EU Net Design	0.4700	0.0000	0.0000	ETHAN ALLEN INC. (RANDOLPH DIV.)
VT	Orleans	50019	354	1	1	10200501	0.00		0.1200	0.0000	0.0000	NEWPORT FURNITURE PARTS, INC.
VT	Orleans	50019	4	1	1	10200902	27.80	EU Net Design	10.3000	0.0022	0.0022	ETHAN ALLEN INC. (ORLEANS DIV.)
VT	Orleans	50019	4	2	1	10200908	34.00	EU Net Design	10.2200	0.0200	0.0200	ETHAN ALLEN INC. (ORLEANS DIV.)
VT	Orleans	50019	4	3	1	10200908	34.00	EU Net Design	5.1700	0.0129	0.0129	ETHAN ALLEN INC. (ORLEANS DIV.)
VT	Orleans	50019	4	3	2	10300504	34.00	EU Net Design	1.3300	0.0036	0.0036	ETHAN ALLEN INC. (ORLEANS DIV.)
VT	Orleans	50019	615	1	1	10201002	0.00		0.2000	0.0000	0.0000	GREEN MOUNTAIN CUSTOM FINISHING
VT	Rutland	50021	644	1	1	10200908	130.00	EU Net Design	10.1400	0.0220	0.0220	VERMONT TUBBS (BRANDON)
VT	Rutland	50021	644	5	1	10201002	59.00	EU Net Design	1.3600	0.0037	0.0037	VERMONT TUBBS (BRANDON)
VT	Rutland	50021	87	1	1	10200903	10.00	EU Net Design	5.6000	0.0091	0.0091	STANLEY TOOLS, PITTSFIELD PLANT
VT	Windham	50025	11	1	1	10200402	20.80	EU Net Design	20.3200	0.0464	0.0464	PUTNEY PAPER CO., INC.
VT	Windham	50025	11	2	1	10200402	25.00	EU Net Design	20.3200	0.0464	0.0464	PUTNEY PAPER CO., INC.
VT	Windham	50025	56	1	2	10200501	0.00		0.0400	0.0001	0.0001	BRADLEY LABORATORIES
VT	Windham	50025	56	1	1	10200501	0.00		0.1600	0.0000	0.0004	BRADLEY LABORATORIES
VT	Windham	50025	56	5	1	10200502	1.50	EU Net Design	0.0400	0.0000	0.0000	BRADLEY LABORATORIES
VT	Windham	50025	626	1	1	10301002	0.20	EU Net Design	0.1100	0.0000	0.0000	G.S. PRECISION, INC
VT	Windham	50025	7	1	1	10200402	38.00	TITLE V PERM	33.4600	0.0727	0.0727	FIBERMARK
VT	Windham	50025	7	2	1	10200402	38.00	TITLE V PERM	33.4600	0.0727	0.0727	FIBERMARK
VT	Windham	50025	7	4	1	10200501	14.80	TITLE V PERM	1.6400	0.0000	0.0000	FIBERMARK
VA	Arlington	51013	00009	11	1	10300501	0.00		1.4200	0.0000	0.0016	US ARMY - FORT MYER
VA	Arlington	51013	00009	12	1	10300602	0.00		10.4900	0.0000	0.0115	US ARMY - FORT MYER
VA	Arlington	51013	00010	11	1	10200501	48.00		0.0840	0.0000	0.0000	PENTAGON RESERVATION
VA	Arlington	51013	00010	11	2	10200602	48.00		2.8600	0.0000	0.0000	PENTAGON RESERVATION
VA	Arlington	51013	00010	12	1	10200501	48.00		0.0780	0.0000	0.0001	PENTAGON RESERVATION
VA	Arlington	51013	00010	12	2	10200602	48.00		3.5400	0.0000	0.0043	PENTAGON RESERVATION
VA	Arlington	51013	00010	13	1	10200501	48.00		0.0620	0.0000	0.0000	PENTAGON RESERVATION
VA	Arlington	51013	00010	13	2	10200602	48.00		2.7000	0.0000	0.0018	PENTAGON RESERVATION
VA	Arlington	51013	00010	14	1	10200501	48.00		0.0840	0.0000	0.0001	PENTAGON RESERVATION
VA	Arlington	51013	00010	14	2	10200602	48.00		1.4100	0.0000	0.0019	PENTAGON RESERVATION
VA	Arlington	51013	00010	15	1	10200501	48.00		0.0450	0.0000	0.0000	PENTAGON RESERVATION
VA	Arlington	51013	00010	15	2	10200602	48.00		0.3290	0.0000	0.0000	PENTAGON RESERVATION
VA	Arlington	51013	00010	16	1	10200501	48.00		0.1400	0.0000	0.0004	PENTAGON RESERVATION
VA	Arlington	51013	00010	16	2	10200602	48.00		3.0000	0.0000	0.0076	PENTAGON RESERVATION
VA	Arlington	51013	00212	2	1	10300501	12.00		0.0600	0.0000	0.0001	BERGMANNS INC
VA	Arlington	51013	00212	2	2	10300603	12.00		1.9600	0.0000	0.0043	BERGMANNS INC
VA	Fairfax	51059	00018	10	1	10300602	89.00		3.2900	0.0000	0.0081	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00018	10	2	10300502	89.00		0.8020	0.0000	0.0022	US ARMY - FORT BELVOIR

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
VA	Fairfax	51059	00018	4	1	10300602	32.20		1.9500	0.0000	0.0000	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00018	4	2	10300501	32.20		0.1270	0.0000	0.0000	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00018	5	1	10300602	32.20		1.0100	0.0000	0.0000	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00018	5	2	10300501	32.20		0.0420	0.0000	0.0000	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00018	6	1	10300602	16.80		0.8350	0.0000	0.0055	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00018	6	2	10300501	16.80		0.3270	0.0000	0.0022	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00018	7	1	10300603	252.00		5.3800	0.0000	0.0012	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00018	7	2	10300501	252.00		3.6900	0.0000	0.0008	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00022	1	1	10300602	49.00		5.3500	0.0000	0.0147	INOVA FAIRFAX HOSPITAL
VA	Fairfax	51059	00022	2	1	10300602	49.00		5.3500	0.0000	0.0147	INOVA FAIRFAX HOSPITAL
VA	Fairfax	51059	00022	3	1	10300602	29.00		5.3500	0.0000	0.0147	INOVA FAIRFAX HOSPITAL
VA	Fairfax	51059	00056	10	1	10300603	9.20		0.2230	0.0000	0.0023	WASHINGTON GAS LIGHT COMPANY
VA	Fairfax	51059	00056	3	1	10300602	10.50		0.0190	0.0000	0.0001	WASHINGTON GAS LIGHT COMPANY
VA	Fairfax	51059	00056	6	1	10300602	10.50		0.0200	0.0000	0.0001	WASHINGTON GAS LIGHT COMPANY
VA	Fairfax	51059	00056	9	1	10300602	10.50		0.0190	0.0000	0.0001	WASHINGTON GAS LIGHT COMPANY
VA	Fairfax	51059	00421	2	1	10300602	63.00		1.2300	0.0000	0.0026	BUSH CENTER FOR INTELLIGENCE (CIA)
VA	Fairfax	51059	00421	3	1	10300602	63.00		0.2000	0.0000	0.0002	BUSH CENTER FOR INTELLIGENCE (CIA)
VA	Fairfax	51059	00421	4	1	10300602	18.00		1.2400	0.0000	0.0010	BUSH CENTER FOR INTELLIGENCE (CIA)
VA	Fairfax	51059	00421	5	1	10200602	63.00		5.1400	0.0000	0.0028	BUSH CENTER FOR INTELLIGENCE (CIA)
VA	Fairfax	51059	00733	2	1	10300603	4.70		0.3030	0.0000	0.0003	AMERICA ONLINE INCORPORATED
VA	Loudoun	51107	00073	1	1	10200501	10.50		0.0170	0.0000	0.0000	TUSCARORA INCORPORATED
VA	Loudoun	51107	00073	1	2	10200602	10.50		1.0500	0.0000	0.0030	TUSCARORA INCORPORATED
VA	Loudoun	51107	00073	2	1	10200501	14.70		0.0350	0.0000	0.0001	TUSCARORA INCORPORATED
VA	Loudoun	51107	00073	2	2	10200602	14.70		1.0800	0.0000	0.0031	TUSCARORA INCORPORATED
VA	Loudoun	51107	00101	4	1	10300603	2.80		2.1700	0.0000	0.0029	DOMINION TRANSMISSION INC - CNG LEESBURG
VA	Loudoun	51107	00134	3	1	10300603	58.00		0.7570	0.0000	0.0002	AMERICA ONLINE INCORPORATED
VA	Prince William	51153	00010	11	1	10300501	3.00		0.1860	0.0000	0.0001	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	14	1	10200401	44.00		5.0100	0.0000	0.0182	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	14	2	10200401	44.00		6.3700	0.0000	0.0231	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	17	1	10300501	2.20		0.1320	0.0000	0.0000	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	18	1	10300501	2.00		0.1160	0.0000	0.0001	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	19	1	10300501	2.90		0.0700	0.0000	0.0000	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	2	1	10300501	62.00		1.2100	0.0000	0.0000	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	3	1	10300602	84.00		5.9000	0.0000	0.0006	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	4	2	10300602	114.00		0.1300	0.0000	0.0000	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	5	1	10300501	114.00		0.5100	0.0000	0.0012	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	5	2	10300602	114.00		5.0300	0.0000	0.0122	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	8	1	10300501	9.50		0.2640	0.0000	0.0001	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00021	1	1	10200602	72.00		0.6900	0.0000	0.0000	LOCKHEED MARTIN MANASSAS
VA	Prince William	51153	00021	2	1	10200602	72.00		0.6850	0.0000	0.0075	LOCKHEED MARTIN MANASSAS
VA	Prince William	51153	00021	3	1	10200603	5.00		0.1400	0.0000	0.0000	LOCKHEED MARTIN MANASSAS
VA	Prince William	51153	00021	4	1	10200603	5.00		0.1400	0.0000	0.0000	LOCKHEED MARTIN MANASSAS
VA	Prince William	51153	00021	7	1	10200603	10.00		0.4400	0.0000	0.0001	LOCKHEED MARTIN MANASSAS
VA	Prince William	51153	00021	8	2	10200602	78.20		6.0700	0.0000	0.0047	LOCKHEED MARTIN MANASSAS
VA	Prince William	51153	00086	14	1	10200603	3.00		1.3000	0.0000	0.0000	TRANSCONTINENTAL GAS PIPELINE-STATION 18
VA	Prince William	51153	00086	15	1	10200603	5.00		0.8000	0.0000	0.0000	TRANSCONTINENTAL GAS PIPELINE-STATION 18
VA	Prince William	51153	00131	1	1	10200501	195.00		0.1920	0.0000	0.0000	MICRON TECHNOLOGY INCORPORATED
VA	Prince William	51153	00131	1	2	10200602	195.00		4.5600	0.0000	0.0005	MICRON TECHNOLOGY INCORPORATED
VA	Prince William	51153	00143	2	1	10300603	3.00		0.0730	0.0000	0.0001	AMERICA ONLINE INC
VA	Stafford	51179	00020	1	1	10300602	0.00		1.9700	0.0000	0.0000	FBI ACADEMY
VA	Stafford	51179	00020	1	2	10300502	0.00		0.4810	0.0000	0.0000	FBI ACADEMY
VA	Stafford	51179	00020	2	1	10300603	0.00		0.0960	0.0000	0.0003	FBI ACADEMY

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
VA	Stafford	51179	00020	2	2	10300503	0.00		0.8770	0.0000	0.0024	FBI ACADEMY
VA	Stafford	51179	00020	3	1	10300502	0.00		3.5800	0.0000	0.0063	FBI ACADEMY
VA	Stafford	51179	00020	4	1	10300603	0.00		0.0270	0.0000	0.0001	FBI ACADEMY
VA	Stafford	51179	00020	5	1	10301002	0.00		0.1830	0.0000	0.0004	FBI ACADEMY
VA	Stafford	51179	00020	6	1	10300503	0.00		1.7500	0.0000	0.0031	FBI ACADEMY
VA	Stafford	51179	00029	1	1	10200603	3.00		0.3500	0.0000	0.0010	CELLOFOAM NORTH AMERICA INC
						MANEVU			54732.2		139.1	
						NOVA			124.6		0.2	
						OTR			54856.8		139.3	

Boiler capacity by size: Table ES-1, *Characterization of the U.S. Industrial/Commercial Boiler Population*, May 2005. Oak Ridge National Laboratory

Area Sources are not subject to NOx regulation in all OTR states except for New Jersey. Thus, we are using the % reduction numbers from uncontrolled for area sources.

								From OTC September 28 Control Strategy Proposal					
						Area Source		**NOx Percent Reduction**					
Unit Size	**Total Capacity**	**Unit Size**	**Total Capacity**	**Capacity Percent**		**Capacity Percent**			**Distillate (**	**Residual Oil**			
(MMBtu/hr)	**(MMBtu/hr)**	**(MMBtu/hr)**	**(MMBtu/hr)**	**in Range**		**in Range**		**Coal**	**#2**	**#4 or #6**	**Natural Ga**	**LPG**	**Wood/Kerosene**
		NOx All Fuels Industrial											
>250	616,209	>250	616,209	39.33	Accounted for in								0
100 to 250	327,327	100 to 250	327,327	20.89	Point Inventory								0
50 to 100	243,128	50 to 100	243,128	15.52		39.01		50	50	50	50	50	10
10 to 50	277,810	25 to 50	138,905	8.87		22.29		50	50	50	50	50	10
<10	102,306	10 to 25	138,905	8.87		22.29		10	10	10	10	10	10
		<10	102,306	6.53		16.42		10	10	10	10	10	10
	1,566,780		1,566,780	100.00		100.00	Weighted Average % Reduction	34.5	34.5	34.5	34.5	34.5	10.0
		NOx All Fuels Commercial/Institutional											
>250	33,639	>250	33,639	2.93	Accounted for in								0
100 to 250	140,110	100 to 250	140,110	12.21	Point Inventory								0
50 to 100	208,980	50 to 100	208,980	18.21		21.46		50	50	50	50	50	10
10 to 50	463,685	25 to 50	231,843	20.20		23.81		50	50	50	50	50	10
<10	301,202	10 to 25	231,843	20.20		23.81		10	10	10	10	10	10
		<10	301,202	26.25		30.93		10	10	10	10	10	10
	1,147,616		1,147,616	100.00		100.00	Weighted Average % Reduction	28.1	28.1	28.1	28.1	28.1	10.0

% Reductio	SCC	SCC_L4	SCC_L3	SCC_L2
34.5	2102001000	Total: All Boiler Ty	Anthracite Coal	Industrial
34.5	2102002000	Total: All Boiler Ty	Bituminous/Subbitu	Industrial
34.5	2102004000	Total: Boilers and	Distillate Oil	Industrial
34.5	2102005000	Total: All Boiler Ty	Residual Oil	Industrial
34.5	2102006000	Total: Boilers and	Natural Gas	Industrial
34.5	2102007000	Total: All Boiler Ty	Liquified Petroleum	Industrial
10.0	2102008000	Total: All Boiler Ty	Wood	Industrial
10.0	2102011000	Total: All Boiler Ty	Kerosene	Industrial
28.1	2103001000	Total: All Boiler Ty	Anthracite Coal	Commercial/Institutional
28.1	2103002000	Total: All Boiler Ty	Bituminous/Subbitu	Commercial/Institutional
28.1	2103004000	Total: Boilers and	Distillate Oil	Commercial/Institutional
28.1	2103004001		Distillate Oil	Commercial/Institutional
28.1	2103004002		Distillate Oil	Commercial/Institutional
28.1	2103005000	Total: All Boiler Ty	Residual Oil	Commercial/Institutional
28.1	2103006000	Total: Boilers and	Natural Gas	Commercial/Institutional
28.1	2103007000	Total: All Combus	Liquified Petroleum	Commercial/Institutional
10.0	2103008000	Total: All Boiler Ty	Wood	Commercial/Institutional
10.0	2103011000	Total: All Combus	Kerosene	Commercial/Institutional

CF0_25

CF100_250

From state specific reductions tab

NOx Percent Reduction

	Size (mmBtu/hr):		> 250*	100 to 250	50 to 100	25 to 50	<25				
State	FIPSST	SCC	CF250	CF100_250	CF50_100	CF25_50	CF0_25	Type	SCC_L4	SCC_L3	SCC_L2
CT	09	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
CT	09	10200204	0	0	0	0	0	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
CT	09	10200205	0	0	0	0	0	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
CT	09	10200206	0	0	0	0	0	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
CT	09	10300102	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
CT	09	10300207	0	0	0	0	0	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
CT	09	10300208	0	0	0	0	0	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
CT	09	10300209	0	0	0	0	0	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
CT	09	10300225	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
CT	09	10200203	0	0	0	0	0	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
CT	09	10200212	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
CT	09	10300203	0	0	0	0	0	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
CT	09	10300226	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
CT	09	10200202	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
CT	09	10200222	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
CT	09	10300101	0	0	0	0	0	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
CT	09	10300206	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DC	11	10200104	72	49	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
DC	11	10200204	72	49	50	50	10	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
DC	11	10200205	72	49	50	50	10	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
DC	11	10200206	72	49	50	50	10	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
DC	11	10300102	72	49	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
DC	11	10300207	72	49	50	50	10	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DC	11	10300208	72	49	50	50	10	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DC	11	10300209	72	49	50	50	10	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DC	11	10300225	72	49	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
DC	11	10200203	72	72	50	50	10	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
DC	11	10200212	72	72	50	50	10	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
DC	11	10300203	72	72	50	50	10	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DC	11	10300226	72	72	50	50	10	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
DC	11	10200202	72	67	50	50	10	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
DC	11	10200222	72	67	50	50	10	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
DC	11	10300101	72	67	50	50	10	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
DC	11	10300206	72	67	50	50	10	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DE	10	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
DE	10	10200204	0	0	0	0	0	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
DE	10	10200205	0	0	0	0	0	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
DE	10	10200206	0	0	0	0	0	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
DE	10	10300102	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
DE	10	10300207	0	0	0	0	0	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional

DE	10	10300208	0	0	0	0	0	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DE	10	10300209	0	0	0	0	0	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DE	10	10300225	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
DE	10	10200203	0	0	0	0	0	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
DE	10	10200212	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
DE	10	10300203	0	0	0	0	0	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DE	10	10300226	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
DE	10	10200202	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
DE	10	10200222	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
DE	10	10300101	0	0	0	0	0	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
DE	10	10300206	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MA	25	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
MA	25	10200204	64	33	50	50	10	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
MA	25	10200205	64	33	50	50	10	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
MA	25	10200206	64	33	50	50	10	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
MA	25	10300102	64	33	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
MA	25	10300207	64	33	50	50	10	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MA	25	10300208	64	33	50	50	10	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MA	25	10300209	64	33	50	50	10	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MA	25	10300225	64	33	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
MA	25	10200203	68	68	50	50	10	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
MA	25	10200212	68	68	50	50	10	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
MA	25	10300203	68	68	50	50	10	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MA	25	10300226	68	68	50	50	10	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
MA	25	10200202	73	69	50	50	10	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
MA	25	10200222	73	69	50	50	10	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
MA	25	10300101	73	69	50	50	10	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
MA	25	10300206	73	69	50	50	10	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MD	24	10200104	68	66	21	21	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
MD	24	10200204	68	66	21	21	10	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
MD	24	10200205	68	66	21	21	10	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
MD	24	10200206	68	66	21	21	10	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
MD	24	10300102	68	66	21	21	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
MD	24	10300207	68	66	21	21	10	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MD	24	10300208	68	66	21	21	10	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MD	24	10300209	68	66	21	21	10	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MD	24	10300225	68	66	21	21	10	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
MD	24	10200203	68	82	21	21	10	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
MD	24	10200212	68	82	21	21	10	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
MD	24	10300203	68	82	21	21	10	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MD	24	10300226	68	82	21	21	10	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
MD	24	10200202	68	79	21	21	10	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
MD	24	10200222	68	79	21	21	10	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
MD	24	10300101	68	79	21	21	10	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
MD	24	10300206	68	79	21	21	10	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
ME	23	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
ME	23	10200204	0	0	0	0	0	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
ME	23	10200205	0	0	0	0	0	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
ME	23	10200206	0	0	0	0	0	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
ME	23	10300102	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
ME	23	10300207	0	0	0	0	0	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
ME	23	10300208	0	0	0	0	0	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional

ME	23	10300209	0	0	0	0	0	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
ME	23	10300225	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
ME	23	10200203	0	0	0	0	0	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
ME	23	10200212	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
ME	23	10300203	0	0	0	0	0	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
ME	23	10300226	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
ME	23	10200202	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
ME	23	10200222	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
ME	23	10300101	0	0	0	0	0	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
ME	23	10300206	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NH	33	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
NH	33	10200204	0	0	0	0	0	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
NH	33	10200205	0	0	0	0	0	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
NH	33	10200206	0	0	0	0	0	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
NH	33	10300102	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
NH	33	10300207	0	0	0	0	0	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NH	33	10300208	0	0	0	0	0	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NH	33	10300209	0	0	0	0	0	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NH	33	10300225	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
NH	33	10200203	0	0	0	0	0	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
NH	33	10200212	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
NH	33	10300203	0	0	0	0	0	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NH	33	10300226	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
NH	33	10200202	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
NH	33	10200222	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
NH	33	10300101	0	0	0	0	0	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
NH	33	10300206	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NJ	34	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
NJ	34	10200204	0	0	0	0	0	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
NJ	34	10200205	0	0	0	0	0	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
NJ	34	10200206	0	0	0	0	0	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
NJ	34	10300102	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
NJ	34	10300207	0	0	0	0	0	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NJ	34	10300208	0	0	0	0	0	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NJ	34	10300209	0	0	0	0	0	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NJ	34	10300225	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
NJ	34	10200203	0	0	0	0	0	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
NJ	34	10200212	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
NJ	34	10300203	0	0	0	0	0	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NJ	34	10300226	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
NJ	34	10200202	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
NJ	34	10200222	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
NJ	34	10300101	0	0	0	0	0	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
NJ	34	10300206	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NY	36	10200104	60	27	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
NY	36	10200204	60	27	50	50	10	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
NY	36	10200205	60	27	50	50	10	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
NY	36	10200206	60	27	50	50	10	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
NY	36	10300102	60	27	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
NY	36	10300207	60	27	50	50	10	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NY	36	10300208	60	27	50	50	10	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NY	36	10300209	60	27	50	50	10	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional

NY	36	10300225	60	27	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
NY	36	10200203	71	76	50	50	10	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
NY	36	10200212	71	76	50	50	10	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
NY	36	10300203	71	76	50	50	10	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NY	36	10300226	71	76	50	50	10	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
NY	36	10200202	73	72	50	50	10	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
NY	36	10200222	73	72	50	50	10	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
NY	36	10300101	73	72	50	50	10	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
NY	36	10300206	73	72	50	50	10	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
PA	42	10200104	29	27	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
PA	42	10200204	29	27	50	50	10	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
PA	42	10200205	29	27	50	50	10	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
PA	42	10200206	29	27	50	50	10	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
PA	42	10300102	29	27	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
PA	42	10300207	29	27	50	50	10	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
PA	42	10300208	29	27	50	50	10	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
PA	42	10300209	29	27	50	50	10	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
PA	42	10300225	29	27	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
PA	42	10200203	29	76	50	50	10	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
PA	42	10200212	29	76	50	50	10	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
PA	42	10300203	29	76	50	50	10	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
PA	42	10300226	29	76	50	50	10	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
PA	42	10200202	29	72	50	50	10	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
PA	42	10200222	29	72	50	50	10	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
PA	42	10300101	29	72	50	50	10	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
PA	42	10300206	29	72	50	50	10	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
RI	44	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
RI	44	10200204	0	0	0	0	0	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
RI	44	10200205	0	0	0	0	0	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
RI	44	10200206	0	0	0	0	0	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
RI	44	10300102	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
RI	44	10300207	0	0	0	0	0	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
RI	44	10300208	0	0	0	0	0	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
RI	44	10300209	0	0	0	0	0	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
RI	44	10300225	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
RI	44	10200203	0	0	0	0	0	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
RI	44	10200212	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
RI	44	10300203	0	0	0	0	0	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
RI	44	10300226	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
RI	44	10200202	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
RI	44	10200222	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
RI	44	10300101	0	0	0	0	0	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
RI	44	10300206	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VA	51	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
VA	51	10200204	0	0	0	0	0	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
VA	51	10200205	0	0	0	0	0	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
VA	51	10200206	0	0	0	0	0	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
VA	51	10300102	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
VA	51	10300207	0	0	0	0	0	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VA	51	10300208	0	0	0	0	0	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VA	51	10300209	0	0	0	0	0	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VA	51	10300225	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional

VA	51	10200203	0	0	0	0	0	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
VA	51	10200212	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
VA	51	10300203	0	0	0	0	0	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VA	51	10300226	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
VA	51	10200202	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
VA	51	10200222	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
VA	51	10300101	0	0	0	0	0	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
VA	51	10300206	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VT	50	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
VT	50	10200204	0	0	0	0	0	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
VT	50	10200205	0	0	0	0	0	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
VT	50	10200206	0	0	0	0	0	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
VT	50	10300102	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
VT	50	10300207	0	0	0	0	0	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VT	50	10300208	0	0	0	0	0	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VT	50	10300209	0	0	0	0	0	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VT	50	10300225	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
VT	50	10200203	0	0	0	0	0	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
VT	50	10200212	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
VT	50	10300203	0	0	0	0	0	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VT	50	10300226	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
VT	50	10200202	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
VT	50	10200222	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
VT	50	10300101	0	0	0	0	0	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
VT	50	10300206	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
CT	09	10200501	40	0	60	60	10		Grades 1 and 2 Oil	Distillate Oil	Industrial
CT	09	10200502	40	0	60	60	10		10-100 Million Btu/hr **	Distillate Oil	Industrial
CT	09	10200503	40	0	60	60	10		< 10 Million Btu/hr **	Distillate Oil	Industrial
CT	09	10200504	40	0	60	60	10		Grade 4 Oil	Distillate Oil	Industrial
CT	09	10200505	40	0	60	60	10		Cogeneration	Distillate Oil	Industrial
CT	09	10300501	40	0	60	60	10		Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
CT	09	10300502	40	0	60	60	10		10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
CT	09	10300503	40	0	60	60	10		< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
CT	09	10300504	40	0	60	60	10		Grade 4 Oil	Distillate Oil	Commercial/Institutional
DE	10	10200501	0	0	0	50	10		Grades 1 and 2 Oil	Distillate Oil	Industrial
DE	10	10200502	0	0	0	50	10		10-100 Million Btu/hr **	Distillate Oil	Industrial
DE	10	10200503	0	0	0	50	10		< 10 Million Btu/hr **	Distillate Oil	Industrial
DE	10	10200504	0	0	0	50	10		Grade 4 Oil	Distillate Oil	Industrial
DE	10	10200505	0	0	0	50	10		Cogeneration	Distillate Oil	Industrial
DE	10	10300501	0	0	0	50	10		Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
DE	10	10300502	0	0	0	50	10		10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
DE	10	10300503	0	0	0	50	10		< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
DE	10	10300504	0	0	0	50	10		Grade 4 Oil	Distillate Oil	Commercial/Institutional
DC	11	10200501	60	33	73	50	10		Grades 1 and 2 Oil	Distillate Oil	Industrial
DC	11	10200502	60	33	73	50	10		10-100 Million Btu/hr **	Distillate Oil	Industrial
DC	11	10200503	60	33	73	50	10		< 10 Million Btu/hr **	Distillate Oil	Industrial
DC	11	10200504	60	33	73	50	10		Grade 4 Oil	Distillate Oil	Industrial
DC	11	10200505	60	33	73	50	10		Cogeneration	Distillate Oil	Industrial
DC	11	10300501	60	33	73	50	10		Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
DC	11	10300502	60	33	73	50	10		10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
DC	11	10300503	60	33	73	50	10		< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
DC	11	10300504	60	33	73	50	10		Grade 4 Oil	Distillate Oil	Commercial/Institutional

ME	23	10200501	40	33	73	50	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
ME	23	10200502	40	33	73	50	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
ME	23	10200503	40	33	73	50	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
ME	23	10200504	40	33	73	50	10	Grade 4 Oil	Distillate Oil	Industrial
ME	23	10200505	40	33	73	50	10	Cogeneration	Distillate Oil	Industrial
ME	23	10300501	40	33	73	50	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
ME	23	10300502	40	33	73	50	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
ME	23	10300503	40	33	73	50	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
ME	23	10300504	40	33	73	50	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
MD	24	10200501	52	20	68	68	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
MD	24	10200502	52	20	68	68	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
MD	24	10200503	52	20	68	68	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
MD	24	10200504	52	20	68	68	10	Grade 4 Oil	Distillate Oil	Industrial
MD	24	10200505	52	20	68	68	10	Cogeneration	Distillate Oil	Industrial
MD	24	10300501	52	20	68	68	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
MD	24	10300502	52	20	68	68	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
MD	24	10300503	52	20	68	68	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
MD	24	10300504	52	20	68	68	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
MA	25	10200501	52	33	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
MA	25	10200502	52	33	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
MA	25	10200503	52	33	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
MA	25	10200504	52	33	33	50	10	Grade 4 Oil	Distillate Oil	Industrial
MA	25	10200505	52	33	33	50	10	Cogeneration	Distillate Oil	Industrial
MA	25	10300501	52	33	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
MA	25	10300502	52	33	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
MA	25	10300503	52	33	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
MA	25	10300504	52	33	33	50	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
NH	33	10200501	60	33	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
NH	33	10200502	60	33	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
NH	33	10200503	60	33	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
NH	33	10200504	60	33	33	50	10	Grade 4 Oil	Distillate Oil	Industrial
NH	33	10200505	60	33	33	50	10	Cogeneration	Distillate Oil	Industrial
NH	33	10300501	60	33	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
NH	33	10300502	60	33	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
NH	33	10300503	60	33	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
NH	33	10300504	60	33	33	50	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
NJ	34	10200501	40	0	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
NJ	34	10200502	40	0	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
NJ	34	10200503	40	0	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
NJ	34	10200504	40	0	33	50	10	Grade 4 Oil	Distillate Oil	Industrial
NJ	34	10200505	40	0	33	50	10	Cogeneration	Distillate Oil	Industrial
NJ	34	10300501	40	0	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
NJ	34	10300502	40	0	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
NJ	34	10300503	40	0	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
NJ	34	10300504	40	0	33	50	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
NY	36	10200501	52	33	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
NY	36	10200502	52	33	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
NY	36	10200503	52	33	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
NY	36	10200504	52	33	33	50	10	Grade 4 Oil	Distillate Oil	Industrial
NY	36	10200505	52	33	33	50	10	Cogeneration	Distillate Oil	Industrial
NY	36	10300501	52	33	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
NY	36	10300502	52	33	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional

NY	36	10300503	52	33	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
NY	36	10300504	52	33	33	50	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
PA	42	10200501	29	33	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
PA	42	10200502	29	33	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
PA	42	10200503	29	33	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
PA	42	10200504	29	33	33	50	10	Grade 4 Oil	Distillate Oil	Industrial
PA	42	10200505	29	33	33	50	10	Cogeneration	Distillate Oil	Industrial
PA	42	10300501	29	33	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
PA	42	10300502	29	33	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
PA	42	10300503	29	33	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
PA	42	10300504	29	33	33	50	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
RI	44	10200501	0	0	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
RI	44	10200502	0	0	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
RI	44	10200503	0	0	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
RI	44	10200504	0	0	33	50	10	Grade 4 Oil	Distillate Oil	Industrial
RI	44	10200505	0	0	33	50	10	Cogeneration	Distillate Oil	Industrial
RI	44	10300501	0	0	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
RI	44	10300502	0	0	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
RI	44	10300503	0	0	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
RI	44	10300504	0	0	33	50	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
VT	50	10200501	60	60	50	50	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
VT	50	10200502	60	60	50	50	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
VT	50	10200503	60	60	50	50	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
VT	50	10200504	60	60	50	50	10	Grade 4 Oil	Distillate Oil	Industrial
VT	50	10200505	60	60	50	50	10	Cogeneration	Distillate Oil	Industrial
VT	50	10300501	60	60	50	50	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
VT	50	10300502	60	60	50	50	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
VT	50	10300503	60	60	50	50	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
VT	50	10300504	60	60	50	50	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
VA	51	10200501	52	20	68	68	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
VA	51	10200502	52	20	68	68	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
VA	51	10200503	52	20	68	68	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
VA	51	10200504	52	20	68	68	10	Grade 4 Oil	Distillate Oil	Industrial
VA	51	10200505	52	20	68	68	10	Cogeneration	Distillate Oil	Industrial
VA	51	10300501	52	20	68	68	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
VA	51	10300502	52	20	68	68	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
VA	51	10300503	52	20	68	68	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
VA	51	10300504	52	20	68	68	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
CT	09	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
CT	09	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
CT	09	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
CT	09	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
CT	09	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
DE	10	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
DE	10	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
DE	10	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
DE	10	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
DE	10	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
DC	11	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
DC	11	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
DC	11	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
DC	11	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional

DC	11	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
ME	23	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
ME	23	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
ME	23	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
ME	23	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
ME	23	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
MD	24	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
MD	24	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
MD	24	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
MD	24	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
MD	24	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
MA	25	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
MA	25	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
MA	25	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
MA	25	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
MA	25	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
NH	33	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
NH	33	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
NH	33	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
NH	33	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
NH	33	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
NJ	34	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
NJ	34	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
NJ	34	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
NJ	34	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
NJ	34	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
NY	36	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
NY	36	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
NY	36	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
NY	36	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
NY	36	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
PA	42	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
PA	42	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
PA	42	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
PA	42	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
PA	42	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
RI	44	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
RI	44	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
RI	44	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
RI	44	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
RI	44	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
VT	50	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
VT	50	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
VT	50	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
VT	50	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
VT	50	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
VA	51	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
VA	51	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
VA	51	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
VA	51	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
VA	51	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
CT	09	10200601	40	50	75	75	10	> 100 Million Btu/hr	Natural Gas	Industrial

CT	09	10200602	40	50	75	75	10	10-100 Million Btu/hr	Natural Gas	Industrial
CT	09	10200603	40	50	75	75	10	< 10 Million Btu/hr	Natural Gas	Industrial
CT	09	10200604	40	50	75	75	10	Cogeneration	Natural Gas	Industrial
CT	09	10300601	40	50	75	75	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
CT	09	10300602	40	50	75	75	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
CT	09	10300603	40	50	75	75	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
DE	10	10200601	0	0	0	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
DE	10	10200602	0	0	0	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
DE	10	10200603	0	0	0	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
DE	10	10200604	0	0	0	50	10	Cogeneration	Natural Gas	Industrial
DE	10	10300601	0	0	0	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
DE	10	10300602	0	0	0	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
DE	10	10300603	0	0	0	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
DC	11	10200601	40	50	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
DC	11	10200602	40	50	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
DC	11	10200603	40	50	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
DC	11	10200604	40	50	50	50	10	Cogeneration	Natural Gas	Industrial
DC	11	10300601	40	50	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
DC	11	10300602	40	50	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
DC	11	10300603	40	50	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
ME	23	10200601	40	60	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
ME	23	10200602	40	60	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
ME	23	10200603	40	60	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
ME	23	10200604	40	60	50	50	10	Cogeneration	Natural Gas	Industrial
ME	23	10300601	40	60	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
ME	23	10300602	40	60	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
ME	23	10300603	40	60	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
MD	24	10200601	40	50	75	75	10	> 100 Million Btu/hr	Natural Gas	Industrial
MD	24	10200602	40	50	75	75	10	10-100 Million Btu/hr	Natural Gas	Industrial
MD	24	10200603	40	50	75	75	10	< 10 Million Btu/hr	Natural Gas	Industrial
MD	24	10200604	40	50	75	75	10	Cogeneration	Natural Gas	Industrial
MD	24	10300601	40	50	75	75	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
MD	24	10300602	40	50	75	75	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
MD	24	10300603	40	50	75	75	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
MA	25	10200601	40	50	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
MA	25	10200602	40	50	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
MA	25	10200603	40	50	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
MA	25	10200604	40	50	50	50	10	Cogeneration	Natural Gas	Industrial
MA	25	10300601	40	50	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
MA	25	10300602	40	50	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
MA	25	10300603	40	50	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
NH	33	10200601	0	0	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
NH	33	10200602	0	0	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
NH	33	10200603	0	0	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
NH	33	10200604	0	0	50	50	10	Cogeneration	Natural Gas	Industrial
NH	33	10300601	0	0	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
NH	33	10300602	0	0	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
NH	33	10300603	0	0	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
NJ	34	10200601	0	0	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
NJ	34	10200602	0	0	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
NJ	34	10200603	0	0	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
NJ	34	10200604	0	0	50	50	10	Cogeneration	Natural Gas	Industrial

NJ	34	10300601	0	0	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
NJ	34	10300602	0	0	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
NJ	34	10300603	0	0	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
NY	36	10200601	40	50	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
NY	36	10200602	40	50	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
NY	36	10200603	40	50	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
NY	36	10200604	40	50	50	50	10	Cogeneration	Natural Gas	Industrial
NY	36	10300601	40	50	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
NY	36	10300602	40	50	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
NY	36	10300603	40	50	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
PA	42	10200601	29	50	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
PA	42	10200602	29	50	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
PA	42	10200603	29	50	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
PA	42	10200604	29	50	50	50	10	Cogeneration	Natural Gas	Industrial
PA	42	10300601	29	50	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
PA	42	10300602	29	50	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
PA	42	10300603	29	50	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
RI	44	10200601	0	0	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
RI	44	10200602	0	0	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
RI	44	10200603	0	0	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
RI	44	10200604	0	0	50	50	10	Cogeneration	Natural Gas	Industrial
RI	44	10300601	0	0	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
RI	44	10300602	0	0	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
RI	44	10300603	0	0	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
VT	50	10200601	40	60	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
VT	50	10200602	40	60	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
VT	50	10200603	40	60	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
VT	50	10200604	40	60	50	50	10	Cogeneration	Natural Gas	Industrial
VT	50	10300601	40	60	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
VT	50	10300602	40	60	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
VT	50	10300603	40	60	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
VA	51	10200601	40	50	75	75	10	> 100 Million Btu/hr	Natural Gas	Industrial
VA	51	10200602	40	50	75	75	10	10-100 Million Btu/hr	Natural Gas	Industrial
VA	51	10200603	40	50	75	75	10	< 10 Million Btu/hr	Natural Gas	Industrial
VA	51	10200604	40	50	75	75	10	Cogeneration	Natural Gas	Industrial
VA	51	10300601	40	50	75	75	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
VA	51	10300602	40	50	75	75	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
VA	51	10300603	40	50	75	75	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
CT	09	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
DE	10	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
DC	11	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
ME	23	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
MD	24	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
MA	25	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
NH	33	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
NJ	34	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
NY	36	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
PA	42	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
RI	44	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
VT	50	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
VA	51	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
CT	09	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial

CT	09	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
CT	09	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
CT	09	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
CT	09	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
CT	09	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
CT	09	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
DE	10	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
DE	10	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
DE	10	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
DE	10	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
DE	10	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
DE	10	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
DE	10	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
DC	11	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
DC	11	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
DC	11	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
DC	11	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
DC	11	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
DC	11	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
DC	11	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
ME	23	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
ME	23	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
ME	23	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
ME	23	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
ME	23	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
ME	23	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
ME	23	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
MD	24	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
MD	24	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
MD	24	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
MD	24	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
MD	24	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
MD	24	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
MD	24	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
MA	25	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
MA	25	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
MA	25	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
MA	25	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
MA	25	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
MA	25	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
MA	25	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
NH	33	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
NH	33	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
NH	33	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
NH	33	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
NH	33	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
NH	33	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
NH	33	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
NJ	34	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
NJ	34	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
NJ	34	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
NJ	34	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial

NJ	34	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
NJ	34	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
NJ	34	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
NY	36	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
NY	36	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
NY	36	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
NY	36	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
NY	36	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
NY	36	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
NY	36	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
PA	42	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
PA	42	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
PA	42	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
PA	42	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
PA	42	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
PA	42	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
PA	42	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
RI	44	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
RI	44	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
RI	44	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
RI	44	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
RI	44	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
RI	44	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
RI	44	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
VT	50	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
VT	50	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
VT	50	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
VT	50	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
VT	50	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
VT	50	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
VT	50	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
VA	51	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
VA	51	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
VA	51	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
VA	51	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
VA	51	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
VA	51	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
VA	51	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
CT	09	10200401	52	20	20	20	10	Grade 6 Oil	Residual Oil	Industrial
CT	09	10200402	52	20	20	20	10	10-100 Million Btu/hr **	Residual Oil	Industrial
CT	09	10200403	52	20	20	20	10	< 10 Million Btu/hr **	Residual Oil	Industrial
CT	09	10200404	52	20	20	20	10	Grade 5 Oil	Residual Oil	Industrial
CT	09	10200405	52	20	20	20	10	Cogeneration	Residual Oil	Industrial
CT	09	10300401	52	20	20	20	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
CT	09	10300402	52	20	20	20	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
CT	09	10300403	52	20	20	20	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
CT	09	10300404	52	20	20	20	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
DE	10	10200401	0	0	0	50	10	Grade 6 Oil	Residual Oil	Industrial
DE	10	10200402	0	0	0	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
DE	10	10200403	0	0	0	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
DE	10	10200404	0	0	0	50	10	Grade 5 Oil	Residual Oil	Industrial
DE	10	10200405	0	0	0	50	10	Cogeneration	Residual Oil	Industrial

DE	10	10300401	0	0	0	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
DE	10	10300402	0	0	0	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
DE	10	10300403	0	0	0	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
DE	10	10300404	0	0	0	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
DC	11	10200401	60	33	33	50	10	Grade 6 Oil	Residual Oil	Industrial
DC	11	10200402	60	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
DC	11	10200403	60	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
DC	11	10200404	60	33	33	50	10	Grade 5 Oil	Residual Oil	Industrial
DC	11	10200405	60	33	33	50	10	Cogeneration	Residual Oil	Industrial
DC	11	10300401	60	33	33	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
DC	11	10300402	60	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
DC	11	10300403	60	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
DC	11	10300404	60	33	33	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
ME	23	10200401	40	33	33	50	10	Grade 6 Oil	Residual Oil	Industrial
ME	23	10200402	40	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
ME	23	10200403	40	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
ME	23	10200404	40	33	33	50	10	Grade 5 Oil	Residual Oil	Industrial
ME	23	10200405	40	33	33	50	10	Cogeneration	Residual Oil	Industrial
ME	23	10300401	40	33	33	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
ME	23	10300402	40	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
ME	23	10300403	40	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
ME	23	10300404	40	33	33	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
MD	24	10200401	52	20	20	20	10	Grade 6 Oil	Residual Oil	Industrial
MD	24	10200402	52	20	20	20	10	10-100 Million Btu/hr **	Residual Oil	Industrial
MD	24	10200403	52	20	20	20	10	< 10 Million Btu/hr **	Residual Oil	Industrial
MD	24	10200404	52	20	20	20	10	Grade 5 Oil	Residual Oil	Industrial
MD	24	10200405	52	20	20	20	10	Cogeneration	Residual Oil	Industrial
MD	24	10300401	52	20	20	20	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
MD	24	10300402	52	20	20	20	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
MD	24	10300403	52	20	20	20	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
MD	24	10300404	52	20	20	20	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
MA	25	10200401	52	33	33	50	10	Grade 6 Oil	Residual Oil	Industrial
MA	25	10200402	52	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
MA	25	10200403	52	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
MA	25	10200404	52	33	33	50	10	Grade 5 Oil	Residual Oil	Industrial
MA	25	10200405	52	33	33	50	10	Cogeneration	Residual Oil	Industrial
MA	25	10300401	52	33	33	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
MA	25	10300402	52	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
MA	25	10300403	52	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
MA	25	10300404	52	33	33	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
NH	33	10200401	60	33	33	50	10	Grade 6 Oil	Residual Oil	Industrial
NH	33	10200402	60	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
NH	33	10200403	60	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
NH	33	10200404	60	33	33	50	10	Grade 5 Oil	Residual Oil	Industrial
NH	33	10200405	60	33	33	50	10	Cogeneration	Residual Oil	Industrial
NH	33	10300401	60	33	33	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
NH	33	10300402	60	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
NH	33	10300403	60	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
NH	33	10300404	60	33	33	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
NJ	34	10200401	40	0	33	50	10	Grade 6 Oil	Residual Oil	Industrial
NJ	34	10200402	40	0	33	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
NJ	34	10200403	40	0	33	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial

NJ	34	10200404	40	0	33	50	10	Grade 5 Oil	Residual Oil	Industrial
NJ	34	10200405	40	0	33	50	10	Cogeneration	Residual Oil	Industrial
NJ	34	10300401	40	0	33	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
NJ	34	10300402	40	0	33	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
NJ	34	10300403	40	0	33	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
NJ	34	10300404	40	0	33	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
NY	36	10200401	52	33	33	50	10	Grade 6 Oil	Residual Oil	Industrial
NY	36	10200402	52	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
NY	36	10200403	52	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
NY	36	10200404	52	33	33	50	10	Grade 5 Oil	Residual Oil	Industrial
NY	36	10200405	52	33	33	50	10	Cogeneration	Residual Oil	Industrial
NY	36	10300401	52	33	33	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
NY	36	10300402	52	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
NY	36	10300403	52	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
NY	36	10300404	52	33	33	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
PA	42	10200401	29	33	33	50	10	Grade 6 Oil	Residual Oil	Industrial
PA	42	10200402	29	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
PA	42	10200403	29	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
PA	42	10200404	29	33	33	50	10	Grade 5 Oil	Residual Oil	Industrial
PA	42	10200405	29	33	33	50	10	Cogeneration	Residual Oil	Industrial
PA	42	10300401	29	33	33	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
PA	42	10300402	29	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
PA	42	10300403	29	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
PA	42	10300404	29	33	33	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
RI	44	10200401	0	0	0	50	10	Grade 6 Oil	Residual Oil	Industrial
RI	44	10200402	0	0	0	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
RI	44	10200403	0	0	0	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
RI	44	10200404	0	0	0	50	10	Grade 5 Oil	Residual Oil	Industrial
RI	44	10200405	0	0	0	50	10	Cogeneration	Residual Oil	Industrial
RI	44	10300401	0	0	0	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
RI	44	10300402	0	0	0	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
RI	44	10300403	0	0	0	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
RI	44	10300404	0	0	0	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
VT	50	10200401	60	60	50	50	10	Grade 6 Oil	Residual Oil	Industrial
VT	50	10200402	60	60	50	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
VT	50	10200403	60	60	50	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
VT	50	10200404	60	60	50	50	10	Grade 5 Oil	Residual Oil	Industrial
VT	50	10200405	60	60	50	50	10	Cogeneration	Residual Oil	Industrial
VT	50	10300401	60	60	50	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
VT	50	10300402	60	60	50	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
VT	50	10300403	60	60	50	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
VT	50	10300404	60	60	50	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
VA	51	10200401	52	20	20	20	10	Grade 6 Oil	Residual Oil	Industrial
VA	51	10200402	52	20	20	20	10	10-100 Million Btu/hr **	Residual Oil	Industrial
VA	51	10200403	52	20	20	20	10	< 10 Million Btu/hr **	Residual Oil	Industrial
VA	51	10200404	52	20	20	20	10	Grade 5 Oil	Residual Oil	Industrial
VA	51	10200405	52	20	20	20	10	Cogeneration	Residual Oil	Industrial
VA	51	10300401	52	20	20	20	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
VA	51	10300402	52	20	20	20	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
VA	51	10300403	52	20	20	20	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
VA	51	10300404	52	20	20	20	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
CT	09	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial

CT	09	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
CT	09	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
CT	09	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
CT	09	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
CT	09	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
CT	09	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
CT	09	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
CT	09	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
CT	09	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
CT	09	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
CT	09	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
DE	10	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
DE	10	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
DE	10	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
DE	10	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
DE	10	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
DE	10	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
DE	10	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
DE	10	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
DE	10	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
DE	10	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
DE	10	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
DE	10	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
DC	11	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
DC	11	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
DC	11	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
DC	11	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
DC	11	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
DC	11	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
DC	11	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
DC	11	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
DC	11	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
DC	11	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
DC	11	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
DC	11	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
ME	23	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
ME	23	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
ME	23	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
ME	23	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
ME	23	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
ME	23	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
ME	23	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
ME	23	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
ME	23	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
ME	23	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
ME	23	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
ME	23	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
MD	24	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
MD	24	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
MD	24	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
MD	24	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
MD	24	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial

MD	24	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
MD	24	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
MD	24	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
MD	24	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
MD	24	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
MD	24	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
MD	24	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
MA	25	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
MA	25	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
MA	25	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
MA	25	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
MA	25	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
MA	25	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
MA	25	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
MA	25	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
MA	25	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
MA	25	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
MA	25	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
MA	25	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
NH	33	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
NH	33	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
NH	33	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
NH	33	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NH	33	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NH	33	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NH	33	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
NH	33	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
NH	33	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
NH	33	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
NH	33	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
NH	33	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
NJ	34	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
NJ	34	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
NJ	34	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
NJ	34	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NJ	34	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NJ	34	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NJ	34	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
NJ	34	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
NJ	34	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
NJ	34	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
NJ	34	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
NJ	34	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
NY	36	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
NY	36	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
NY	36	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
NY	36	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NY	36	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NY	36	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NY	36	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
NY	36	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
NY	36	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional

NY	36	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
NY	36	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
NY	36	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
PA	42	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
PA	42	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
PA	42	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
PA	42	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
PA	42	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
PA	42	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
PA	42	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
PA	42	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
PA	42	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
PA	42	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
PA	42	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
PA	42	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
RI	44	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
RI	44	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
RI	44	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
RI	44	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
RI	44	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
RI	44	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
RI	44	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
RI	44	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
RI	44	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
RI	44	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
RI	44	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
RI	44	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
VT	50	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
VT	50	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
VT	50	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
VT	50	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
VT	50	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
VT	50	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
VT	50	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
VT	50	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
VT	50	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
VT	50	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
VT	50	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
VT	50	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
VA	51	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
VA	51	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
VA	51	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
VA	51	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
VA	51	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
VA	51	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
VA	51	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
VA	51	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
VA	51	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
VA	51	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
VA	51	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
VA	51	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional

State	Current 2006 NOx RACT Limit (lbs/mmBtu) (from State regulations) Applicability Threshold mmBtu/hour Heat Input > 250*	100 to 250	50 to 100	25 to 50	5 to 25		OTB Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold mmBtu/hour Heat Input > 250*	100 to 250	50 to 100	25 to 50	<25
NATURAL GAS						**OTC Limits (lbs/mmBtu):**	**0.12**	**0.10**	**0.05**	**0.05**	**NL**
CT	0.20	0.20	0.20	0.20	0.20		40.0	50.0	75.0	75.0	10.0
DE	0.10	0.10	LNB	NL	NL		0.0	0.0	0.0	50.0	10.0
DC	0.20	0.20	NL	NL	NL		40.0	50.0	50.0	50.0	10.0
ME	0.20	NL	NL	NL	NL		40.0	60.0	50.0	50.0	10.0
MD	0.20	0.20	0.20	0.20	0.20		40.0	50.0	75.0	75.0	10.0
MA	0.20	0.20	0.10	NL	NL		40.0	50.0	50.0	50.0	10.0
NH	0.10	0.10	0.10	NL	NL		0.0	0.0	50.0	50.0	10.0
NJ	0.10	0.10	0.10	NL	NL		0.0	0.0	50.0	50.0	10.0
NY	0.20	0.20	0.10	NL	NL		40.0	50.0	50.0	50.0	10.0
PA	Source Specific NOx RACT						29.4	50.0	50.0	50.0	10.0
SE PA	0.17	0.10	Source Specific RACT				29.4	0.0	50.0	50.0	10.0
RI	0.10	0.10	0.10	NL	NL		0.0	0.0	50.0	50.0	10.0
VT	0.20	NL	NL	NL	NL		40.0	60.0	50.0	50.0	10.0
NOVA	0.2	0.2	0.2	0.2	0.2		40.0	50.0	75.0	75.0	10.0

	Current 2006 NOx RACT Limit (from State regulations) Applicability Threshold						OTB Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold				
State	> 250*	100 to 250	50 to 100	25 to 50	5 to 25		> 250*	100 to 250	50 to 100	25 to 50	<25
DISTILLATE OIL						OTC Limits (lbs/mmBtu):	0.12	0.20	0.08	0.08	NL
CT	0.20	0.20	0.20	0.20	0.20		40.0	0.0	60.0	60.0	10.0
DE	0.10	0.10	LNB	NL	NL		0.0	0.0	0.0	50.0	10.0
DC	0.30	0.30	0.30	NL	NL		60.0	33.3	73.3	50.0	10.0
ME	0.20	0.30	0.30	NL	NL		40.0	33.3	73.3	50.0	10.0
MD	0.25	0.25	0.25	0.25	0.25		52.0	20.0	68.0	68.0	10.0
MA	0.25	0.30	0.12	NL	NL		52.0	33.3	33.3	50.0	10.0
NH	0.30	0.30	0.12	NL	NL		60.0	33.3	33.3	50.0	10.0
NJ	0.20	0.20	0.12	NL	NL		40.0	0.0	33.3	50.0	10.0
NY	0.25	0.30	0.12	NL	NL		52.0	33.3	33.3	50.0	10.0
PA	Source Specific NOx RACT						29.4	33.3	33.3	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	0.0	33.3	50.0	10.0
RI	0.12	0.12	0.12	NL	NL		0.0	0.0	33.3	50.0	10.0
VT	0.30	NL	NL	NL	NL		60.0	60.0	50.0	50.0	10.0
NOVA	0.25	0.25	0.25	0.25	0.25		52.0	20.0	68.0	68.0	10.0

	Current 2006 NOx RACT Limit (from State regulations) Applicability Threshold						OTB Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold				
State	> 250*	100 to 250	50 to 100	25 to 50	5 to 25		> 250*	100 to 250	50 to 100	25 to 50	<25
RESIDUAL OIL						OTC Limits (lbs/mmBtu):	0.12	0.20	0.20	0.20	NL
CT	0.25	0.25	0.25	0.25	0.25		52.0	20.0	20.0	20.0	10.0
DE	0.10	0.10	LNB	NL	NL		0.0	0.0	0.0	50.0	10.0
DC	0.30	0.30	0.30	NL	NL		60.0	33.3	33.3	50.0	10.0
ME	0.20	0.30	0.30	NL	NL		40.0	33.3	33.3	50.0	10.0
MD	0.25	0.25	0.25	0.25	0.25		52.0	20.0	20.0	20.0	10.0
MA	0.25	0.30	0.30	NL	NL		52.0	33.3	33.3	50.0	10.0
NH	0.30	0.30	0.30	NL	NL		60.0	33.3	33.3	50.0	10.0
NJ	0.20	0.20	0.30	NL	NL		40.0	0.0	33.3	50.0	10.0
NY	0.25	0.30	0.30	NL	NL		52.0	33.3	33.3	50.0	10.0
PA	Source Specific NOx RACT						29.4	33.3	33.3	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	0.0	50.0	50.0	10.0
RI	LNB/FGR	LNB/FGR	LNB/FGR	NL	NL		0.0	0.0	0.0	50.0	10.0
VT	0.30	NL	NL	NL	NL		60.0	60.0	50.0	50.0	10.0
NOVA	0.25	0.25	0.25	0.25	0.25		52.0	20.0	20.0	20.0	10.0

State	Current 2006 NOx RACT Limit (from State regulations) Applicability Threshold > 250*	100 to 250	50 to 100	25 to 50	5 to 25		OTB Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold > 250*	100 to 250	50 to 100	25 to 50	<25
COAL Wall-fired						OTC Limits (lbs/mmBtu):	0.12	0.14	0.30	0.30	NL
CT	0.38	0.38	0.38	0.38	0.38		68.4	63.2	21.1	21.1	10.0
DE	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
DC	0.43	0.43	NL	NL	NL		72.1	67.4	50.0	50.0	10.0
ME	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
MD	0.38	0.65	0.38	0.38	0.38		68.4	78.5	21.1	21.1	10.0
MA	0.45	0.45	NL	NL	NL		73.3	68.9	50.0	50.0	10.0
NH	0.50	0.50	0.50	NL	NL		76.0	56.0	40.0	50.0	10.0
NJ	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NY	0.45	0.5	NL	NL	NL		73.3	72.0	50.0	50.0	10.0
PA	Source Specific NOx RACT						29.4	72.0	50.0	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	30.0	######	0.0	10.0
RI	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
VT	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NOVA	0.38	0.38	0.38	0.38	0.38		68.4	63.2	21.1	21.1	10.0

State	Current 2006 NOx RACT Limit (from State regulations) Applicability Threshold > 250*	100 to 250	50 to 100	25 to 50	5 to 25		OTB Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold > 250*	100 to 250	50 to 100	25 to 50	<25
COAL - Tangential						OTC Limits (lbs/mmBtu):	0.12	0.12	0.30	0.30	NL
CT	0.20	0.20	0.20	0.20	0.20		40.0	40.0	0.0	0.0	10.0
DE	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
DC	0.43	0.43	NL	NL	NL		72.1	72.1	50.0	50.0	10.0
ME	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
MD	0.38	0.65	0.38	0.38	0.38		68.4	81.5	21.1	21.1	10.0
MA	0.38	0.38	NL	NL	NL		68.4	68.4	50.0	50.0	10.0
NH	0.38	0.38	0.38	NL	NL		68.4	42.1	21.1	50.0	10.0
NJ	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NY	0.42	0.5	NL	NL	NL		71.4	76.0	50.0	50.0	10.0
PA	Source Specific NOx RACT						29.4	76.0	50.0	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	40.0	50.0	50.0	10.0
RI	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
VT	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NOVA	0.38	0.38	0.38	0.38	0.38		68.4	68.4	21.1	21.1	10.0

State	Current 2006 NOx RACT Limit (from State regulations) Applicability Threshold > 250*	100 to 250	50 to 100	25 to 50	5 to 25		OTB Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold > 250*	100 to 250	50 to 100	25 to 50	<25
COAL Stoker						**OTC Limits (lbs/mmBtu):**	**0.12**	**0.22**	**0.30**	**0.30**	**NL**
CT	0.20	0.20	0.20	0.20	0.20		40.0	0.0	0.0	0.0	10.0
DE	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
DC	0.43	0.43	NL	NL	NL		72.1	48.8	50.0	50.0	10.0
ME	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
MD	0.38	0.65	0.38	0.38	0.38		68.4	66.2	21.1	21.1	10.0
MA	0.33	0.33	NL	NL	NL		63.6	33.3	50.0	50.0	10.0
NH	0.30	0.30	0.30	NL	NL		60.0	26.7	0.0	50.0	10.0
NJ	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NY	0.3	0.3	NL	NL	NL		60.0	26.7	50.0	50.0	10.0
PA	Source Specific NOx RACT						29.4	26.7	50.0	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	0.0	50.0	50.0	10.0
RI	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
VT	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NOVA	0.4	0.4	0.4	0.4	0.4		70.0	45.0	25.0	25.0	10.0

State	Current 2006 NOx RACT Limit (from State regulations) Applicability Threshold > 250*	100 to 250	50 to 100	25 to 50	5 to 25		OTB Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold > 250*	100 to 250	50 to 100	25 to 50	<25
COAL - FBC						**OTC Limits (lbs/mmBtu):**	**0.12**	**0.08**	**0.30**	**0.30**	**NL**
CT	0.20	0.20	0.20	0.20	0.20		40.0	60.0	0.0	0.0	10.0
DE	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
DC	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
ME	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
MD	0.38	0.65	0.38	0.38	0.38		68.4	87.7	21.1	21.1	10.0
MA	0.33	0.33	NL	NL	NL		63.6	75.8	50.0	50.0	10.0
NH	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NJ	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NY	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
PA	Source Specific NOx RACT						0.0	0.0	0.0	0.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	60.0	50.0	50.0	10.0
RI	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
VT	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NOVA	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0

Appendix F – State ICI Boiler Regulations

Due to their large size, these tables are being transmitted electronically in the spreadsheet named Appendix F State ICI Regs.xls. There are separate tabs for each state. In the final report, these tables will be provided in electronic format

State	Type of Emissions Unit	Pollutant	Unit Size		Fuel	Emission Limit		Regulatory Citation	Notes 1	Notes 2	Notes 3	Notes 4	Notes 5
CT	Fuel Burning Equipment	PM	All		NG	0.10	lb/MMBtu	22a-174-18(e)(2)					
	Fuel Burning Equipment	PM	All		DO	0.12	lb/MMBtu	22a-174-18(e)(2)					
	Fuel Burning Equipment	PM	All		RO	0.14	lb/MMBtu	22a-174-18(e)(2)					
	Fuel Burning Equipment	PM	All		Other	0.20	lb/MMBtu	22a-174-18(e)(2)					
	Fuel Burning Equipment, Eff 1/1/02	SO2	All		NG/DO/RO	0.55	lb/MMBtu	22a-174-19a(c)(2)	Effective 1/1/02	Alternate: 0.5 lb/MMBtu avg for multiple units	Alternate: sulfur content < 0.5 wt%		
	Fuel Burning Equipment, Eff 1/1/03	SO2	All		NG/DO/RO	0.33	lb/MMBtu	22a-174-19a(e)(2)	Effective 1/1/03	Alternate: 0.3 lb/MMBtu avg for multiple units	Alternate: sulfur content < 0.5 wt%		
	Fuel Burning Equipment	SO2	All		Other	1.10	lb/MMBtu	22a-174-19(a)(3)(ii)			Alternate: sulfur content < 1.0 wt%		
	Boiler - Cyclone	NOx	All		NG/DO/RO/Coal	0.43	lb/MMBtu	22a-174-22(e)(1)					
	Boiler - Fluidized Bed	NOx	All		Coal	0.29	lb/MMBtu	22a-174-22(e)(1)					
	Boiler - Other	NOx	All		NG/DO	0.20	lb/MMBtu	22a-174-22(e)(1)					
	Boiler - Other	NOx	All		RO	0.25	lb/MMBtu	22a-174-22(e)(1)					
	Boiler - Other	NOx	All		Coal	0.38	lb/MMBtu	22a-174-22(e)(1)					
	Turbine	NOx	≥ 100	MMBtu/hr	NG	55	ppmvd	22a-174-22(e)(1)			Corrected to 15% O2		
	Turbine	NOx	≥ 100	MMBtu/hr	DO	75	ppmvd	22a-174-22(e)(1)			Corrected to 15% O2		
	Turbine	NOx	< 100	MMBtu/hr	NG/DO	0.90	lb/MMBtu	22a-174-22(e)(1)					
	Fuel Burning Equipment	NOx	All		Other	0.30	lb/MMBtu	22a-174-22(e)(2)					
DE	Fuel Burning Equipment	PM	All		Any	0.30	lb/MMBtu	Reg. 4, Section 2.1					
	Fuel Burning Equipment	SO2	All		DO	0.30	wt% sulfur	Reg. 8, Section 2.2	Statewide				
	Fuel Burning Equipment	SO2	All		Any	1.00	wt% sulfur	Reg. 8, Section 2.1	New Castle County only				
	Boiler - Face/Tangential	NOx	All		NG	0.20	lb/MMBtu	Reg. 12, Section 3.2.a					
	Boiler - Face/Tangential	NOx	All		Oil or Oil/NG	0.25	lb/MMBtu	Reg. 12, Section 3.2.a					
	Boiler - Face/Tangential	NOx	All		Coal	0.38	lb/MMBtu	Reg. 12, Section 3.2.a					
	Boiler - Cyclone	NOx	All		Oil	0.43	lb/MMBtu	Reg. 12, Section 3.2.a					
	Boiler - Stoker	NOx	All		Coal	0.40	lb/MMBtu	Reg. 12, Section 3.2.a					
DC	Fuel Burning Equipment	PM	< 3.5		Any	0.13	lb/MMBtu	Title 20, Section 600.1					
	Fuel Burning Equipment	PM	3.5 - 9,999		Any	Formula	lb/MMBtu	Title 20, Section 600.1	Based on a formula: E (lb/MMBtu) = 0.17455 $H^{0.23522}$, where H = MMBtu/hr input rating of the unit				
	Fuel Burning Equipment	PM	≥ 10,000		Any	0.02	lb/MMBtu	Title 20, Section 600.1					
	Fuel Burning Equipment	SO2	All		Any	0.05	vol %	Title 20, Section 803.1	0.05 vol% = 500 ppmv	Dry or wet not specified, O2 correction not specified			
	Fuel Burning Equipment	SO2	All		Oil/Coal	1.00	wt% sulfur	Title 20, Section 801.1 / 802.1					
	Boiler	NOx	> 100	MMBtu/hr	NG	0.20	lb/MMBtu	Title 20, Section 804.1					
	Boiler	NOx	> 100	MMBtu/hr	Oil	0.30	lb/MMBtu	Title 20, Section 804.1					
	Boiler	NOx	> 100	MMBtu/hr	Solid	0.70	lb/MMBtu	Title 20, Section 804.1	Solid fuel includes coal, except lignite				
	Boiler - Face/Tangential	NOx	50 - 99	MMBtu/hr	Oil	0.30	lb/MMBtu	Title 20, Section 805.5(b)	RACT - Major sources only				
	Boiler - Face/Tangential	NOx	≥ 100	MMBtu/hr	NG	0.20	lb/MMBtu	Title 20, Section 805.5(c)(2)	RACT - Major sources only				
	Boiler - Face/Tangential	NOx	≥ 100	MMBtu/hr	Oil	0.25	lb/MMBtu	Title 20, Section 805.5(c)(2)	RACT - Major sources only				
	Boiler - Face/Tangential/Stoker	NOx	≥ 100	MMBtu/hr	Coal	0.43	lb/MMBtu	Title 20, Section 805.5(c)(1)	RACT - Major sources only				
	Turbine	NOx	≥ 100	MMBtu/hr	Oil	75	ppmvd	Title 20, Section 805.4(a)(1)	RACT - Major sources only		Corrected to 15% O2		
ME	Fuel Burning Equipment, Pre-12/2/82	PM	All		NG/DO/RO	0.20	lb/MMBtu	6-96-103.2(A)(1)					
	Fuel Burning Equipment, Pre-12/2/82	PM	< 50	MMBtu/hr	Coal	0.30	lb/MMBtu	6-96-103.2(A)(2)(a)					
	Fuel Burning Equipment, Pre-12/2/82	PM	≥ 50	MMBtu/hr	Coal	0.08	lb/MMBtu	6-96-103.2(A)(2)(b)					
	Fuel Burning Equipment, Pre-12/2/82	PM	< 150	MMBtu/hr	Wood	Formula	lb/MMBtu	6-96-103.2(A)(3)(a)	Based on a formula: log(y) = 0.034 - 0.256 log(x), where y = lb/MMBtu emission factor, x = MMBtu input rating of the unit				
	Fuel Burning Equipment, Pre-12/2/82	PM	≥ 150	MMBtu/hr	Wood	0.30	lb/MMBtu	6-96-103.2(A)(3)(b)					
	Fuel Burning Equipment, Post-12/2/82	PM	< 50	MMBtu/hr	NG/DO/RO	0.12	lb/MMBtu	6-96-103.2(B)(1)(a)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 50	MMBtu/hr	NG/DO/RO	0.08	lb/MMBtu	6-96-103.2(B)(1)(b)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 250	MMBtu/hr	NG/DO/RO	0.06	lb/MMBtu	6-96-103.2(B)(1)(c)					
	Fuel Burning Equipment, Post-12/2/82	PM	< 50	MMBtu/hr	Solid Waste	0.30	lb/MMBtu	6-96-103.2(B)(2)(a)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 50	MMBtu/hr	Solid Waste	0.20	lb/MMBtu	6-96-103.2(B)(2)(b)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 250	MMBtu/hr	Solid Waste	0.10	lb/MMBtu	6-96-103.2(B)(2)(c)					
	Fuel Burning Equipment, Post-12/2/82	PM	< 50	MMBtu/hr	Coal	0.30	lb/MMBtu	6-96-103.2(B)(3)(a)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 50	MMBtu/hr	Coal	0.08	lb/MMBtu	6-96-103.2(B)(3)(b)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 250	MMBtu/hr	Coal	0.05	lb/MMBtu	6-96-103.2(B)(3)(c)					
	Fuel Burning Equipment, Post-12/2/82	PM	< 50	MMBtu/hr	Wood/Coal/Biomass	0.30	lb/MMBtu	6-96-103.2(B)(4)(a)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 50	MMBtu/hr	Wood/Coal/Biomass	0.08	lb/MMBtu	6-96-103.2(B)(4)(b)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 250	MMBtu/hr	Wood/Coal/Biomass	0.06	lb/MMBtu	6-96-103.2(B)(4)(c)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 50	MMBtu/hr	Wood/Coal/Biomass	0.10	lb/MMBtu	6-96-103.2(B)(4)(d)	Applies when using venturi scrubber, i.e., exempt from 6-96-103.2.B(4)(b) and (c)				
	Fuel Burning Equipment	SO2	All		DO/RO	2.00	wt% sulfur	6-96-106.2(A)(2)	Statewide	Fuel blending allowed per 6-96-106.5			
	Fuel Burning Equipment	SO2	All		DO/RO	1.50	wt% sulfur	6-96-106.2(A)(3)	Portland Peninsula AQR only	Fuel blending allowed per 6-96-106.5			
	Fuel Burning Equipment	SO2	All		Coal	0.96	lb S/MMBtu	6-96-106.2(B)(2)	Statewide	Fuel blending allowed per 6-96-106.5			
	Fuel Burning Equipment	SO2	All		Coal	0.72	lb S/MMBtu	6-96-106.2(B)(3)	Portland Peninsula AQR only	Fuel blending allowed per 6-96-106.5			
	Fuel Burning Equipment	SO2	All		Any	1.92	lb/MMBtu	6-96-106.4(B)	Statewide	When using FGD or other sulfur removal device, i.e., exempt from 6-96-106.2 fuel sulfur content			
	Fuel Burning Equipment	SO2	All		Any	1.57	lb/MMBtu	6-96-106.4(C)	Portland Peninsula AQR only	When using FGD or other sulfur removal device, i.e., exempt from 6-96-106.2 fuel sulfur content			
	Boiler	NOx	≥ 1,500	MMBtu/hr	Any	0.30	lb/MMBtu	6-96-138.3(A)	Statewide	RACT - Major sources only	Alternate: 0.2 (O3 season), 0.3 (rest)	Alternate: 0.15 (O3 season), 0.35 (rest)	Emissions averaging across units allowed
	Boiler	NOx	50 - 1,499	MMBtu/hr	Oil/Biomass/NG	0.30	lb/MMBtu	6-96-138.3(B)	Moderate non-attainment areas only	RACT - Major sources only	Alternate: 0.2 (O3 season), 0.4 (rest)	Alternate: 0.15 (O3 season), 0.45 (rest)	Emissions averaging across units allowed
	Boiler	NOx	50 - 1,499	MMBtu/hr	Biomass & Coal	0.38	lb/MMBtu	6-96-138.3(B)	Moderate non-attainment areas only	RACT - Major sources only	Alternate: 0.2 (O3 season), 0.4 (rest)	Alternate: 0.15 (O3 season), 0.45 (rest)	Emissions averaging across units allowed
	Boiler	NOx	50 - 1,499	MMBtu/hr	Biomass/NG	0.30	lb/MMBtu	6-96-138.4	Attainment areas only	RACT - Major sources only			Emissions averaging across units allowed
	Boiler	NOx	50 - 1,499	MMBtu/hr	Oil	0.40	lb/MMBtu	6-96-138.4	Attainment areas only	RACT - Major sources only			Emissions averaging across units allowed
	Boiler	NOx	50 - 1,499	MMBtu/hr	Biomass & Coal	0.45	lb/MMBtu	6-96-138.4	Attainment areas only	RACT - Major sources only			Emissions averaging across units allowed
	Boiler - Kraft Recovery	NOx	All		Any	120	ppmvw	6-96-138.3(C)	Statewide	RACT - Major sources only	Corrected to 8% O2 or 12% CO2		Emissions averaging across units allowed
	EGU ≥ 25 MW	NOx	< 750	MMBtu/hr	Fossil	0.22	lb/MMBtu	6-96-145.3(B)(2)(a)	Counties not waived under section 182(f) of the 1990 CAAA (York, Cumberland, Sagadahoc, Androscoggin, Kennebec, Lincoln and Knox)				Emissions averaging across units allowed
	EGU ≥ 25 MW	NOx	≥ 750	MMBtu/hr	Fossil	0.15	lb/MMBtu	6-96-145.3(B)(2)(b)	Counties not waived under section 182(f) of the 1990 CAAA (York, Cumberland, Sagadahoc, Androscoggin, Kennebec, Lincoln and Knox)				Emissions averaging across units allowed
	Boiler - non-EGU	NOx	≥ 250	MMBtu/hr	Fossil	0.20	lb/MMBtu	6-96-145.3(B)(2)(c)	Counties not waived under section 182(f) of the 1990 CAAA (York, Cumberland, Sagadahoc, Androscoggin, Kennebec, Lincoln and Knox)				
MD	Fuel Burning Equipment, Pre-01/17/72	PM	< 10	MMBtu/hr	RO/Solid	0.60	lb/MMBtu	26.11.09.06(A)(1)	Areas I, II, V & VI only				
	Fuel Burning Equipment, Pre-01/17/72	PM	≥ 10	MMBtu/hr	RO/Solid	Formula	lb/MMBtu	26.11.09.06(A)(1)	Areas I, II, V & VI only	Based on a formula: E (lb/MMBtu) = 1.025985 $H^{0.23299}$, where H = MMBtu input rating of the unit			
	Fuel Burning Equipment, Post-01/17/72	PM	< 25	MMBtu/hr	RO/Solid	0.40	lb/MMBtu	26.11.09.06(A)(2)	Areas I, II, V & VI only				
	Fuel Burning Equipment, Post-01/17/72	PM	25 - 249	MMBtu/hr	RO/Solid	Formula	lb/MMBtu	26.11.09.06(A)(2)	Areas I, II, V & VI only	Based on a formula: E = $\log_{10}$[6.597538 $(H)^{-0.3}$], where E = lb/MMBtu emission factor, H = MMBtu input rating of the unit			
	Fuel Burning Equipment, Post-01/17/72	PM	≥ 250	MMBtu/hr	RO/Solid	0.10	lb/MMBtu	26.11.09.06(A)(2)	Areas I, II, V & VI only				
	Fuel Burning Equipment	PM	13 - 50	MMBtu/hr	RO	0.03	gr/dscf	26.11.09.06(B)(2)	Areas III & IV only (Baltimore & Washington metropolitan areas)				
	Fuel Burning Equipment	PM	50 - 250	MMBtu/hr	RO	0.02	gr/dscf	26.11.09.06(B)(2)	Areas III & IV only (Baltimore & Washington metropolitan areas)				
	Fuel Burning Equipment, Pre-07/01/75	PM	> 250	MMBtu/hr	RO	0.02	gr/dscf	26.11.09.06(B)(2)	Areas III & IV only (Baltimore & Washington metropolitan areas)				
	Fuel Burning Equipment, Post-07/01/75	PM	> 250	MMBtu/hr	RO	0.01	gr/dscf	26.11.09.06(B)(2)	Areas III & IV only (Baltimore & Washington metropolitan areas)				
	Fuel Burning Equipment, Pre-07/01/75	PM	< 250	MMBtu/hr	Solid	0.05	gr/dscf	26.11.09.06(B)(3)	Areas III & IV only (Baltimore & Washington metropolitan areas)				
	Fuel Burning Equipment, Post-07/01/75	PM	< 250	MMBtu/hr	Solid	0.03	gr/dscf	26.11.09.06(B)(3)	Areas III & IV only (Baltimore & Washington metropolitan areas)				
	Fuel Burning Equipment	PM	≥ 250	MMBtu/hr	Solid	0.03	gr/dscf	26.11.09.06(B)(3)	Areas III & IV only (Baltimore & Washington metropolitan areas)				
	Fuel Burning Equipment	SO2	All		Process Gas	0.30	wt% sulfur	26.11.09.07(A)(1)	Areas I, II, V & VI only				
	Fuel Burning Equipment	SO2	All		DO	0.30	wt% sulfur	26.11.09.07(A)(1)	Areas I, II, V & VI only				
	Fuel Burning Equipment	SO2	All		RO	2.00	wt% sulfur	26.11.09.07(A)(1)	Areas I, II, V & VI only			Area I exception: 1.0 wt% sulfur limit, if NAAQS/PSD increment violation	
	Fuel Burning Equipment	SO2	All		Solid	3.50	lb/MMBtu	26.11.09.07(A)(1)	Areas I, II, V & VI only	Only applies if all fuel burning equipment at the facility combined ≥ 100 MMBtu/hr		Area I exception: 1.8 lb SO2/MMBtu limit, if NAAQS/PSD increment violation	
	Fuel Burning Equipment	SO2	All		DO	0.30	wt% sulfur	26.11.09.07(A)(2)	Areas III & IV only				
	Fuel Burning Equipment	SO2	All		RO	1.00	wt% sulfur	26.11.09.07(A)(2)	Areas III & IV only				
	Fuel Burning Equipment	SO2	All		Solid	1.00	wt% sulfur	26.11.09.07(A)(2)	Areas III & IV only				
	Fuel Burning Equipment	SO2	> 1,000	MMBtu/hr	Solid	3.50	lb/MMBtu	26.11.09.07(B)(4)	Areas III & IV only	Only applies to existing units. It is unclear what "existing" means - no date specified.			
	Fuel Burning Equipment	NOx	All		NG	0.20	lb/MMBtu	26.11.09.08(B)(1)(c)	Major sources only	Emissions averaging across units and across facilities allowed			

	Fuel Burning Equipment	NOx	All		Oil/NG	0.25	lb/MMBtu	26.11.09.08(B)(1)(c)	Major sources only	Emissions averaging across units and across facilities allowed			
	Fuel Burning Equipment - dry bottom	NOx	All		Coal	0.38	lb/MMBtu	26.11.09.08(B)(1)(c)	Major sources only	Emissions averaging across units and across facilities allowed			
	Fuel Burning Equipment - wet bottom	NOx	All		Coal	1.00	lb/MMBtu	26.11.09.08(B)(1)(c)	Major sources only	Emissions averaging across units and across facilities allowed			
	EGU	NOx	≥ 250	MMBtu/hr	Oil or Oil/NG	0.30	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	EGU - Tangential	NOx	≥ 250	MMBtu/hr	Coal	0.45	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	EGU - Wall	NOx	≥ 250	MMBtu/hr	Coal	0.50	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	EGU - Tangential (High Heat Release)	NOx	≥ 250	MMBtu/hr	Coal	0.70	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	EGU - Wall (High Heat Release)	NOx	≥ 250	MMBtu/hr	Coal	0.80	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	EGU - Cell Burners	NOx	≥ 250	MMBtu/hr	Coal	0.60	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	EGU - Cyclone (Ozone Season)	NOx	≥ 250	MMBtu/hr	Coal	0.70	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	EGU - Cyclone (non-Ozone Season)	NOx	≥ 250	MMBtu/hr	Coal	1.50	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	Non-EGU (Ozone Season)	NOx	≥ 250	MMBtu/hr	Any	0.70	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	Non-EGU (non-Ozone Season)	NOx	≥ 250	MMBtu/hr	Any	0.99	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	Fuel Burning Equipment	NOx	100 - 249	MMBtu/hr	Any	0.65	lb/MMBtu	26.11.09.08(D)(1)(a)	Major sources only	Only applies to units > 15% capacity factor	Space heaters exempted		
	Turbine	NOx	All	MMBtu/hr	NG	42	ppmvd	26.11.09.08(G)(2)	Major sources only	Only applies to units > 15% capacity factor	Corrected to 15% O2		
	Turbine	NOx	All	MMBtu/hr	Oil	65	ppmvd	26.11.09.08(G)(2)	Major sources only	Only applies to units > 15% capacity factor	Corrected to 15% O2		
MA	Fuel Burning Equipment - Pre-06/01/72	PM	≥ 3	MMBtu/hr	Any	0.12	lb/MMBtu	310 CMR 7.02(8)(d)	Communities listed in Table 3 of this regulation (except Worcester)				
	Fuel Burning Equipment - Pre-06/01/72	PM	≥ 3	MMBtu/hr	NG or DO	0.10	lb/MMBtu	310 CMR 7.02(8)(d)	City of Worcester only				
	Fuel Burning Equipment - Pre-06/01/72	PM	≥ 3	MMBtu/hr	RO or Coal	0.12	lb/MMBtu	310 CMR 7.02(8)(d)	City of Worcester only				
	Fuel Burning Equipment - Pre-06/01/72	PM	≥ 3	MMBtu/hr	Any	0.15	lb/MMBtu	310 CMR 7.02(8)(e)	Rest of the State				
	Fuel Burning Equipment - Post-06/01/72	PM	≥ 3	MMBtu/hr	Wood	0.10	lb/MMBtu	310 CMR 7.02(8)(h)	Communities listed in Table 3 of this regulation (including Worcester)				
	Fuel Burning Equipment - Post-06/01/72	PM	3 - 25	MMBtu/hr	Wood	0.20	lb/MMBtu	310 CMR 7.02(8)(h)	Rest of the State				
	Fuel Burning Equipment - Post-06/01/72	PM	≥ 25	MMBtu/hr	Wood	0.10	lb/MMBtu	310 CMR 7.02(8)(h)	Rest of the State				
	Fuel Burning Equipment - Post-06/01/72	PM	3 - 250	MMBtu/hr	Fossil	0.10	lb/MMBtu	310 CMR 7.02(8)(h)	Statewide				
	Fuel Burning Equipment - Post-06/01/72	PM	≥ 250	MMBtu/hr	Fossil	0.05	lb/MMBtu	310 CMR 7.02(8)(h)	Statewide				
	Fuel Burning Equipment	SO2	All		Fossil	0.28 - 1.21	lb S/MMBtu	310 CMR 7.05(1)(a)(1)	Districts listed in Table 1 of this regulation (varies by district and portions of district)				
	Fuel Burning Equipment	SO2	All		DO	0.17	lb S/MMBtu	310 CMR 7.05(1)(a)(2)	Statewide				
	Fuel Burning Equipment	SO2	≥ 100	MMBtu/hr	Oil or Coal	1.21	lb S/MMBtu	310 CMR 7.05(1)(b)(1)	Districts listed in Table 1 of this regulation				
	EGU	SO2	≥ 2,500	MMBtu/hr	Oil or Coal	0.55	lb S/MMBtu	310 CMR 7.05(1)(b)(2)	Certain towns within Metro Boston APCD listed in Table 1 of this regulation				
	Entire State (All Sources of SO2)	SO2	All		Any	417,000	tons/yr	310 CMR 7.21(2)	Statewide Emissions Cap				
	Fuel Burning Equipment	SO2	≥ 100	MMBtu/hr	Any	1.20	lb/MMBtu	310 CMR 7.22(1)	Annual average, eff. 12/31/94	Emissions averaging across units and across facilities within the State allowed		Emissions trading allowed within the State	
	Entire Power Plant	SO2	All		Any	6.0	lb/MWH	310 CMR 7.29(5)(a)(2)(a)	Annual average, eff. 10/01/04	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Entire Power Plant, with any repowered unit	SO2	All		Any	6.0	lb/MWH	310 CMR 7.29(5)(a)(2)(a)	Annual average, eff. 10/01/06	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Entire Power Plant	SO2	All		Any	3.0	lb/MWH	310 CMR 7.29(5)(a)(2)(b)	Annual average, eff. 10/01/06	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Entire Power Plant, with any repowered unit	SO2	All		Any	3.0	lb/MWH	310 CMR 7.29(5)(a)(2)(b)	Annual average, eff. 10/01/08	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Entire Power Plant	SO2	All		Any	6.0	lb/MWH	310 CMR 7.29(5)(a)(2)(b)	Monthly average, eff. 10/01/06	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Entire Power Plant, with any repowered unit	SO2	All		Any	6.0	lb/MWH	310 CMR 7.29(5)(a)(2)(b)	Monthly average, eff. 10/01/08	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Boiler	NOx	All	MMBtu/hr	NG	0.20	lb/MMBtu	310 CMR 7.19(4)(a)(5)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler (Heat Release ≤ 70,000 Btu/hours-ft^3)	NOx	100 - 249	MMBtu/hr	Oil or Oil/NG	0.30	lb/MMBtu	310 CMR 7.19(4)(a)(4)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler (Heat Release > 70,000 Btu/hours-ft^3)	NOx	100 - 249	MMBtu/hr	Oil or Oil/NG	0.40	lb/MMBtu	310 CMR 7.19(4)(a)(4)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Tangential	NOx	≥ 250	MMBtu/hr	NG	0.20	lb/MMBtu	310 CMR 7.19(4)(a)(3)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Tangential	NOx	≥ 250	MMBtu/hr	Oil or Oil/NG	0.25	lb/MMBtu	310 CMR 7.19(4)(a)(3)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiiler - Face Fired	NOx	≥ 250	MMBtu/hr	Oil/NG	0.28	lb/MMBtu	310 CMR 7.19(4)(a)(3)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Stoker	NOx	≥ 100	MMBtu/hr	Solid (Not Coal)	0.33	lb/MMBtu	310 CMR 7.19(4)(a)(2)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Dry Bottom, Tangential	NOx	≥ 100	MMBtu/hr	Coal	0.38	lb/MMBtu	310 CMR 7.19(4)(a)(1)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Dry Bottom, Face Fired	NOx	≥ 100	MMBtu/hr	Coal	0.45	lb/MMBtu	310 CMR 7.19(4)(a)(1)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Repowered	NOx	All	MMBtu/hr	Oil/NG	0.10	lb/MMBtu	310 CMR 7.19(4)(b)(3)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Dry Bottom, Face/Tangential, Repowered	NOx	All	MMBtu/hr	Solid	0.20	lb/MMBtu	310 CMR 7.19(4)(b)(3)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Face/Tangential	NOx	50 - 99	MMBtu/hr	NG	0.10	lb/MMBtu	310 CMR 7.19(5)(a)(2)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Face/Tangential	NOx	50 - 99	MMBtu/hr	DO or DO/NG	0.12	lb/MMBtu	310 CMR 7.19(5)(a)(2)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Face/Tangential	NOx	50 - 99	MMBtu/hr	RO or RO/NG	0.30	lb/MMBtu	310 CMR 7.19(5)(a)(2)	RACT - Major sources only	Emissions averaging across units allowed	Required: 15% FGR, O2=3% at boiler exit	Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Face/Tangential/Stoker	NOx	50 - 99	MMBtu/hr	Solid	0.43	lb/MMBtu	310 CMR 7.19(5)(a)(1)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Turbine - Combined Cycle	NOx	≥ 25	MMBtu/hr	NG	42	ppmvd	310 CMR 7.19(7)(a)(1)	RACT - Major sources only	Emissions averaging across units allowed	Corrected to 15% O2	Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Turbine - Combined Cycle	NOx	≥ 25	MMBtu/hr	Oil	65	ppmvd	310 CMR 7.19(7)(a)(1)	RACT - Major sources only	Emissions averaging across units allowed	Corrected to 15% O2	Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Turbine - Combined Cycle	NOx	≥ 25	MMBtu/hr	Oil/NG	50	ppmvd	310 CMR 7.19(7)(a)(1)	RACT - Major sources only	Emissions averaging across units allowed	Corrected to 15% O2	Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Turbine - Simple Cycle	NOx	≥ 25	MMBtu/hr	NG	65	ppmvd	310 CMR 7.19(7)(a)(2)	RACT - Major sources only	Emissions averaging across units allowed	Corrected to 15% O2	Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Turbine - Simple Cycle	NOx	≥ 25	MMBtu/hr	Oil	100	ppmvd	310 CMR 7.19(7)(a)(2)	RACT - Major sources only	Emissions averaging across units allowed	Corrected to 15% O2	Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Turbine - Simple Cycle	NOx	≥ 25	MMBtu/hr	Oil/NG	100	ppmvd	310 CMR 7.19(7)(a)(2)	RACT - Major sources only	Emissions averaging across units allowed	Corrected to 15% O2	Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Turbine - Post-03/23/06	NOx	< 1	MW	NG	0.47	lb/MWH	310 CMR 7.26(43)(b)					
	Turbine - Post-03/23/06	NOx	1 - 10	MW	NG	0.14	lb/MWH	310 CMR 7.26(43)(b)					
	Turbine - Post-03/23/06	NOx	1 - 10	MW	Oil	0.34	lb/MWH	310 CMR 7.26(43)(b)					
	Entire Power Plant	NOx	All		Any	1.5	lb/MWH	310 CMR 7.29(5)(a)(1)(a)	Annual average, eff. 10/01/04	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Entire Power Plant, with any repowered unit	NOx	All		Any	1.5	lb/MWH	310 CMR 7.29(5)(a)(1)(a)	Annual average, eff. 10/01/06	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Entire Power Plant	NOx	All		Any	3.0	lb/MWH	310 CMR 7.29(5)(a)(1)(b)	Monthly average, eff. 10/01/06	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Entire Power Plant, with any repowered unit	NOx	All		Any	3.0	lb/MWH	310 CMR 7.29(5)(a)(1)(b)	Monthly average, eff. 10/01/08	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
NH	Fuel Burning Equipment - Pre-05/13/70	PM	< 10	MMBtu/hr	Any	0.60	lb/MMBtu	Env-A 2002.06(c)(1)					
	Fuel Burning Equipment - Pre-05/13/70	PM	10 - 9,999	MMBtu/hr	Any	Formula	lb/MMBtu	Env-A 2002.06(c)(2)	Based on a formula: E (lb/MMBtu) = 0.880 $H^{0.166}$, where H = MMBtu/hr input rating of the unit				
	Fuel Burning Equipment - Pre-05/13/70	PM	≥ 10,000	MMBtu/hr	Any	0.19	lb/MMBtu	Env-A 2002.06(c)(3)					
	Fuel Burning Equipment - 05/14/70 - 12/31/84	PM	< 10	MMBtu/hr	Any	0.60	lb/MMBtu	Env-A 2002.07(c)(1)					
	Fuel Burning Equipment - 05/14/70 - 12/31/84	PM	10 - 249	MMBtu/hr	Any	Formula	lb/MMBtu	Env-A 2002.07(c)(2)	Based on a formula: E (lb/MMBtu) = 1.028 $H^{0.234}$, where H = MMBtu/hr input rating of the unit				
	Fuel Burning Equipment - 05/14/70 - 12/31/84	PM	≥ 250	MMBtu/hr	Any	0.10	lb/MMBtu	Env-A 2002.07(c)(3)					
	Fuel Burning Equipment - Post-01/01/85	PM	< 100	MMBtu/hr	Any	0.30	lb/MMBtu	Env-A 2002.08(c)(1)					
	Fuel Burning Equipment - Post-01/01/85	PM	100 - 249	MMBtu/hr	Any	0.15	lb/MMBtu	Env-A 2002.08(c)(2)					
	Fuel Burning Equipment - Post-01/01/85	PM	≥ 250	MMBtu/hr	Any	0.10	lb/MMBtu	Env-A 2002.08(c)(3)					
	Fuel Burning Equipment	SO2	< 1,000	MMBtu/hr	Any	1.60	lb/MMBtu	Env-A 403.01					
	Fuel Burning Equipment	SO2	All		Oil No. 2	0.40	wt% sulfur	Env-A 1604.01(a)					
	Fuel Burning Equipment	SO2	All		Oil No. 4	1.00	wt% sulfur	Env-A 1604.01(b)					
	Fuel Burning Equipment	SO2	All		Oil No. 5 & 6	2.20	wt% sulfur	Env-A 1604.01(a)	Coos County				
	Fuel Burning Equipment	SO2	All		Oil No. 5 & 6	2.00	wt% sulfur	Env-A 1604.01(a)	Rest of the State				
	Fuel Burning Equipment - Pre-04/15/70	SO2	All		Coal	2.80	lb S/MMBtu	Env-A 1601.01(a)(1)					
	Fuel Burning Equipment - Pre-04/15/70	SO2	All		Coal	2.00	lb S/MMBtu	Env-A 1601.01(a)(2)					
	Fuel Burning Equipment - Post-04/15/70	SO2	All		Coal	1.50	lb S/MMBtu	Env-A 1601.01(b)(1)					
	Fuel Burning Equipment - Post-04/15/70	SO2	All		Coal	1.00	lb S/MMBtu	Env-A 1601.01(b)(2)					
	Utility Boiler - Wet Bottom - Tangential/Face	NOx	≥ 50	MMBtu/hr	Coal or Coal/Other	1.00	lb/MMBtu	Env-A 1211.03(c)(1)(a)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Wet Bottom - Cyclone < 320 MW	NOx	≥ 50	MMBtu/hr	Coal or Coal/Other	0.92	lb/MMBtu	Env-A 1211.03(c)(1)(b)(1)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Wet Bottom - Cyclone > 320 MW	NOx	≥ 50	MMBtu/hr	Coal or Coal/Other	1.40	lb/MMBtu	Env-A 1211.03(c)(1)(b)(2)	RACT - Daily Avg	Emissions averaging across units allowed	In addition to tons/day limit below	Alternate: Apply RACT (SNCR or better)	Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Dry Bottom - Tangential	NOx	≥ 50	MMBtu/hr	Coal or Coal/Other	0.38	lb/MMBtu	Env-A 1211.03(c)(2)(a)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Dry Bottom - Face	NOx	≥ 50	MMBtu/hr	Coal or Coal/Other	0.50	lb/MMBtu	Env-A 1211.03(c)(2)(b)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Dry Bottom - Stoker	NOx	≥ 50	MMBtu/hr	Coal or Coal/Other	0.30	lb/MMBtu	Env-A 1211.03(c)(2)(c)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Tangential/Face	NOx	≥ 50	MMBtu/hr	Oil	0.35	lb/MMBtu	Env-A 1211.03(c)(3)(a)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Face	NOx	≥ 50	MMBtu/hr	Oil/NG	0.25	lb/MMBtu	Env-A 1211.03(c)(3)(b)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Tangential	NOx	≥ 50	MMBtu/hr	Oil/NG	0.25	lb/MMBtu	Env-A 1211.03(c)(3)(c)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Tangential/Face	NOx	≥ 50	MMBtu/hr	NG	0.20	lb/MMBtu	Env-A 1211.03(c)(4)	RACT - Hourly Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Moving Grate	NOx	≥ 50	MMBtu/hr	Wood or Wood/Oil	0.33	lb/MMBtu	Env-A 1211.03(c)(5)(a)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power

	Utility Boiler - Stationary Grate	NOx	≥ 50	MMBtu/hr	Wood or Wood/Oil	0.25	lb/MMBtu	Env-A 1211.03(c)(5)(b)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Wet Bottom - Cyclone	NOx	≥ 50	MMBtu/hr	Coal or Coal/Other	15.4	tons/day	Env-A 1211.03(d)(1)		Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Wet Bottom - Cyclone	NOx	≥ 50	MMBtu/hr	Other than Coal	3.8	tons/day	Env-A 1211.03(d)(2)		Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Industrial Boiler - Dry Bottom - Tangential	NOx	50 - 99	MMBtu/hr	Coal or Coal/Oil	0.38	lb/MMBtu	Env-A 1211.05(c)(1)(a)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Dry Bottom - Face	NOx	50 - 99	MMBtu/hr	Coal or Coal/Oil	0.50	lb/MMBtu	Env-A 1211.05(c)(1)(b)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Dry Bottom - Stoker	NOx	50 - 99	MMBtu/hr	Coal or Coal/Oil	0.30	lb/MMBtu	Env-A 1211.05(c)(1)(c)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Tangential/Face	NOx	50 - 99	MMBtu/hr	DO	0.12	lb/MMBtu	Env-A 1211.05(c)(2)(a)	RACT - Hourly Avg	Emissions averaging across units allowed			
	Industrial Boiler - Tangential/Face	NOx	50 - 99	MMBtu/hr	RO	0.30	lb/MMBtu	Env-A 1211.05(c)(2)(b)	RACT - Daily Avg	Emissions averaging across units allowed		Alternate: Apply RACT (LNB or better)	
	Industrial Boiler - Tangential/Face	NOx	50 - 99	MMBtu/hr	DO/NG	0.12	lb/MMBtu	Env-A 1211.05(c)(3)(c)(1)	RACT - Hourly Avg	Emissions averaging across units allowed			
	Industrial Boiler - Tangential/Face	NOx	50 - 99	MMBtu/hr	RO/NG	0.30	lb/MMBtu	Env-A 1211.05(c)(3)(c)(2)	RACT - Daily Avg	Emissions averaging across units allowed		Alternate: Apply RACT (LNB or better)	
	Industrial Boiler	NOx	50 - 99	MMBtu/hr	NG	0.10	lb/MMBtu	Env-A 1211.05(c)(4)	RACT - Hourly Avg	Emissions averaging across units allowed		Alternate: Apply RACT (LNB or better)	
	Industrial Boiler - Moving Grate	NOx	50 - 99	MMBtu/hr	Wood or Wood/Oil	0.33	lb/MMBtu	Env-A 1211.05(c)(5)(a)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Stationary Grate	NOx	50 - 99	MMBtu/hr	Wood or Wood/Oil	0.25	lb/MMBtu	Env-A 1211.05(c)(5)(b)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Wet Bottom - Tangential/Face	NOx	≥ 100	MMBtu/hr	Coal or Coal/Other	1.00	lb/MMBtu	Env-A 1211.05(d)(1)(a)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Wet Bottom - Cyclone	NOx	≥ 100	MMBtu/hr	Coal or Coal/Other	0.92	lb/MMBtu	Env-A 1211.05(d)(1)(b)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Dry Bottom - Tangential	NOx	≥ 100	MMBtu/hr	Coal or Coal/Oil	0.38	lb/MMBtu	Env-A 1211.05(d)(2)(a)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Dry Bottom - Face	NOx	≥ 100	MMBtu/hr	Coal or Coal/Oil	0.50	lb/MMBtu	Env-A 1211.05(d)(2)(b)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Dry Bottom - Stoker	NOx	≥ 100	MMBtu/hr	Coal or Coal/Oil	0.30	lb/MMBtu	Env-A 1211.05(d)(2)(c)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Tangential/Face	NOx	≥ 100	MMBtu/hr	Oil	0.30	lb/MMBtu	Env-A 1211.05(d)(3)(a)	RACT - Daily Avg	Emissions averaging across units allowed		Alternate: Apply RACT (LNB or better)	
	Industrial Boiler - Face	NOx	≥ 100	MMBtu/hr	Oil/NG	0.25	lb/MMBtu	Env-A 1211.05(d)(3)(b)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Tangential	NOx	≥ 100	MMBtu/hr	Oil/NG	0.25	lb/MMBtu	Env-A 1211.05(d)(3)(c)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Tangential/Face	NOx	≥ 100	MMBtu/hr	NG	0.10	lb/MMBtu	Env-A 1211.05(d)(4)	RACT - Hourly Avg	Emissions averaging across units allowed		Alternate: Apply RACT (LNB or better)	
	Industrial Boiler - Moving Grate	NOx	≥ 100	MMBtu/hr	Wood or Wood/Oil	0.33	lb/MMBtu	Env-A 1211.05(d)(5)(a)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Stationary Grate	NOx	≥ 100	MMBtu/hr	Wood or Wood/Oil	0.25	lb/MMBtu	Env-A 1211.05(d)(5)(b)	RACT - Daily Avg	Emissions averaging across units allowed			
	Auxiliary Boiler	NOx	≥ 50	MMBtu/hr	Any	0.20	lb/MMBtu	Env-A 1211.12(c)	RACT - Daily Avg - Major Sources	Emissions averaging across units allowed			
	Turbine - Combined or Regenerative Cycle	NOx	≥ 25	MMBtu/hr	NG	42.00	ppmvd	Env-A 1211.06(c)(1)(a)	RACT - Hourly Avg	Emissions averaging across units allowed	Corrected to 15% O2	Equiv: 0.155 lb/MMBtu	
	Turbine - Combined or Regenerative Cycle	NOx	≥ 25	MMBtu/hr	Oil	65.00	ppmvd	Env-A 1211.06(c)(1)(c)	RACT - Hourly Avg	Emissions averaging across units allowed	Corrected to 15% O2	Equiv: 0.253 lb/MMBtu	
	Turbine - Simple Cycle	NOx	≥ 25	MMBtu/hr	NG	55.00	ppmvd	Env-A 1211.06(c)(2)(a)	RACT - Hourly Avg	Emissions averaging across units allowed	Corrected to 15% O2	Equiv: 0.203 lb/MMBtu	
	Turbine - Simple Cycle	NOx	≥ 25	MMBtu/hr	Oil	75.00	ppmvd	Env-A 1211.06(c)(2)(b)	RACT - Hourly Avg	Emissions averaging across units allowed	Corrected to 15% O2	Equiv: 0.292 lb/MMBtu	
	Turbine - All - Post 05/27/1999	NOx	≥ 25	MMBtu/hr	NG	25.00	ppmvd	Env-A 1211.06(d)	RACT - Hourly Avg	Emissions averaging across units allowed	Corrected to 15% O2	Equiv: 0.092 lb/MMBtu	
	Turbine - Peak Shaving	NOx	All		Any	0.90	lb/MMBtu	Env-A 1211.13(b)	RACT - Hourly Avg - Major Sources	Emissions averaging across units allowed			
NJ	Fuel Burning Equipment	PM	All		Any	Table	lb/hr	7:27-4.2(a)	Table lists maximum allowable emission rates (lb/hr) according to heat input (MMBtu/hr)				
	Fuel Burning Equipment	PM	≥ 200	MMBtu/hr	Any	0.10	lb/MMBtu	7:27-4.2(a)	Calculated from Table presented with regulation				
	Fuel Burning Equipment	SO2	All		Oil No. 2 & lighter	0.20	wt% sulfur	7:27-9.2(a) & (b)	Zones 3, 4 & 6	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No. 2 & lighter	0.30	wt% sulfur	7:27-9.2(a) & (b)	Zones 1, 2 & 5	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No.4	0.30	wt% sulfur	7:27-9.2(a) & (b)	Zones 3, 4 & 6	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No. 4	0.70	wt% sulfur	7:27-9.2(a) & (b)	Zones 2 & 5	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No. 4	2.00	wt% sulfur	7:27-9.2(a) & (b)	Zone 1	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No. 5, 6, & higher	0.30	wt% sulfur	7:27-9.2(a) & (b)	Zones 4 & 6	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No. 5, 6, & higher	0.50	wt% sulfur	7:27-9.2(a) & (b)	Zone 3	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No. 5, 6, & higher	1.00	wt% sulfur	7:27-9.2(a) & (b)	Zones 2 & 5	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No. 5, 6, & higher	2.00	wt% sulfur	7:27-9.2(a) & (b)	Zone 1	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No. 2 & lighter	0.21	lb/MMBtu	7:27-9.2(c)	Zones 3, 4 & 6				
	Fuel Burning Equipment	SO2	All		Oil No. 2 & lighter	0.32	lb/MMBtu	7:27-9.2(c)	Zones 1, 2 & 5				
	Fuel Burning Equipment	SO2	All		Oil No.4	0.32	lb/MMBtu	7:27-9.2(c)	Zones 3, 4 & 6				
	Fuel Burning Equipment	SO2	All		Oil No. 4	0.74	lb/MMBtu	7:27-9.2(c)	Zones 2 & 5				
	Fuel Burning Equipment	SO2	All		Oil No. 4	2.10	lb/MMBtu	7:27-9.2(c)	Zone 1				
	Fuel Burning Equipment	SO2	All		Oil No. 5, 6, & higher	0.32	lb/MMBtu	7:27-9.2(c)	Zones 4 & 6				
	Fuel Burning Equipment	SO2	All		Oil No. 5, 6, & higher	0.53	lb/MMBtu	7:27-9.2(c)	Zone 3				
	Fuel Burning Equipment	SO2	All		Oil No. 5, 6, & higher	1.05	lb/MMBtu	7:27-9.2(c)	Zones 2 & 5				
	Fuel Burning Equipment	SO2	All		Oil No. 5, 6, & higher	2.10	lb/MMBtu	7:27-9.2(c)	Zone 1				
	Utility Boiler - Wet Bottom - Tangential/Face	NOx	All		Coal	1.00	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Wet Bottom - Cyclone	NOx	All		Coal	0.60	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Dry Bottom - Tangential	NOx	All		Coal	0.38	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Dry Bottom - Face	NOx	All		Coal	0.45	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Dry Bottom - Cyclone	NOx	All		Coal	0.55	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Tangential	NOx	All		Oil and/or Gas	0.20	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Face	NOx	All		Oil and/or Gas	0.28	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Cyclone	NOx	All		Oil and/or Gas	0.43	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Tangential/Face	NOx	All		Gas Only	0.20	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Cyclone	NOx	All		Gas Only	0.43	lb/MMBtu	7:27-19.4(a)					
	Stationary Simple Cycle Gas Turbine	NOx	≥ 30	MMBtu/hr	Oil	0.40	lb/MMBtu	7:27-19.5(a)	Emissions averaging across units allowed				
	Stationary Simple Cycle Gas Turbine	NOx	≥ 30	MMBtu/hr	Gas	0.20	lb/MMBtu	7:27-19.5(a)	Emissions averaging across units allowed				
	Stationary Combined Cycle Gas Turbine	NOx	≥ 30	MMBtu/hr	Oil	0.35	lb/MMBtu	7:27-19.5(b)	Emissions averaging across units allowed				
	Stationary Combined Cycle Gas Turbine	NOx	≥ 30	MMBtu/hr	Gas	0.15	lb/MMBtu	7:27-19.5(b)	Emissions averaging across units allowed				
	Stationary Regenerative Cycle Gas Turbine	NOx	≥ 30	MMBtu/hr	Oil	0.35	lb/MMBtu	7:27-19.5(b)	Emissions averaging across units allowed				
	Stationary Regenerative Cycle Gas Turbine	NOx	≥ 30	MMBtu/hr	Gas	0.15	lb/MMBtu	7:27-19.5(b)	Emissions averaging across units allowed				
	ICI Boiler or Other Indirect Heat Exchanger	NOx	>5	MMBtu/hr	All	Tune-up		7:27-19.7(g)	Effective 3/7/2007				
	ICI Boiler or Other Indirect Heat Exchanger	NOx	50-100	MMBtu/hr	Natural Gas	0.10	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler or Other Indirect Heat Exchanger	NOx	50-100	MMBtu/hr	#2 Fuel Oil	0.12	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler or Other Indirect Heat Exchanger	NOx	50-100	MMBtu/hr	Refinery Fuel Gas	0.20	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler or Other Indirect Heat Exchanger	NOx	50-100	MMBtu/hr	Other Liquid Fuels	0.30	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Wet Bottom Tangential	NOx	50-100	MMBtu/hr	Coal	1.00	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Wet Bottom Face	NOx	50-100	MMBtu/hr	Coal	1.00	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Wet Bottom Cyclone	NOx	50-100	MMBtu/hr	Coal	0.55	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Dry Bottom Tangential	NOx	50-100	MMBtu/hr	Coal	0.38	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Dry Bottom Face	NOx	50-100	MMBtu/hr	Coal	0.43	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Dry Bottom Cyclone	NOx	50-100	MMBtu/hr	Coal	0.55	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler or Other Indirect Heat Exchanger	NOx	100+	MMBtu/hr	Natural Gas Only	0.10	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler or Other Indirect Heat Exchanger	NOx	100+	MMBtu/hr	Refinery Fuel Gas	0.20	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Tangential	NOx	100+	MMBtu/hr	Fuel oil and/or natural gas	0.20	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Face	NOx	100+	MMBtu/hr	Fuel oil and/or natural gas	0.28	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Cyclone	NOx	100+	MMBtu/hr	Fuel oil and/or natural gas	0.43	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Wet Bottom Tangential	NOx	100+	MMBtu/hr	Coal	1.00	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Wet Bottom Face	NOx	100+	MMBtu/hr	Coal	1.00	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Wet Bottom Cyclone	NOx	100+	MMBtu/hr	Coal	0.60	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Dry Bottom Tangential	NOx	100+	MMBtu/hr	Coal	0.38	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Dry Bottom Face	NOx	100+	MMBtu/hr	Coal	0.45	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Dry Bottom Cyclone	NOx	100+	MMBtu/hr	Coal	0.55	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
NY	Fuel Burning Equipment	PM	> 250	MMBtu/hr	Liquid fuel from coal	0.10	lb/MMBtu	227-1.2(a)(1)					
	Fuel Burning Equipment	PM	50 - 250	MMBtu/hr	Liquid fuel from coal	0.20	lb/MMBtu	227-1.2(a)(2)					
	Fuel Burning Equipment	PM	> 250	MMBtu/hr	Coal, wood, coke, etc.	0.10	lb/MMBtu	227-1.2(a)(3)	Units with permits to construct submitted after August 11, 1972.				
	Fuel Burning Equipment	PM	All	MMBtu/hr	Coal, wood, coke, etc.	Formula	lb/MMBtu	227-1.2(b)	Based on a formula: E (lb/MMBtu) = $1.0/p^{0.22}$, where p = max heat input capacity (MMBtu/hr)		Applies to units not subject to 227-1.2(a)(3)		
	Fuel Burning Equipment - Spreader Stokers	PM	≤ 300	MMBtu/hr	Coal, wood, coke, etc.	0.60	lb/MMBtu	227-1.2(c)(1)	Units in operation prior to June 1, 1972				

	Fuel Burning Equipment - All others	PM	≤ 300	MMBtu/hr	Coal, wood, coke, etc.	Table	lb/MMBtu	227-1.2(c)(2)	Table lists maximum allowable emission rates (lb/hr) according to heat input (MMBtu/hr): 1-100 MMBtu/hr = 0.6 lb/MMBtu; 200 MMBtu/hr = 0.45 lb/MMBtu; 300 MMBtu/hr = 0.30 lb/MMBtu (interpolate for units with heat input capacities not shown)		
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Oil	0.75	wt% sulfur	225-1.2(a)(1)	Applies when the permit to construct was received after March 15, 1973, and the installation is not located in New York City, Nassau, Rockland, or Westchester Counties.		
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Coal	0.60	lb S/MMBtu	225-1.2(a)(1)	Applies when the permit to construct was received after March 15, 1973, and the installation is not located in New York City, Nassau, Rockland, or Westchester Counties.		
	Fuel Burning Equipment	SO2	All		Residual Oil	0.30	wt% sulfur	225-1.2(d)	New York City	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Distillate Oil	0.20	wt% sulfur	225-1.2(d)	New York City	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Coal	0.20	lb S/MMBtu	225-1.2(d)	New York City	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Oil	0.37	wt% sulfur	225-1.2(d)	Nassau, Rockland, and Westchester Coun	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Coal	0.20	lb S/MMBtu	225-1.2(d)	Nassau, Rockland, and Westchester Coun	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Oil	1.00	wt% sulfur	225-1.2(d)	Suffold County: Towns of Babylon, Brookh	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Coal	0.60	lb S/MMBtu	225-1.2(d)	Suffold County: Towns of Babylon, Brookh	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Oil	1.10	wt% sulfur	225-1.2(d)	Erie County: City of Lackawana and South	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Coal	1.70	lb S/MMBtu	225-1.2(d)	Erie County: City of Lackawana and South	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Oil	1.50	wt% sulfur	225-1.2(d)	Niagara County and remainder of Erie Cou	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Coal	1.70	lb S/MMBtu	225-1.2(d)	Niagara County and remainder of Erie Cou	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Oil	1.50	wt% sulfur	225-1.2(d)	Remainder of State	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Coal	2.50	lb S/MMBtu	225-1.2(d)	Remainder of State	Effective January 1, 1988	
	Very Large Boilers - Tangential/Wall	NOx	> 250	MMBtu/hr	Gas Only	0.20	lb/MMBtu	227-2.4(a)(1)	RACT - 24hr average	From October 1 to April 30th, 30-day rolling avg allowed	
	Very Large Boilers - Tangential/Wall	NOx	> 250	MMBtu/hr	Gas/Oil	0.25	lb/MMBtu	227-2.4(a)(1)	RACT - 24hr average	From October 1 to April 30th, 30-day rolling avg allowed	
	Very Large Boilers - Cyclone	NOx	> 250	MMBtu/hr	Gas/Oil	0.43	lb/MMBtu	227-2.4(a)(1)	RACT - 24hr average	From October 1 to April 30th, 30-day rolling avg allowed	
	Very Large Boilers - Wet Bottom - Tangential/Wall	NOx	> 250	MMBtu/hr	Coal	1.00	lb/MMBtu	227-2.4(a)(1)	RACT - 24hr average	From October 1 to April 30th, 30-day rolling avg allowed	
	Very Large Boilers - Wet Bottom - Cyclone	NOx	> 250	MMBtu/hr	Coal	0.60	lb/MMBtu	227-2.4(a)(1)	RACT - 24hr average	From October 1 to April 30th, 30-day rolling avg allowed	
	Very Large Boilers - Dry Bottom - Tangential	NOx	> 250	MMBtu/hr	Coal	0.42	lb/MMBtu	227-2.4(a)(1)	RACT - 24hr average	From October 1 to April 30th, 30-day rolling avg allowed	
	Very Large Boilers - Dry Bottom - Wall	NOx	> 250	MMBtu/hr	Coal	0.45	lb/MMBtu	227-2.4(a)(1)	RACT - 24hr average	From October 1 to April 30th, 30-day rolling avg allowed	
	Very Large Boilers - Dry Bottom - Stoker	NOx	> 250	MMBtu/hr	Coal	0.30	lb/MMBtu	227-2.4(a)(1)	RACT - 24hr average	From October 1 to April 30th, 30-day rolling avg a	Emission limit is 0.33 lb/MMBtu when at least 25% of other solid fuels are burned on a Btu basis
	Large Boilers	NOx	100 - 250	MMBtu/hr	Gas Only	0.20	lb/MMBtu	227-2.4(b)(1)	RACT - 1hr avg, or 24hr avg if a CEMS is used		
	Large Boilers	NOx	100 - 250	MMBtu/hr	Gas/Oil	0.30	lb/MMBtu	227-2.4(b)(1)	RACT - 1hr avg, or 24hr avg if a CEMS is used		
	Large Boilers	NOx	100 - 250	MMBtu/hr	Pulverized Coal	0.50	lb/MMBtu	227-2.4(b)(1)	RACT - 1hr avg, or 24hr avg if a CEMS is used		
	Large Boilers	NOx	100 - 250	MMBtu/hr	Coal (Overfeed Stoker)	0.30	lb/MMBtu	227-2.4(b)(1)	RACT - 1hr avg, or 24hr avg if a CEMS is u	Emission limit is 0.33 lb/MMBtu when at least 25% of other solid fuels are burned on a Btu basis	
	Mid-size Boilers	NOx	50 - 100	MMBtu/hr	Natural Gas	0.10	lb/MMBtu	227-2.4(c)(2)	RACT - 1hr avg, or 24hr avg if a CEMS is u	Must utilize low NOx burners	
	Mid-size Boilers	NOx	50 - 100	MMBtu/hr	Distillate Oil	0.12	lb/MMBtu	227-2.4(c)(2)	RACT - 1hr avg, or 24hr avg if a CEMS is u	Must utilize low NOx burners	
	Mid-size Boilers	NOx	50 - 100	MMBtu/hr	Residual Oil	0.30	lb/MMBtu	227-2.4(c)(2)	RACT - 1hr avg, or 24hr avg if a CEMS is u	Must utilize low NOx burners with flue gas recirculation	
	Combustion Turbine - Simple Cycle/Regenerative	NOx	> 10	MMBtu/hr	Gas Only	50.00	ppmvd	227-2.4(e)(1)(i)	RACT - 1hr avg, or 24hr avg if a CEMS is u	Turbine operates < 500 hrs between October 1st and April 30th	
	Combustion Turbine - Simple Cycle/Regenerative	NOx	> 10	MMBtu/hr	Multiple Fuels	100.00	ppmvd	227-2.4(e)(1)(ii)	RACT - 1hr avg, or 24hr avg if a CEMS is u	Turbine operates < 500 hrs between October 1st and April 30th	
	Combustion Turbine - Combined Cycle	NOx	> 10	MMBtu/hr	Gas	42.00	ppmvd	227-2.4(e)(2)(i)	RACT - 1hr avg, or 24hr avg if a CEMS is used		
	Combustion Turbine - Combined Cycle	NOx	> 10	MMBtu/hr	Oil	65.00	ppmvd	227-2.4(e)(2)(ii)	RACT - 1hr avg, or 24hr avg if a CEMS is used		
PA	Fuel Burning Equipment	PM	2.5 - 50	MMBtu/hr	All	0.40	lb/MMBtu	123.11(a)(1)			
	Fuel Burning Equipment	PM	50 - 600	MMBtu/hr	All	Formula	lb/MMBtu	123.11(a)(2)	Based on a formula: $A\ (lb/MMBtu) = 3.6\ E^{0.56}$, where E = MMBtu/hr input rating of the unit		
	Fuel Burning Equipment	PM	> 600	MMBtu/hr	All	0.10	lb/MMBtu	123.11(a)(3)			
	Fuel Burning Equipment	SO2	All		All	4.00	lb/MMBtu	123.22(a)(1)	Nonair basin areas	As measured over a 1-hr period	
	Fuel Burning Equipment	SO2	All		No. 2 Oil & lighter	0.50	wt% sulfur	123.22(a)(2)	Nonair basin areas		
	Fuel Burning Equipment	SO2	All		No. 4, 5, 6, & heavier	2.80	wt% sulfur	123.22(a)(2)	Nonair basin areas		
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	3.70	lb/MMBtu	123.22(a)(4)(iii)	Nonair basin areas	30-day running average	
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	4.00	lb/MMBtu	123.22(a)(4)(iii)	Nonair basin areas	Daily average, not to be exceeded more than 2 days in any 30-day running period	
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	4.80	lb/MMBtu	123.22(a)(4)(iii)	Nonair basin areas	Daily maximum average	
	Fuel Burning Equipment	SO2	All		All	4.00	lb/MMBtu	123.22(b)(1)	As measured over a 1-hr period	Erie, Harrisburg, York, Lancaster, Scranton, Wilkes-Barre air basins	
	Fuel Burning Equipment	SO2	All		No. 2 Oil & lighter	0.30	wt% sulfur	123.22(b)(2)	Erie, Harrisburg, York, Lancaster, Scranton, Wilkes-Barre air basins		
	Fuel Burning Equipment	SO2	All		No. 4, 5, 6, & heavier	2.80	wt% sulfur	123.22(b)(2)	Erie, Harrisburg, York, Lancaster, Scranton, Wilkes-Barre air basins		
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	3.70	lb/MMBtu	123.22(b)(4)(iii)	30-day running average	Erie, Harrisburg, York, Lancaster, Scranton, Wilkes-Barre air basins	
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	4.00	lb/MMBtu	123.22(b)(4)(iii)	Daily average, not to be exceeded more th	Erie, Harrisburg, York, Lancaster, Scranton, Wilkes-Barre air basins	
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	4.80	lb/MMBtu	123.22(b)(4)(iii)	Daily maximum average	Erie, Harrisburg, York, Lancaster, Scranton, Wilkes-Barre air basins	
	Fuel Burning Equipment	SO2	All		All	3	lb/MMBtu	123.22(c)(1)	As measured over a 1-hr period	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstwon air basins	
	Fuel Burning Equipment	SO2	All		No. 2 Oil & lighter	0.30	wt% sulfur	123.22(c)(2)	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstwon air basins		
	Fuel Burning Equipment	SO2	All		No. 4, 5, 6, & heavier	2.00	wt% sulfur	123.22(c)(2)	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstwon air basins		
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	2.80	lb/MMBtu	123.22(c)(4)(iii)	30-day running average	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstwon air basins	
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	3.00	lb/MMBtu	123.22(c)(4)(iii)	Daily average, not to be exceeded more th	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstwon air basins	
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	3.60	lb/MMBtu	123.22(c)(4)(iii)	Daily maximum average	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstwon air basins	
	Fuel Burning Equipment	SO2	2.5 - 50	MMBtu/hr	All	1	lb/MMBtu	123.22(d)(1)	Allegheny County, Lower Beaver Valley, and Monongahela Valley air basins		
	Fuel Burning Equipment	SO2	50 - 2,000	MMBtu/hr	All	Formula	lb/MMBtu	123.22(d)(2)	Allegheny County, Lower Beaver Valley, and Monongahela Valley air basins		Based on a formula: $A\ (lb/MMBtu) = 1.7\ E^{0.14}$, where E = MMBtu/hr input rating of the unit
	Fuel Burning Equipment	SO2	> 2,000	MMBtu/hr	All	0.60	lb/MMBtu	123.22(d)(3)	Allegheny County, Lower Beaver Valley, and Monongahela Valley air basins		
	Fuel Burning Equipment	SO2	< 250	MMBtu/hr	All	1.00 / 1.20	lb/MMBtu	123.22(e)(1)	Inner Zone / Outer Zone	Southeast Pennsylvania air basin	
	Fuel Burning Equipment	SO2	≥ 250	MMBtu/hr	All	0.60 / 1.20	lb/MMBtu	123.22(e)(1)	Inner Zone / Outer Zone	Southeast Pennsylvania air basin	
	Fuel Burning Equipment	SO2	All		No. 2 Oil & lighter	0.20 / 0.30	wt% sulfur	123.22(e)(2)	Inner Zone / Outer Zone	Southeast Pennsylvania air basin	
	Fuel Burning Equipment	SO2	All		No. 4, 5, 6, & heavier	0.50 / 1.00	wt% sulfur	123.22(e)(2)	Inner Zone / Outer Zone	Southeast Pennsylvania air basin	
	Fuel Burning Equipment	SO2	All		Noncommercial fuel	0.60 / 1.20	lb/MMBtu	123.22(e)(3)	Inner Zone / Outer Zone	Southeast Pennsylvania air basin	
	Fuel Burning Equipment	SO2	< 250	MMBtu/hr	Solid fossil fuel	0.75 / 0.90	lb/MMBtu	123.22(e)(5)(iii)	30-day running average	Inner Zone / Outer Zone	Southeast Pennsylvania air basin
	Fuel Burning Equipment	SO2	≥ 250	MMBtu/hr	Solid fossil fuel	0.45 / 0.90	lb/MMBtu	123.22(e)(5)(iii)	30-day running average	Inner Zone / Outer Zone	Southeast Pennsylvania air basin
	Fuel Burning Equipment	SO2	< 250	MMBtu/hr	Solid fossil fuel	1.00 / 1.20	lb/MMBtu	123.22(e)(5)(iii)	Daily average, not to be exceeded more th	Inner Zone / Outer Zone	Southeast Pennsylvania air basin
	Fuel Burning Equipment	SO2	≥ 250	MMBtu/hr	Solid fossil fuel	0.60 / 1.20	lb/MMBtu	123.22(e)(5)(iii)	Daily average, not to be exceeded more th	Inner Zone / Outer Zone	Southeast Pennsylvania air basin
	Fuel Burning Equipment	SO2	< 250	MMBtu/hr	Solid fossil fuel	1.20 / 1.44	lb/MMBtu	123.22(e)(5)(iii)	Daily maximum average	Inner Zone / Outer Zone	Southeast Pennsylvania air basin
	Fuel Burning Equipment	SO2	≥ 250	MMBtu/hr	Solid fossil fuel	0.72 / 1.44	lb/MMBtu	123.22(e)(5)(iii)	Daily maximum average	Inner Zone / Outer Zone	Southeast Pennsylvania air basin
	Fuel Burning Equipment	NOx	100 - 250	MMBtu/hr	NG or noncommercial gas	0.10	lb/MMBtu	129.201(c)(1)(i)			
	Fuel Burning Equipment	NOx	100 - 250	MMBtu/hr	Solid or liquid fuel	0.20	lb/MMBtu	129.201(c)(1)(ii)			
RI	Steam or Hot Water Generating Units	PM	> 1	MMBtu/hr	fossil fuel	0.10	lb/MMBtu	13.2.1			
	Fuel Burning Equipment	SO2	All		All	1.1	lb/MMBtu	8.3.1			
	Fuel Burning Equipment	SO2	≥ 250	MMBtu/hr	Coal	1.21	lb/MMBtu	8.3.4.1(a) & (b)	Provided source does not exceed limit within any 30-day period		
	Fuel Burning Equipment	SO2	≥ 250	MMBtu/hr	Coal	2.31	lb/MMBtu	8.3.4.1(a) & (b)	Provided source does not exceed limit within any 24-hr period		
	Utility Boilers	NOx	All		NG or LPG	0.20	lb/MMBtu	27.4.1(a)			
	Utility Boilers	NOx	All		fuel oil	0.25	lb/MMBtu	27.4.1(b)			
	Industrial, Commercial, Institutional Boilers	NOx	> 50	MMBtu/hr	Natural Gas	0.10	lb/MMBtu	27.4.2(a)(1)			
	Industrial, Commercial, Institutional Boilers	NOx	> 50	MMBtu/hr	Distillate oil or LPG	0.12	lb/MMBtu	27.4.2(a)(2)			
VT	Fuel Burning Equipment	PM	≤ 10	MMBtu/hr	fossil fuel	0.50	lb/MMBtu	5-231(3)(a)(i)			
	Fuel Burning Equipment	PM	10 - 250	MMBtu/hr	fossil fuel	Formula	lb/MMBtu	5-231(3)(a)(ii)	Based on formula: $E=10^{-0.47039x(\log HI)+0.16936}$, where E is the emission limit in lb/MMBtu, and HI is the heat input in MMBtu/hr		
	Fuel Burning Equipment	PM	250 - 1,000	MMBtu/hr	fossil fuel	0.10	lb/MMBtu	5-231(3)(a)(iii)			
	Fuel Burning Equipment	PM	> 1,000	MMBtu/hr	fossil fuel	0.06	lb/MMBtu	5-231(3)(a)(iv)			
	Fuel Burning Equipment	PM	> 90	HP	wood fuel	0.45	gr/dscf	5-231(3)(b)(i)	Corrected to 12% CO_2	Installed & commenced operation before December 5, 1977.	
	Fuel Burning Equipment	PM	90 - 1,300	HP	wood fuel	0.20	gr/dscf	5-231(3)(b)(ii)	Corrected to 12% CO_2	Installed & commenced operation after December 5, 1977.	
	Fuel Burning Equipment	PM	≥ 1,300	HP	wood fuel	0.10	gr/dscf	5-231(3)(b)(iii)	Corrected to 12% CO_2	Installed & commenced operation after December 5, 1977.	
	Fuel Burning Equipment	SO2	≥ 250	MMBtu/hr	liquid fossil fuel	0.80	lb/MMBtu	5-252(1)(a)			
	Fuel Burning Equipment	SO2	≥ 250	MMBtu/hr	Solid fossil fuel	1.20	lb/MMBtu	5-252(1)(b)			
	Fuel Burning Equipment	NOx	≥ 250	MMBtu/hr	gaseous fossil fuel	0.20	lb/MMBtu	5-251(1)(a)			
	Fuel Burning Equipment	NOx	≥ 250	MMBtu/hr	liquid fossil fuel	0.30	lb/MMBtu	5-251(1)(b)			
	Fuel Burning Equipment	NOx	≥ 250	MMBtu/hr	Solid fossil fuel	0.70	lb/MMBtu	5-251(1)(c)			
BAAQMD	Fuel Burning Equipment	PM	All		All	0.15	gr/dscf	6-310	Corrected to 12% CO2 for incineration devices		
	Fuel Burning Equipment	SO2	All		Liquid or solid fuel	0.50	wt% sulfur	9-1-304			

	Fuel Burning Equipment	SO2	All		Liquid or solid fuel	300	ppmvd	9-1-304					
	EGU Boilers	NOx	≥ 1,750	MMBtu/hr	Gaseous fuel	10	ppmvd	9-11-301.1	Corrected to 3% O2				
	EGU Boilers	NOx	≥ 1,750	MMBtu/hr	Non-gaseous fuel	25	ppmvd	9-11-301.2	Corrected to 3% O2				
	EGU Boilers	NOx	1,500 - 1,750	MMBtu/hr	Gaseous fuel	25	ppmvd	9-11-303.1	Corrected to 3% O2				
	EGU Boilers	NOx	1,500 - 1,750	MMBtu/hr	Non-gaseous fuel	110	ppmvd	9-11-303.2	Corrected to 3% O2				
	EGU Boilers	NOx	< 1,500	MMBtu/hr	Gaseous fuel	30	ppmvd	9-11-305.1	Corrected to 3% O2				
	EGU Boilers	NOx	< 1,500	MMBtu/hr	Non-gaseous fuel	110	ppmvd	9-11-305.2	Corrected to 3% O2				
	EGU System	NOx	All		All	0.28	lb/MMBtu	9-11-308	Calculated each operating day as the average of all hourly data for the preceeding 30 operating days				
	EGU System - plant wide	NOx	All		Gaseous fuel	0.018	lb/MMBtu	9-11-309.1	Advanced Technology Alternative Emission Control Plan				
	Boilers, Steam Generators, or process heaters	NOx	≥ 10	MMBtu/hr	Gaseous fuel	30	ppmvd	9-7-301.1	Corrected to 3% O2				
	Boilers, Steam Generators, or process heaters	NOx	≥ 10	MMBtu/hr	Non-gaseous fuel	40	ppmvd	9-7-302.1	Corrected to 3% O2				
	Boilers, Steam Generators, or process heaters	NOx	≥ 10	MMBtu/hr	Non-gaseous fuel	150	ppmvd	9-7-305.1	Corrected to 3% O2	Limit applies during natural gas curtailment periods, when gaseous fuels are unavailable.			
SCAQMD	Fuel Burning Equipment	PM	All		All	0.1	gr/scf	Rule 409	Corrected to 12% CO2, averaged over a minimum of 15 consecutive minutes.				
	Fuel Burning Equipment	SO2	All		Natural Gas	16	ppmv	431.1(c)(1)	Sulfur content of natural gas calculated as H2S				
	Fuel Burning Equipment	SO2	All		Other Gaseous fuel	40	ppmv	431.1(c)(2)	Sulfur content of natural gas calculated as H2S, and averaged over a 4-hr period				
	Fuel Burning Equipment	SO2	All		Liquid Fuel	500	ppmw	431.2(d)(1)	Sulfur content of liquid fuel is measured by weight				
	Fuel Burning Equipment	SO2	All		Low Sulfur Diesel	15	ppmw	431.2(d)(2)	Sulfur content of low sulfur diesel is measured by weight				
	Fuel Burning Equipment	SO2	All		Solid fossil fuel	0.56	lb/MMBtu	431.3(a)					
	Non-mobile fuel burning equipment	NOx	555 - 1,786	MMBtu/hr	Gas fuel	300	ppmvd	474(a)	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes				
	Non-mobile fuel burning equipment	NOx	555 - 1,786	MMBtu/hr	Liquid or solid fuel	400	ppmvd	474(a)	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes				
	Non-mobile fuel burning equipment	NOx	1,786 - 2,143	MMBtu/hr	Gas fuel	225	ppmvd	474(a)	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes				
	Non-mobile fuel burning equipment	NOx	1,786 - 2,143	MMBtu/hr	Liquid or solid fuel	325	ppmvd	474(a)	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes				
	Non-mobile fuel burning equipment	NOx	> 2,143	MMBtu/hr	Gas fuel	125	ppmvd	474(a)	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes				
	Non-mobile fuel burning equipment	NOx	> 2,173	MMBtu/hr	Liquid or solid fuel	225	ppmvd	474(a)	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes				
	Steam Generating Equipment	NOx	> 555	MMBtu/hr	Gas fuel	125	ppmvd	474(b)	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes				
	Steam Generating Equipment	NOx	> 555	MMBtu/hr	Liquid or solid fuel	225	ppmvd	474(b)	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes				
	Supercritical Steam Generating Unit	NOx	> 2,143	MMBtu/hr	All	400	ppmvd	474(d)	During pressure ramp periods of boiler sta	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes			
	Steam Generating Equipment	NOx	> 50	MMBtu/hr	Gas fuel	125	ppmvd	476(a)(1)	Applies to units installed after May 7, 1976	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes			
	Steam Generating Equipment	NOx	> 50	MMBtu/hr	Liquid or solid fuel	225	ppmvd	476(a)(1)	Applies to units installed after May 7, 1976	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes			
	Existing Stationary Gas Turbines	NOx	≥ 0.3	MW	All	Formula		1134(c)(1)	Applies to units installed as of August 4, 19	Based on a formula: Compliance Limit = Reference Limit x (EFF/25%), where Reference Limits are the NOx limit, based on unit capacity, and EFF is the unit's demonstrated efficiency			
	Electric Power Generating Systems	NOx	All		All	0.15	lb/MWH	1135(c)(1)	Applies to Souther California Edison power plant				
	Electric Power Generating Systems	NOx	All		All	0.15	lb/MWH	1135(c)(2)	Applies to Los Angeles Department of Water & Power				
	Electric Power Generating Systems	NOx	All		All	0.2	lb/MWH	1135(c)(3)	Applies to the Cities of Burbank, Glendale, and Pasedena				
	Boilers, Steam Generators, and process heaters	NOx	2 - 5	MMBtu/hr	All	0.037	lb/MMBtu	1146.1(c)(1)	Alternate limit is 30 ppm NOx.				
	Small Industrial Boilers	NOx	0.75 - 2	MMBtu/hr	Natural Gas	0.037	lb/MMBtu	1146.2(c)(1)	Alternate limit is 30 ppmvd NOx, corrected to 3% O2				
	ICI Boilers, Steam Generators, Process Heaters	NOx	> 40	MMBtu/hr	All	0.036	lb/MMBtu	1146(c)(1)	Alternate limit is 30 ppm NOx.				
	ICI Boilers, Steam Generators, Process Heaters	NOx	≥ 5	MMBtu/hr	Non-gaseous fuel	0.052	lb/MMBtu	1146(c)(2)(A)	Alternate limit is 40 ppm NOx.				
	ICI Boilers, Steam Generators, Process Heaters	NOx	5 - 40	MMBtu/hr	All	0.052	lb/MMBtu	1146(c)(2)(B)	Alternate limit is 40 ppm NOx.				
	ICI Boilers, Steam Generators, Process Heaters	NOx	≥ 10	MMBtu/hr	Gaseous fuel	0.036	lb/MMBtu	1146(c)(3)(A)	Alternate limit is 30 ppm NOx.				
	ICI Boilers, Steam Generators, Process Heaters	NOx	5 - 40	MMBtu/hr	All	0.036	lb/MMBtu	1146(c)(3)(B)	Alternate limit is 30 ppm NOx.	Weighted average calculated when burning a combination of gaseous and non-gaseous fuels.			
SJVAPCD	Fuel Burning Equipment	PM	All		All	0.1	gr/dscf	Rule 4301, 5.1	Corrected to 12% CO_2				
	Fuel Burning Equipment	PM	All		All	Formula		Rule 4202, 4	Based on formula: $E = 3.59P^{0.62}$, where P is ≤ 30 tons/hr, or $E = 17.31P^{0.16}$, where P > 30 tons/hr. E is the allowable emission rate in lb/hr, while P is the process weight rate in tons/hr.				
	Fuel Burning Equipment	SO2	All		All	200	lb/hr	Rule 4301, 5.2.1					
	Existing Steam Generator	SO2	≥ 15	MMBtu/hr	All	0.11	lb/MMBtu	Rule 4406, 4.2	Applies to units in Kern County				
	Fuel Burning Equipment	NOx	All		All	140	lb/hr	Rule 4301, 5.2.2					
	Boilers, Steam Generators, and Process Heaters	NOx	> 9	MMBtu/hr	Gaseous fuel	0.10	lb/MMBtu	Rule 4351, 5.1	Alternate limit is 95 ppmvd at 3% O2	Applies to all units except those with natural or induced drafts		Does not apply to units located west of Interstate 5 located in Fresno, Kern, or Kings county.	
	Boilers, Steam Generators, and Process Heaters	NOx	> 9	MMBtu/hr	Distillate Oil	0.15	lb/MMBtu	Rule 4351, 5.1	Alternate limit is 115 ppmvd at 3% O2	Applies to all units except those with natural or induced drafts		Does not apply to units located west of Interstate 5 located in Fresno, Kern, or Kings county.	
	Boilers, Steam Generators, and Process Heaters	NOx	> 9	MMBtu/hr	Residual or Crude Oil	0.22	lb/MMBtu	Rule 4351, 5.1	Alternate limit is 165 ppmvd at 3% O2	Applies to all units except those with natural or induced drafts		Does not apply to units located west of Interstate 5 located in Fresno, Kern, or Kings county.	
	Boilers, Steam Generators, and Process Heaters	NOx	> 9	MMBtu/hr	Gaseous fuel	0.18	lb/MMBtu	Rule 4351, 5.1	Alternate limit is 147 ppmvd at 3% O2	Applies to units with natural and induced drafts	Does not apply to units located west of Interstate 5 located in Fresno, Kern, or Kings county.		
	Boilers, Steam Generators, and Process Heaters	NOx	> 9	MMBtu/hr	Distillate Oil	0.20	lb/MMBtu	Rule 4351, 5.1	Alternate limit is 155 ppmvd at 3% O2	Applies to units with natural and induced drafts	Does not apply to units located west of Interstate 5 located in Fresno, Kern, or Kings county.		
	Boilers, Steam Generators, and Process Heaters	NOx	> 9	MMBtu/hr	Residual or Crude Oil	0.25	lb/MMBtu	Rule 4351, 5.1	Alternate limit is 194 ppmvd at 3% O2	Applies to units with natural and induced drafts	Does not apply to units located west of Interstate 5 located in Fresno, Kern, or Kings county.		
	Boilers, Steam Generators, and Process Heaters	NOx	> 9	MMBtu/hr	Gaseous Fuel	0.036	lb/MMBtu	Rule 4351, 5.2.2.1	Alternate limit is 30 ppmvd at 3% O2	Alternate limit to section 5.1, for units not subject to sections 5.2.3 or 5.2.4, requiring compliance by May 31, 1997.			
	Boilers, Steam Generators, and Process Heaters	NOx	> 9	MMBtu/hr	Liquid Fuel	0.052	lb/MMBtu	Rule 4351, 5.2.2.2	Alternate limit is 40 ppmvd at 3% O2	Alternate limit to section 5.1, for units not subject to sections 5.2.3 or 5.2.4, requiring compliance by May 31, 1997.			
	Boilers, Steam Generators, and Process Heaters	NOx	≤ 40	MMBtu/hr	Gaseous fuel	0.085	lb/MMBtu	Rule 4351, 5.2.3.1	Alternate limit is 74 ppmvd at 3% O2	Applies to units with natural and induced drafts	Alternate limit to section 5.1, requiring compliance by May 31, 1999.		
	Boilers, Steam Generators, and Process Heaters	NOx	≤ 40	MMBtu/hr	Distillate Oil	0.102	lb/MMBtu	Rule 4351, 5.2.3.2	Alternate limit is 78 ppmvd at 3% O2	Applies to units with natural and induced drafts	Alternate limit to section 5.1, requiring compliance by May 31, 1999.		
	Boilers, Steam Generators, and Process Heaters	NOx	≤ 40	MMBtu/hr	Residual or Crude Oil	0.127	lb/MMBtu	Rule 4351, 5.2.3.3	Alternate limit is 97 ppmvd at 3% O2	Applies to units with natural and induced drafts	Alternate limit to section 5.1, requiring compliance by May 31, 1999.		
	Boilers, Steam Generators, and Process Heaters	NOx	≤ 40	MMBtu/hr	Gaseous Fuel	0.061	lb/MMBtu	Rule 4351, 5.2.4.1	Alternate limit is 52 ppmvd at 3% O2	Alternate limit to section 5.1, requiring compliance by May 31, 1999.			
	Boilers, Steam Generators, and Process Heaters	NOx	≤ 40	MMBtu/hr	Liquid Fuel	0.077	lb/MMBtu	Rule 4351, 5.2.4.2	Alternate limit is 59 ppmvd at 3% O2	Alternate limit to section 5.1, requiring compliance by May 31, 1999.			
	Boilers, Steam Generators, and Process Heaters	NOx	All		Solid Fuel	200	ppmv	Rule 4352, 5.1	Applies to burning Municipal Solid Waste	Corrected to 12% CO2			
	Boilers, Steam Generators, and Process Heaters	NOx	All		Solid Fuel	0.35	lb/MMBtu	Rule 4352, 5.1	Applies to burning biomass using multiple hearth furnaces				
	Boilers, Steam Generators, and Process Heaters	NOx	All		Solid Fuel	0.20	lb/MMBtu	Rule 4352, 5.1					
	Existing Steam Generator	NOx	≥ 35	MMBtu/hr	Oil	0.35	lb/MMBtu	Rule 4405, 4.1.1	Applies to generators operated by small pr	Applies to units in Central and Western Kern County			
	Existing Steam Generator	NOx	≥ 35	MMBtu/hr	Oil	0.20	lb/MMBtu	Rule 4405, 4.1.2	Applies to units in Central and Western Kern County				
	Existing Steam Generator	NOx	15 - 35	MMBtu/hr	Oil	0.38	lb/MMBtu	Rule 4405, 4.1.3	Applies to units in Central and Western Kern County				
	Existing Steam Generator	NOx	≥ 35	MMBtu/hr	Natural Gas	0.14	lb/MMBtu	Rule 4405, 4.2.1 & 4.2.2	Applies to units in Central and Western Kern County				
	Existing Steam Generator	NOx	15 - 35	MMBtu/hr	Natural Gas	0.18	lb/MMBtu	Rule 4405, 4.2.3	Applies to units in Central and Western Kern County				
	Existing Steam Generator	NOx	All		Natural Gas	0.02	lb/MMBtu	Rule 4405, 5.1	Alternate emission limit, for existing steam generators equipped with a "Coen" Low NOx Burr		Applies to units in Central and Western Kern County		
	Boilers, Steam Generators, and Process Heaters	NOx	> 5	MMBtu/hr	Gaseous fuel	0.18	lb/MMBtu	Rule 4305, 5.1.1	Alternate limit is 147 ppmvd at 3% O2	Applies to box or cabin type units, and vertical cylindrical process heaters			
	Boilers, Steam Generators, and Process Heaters	NOx	> 5	MMBtu/hr	Liquid fuel	0.20	lb/MMBtu	Rule 4305, 5.1.1	Alternate limit is 155 ppmvd at 3% O2	Applies to box or cabin type units, and vertical cylindrical process heaters			
	Boilers, Steam Generators, and Process Heaters	NOx	> 5	MMBtu/hr	Gaseous fuel	0.036	lb/MMBtu	Rule 4305, 5.1.1	Alternate limit is 30 ppmvd at 3% O2	Applies units except box or cabin type units, and vertical cylindrical process heaters			
	Boilers, Steam Generators, and Process Heaters	NOx	> 5	MMBtu/hr	Liquid fuel	0.052	lb/MMBtu	Rule 4305, 5.1.1	Alternate limit is 40 ppmvd at 3% O2	Applies units except box or cabin type units, and vertical cylindrical process heaters			
	Boilers, Steam Generators, and Process Heaters	NOx	≤ 20	MMBtu/hr	Gaseous fuel	0.018	lb/MMBtu	Rule 4306, 5.1.A.	Alternate limit is 15 ppmvd at 3% O2	Standard Option	Applies to all units except those in Categories C, D, E, F, G, H, and I.		
	Boilers, Steam Generators, and Process Heaters	NOx	≤ 20	MMBtu/hr	Gaseous fuel	0.011	lb/MMBtu	Rule 4306, 5.1.A.	Alternate limit is 9 ppmvd at 3% O2	Enhanced Option	Applies to all units except those in Categories C, D, E, F, G, H, and I.		
	Boilers, Steam Generators, and Process Heaters	NOx	≤ 20	MMBtu/hr	Liquid Fuel	0.052	lb/MMBtu	Rule 4306, 5.1.A.	Alternate limit is 40 ppmvd at 3% O2	Applies to all units except those in Categories C, D, E, F, G, H, and I.			
	Boilers, Steam Generators, and Process Heaters	NOx	> 20	MMBtu/hr	Gaseous fuel	0.011	lb/MMBtu	Rule 4306, 5.1.B.	Alternate limit is 9 ppmvd at 3% O2	Standard Option	Applies to all units except those in Categories C, D, E, F, G, H, and I.		
	Boilers, Steam Generators, and Process Heaters	NOx	> 20	MMBtu/hr	Gaseous fuel	0.007	lb/MMBtu	Rule 4306, 5.1.B.	Alternate limit is 6 ppmvd at 3% O2	Enhanced Option	Applies to all units except those in Categories C, D, E, F, G, H, and I.		
	Boilers, Steam Generators, and Process Heaters	NOx	> 20	MMBtu/hr	Liquid fuel	0.052	lb/MMBtu	Rule 4306, 5.1.B.	Alternate limit is 40 ppmvd at 3% O2	Applies to all units except those in Categories C, D, E, F, G, H, and I.			
	Oilfield Steam Generators	NOx	All		Gaseous fuel	0.018	lb/MMBtu	Rule 4306, 5.1.C.	Alternate limit is 15 ppmvd at 3% O2	Standard Option			
	Oilfield Steam Generators	NOx	All		Liquid fuel	0.052	lb/MMBtu	Rule 4306, 5.1.C.	Alternate limit is 40 ppmvd at 3% O2				
	Refinery Units	NOx	5 - 65	MMBtu/hr	Gaseous fuel	0.036	lb/MMBtu	Rule 4306, 5.1.D.	Alternate limit is 30 ppmvd at 3% O2	Standard Option			
	Refinery Units	NOx	5 - 65	MMBtu/hr	Liquid fuel	0.052	lb/MMBtu	Rule 4306, 5.1.D.	Alternate limit is 40 ppmvd at 3% O2				
	Refinery Units	NOx	65 - 110	MMBtu/hr	Gaseous fuel	0.031	lb/MMBtu	Rule 4306, 5.1.E.	Alternate limit is 25 ppmvd at 3% O2	Standard Option			
	Refinery Units	NOx	65 - 110	MMBtu/hr	Liquid fuel	0.052	lb/MMBtu	Rule 4306, 5.1.E.	Alternate limit is 40 ppmvd at 3% O2				
	Refinery Units	NOx	> 110	MMBtu/hr	Gaseous fuel	0.018	lb/MMBtu	Rule 4306, 5.1.F.	Alternate limit is 15 ppmvd at 3% O2	Standard Option			
	Refinery Units	NOx	> 110	MMBtu/hr	Gaseous fuel	0.011	lb/MMBtu	Rule 4306, 5.1.F.	Alternate limit is 9 ppmvd at 3% O2	Enhanced Option			
	Refinery Units	NOx	> 110	MMBtu/hr	Liquid fuel	0.052	lb/MMBtu	Rule 4306, 5.1.F.	Alternate limit is 40 ppmvd at 3% O2				
	Load-following Units	NOx	All		Gaseous fuel	0.018	lb/MMBtu	Rule 4306, 5.1.G.	Alternate limit is 15 ppmvd at 3% O2	Standard Option			
	Load-following Units	NOx	All		Gaseous fuel	0.011	lb/MMBtu	Rule 4306, 5.1.G.	Alternate limit is 9 ppmvd at 3% O2	Enhanced Option			
	Load-following Units	NOx	All		Liquid fuel	0.052	lb/MMBtu	Rule 4306, 5.1.G.	Alternate limit is 40 ppmvd at 3% O2				
	Boilers, Steam Generators, and Process Heaters	NOx	9,000 - 30,000	MMBtu/yr	Gaseous fuel	0.036	lb/MMBtu	Rule 4306, 5.1.H.	Alternate limit is 30 ppmvd at 3% O2	Standard Option			
	Boilers, Steam Generators, and Process Heaters	NOx	9,000 - 30,000	MMBtu/yr	Liquid fuel	0.052	lb/MMBtu	Rule 4306, 5.1.H.	Alternate limit is 40 ppmvd at 3% O2				
	Small boilers, steam generators and process heaters	NOx	2 - 5	MMBtu/yr	Gaseous fuel	0.036	lb/MMBtu	Rule 4307, 5.1	Alternate limit is 30 ppmvd at 3% O2				
	Small boilers, steam generators and process heaters	NOx	2 - 5	MMBtu/yr	Liquid fuel	0.052	lb/MMBtu	Rule 4307, 5.1	Alternate limit is 40 ppmvd at 3% O2				
	Small boilers, steam generators and process heaters	NOx	0.075 - 0.4	MMBtu/yr	All	0.093	lb/MMBtu	Rule 4308, 5.1	Corrected to 3% O2				

	Small boilers, steam generators and process heaters	NOx	0.4 - 2	MMBtu/yr	All	0.036	lb/MMBtu	Rule 4307, 5.1	Corrected to 3% O2				

Notes 6
Alternate: Apply RACT (LNB, OFA, SCR/SNCR, fuel change, alt. oper. scenario, etc.)
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Includes indirect heat exchangers, primary boilers and resource recovery units

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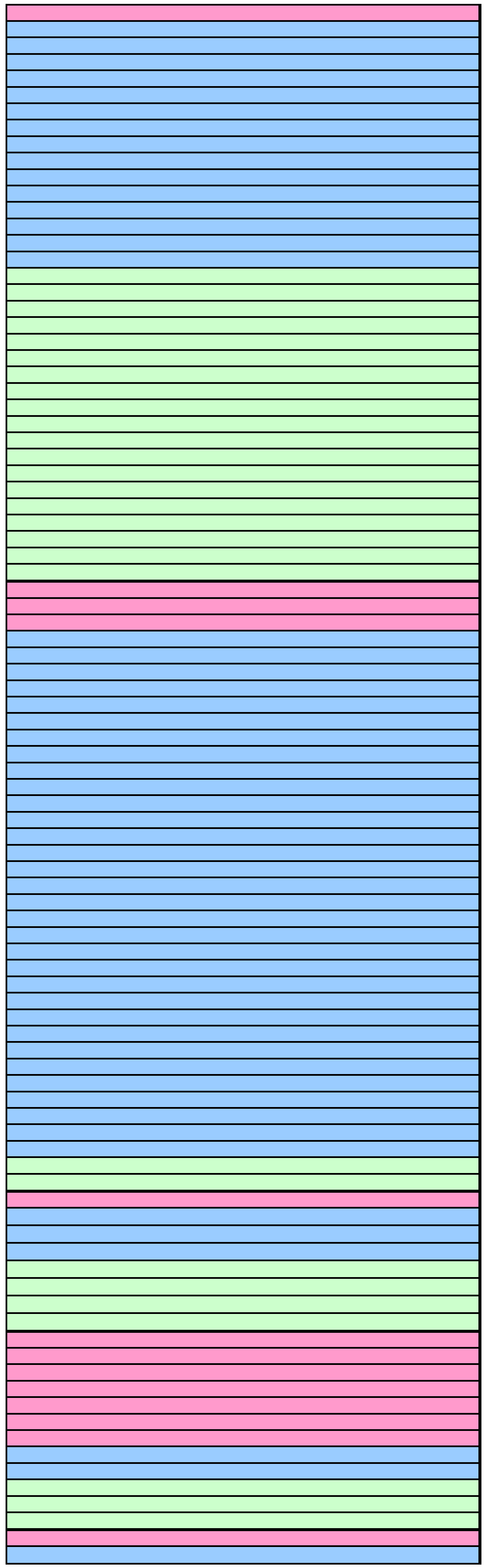

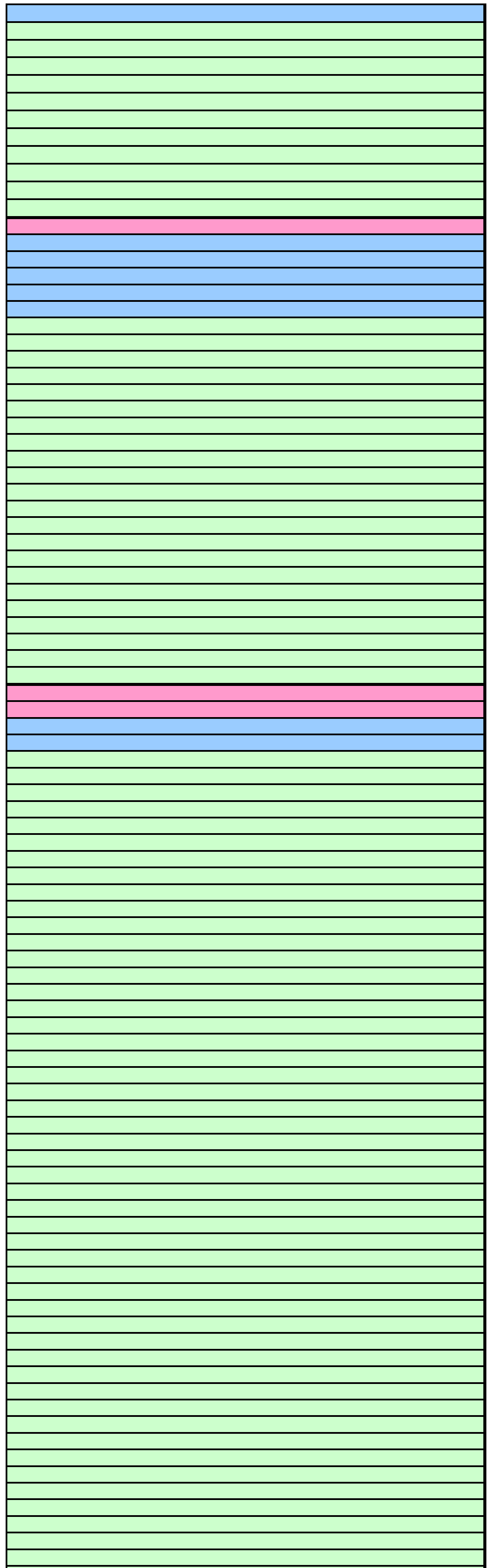

Connecticut Regulations Summary

Unit	NOx Emission Limits by Size				Units	Regulatory Citation	Date
	Size 1	Size 2	Size 3	Size 4			
Fuel Burning Units at Major Sources [1]	60%	60%	60%	60%	% of 1990	22a-174-22(d)(1)	31-May-95
Turbine - Gas Fired	NL	NL	55	NL	ppmvd	22a-174-22(e)(1)	31-May-95
Turbine - Other-Oil fired	NL	NL	75	NL	ppmvd	22a-174-22(e)(1)	31-May-95
Turbine - Gas or Other-Oil Fired	NL	NL	0.9	0.9	lb/MMBtu	22a-174-22(e)(1)	31-May-95
Cyclone Furnace - Gas, Oil, or Coal Fired	0.43	0.43	0.43	0.43	lb/MMBtu	22a-174-22(e)(1)	31-May-95
Fast-Response Double-Furnace Naval Boiler - Gas Fired	0.20	0.20	0.20	0.20	lb/MMBtu	22a-174-22(e)(1)	31-May-95
Fast-Response Double-Furnace Naval Boiler - Oil or Coal Fired	0.30	0.30	0.30	0.30	lb/MMBtu	22a-174-22(e)(1)	31-May-95
Fluidized Bed Combustor - Coal Fired	0.29	0.29	0.29	0.29	lb/MMBtu	22a-174-22(e)(1)	31-May-95
Other Boiler - Gas or Other-Oil Fired	0.20	0.20	0.20	0.20	lb/MMBtu	22a-174-22(e)(1)	31-May-95
Other Boiler - Residual-Oil Fired	0.25	0.25	0.25	0.25	lb/MMBtu	22a-174-22(e)(1)	31-May-95
Other Boiler - Coal Fired	0.38	0.38	0.38	0.38	lb/MMBtu	22a-174-22(e)(1)	31-May-95
Other Fuels (i.e., other than NG, RO, DO, coal)	0.30	0.30	0.30	0.30	lb/MMBtu	22a-174-22(e)(2)(A)	31-May-95
NOx Budget Sources - Non O-Season Emissions: 10/1 to 4/30	0.15	NA	NA	NA	lb/MMBtu	22a-174-22(e)(3)	31-May-95

[1] Sources provided option of meeting 40% reduction in NOx emissions by use of allowances or emisison reduction credits [22a-174-22(a)]

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Date
	Size 1	Size 2	Size 3	Size 4			
Fuel Burning Equipment - Fuel with sulfur content < 1.0%, other than solid fuel	1.0	1.0	1.0	1.0	Wt. % Sulfur	22a-174-19a(2)(i)	1-Apr-04
Equivalent: distillate oil (140,000 BTU/gal, 7.05 lb/gal)	1.01	1.01	1.01	1.01	lbSO2/MMBtu		
Equivalent: residual oil (150,000 BTU/gal; 7.88 lb/gal)	1.05	1.05	1.05	1.05	lbSO2/MMBtu		
Fuel Burning Equipment - Fuel with sulfur content < 1.0%, solid fuel	1.1	1.1	1.1	1.1	lbSO2/MMBtu		
Premise with Fuel Burning Equipment - Fuel with sulfur content > 1.0%, with consent of the Commissioner	0.55	0.55	0.55	0.55	lbSO2/MMBtu	22a-174-19a(3)(i)(A)	1-Apr-04
Fuel Burning Equipment - Fuel with sulfur content > 1.0%, with consent of the Commissioner	1.1	1.1	1.1	1.1	lbSO2/MMBtu	22a-174-19a(3)(ii)	1-Apr-04

Delaware Regulations Summary

Unit	NOx Emission Limits by Size [1]				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Boiler - Gas only-Face & Tangential	0.20	0.20	NL	NL	lb/MMBtu	Reg. 12, Section 3.2a	May 31, 1995 - existing units
Boiler - Oil or Gas or Both-Face & Tangential	0.25	0.25	NL	NL	lb/MMBtu	Reg. 12, Section 3.2a	May 31, 1995 - existing units
Boiler - Coal/Face & Tangential -dry botom	0.38	0.38	NL	NL	lb/MMBtu	Reg. 12, Section 3.2a	May 31, 1995 - existing units
Boiler - Oil or Gas or Both-Cyclone	0.43	0.43	NL	NL	lb/MMBtu	Reg. 12, Section 3.2a	May 31, 1995 - existing units
Boiler - Coal/Stoker-dry bottom	0.40	0.40	NL	NL	lb/MMBtu	Reg. 12, Section 3.2a	May 31, 1995 - existing units
All Burners >50 and <100 MMBtu/hour: LNB or EGR							
Equivalent Distillate Oil (assume 30% control from AP-42)	NL	NL	0.10	NL	lb/MMBtu		
Equivalent Natural Gas (assume 30% control from AP-42)	NL	NL	0.07	NL	lb/MMBtu		
All Burners >15 and <50 MMBtu/hour: Annual Tuneup							
Equivalent Distillate Oil (assume 10% control from AP-42)	NL	NL	NL	0.13	lb/MMBtu		
Equivalent Natural Gas (Assume 10% control from AP-42)	NL	NL	NL	0.09	lb/MMBtu		
All Combustion Units Not Exempt [2]			NL	NL		Reg. 42, Section 1	1-May-04
May 1- September 30	0.10	0.10	NL	NL	lb/MMBtu	Reg. 42, Section 1.c.1.A	
Gas-Firing	0.10	0.10	NL	NL	lb/MMBtu	Reg. 42, Section 1.c.1.B	
All Other not cover in A and B above	0.24	0.24	NL	NL	lb/MMBtu	Reg. 42, Section 1.c.1.C	
Gas Turbine - Gas fuel	42	42	42	42	ppm @ 15% O_2, 1-hr avg.	Reg. 12, Section 3.5	31-May-95
Gas Turbine - Liquid fuel	88	88	88	88	ppm @ 15% O_2, 1-hr avg.	Reg. 12, Section 3.5	31-May-95

[1] RACT can be set at actual emission levels higher than limits for > 100 MMBtu/hour units if LNB or EGR installed.

[2] Units as of 12/12/2001 not either: in compliance with Rule 12 (Table I) Limits; equipped with LNB, FGR, SCR, or SNCR; subject to Rule 39 NOx Budget.

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Fuel Burning Equipment, - All Fuels, New Castle County	1.0	1.0	1.0	1.0	wt % sulfur	Reg. 8, Section 2.1	8-Dec-83
Equivalent Coal (assume 14,000 Btu/lb)	1.4	1.4	1.4	1.4	lb SO2/MMBtu		
Equivalent Distillate Oil (assume 7.05 lb/gal and 140,000 Btu/gal)	1.0	1.0	1.0	1.0	lb SO2/MMBtu		
Fuel Burning Equipment - Distillate Oil, Statewide	0.3	0.3	0.3	0.3	wt % sulfur	Reg. 8, Section 2.2	8-Dec-83
Equivalent Distillate Oil (assume 7.05 lb/gal and 140,000 Btu/gal)	0.3	0.3	0.3	0.3	lb SO2/MMBtu		

District of Columbia Regulations Summary

Unit	NOx Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Fossil Fuel Fired Steam Generators, 2-hour limit						Title 20, Section 804, App. 8-1	> 100 MMBtu/hour
Gas	0.20	0.20	NL	NL	lb/MMBtu		
Liquid	0.30	0.30	NL	NL	lb/MMBtu		
Solid	0.70	0.70	NL	NL	lb/MMBtu		
Fossil Fuel Fired Steam Generators -annual tuning						Title 20, Section 805.5(a)	< 20 MMBtu/hour
Equivalent Distillate Oil (assume 10% control from AP-42)	NL	NL	NL	0.13	lb/MMBtu		
Equivalent Natural Gas (Assume 10% control from AP-42)	NL	NL	NL	0.09	lb/MMBtu		
Fossil Fuel Fired Steam Generators, 24 hour limits							
Oil, tangential or face -fired	NL	NL	0.30	NL	lb/MMBtu	Title 20, Section 805.5(b)	> 50 MMBtu/hr & < 100 MMBtu/hr
Dry Bottom Coal: tangential, face-fired, or stoker -fired	0.43	0.43	NL	NL	lb/MMBtu	Title 20, Section 805.5(c)(1)	> 100 MMBtu/hour
Natural Gas: tangential or face-fired	0.2	0.2	NL	NL	lb/MMBtu	Title 20, Section 805.5(c)(2)	> 100 MMBtu/hour
Oil or Oil & Gas: tangential or face- fired	0.25	0.25	NL	NL	lb/MMBtu	Title 20, Section 805.5(c)	> 100 MMBtu/hour

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Oil and Coal	1.0	1.0	1.0	1.0	wt % sulfur	Title 20, Section 801.1 & 802.1	-
Equivalent Coal (assume 14,000 BTU/lb)	1.4	1.4	1.4	1.4	lb SO2/MMBtu		
Equivalent Oil (assume 7.05 lb/gal, 140,000 btu/gal)	1.0	1.0	1.0	1.0	lb SO2/MMBtu		
Sulfur process emissions	0.05	0.05	0.05	0.05	vol %	Title 20, Section 803.1	-

Maine Regulations Summary

Unit	NOx Emission Limits by Size [1]				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Boiler >1,500 MMBtu/hr All Fuels Statewide	0.30	NL	NL	NL	lb/MMBtu	6-96-138.3(A)	Effective 31-May-95
Boiler > 20 & < 50 MMBtu/hr All Fuels Statewide - annual tune up						6-96-138.3(I)	
Equivalent Distillate Oil (assume 10% control & AP-42 Emissions)	NL	NL	NL	0.13	lb/MMBtu		
Equivalent Natural Gas (Assume 10% control & AP-42 Emissions)	NL	NL	NL	0.09	lb/MMBtu		
Equivalent Biomass (assume 10% control & AP-42 Emissions for dry wood)	NL	NL	NL	0.44	lb/MMBtu		
Boilers > 50 & < 1,500 MMBtu/hour in Moderate Non-Attainment Areas							
biomass; biomass and other than coal and oil.	0.3	0.3	0.3	NL	lb/MMBtu	6-96-138.3(B)	
oil; biomass & oil	0.4	0.4	0.4	NL	lb/MMBtu	6-96-138.3(B)	
biomass & coal	0.45	0.45	0.45	NL	lb/MMBtu	6-96-138.3(B)	
Boilers > 50 & < 1,500 MMBtu/hour in Attainment Areas							
oil; biomass; biomas & oil; biomass & other than coal & oil	0.3	0.3	0.3	NL	lb/MMBtu	6-96-138.4	
biomass & coal	0.45	0.45	0.45	NL	lb/MMBtu	6-96-138.4	
EGU - Fossil Fuel (≥ 25 MW, heat input <750 MMBtu/hr)	0.22	NL	NL	NL	lb/MMBtu	6-96-145.3(B)(2)(a)	Effective January 1, 2005 in Counties not waived under section 182(f) of the 1990 CAAA (Applies in York, Cumberland, Sagadahoc, Androscoggin, Kennebec, Lincoln and Knox)
EGU - Fossil Fuel (≥ 25 MW, heat inputs ≥ 750 MMBtu/hr))	0.15	NL	NL	NL	lb/MMBtu	6-96-145.3(B)(2)(b)	
Non-EGU Fossil Fuel-Fired Indirect heat Exchangers > 250 MMBtu/hour	0.20	NL	NL	NL	lb/MMBtu	6-96-145.3(B)(2)(c)	

[1] Sources can petition for less stringent, alternative limit [6-96-145.3(D)]

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Liquid Fossil Fuels	2.00	2.00	2.00	2.00	wt % sulfur	6-96-106.2(A)(2)	Effective 1-Nov-91, statewide
Equivalent Distillate Oil (7.05 lb/gal, 140,000 Btu/gal)	2.01	2.01	2.01	2.01	lb SO2/MMBtu		
Liquid Fossil Fuels	1.50	1.50	1.50	1.50	wt % sulfur	6-96-106.2(A)(3)	Applies to the Portland Peninsula AQR only
Equivalent Distillate Oil (7.05 lb/gal, 140,000 Btu/gal)	1.51	1.51	1.51	1.51	lb SO2/MMBtu		
Solid Fossil Fuels	0.96	0.96	0.96	0.96	lb S/MMBtu	6-96-106.2(B)(2)	Effective 1-Nov-91, statewide
Equivalent Coal (14,000 Btu/lb)	1.92	1.92	1.92	1.92	lb SO2/MMBtu		
Solid Fossil Fuels	0.72	0.72	0.72	0.72	lb S/MMBtu	6-96-106.2(B)(3)	Applies to the Portland Peninsula AQR only
Equivalent Coal (14,000 Btu/lb)	1.44	1.44	1.44	1.44	lb SO2/MMBtu		
Fuel Burning Equipment - All Fuels	1.92	1.92	1.92	1.92	lb SO2/MMBtu	6-96-106.4(B)	Effective 1-Nov-91, statewide; When using FGD or other sulfur removal device, i.e., exempt from 6-96-106.2 fuel sulfur content
Fuel Burning Equipment - All Fuels	1.57	1.57	1.57	1.57	lb SO2/MMBtu	6-96-106.4(C)	Applies to the Portland Peninsula AQR only; When using FGD or other sulfur removal device, i.e., exempt from 6-96-106.2 fuel sulfur content

Maryland Regulations Summary

Unit	NOx Emission Limits by Size[1] Size[1]	Size 2	Size 3	Size 4	Units	Regulatory Citation	Applicability
Fuel Burning Equipment - Natural Gas	0.2	0.2	0.2	0.2	lb/MMBtu	26.11.09.08(B)(1)(c)	Units located at premises that have total potential to emit: (a) 25 tons or more per year of NOx and is located in Baltimore City, or Anne Arundel, Baltimore, Calvert, Carroll, Cecil, Charles, Frederick, Harford, Howard, Montgomery, or Prince George's counties; or (b) 100 tons or more per year of NOx and is located in Allegany, Caroline, Dorchester, Garrett, Kent, Queen Anne's, St. Mary's, Somerset, Talbot, Washington, Wicomico, or Worcester counties.
Fuel Burning Equipment - Oil/Natural Gas	0.25	0.25	0.25	0.25	lb/MMBtu	26.11.09.08(B)(1)(c)	
Fuel Burning Equipment - Coal, dry bottom	0.38	0.38	0.38	0.38	lb/MMBtu	26.11.09.08(B)(1)(c)	
Fuel Burning Equipment - Coal, wet bottom	1	1	1	1	lb/MMBtu	26.11.09.08(B)(1)(c)	
EGU - Oil or Oil/Natural Gas	0.30	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
EGU - Coal, tangential	0.45	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
EGU - Coal, wall	0.50	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
EGU - Coal, tangential (high heat release)	0.70	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
EGU - Coal, wall (high heat release)	0.80	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
EGU - Coal, cell burners	0.60	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
EGU - Coal, cyclone (during ozone season)	0.70	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
EGU - Coal, cyclone (non-ozone season)	1.50	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
Non-EGU - All Fuels (during ozone season)	0.70	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
Non-EGU - All Fuels (non-onzone season)	0.99	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
Fuel Burning Equipment - Coal <250 & >100 MMBtu/hr	NL	0.65	NL	NL	lb/MMBtu	26.11.09.08(D)(1)(a)	
Fuel Burning Equipment - Gas <250 & >100 MMBtu/hr	NL	0.2	NL	NL	lb/MMBtu	26.11.09.08(D)(1)(b)	
Fuel Burning Equipment - Oil/Gas <250 & >100 MMBtu/hr	NL	0.25	NL	NL	lb/MMBtu	26.11.09.08(D)(1)(b)	
Fuel Burning Equipment - Annual Tuning < 100 MMBtu/hr						26.11.09.08(E)(2)	
Equivalent Distillate Oil (assume 10% control from AP-42)	NL	NL	0.13	0.13	lb/MMBtu		
Equivalent Natural Gas (assume 10% control from AP-42)	NL	NL	0.09	0.09	lb/MMBtu		
Turbine - Natural Gas	42.00	42.00	42.00	42.00	ppmvd at 15% O_2	26.11.09.08(G)(2)	
Turbine - Oil	65.00	65.00	65.00	65.00	ppmvd at 15% O2	26.11.09.08(G)(2)	

[1] Provides for approval of less stringent alternative limits [26.11.09.08(B)(3)]

Unit	SO_2 Emission Limits by Size Size 1	Size 2	Size 3	Size 4	Units	Regulatory Citation	Applicability
Process Gas - Areas I, II, V, & VI	0.30	0.30	0.30	0.30	wt % sulfur	26.11.09.07(A)(1)	
Distillate Oil - All Areas	0.30	0.30	0.30	0.30	wt % sulfur	26.11.09.07(A)(1) & (2)	
Equivalent Distillate Oil (7.05 lb/gal, 140,000 Btu/gal)	0.30	0.30	0.30	0.30	lb SO2/MMBtu		
Residual Oil - Areas I, II, V, & VI	2.00	2.00	2.00	2.00	wt % sulfur	26.11.09.07(A)(1)	
Equivalent Residual Oil (7.88 lb/gal, 150,000 Btu/gal)	2.01	2.01	2.01	2.01	lb SO2/MMBtu		
Solid Fuels - Areas I, II, V, & VI	3.50	3.50	NL	NL	lb/MMBtu	26.11.09.07(A)(1)	Only applies if all fuel burning equipment at the facility combined ≥ 100 MMBtu/hr
Residual Oil - Areas III & IV	1.00	1.00	1.00	1.00	wt % sulfur	26.11.09.07(A)(2)	
Equivalent Residual Oil (7.88 lb/gal, 150,000 Btu/gal)	1.01	1.01	1.01	1.01	lb SO2/MMBtu		
Solid Fuels - Areas III & IV	1.00	1.00	1.00	1.00	wt % sulfur	26.11.09.07(A)(2)	
Equivalent Coal (14,000 BTU/lb)	1.4	1.4	1.4	1.4	lb SO2/MMBtu		
Solid Fuels - Areas III & IV	3.50	NL	NL	NL	lb SO2/MMBtu	26.11.09.07(B)(4)	Applies to existing cyclone type fuel burning equipment with heat inputs > 1,000 MMBtu/hr

Area I: The western area of the State comprising the counties of Allegany, Garrett, and Washington.
Area II: The central area of the State composed of Frederick County.
Area III: The Baltimore metropolitan area of the State comprising Baltimore City and the counties of Anne Arundel, Baltimore, Carroll, Harford, and Howard.
Area IV: The Washington metropolitan area of the State comprising the counties of Montgomery and Prince George's.
Area V: The southern area of the State comprising the counties of Calvert, Charles, and St. Mary's.
Area VI: The eastern shore area of the State comprising the counties of Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, and Worcester.

Massachusetts Regulations Summary

Unit	NOx Emission Limits by Size[1] Size 1	Size 2	Size 3	Size 4	Units	Regulatory Citation	Applicability
Boiler - Natural Gas	0.20	0.20	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Oil or Oil/Natural Gas (Heat Release ≤ 70,000 BTU/hrs-ft^3)	NL	0.30	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Oil or Oil/Natural Gas (Heat Release > 70,000 BTU/hrs-ft^3)	NL	0.40	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Natural Gas, tangential	0.20	NL	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Oil or Oil/Natural Gas, tangential	0.25	NL	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Oil/Natural Gas, face	0.28	NL	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Solid fuel other than coal, stoker	0.33	0.33	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Coal, dry bottom - tangential	0.38	0.38	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Coal, dry bottom - face	0.45	0.45	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Oil/Natural Gas, repowered	0.10	0.10	0.10	0.10	lb/MMBtu	310 CMR 7.19(4)(b)	Effective 31-May-95
Boiler - Solid fuel, dry bottom - face/tangential, repowered	0.20	0.20	0.20	0.20	lb/MMBtu	310 CMR 7.19(4)(b)	Effective 31-May-95
Boiler - Natural Gas, face/tangential	NL	NL	0.10	NL	lb/MMBtu	310 CMR 7.19(5)(a)	Effective 31-May-95
Boiler - Distillate Oil or Distillate Oil/Natural Gas, face/tangential	NL	NL	0.12	NL	lb/MMBtu	310 CMR 7.19(5)(a)	Effective 31-May-95
Boiler - Residual Oil or Residual Oil/Natural Gas, face/tangential [2]	NL	NL	0.30	NL	lb/MMBtu	310 CMR 7.19(5)(a)	Effective 31-May-95
Boiler - Solid Fuel, face/tangential/stoker	NL	NL	0.43	NL	lb/MMBtu	310 CMR 7.19(5)(a)	Effective 31-May-95
Fuel Burning Equipment - Annual Tuning < 50 & > 20 MMBtu/hr						310 CMR 7.19(6)(a)	Effective 31-May-95
Estimate Equivalent Distillate Oil (assume 10% control from AP-42)	NL	NL	NL	0.13	lb/MMBtu		
Estimate Equivalent Natural Gas (assume 10% control from AP-42)	NL	NL	NL	0.09	lb/MMBtu		
Boiler - new units after 9/14/2001 at Non-Title V Permitted Facilities < 40 & > 10 MMBtu/hr						310 CMR 7.26(30)	
Natural Gas	NL	NL	NL	0.035	lb/MMBtu		
Distillate Oil (max on oil: 90 Days/yr)	NL	NL	NL	0.150	lb/MMBtu		
Turbine - Natural Gas, combined cycle	42	42	42	42	ppmvd at 15% O_2	310 CMR 7.19(7)(a)	Effective 31-May-95
Turbine - Oil, combined cycle	65	65	65	65	ppmvd at 15% O_2	310 CMR 7.19(7)(a)	Effective 31-May-95
Turbine - Oil/Natural Gas, combined cycle	50	50	50	50	ppmvd at 15% O_2	310 CMR 7.19(7)(a)	Effective 31-May-95
Turbine - Natural Gas, simple cycle	65	65	65	65	ppmvd at 15% O_2	310 CMR 7.19(7)(a)	Effective 31-May-95
Turbine - Oil or Oil/Natural Gas, simple cycle	100	100	100	100	ppmvd at 15% O_2	310 CMR 7.19(7)(a)	Effective 31-May-95

[1] Provides for approval of less stringent alternative limits [310 CMR 7.19(4)(c)]

[2] Allows exhaust gas recirculation and oxygen control as compliance alternative to limit [310 CMR 7.19(5)(a)(2)(c)(ii)]

Unit	SO_2 Emission Limits by Size Size 1	Size 2	Size 3	Size 4	Units	Regulatory Citation	Applicability
Fossil Fuel - Berkshire APCD and remainder of Merrimack Valley APCD (1.21 lbs S /MMBtu)	2.42	2.42	2.42	2.42	lb SO2 /MMBtu	310 CMR 7.05(1)(a)	-
Fossil Fuel - City of Worcester, remainder of Central MAPCD, City of Lawrence, Towns of Andover, North Andover, and Methuen, remainder of Metropolitan Boston APCD, Pioneer Valley APCD, and Southeastern MAPCD (0.55 lb S /MMBtu)	1.1	1.1	1.1	1.1	lb SO2 /MMBtu	310 CMR 7.05(1)(a)	-
Fossil Fuel - Cities and Towns of Arlington, Belmont, Boston, Brookline, Cambridge, Chelsea, Everett, Malden, Medford, Newton, Somerville, Waltham, and Watertown (0.28 lb S /MMBtu)	0.56	0.56	0.56	0.56	lb SO2 /MMBtu	310 CMR 7.05(1)(a)	-
Distillate Fuel Oil (0.17 lb S /MMBtu)	0.34	0.34	0.34	0.34	lb SO2 /MMBtu	310 CMR 7.05(1)(a)	-
Fossil Fuel (1.21 lb S /MMBtu)	2.42	2.42	NL	NL	lb SO2 /MMBtu	310 CMR 7.05(1)(b)	-
EGU located in the cities and towns of Arlington, Belmont, Boston, Brookline, Cambridge, Chelsea, Everett, Malden, Medford, Newton, Somerville, Waltham, and Watertown - Fossil Fuel (0.55 lb S /MMBtu)	1.1	NL	NL	NL	lb SO2 /MMBtu (for units > 2,500 MMBtu/hr)	310 CMR 7.05(1)(b)	-
Fuel Burning Equipment - Fossil Fuel (1.21 lbs S/MMBtu)	2.4	2.4	NL	NL	lb SO2 /MMBtu	310 CMR 7.22(1)	Effective 31-Dec-94
Boiler - new units after 9/14/2001 at Non-Title V Permitted Facilities < 40 & > 10 MMBtu/hr						310 CMR 7.26(30)	
Natural Gas	NL	NL	NL	0.0006	lb SO2 /MMBtu		
Distillate Oil (max on oil: 90 Days./yr, 0.05 wt. % sulfur)	NL	NL	NL	0.05	lb SO2 /MMBtu		

New Hampshire Regulations Summary

Unit	NOx Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Utility Boiler - Coal, wet bottom - tangential/face	1.00	1.00	1.00	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Coal, wet bottom - cyclone (< 320 MW	0.92	0.92	0.92	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Coal, wet bottom - cyclone (> 320 MW)[1]	1.40	1.40	1.40	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Coal, dry bottom - tangential	0.38	0.38	0.38	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Coal, dry bottom - face	0.50	0.50	0.50	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Coal, dry bottom - stoker	0.30	0.30	0.30	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Oil, tangential/face	0.35	0.35	0.35	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Oil/Natural Gas, tangential/face	0.25	0.25	0.25	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Natural Gas	0.20	0.20	0.20	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Wood or Wood/Oil, moving grate	0.33	0.33	0.33	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Wood or Wood/Oil, stationary grate	0.25	0.25	0.25	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Steam Electric, Auxiliary, & Industrial Boilers - > 50 & < 5 MMBtu/hr Annual Tuning	NL	NL	NL			Env-A 1211.03(b), 04(b), 05(c), & 12(b)	Effective 31-May-95
Equivalent Distillate Oil (assume 10% control from AP-42	NL	NL	NL	0.13	lb/MMBtu		
Equivalent Natural Gas (assume 10% control from AP-42	NL	NL	NL	0.09	lb/MMBtu		
Industrial/Steam Electric Boiler - Coal or Coal/Other, wet bottom - tangential/face	1.00	1.00	NL	NL	lb/MMBtu	Env-A 1211.04(d) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Coal or Coal/Other, wet bottom - cyclone	0.92	0.92	NL	NL	lb/MMBtu	Env-A 1211.04(d) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Coal or Coal/Oil, dry bottom - tangential	0.38	0.38	0.38	NL	lb/MMBtu	Env-A 1211.04(c), 4(d), 5(c) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Coal or Coal/Oil, dry bottom - face	0.50	0.50	0.50	NL	lb/MMBtu	Env-A 1211.04(c), 4(d), 5(c) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Coal or Coal/Oil, dry bottom - stoker	0.30	0.30	0.30	NL	lb/MMBtu	Env-A 1211.04(c), 4(d), 5(c) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Distillate Oil or Oil/Natural Gas on No. 2 Oil or Combination of Gas/Oil, tangential/face[2]	NL	NL	0.12	NL	lb/MMBtu	Env-A 1211.04(c) & 5(c)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Residual Oil or Oil/Natural Gas on Residual Oil or Combination Gas/Oil, tangential/face[2]	NL	NL	0.30	NL	lb/MMBtu	Env-A 1211.04(c) & 5(c)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Natural Gas or Oil/Natural Gas on Natural Gas, tangential/face[2]	NL	NL	0.10	NL	lb/MMBtu	Env-A 1211.04(c) & 5(c)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Oil, tangential/face[2]	0.30	0.30	NL	NL	lb/MMBtu	Env-A 1211.04(d) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Gas or any Combination Gas/Oil, tangential/face[2]	0.25	0.25	NL	NL	lb/MMBtu	Env-A 1211.04(d) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler- Natural Gas[2]	0.10	0.10	NL	NL	lb/MMBtu	Env-A 1211.04(d) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Wood or Wood/Oil, moving grate	0.33	0.33	0.33	NL	lb/MMBtu	Env-A 1211.04(c), 4(d), 5(c) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Wood or Wood/Oil, stationary grate	0.25	0.25	0.25	NL	lb/MMBtu	Env-A 1211.04(c), 4(d), 5(c) & 5(d)	Effective 31-Dec-89
Auxillary Boiler - All Fuels	0.20	0.20	0.20	NL	lb/MMBtu	Env-A 1211.12(c)	Effective 31-Dec-89
Turbine - Natural Gas, combined or regenerative cycle	42 / 0.155	42 / 0.155	42 / 0.155	42 / 0.155	ppmvd at 15% O_2 / lb/MMBtu	Env-A 1211.06(c)	Effective 31-Dec-89
Turbine - Oil, combined or regenerative cycle	65 / 0.253	65 / 0.253	65 / 0.253	65 / 0.253	ppmvd at 15% O_2 / lb/MMBtu	Env-A 1211.06(c)	Effective 31-Dec-89
Turbine - Natural Gas, simple cycle	55 / 0.203	55 / 0.203	55 / 0.203	55 / 0.203	ppmvd at 15% O_2 / lb/MMBtu	Env-A 1211.06(c)	Effective 31-Dec-89
Turbine - Oil, simple cycle	75 / 0.292	75 / 0.292	75 / 0.292	75 / 0.292	ppmvd at 15% O_2 / lb/MMBtu	Env-A 1211.06(c)	Effective 31-Dec-89
Turbine - Natural Gas	25 / 0.092	25 / 0.092	25 / 0.092	25 / 0.092	ppmvd at 15% O_2 / lb/MMBtu	Env-A 1211.06(c)	Post 27-May-99

[1] Or alternatively, install SNCR or equivalent [Env-A 1211.03(c)(1)(b)(2)]

[2] Or alternatively, install LNB or equivalent [Env-A 1211.053(c)(2), (c)(3), (c)(4), (d)(3) & (d)(4)]

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
No. 2 Oil and JP-4 aviation fuel (Limit: 0.4 wt. % Sulfur)	0.40	0.40	0.40	0.40	lb SO2 /MMBtu	Env-A 1604.01(a)	Effective 23-Apr-05
No. 4 Oil (Limit 1.0 wt. % Sulfur)	1.03	1.03	1.03	1.03	lb SO2 /MMBtu	Env-A 1604.01(b)	Effective 23-Apr-05
No. 5, 6, and crude Oils - Coos County (Limit: 2.2 wt. % sulfur)	2.31	2.31	2.31	2.31	lb SO2 /MMBtu	Env-A 1604.01(c)	Effective 23-Apr-05
No. 5, 6, and crude Oils - Remainder of State (Limit: 2.0 wt. % sulfur	2.10	2.10	2.10	2.10	lb SO2 /MMBtu	Env-A 1604.01(c)	Effective 23-Apr-05
Jet A, A-1, B, and JP-8 aviation fuels (Limit: 0.3 wt. % Sulfur)	0.30	0.30	0.30	0.30	lb SO2 /MMBtu	Env-A 1604.01(f)	Effective 23-Apr-05
Gaseous Fuels (Limit: 15 grains/100 scf)	0.04	0.04	0.04	0.04	lb SO2 /MMBtu	Env-A 1605.01	Effective 23-Apr-05
Coal (Max 2.8 lbs S/MMBtu; 3-mon ave 2.0 lbs S/MMBtu)	4.0	4.0	4.0	4.0	lb SO2 /MMBtu, (3-month)	Env-A 1606.01(a)	Device in Operation before 15-Apr-70
Coal (Max 1.5 lbs S/MMBtu; 3-mon ave 1.0 lbs S/MMBtu)	2.0	2.0	2.0	2.0	lb SO2 /MMBtu (3-month)	Env-A 1606.01(b)	Device in Operation after 15-Apr-70

New Jersey Regulations Summary

Unit	NOx Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Utility Boiler - Coal, wet bottom - tangential/face[1]	1.00	1.00	1.00	1.00	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Coal, wet bottom - cyclone[1]	0.60	0.60	0.60	0.60	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Coal, dry bottom - tangential[1]	0.38	0.38	0.38	0.38	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Coal, dry bottom - face[1]	0.45	0.45	0.45	0.45	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Coal, dry bottom - cyclone[1]	0.55	0.55	0.55	0.55	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Oil and/or Gas, tangential[1]	0.20	0.20	0.20	0.20	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Oil and/or Gas, face[1]	0.28	0.28	0.28	0.28	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Oil and/or Gas, cyclone[1]	0.43	0.43	0.43	0.43	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Gas only, tangential/face[1]	0.20	0.20	0.20	0.20	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Gas only, cyclone[1]	0.43	0.43	0.43	0.43	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Gas Turbine - Oil, stationary simple cycle[2]	0.40	0.40	0.40	0.40	lb/MMBtu	7:27-19.5(a)	6-Jun-00
Gas Turbine - Gas, stationary simple cycle[2]	0.20	0.20	0.20	0.20	lb/MMBtu	7:27-19.5(a)	6-Jun-00
Gas Turbine - Oil, stationary combined or regenerative cycle[2]	0.35	0.35	0.35	0.35	lb/MMBtu	7:27-19.5(b)	6-Jun-00
Gas Turbine - Gas, stationary combined or regenerative cycle[2]	0.15	0.15	0.15	0.15	lb/MMBtu	7:27-19.5(b)	6-Jun-00
Non-Utility Boiler - Coal, wet bottom - tangential/face[3]	1.00	1.00	1.00	1.00	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Coal, wet bottom - cyclone[3]	0.60	0.60	0.55	0.55	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Coal, dry bottom - tangential[3]	0.38	0.38	0.38	0.38	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Coal, dry bottom - face[3]	0.45	0.45	0.43	0.43	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Coal, dry bottom - cyclone[3]	0.55	0.55	0.55	0.55	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - No. 2 Oil, tangential/face/cyclone[3]	NL	NL	0.12	0.12	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Other Liquid Fuels, tangential/face/cyclone[3]	NL	NL	0.30	0.30	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Refinery Fuel Gas, tangential/face/cyclone[3]	0.20	0.20	0.20	0.20	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Natural Gas, tangential/face[3]	0.10	0.10	0.10	0.10	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Natural Gas, cyclone[3]	0.10	0.10	0.10	0.10	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Oil and/or Gas, tangential[3]	0.20	0.20	NL	NL	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Oil and/or Gas, face[3]	0.28	0.28	NL	NL	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Oil and/or Gas, cyclone[3]	0.43	0.43	NL	NL	lb/MMBtu	7:27-19.7(h)	7-Mar-07

[1] Alternative limits can be authorized including provisions for emission averaging and fuel switching [7:27-19.4(a)]

[2] Alternative limits can be authorized including provisions for emission averaging and fuel switching [7:27-19.5(a) & 5(b)]

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Fuel Burning Equipment - No. 2 Oil, Zones 1, 2, & 5	0.32	0.32	0.32	0.32	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78
Fuel Burning Equipment - No. 2 Oil, Zones 3, 4, & 6	0.21	0.21	0.21	0.21	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78
Fuel Burning Equipment - No. 4 Oil, Zone 1	2.10	2.10	2.10	2.10	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78
Fuel Burning Equipment - No. 4 Oil, Zones 2 & 5	0.74	0.74	0.74	0.74	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78
Fuel Burning Equipment - No. 4 Oil, Zones 3, 4, & 6	0.32	0.32	0.32	0.32	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78
Fuel Burning Equipment - No. 5, 6, & heavier oils, Zone 1	2.10	2.10	2.10	2.10	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78
Fuel Burning Equipment - No. 5, 6, & heavier oils, Zones 2 & 5	1.05	1.05	1.05	1.05	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78
Fuel Burning Equipment - No. 5, 6, & heavier oils, Zone 3	0.53	0.53	0.53	0.53	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78
Fuel Burning Equipment - No. 5, 6, & heavier oils, Zones 4 & 6	0.32	0.32	0.32	0.32	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78

Zone 1: Atlantic, Cape May, Cumberland, and Ocean Counties.
Zone 2: Hunterdon, Sussex, and Warren Counties.
Zone 3: Burlington, Camden, Gloucester, and Mercer Counties except those municipalities included in Zone 6.
Zone 4: Bergen, Essex, Hudson, Middlesex, Monmouth, Morris, Passaic, Somerset, and Union Counties.
Zone 5: Salem County.
Zone 6: Burlington County, the municipalities of Bass River Township, Shamong Township, Southampton Township, Tabernacle Township, Washington Township, Woodland Township, and in Camden County, Waterford Township.

New York Regulations Summary

Unit	NOx Emission Limits by Size [1]				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Boilers - Gas only	0.20	0.20	0.10	NL	lb/MMBtu	227-2.4(a)(1), (b)(1), & (c)(2)	11-Feb-04
Boilers - Gas/Oil - Tangential/Wall Fired	0.25	0.30	NL	NL	lb/MMBtu	227-2.4(a)(1) & (b)(1)	11-Feb-04
Boilers - Gas/Oil - Cyclone	0.43	0.30	NL	NL	lb/MMBtu	227-2.4(a)(1) & (b)(1)	11-Feb-04
Boilers - Distillate Oil	NL	NL	0.12	NL	lb/MMBtu	227-2.4(c)(2)	11-Feb-04
Boilers - Residual Oil	NL	NL	0.3	NL	lb/MMBtu	227-2.4(c)(2)	11-Feb-04
Boilers - Coal - Tangential/Wall Fired, wet bottom	1.00	NL	NL	NL	lb/MMBtu	227-2.4(a)(1)	11-Feb-04
Boilers - Coal - Cyclone, wet bottom	0.60	NL	NL	NL	lb/MMBtu	227-2.4(a)(1)	11-Feb-04
Boilers - Coal - Tangential Fired, dry bottom	0.42	NL	NL	NL	lb/MMBtu	227-2.4(a)(1)	11-Feb-04
Boilers - Coal - Wall Fired, dry bottom	0.45	NL	NL	NL	lb/MMBtu	227-2.4(a)(1)	11-Feb-04
Boilers - Coal - Stoker, dry bottom	0.30	NL	NL	NL	lb/MMBtu	227-2.4(a)(1)	11-Feb-04
Boilers - Coal - Stoker, dry bottom w/ 25% or more other fuels	0.33	NL	NL	NL	lb/MMBtu	227-2.4(a)(1)	11-Feb-04
Boilers - Pulverized Coal	NL	0.50	NL	NL	lb/MMBtu	227-2.4(b)(1)	11-Feb-04
Boilers - Coal - Overfeed Stoker	NL	0.30	NL	NL	lb/MMBtu	227-2.4(b)(1)	11-Feb-04
Boilers - Coal - Overfeed Stoker w/ 25% or more other fuels	NL	0.33	NL	NL	lb/MMBtu	227-2.4(b)(1)	11-Feb-04
Boilers - Annual Tuning > 10 & < 50 MMBtu/hr						227-2.4(d)	11-Feb-04
Equivalent Distillate Oil (assume 10% control from AP-42)	NL	NL	NL	0.13	lb/MMBtu		
Equivalent Natural Gas (assume 10% control from AP-42)	NL	NL	NL	0.09	lb/MMBtu		
Combustion Turbine - Gas Only, simple cycle/regenerative	50	50	50	50	ppmvd	227-2.4(e)(1)(i)	11-Feb-04
Combustion Turbine - Multiple Fuels, simple cycle/regenerative	100	100	100	100	ppmvd	227-2.4(e)(1)(ii)	11-Feb-04
Combustion Turbine - Gas, combined cycle	42	42	42	42	ppmvd	227-2.4(e)(2)(i)	11-Feb-04
Combustion Turbine - Oil, combined cycle	65	65	65	65	ppmvd	227-2.4(e)(2)(ii)	11-Feb-04

[1] Alternative limits can be set thru case-by-case RACT determinations [227-2.4]

Unit	SO_2 Emission Limits by Size [1]				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Fuel Burning Equipment - Oil (Limit: 0.75 wt. % S)	0.76	NL	NL	NL	lb SO2/MMBtu	225-1.2(a)(1)	Units constructed after 3-Mar-73, not located in New York City, or Nassau, Rockland, or Westchester Counties
Fuel Burning Equipment - Coal (Limit: 0.6 lb S/MMBtu)	1.20	NL	NL	NL	lb SO2/MMBtu	225-1.2(a)(1)	Units constructed after 3-Mar-73, not located in New York City, or Nassau, Rockland, or Westchester Counties
Residual Oil - New York City (Limit: 0.3 wt. % S)	0.32	0.32	0.32	0.32	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Distillate Oil - New York City (Limit: 0.2 wt. % S)	0.20	0.20	0.20	0.20	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Coal - New York City, Nassau, Rockland, & Westchester Counties (Limit: 0.2 lbs S/MMBtu)	0.40	0.40	0.40	0.40	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Oil - Nassau, Rockland, & Westchester Counties (Limit 0.37 wt. % S)	0.37	0.37	0.37	0.37	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Oil - Suffolk County: Town of Babylon, Brookhaven, Huntington, Islip, & Smith Town (Limit: 1 wt. % S)	1.0	1.0	1.0	1.0	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Coal - Suffolk County: Town of Babylon, Brookhaven, Huntington, Islip, & Smith Town (Limit: 0.6 lbs S/MMBtu)	1.2	1.2	1.2	1.2	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Oil - Erie County: City of Lackawana & South Buffalo (Limit: 1.1 wt. % S)	1.1	1.1	1.1	1.1	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Coal - Niagara County & Erie County (Limit: 3-month average 1.4 lbs S/MMBtu)	2.8	2.8	2.8	2.8	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Oil - Niagara County, Remainder of Erie County, and Remainder of State (Limit: 1.5 wt. % S)	1.5	1.5	1.5	1.5	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Coal - Remainder of State Limit: annual ave. 1.7 lbs S/MMBtu)	3.4	3.4	3.4	3.4	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88

1 Allows alternative limits based on "impact offset plans" (bubble) for two or more units at same facility with > 100 tons/yr emissions or 50 MW or capacity [225-1.3]

Pennsylvania Regulations Summary

Unit	NOx Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Boiler - NG or non-commercial gas	NL	0.10	NL	NL	lb/MMBtu	129.201(c)(1)(i)	1-May-05, for boilers located in Bucks, Chester, Delaware, Montgomery or Philadelphia County
Boiler - Solid or Liquid Fuel	NL	0.20	NL	NL	lb/MMBtu	129.201(c)(1)(ii)	1-May-05, for boilers located in Bucks, Chester, Delaware, Montgomery or Philadelphia County
Boiler - All fuels	0.17	NL	NL	NL	lb/MMBtu	129.201(c)(2)	1-May-05, for boilers located in Bucks, Chester, Delaware, Montgomery or Philadelphia County and not subject to NOx Budget Rules

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Combustion Units - All Fuels	4.0	4.0	4.0	4.0	lb SO2/MMBtu, 1-hr period	123.22(a)(1), 123.22(b)(1)	Nonair basin areas, Erie, Harrisburg, York, Lancaster, Scranton, and Wilkes-Barre air basins
Combustion Units - No. 2 Oil & lighter fuel oils (Limit: 0. wt. % S)	0.50	0.50	0.50	0.50	lb SO2/MMBtu	123.22(a)(2)	Nonair basin areas
Combustion Units - No. 4, 5, 6, & heavier fuel oils (Limit 2.8 wt. % S)	2.9	2.9	2.9	2.9	lb SO2/MMBtu	123.22(a)(2), 123.22(b)(2)*	Nonair basin areas, Erie, Harrisburg, York, Lancaster, Scranton, and Wilkes-Barre air basins
Combustion Units - Solid Fuels	3.7	NL	NL	NL	lb SO2/MMBtu, 30-day running avg.	123.22(a)(4)(iii), 123.22(b)(4)(iii)	Nonair basin areas, Erie, Harrisburg, York, Lancaster, Scranton, and Wilkes-Barre air basins
Combustion Units - Solid Fuels	4.0	NL	NL	NL	lb SO2/MMBtu, daily avg not exceeding 2-days in any 30-day period	123.22(a)(4)(iii), 123.22(b)(4)(iii)	Nonair basin areas, Erie, Harrisburg, York, Lancaster, Scranton, and Wilkes-Barre air basins
Combustion Units - Solid Fuels	4.8	NL	NL	NL	lb SO2/MMBtu, maximum daily avg.	123.22(a)(4)(iii), 123.22(b)(4)(iii)	Nonair basin areas, Erie, Harrisburg, York, Lancaster, Scranton, and Wilkes-Barre air basins
Combustion Units - No. 2 Oil & lighter fuel oils (Limit: 0. wt. % S)	0.30	0.30	0.30	0.30	lb SO2/MMBtu	123.22(b)(2)*, 123.22(c)(2)*	Erie, Harrisburg, York, Lancaster, Scranton, and Wilkes-Barre air basins + Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstown air basins
Combustion Units - All Fuels	3.0	3.0	3.0	3.0	lb SO2/MMBtu, 1-hr period	123.22(c)(1)	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstown air basins
Combustion Units - No. 4, 5, 6, & heavier fuel oils (Limit: 2 wt. % S)	2.1	2.1	2.1	2.1	lb SO2/MMBtu	123.22(c)(2)*	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstown air basins
Combustion Units - Solid Fuels	2.8	NL	NL	NL	lb SO2/MMBtu, 30-day running avg.	123.22(c)(4)(iii)	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstown air basins
Combustion Units - Solid Fuels	3.0	NL	NL	NL	lb SO2/MMBtu, daily avg not exceeding 2-days in any 30-day period	123.22(c)(4)(iii)	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstown air basins
Combustion Units - Solid Fuels	3.6	NL	NL	NL	lb SO2/MMBtu, maximum daily avg.	123.22(c)(4)(iii)	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstown air basins
Combustion Units - All Fuels	0.6 (Boilers ≥ 2000 MMBtu/hr) or Formula:A=1.7xE-0.14 E=heat input (MMBtu/hr)	Formula:$A=1.7xE^{0.14}$ E=heat input (MMBtu/hr)	Formula:$A=1.7xE^{0.14}$ E=heat input (MMBtu/hr)	1.0	lb SO2/MMBtu	123.22(d)(1), (2), & (3)	Allegheny County, Lower Beaver Valley, and Monongahela Valley air basins
Combustion Units - All Fuels	0.60 / 1.20	1.00 / 1.20	1.00 / 1.20	1.00 / 1.20	lb SO2/MMBtu (Inner Zone / Outer Zone)	123.22(e)(1)	Southeast Pennsylvania air basin
Combustion Units - No. 2 Oil & lighter fuel oils (Limits 0.2/0.3 wt. % S)	0.20 / 0.30	0.20 / 0.30	0.20 / 0.30	0.20 / 0.30	lb SO2/MMBtu (Inner Zone / Outer Zone)	123.22(e)(2)	Southeast Pennsylvania air basin
Combustion Units - No. 4, 5, 6, & heavier fuel oils (Limits 0.5/1.0 wt. % S)	0.53 / 1.1	0.53 / 1.1	0.53 / 1.1	0.53 / 1.1	lb SO2/MMBtu (Inner Zone / Outer Zone)	123.22(e)(2)	Southeast Pennsylvania air basin
Combustion Units - Noncommercial fuel	0.60 / 1.2	0.60 / 1.2	0.60 / 1.2	0.60 / 1.2	lb SO2/MMBtu (Inner Zone / Outer Zone)	123.22(e)(3)	Southeast Pennsylvania air basin
Combustion Units - Solid Fuels	0.45 / 0.90	0.75 / 0.90	0.75 / 0.90	0.75 / 0.90	lb SO2/MMBtu, 30-day running avg. (Inner Zone / Outer Zone)	123.22(e)(5)(iii)	Southeast Pennsylvania air basin
Combustion Units - Solid Fuels	0.60 / 1.2	1.0 / 1.2	1.0 / 1.2	1.0 / 1.2	lb SO2/MMBtu, daily avg not exceeding 2-days in any 30-day period (Inner Zone / Outer Zone)	123.22(e)(5)(iii)	Southeast Pennsylvania air basin
Combustion Units - Solid Fuels	0.72 / 1.44	1.2 / 1.44	1.2 / 1.44	1.2 / 1.44	lb SO2/MMBtu, maximum daily avg. (Inner Zone / Outer Zone)	123.22(e)(5)(iii)	Southeast Pennsylvania air basin

* Effective Date: August 1, 1979

Rhode Island Regulations Summary

Unit	NOx Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
ICI Boilers - Natural Gas	0.10	0.10	0.10	NL	lb/MMBtu	27.4.2(a)(1)	1-Jan-1990, with potential to emit 50 tpy NOx
ICI Boilers - Distillate Oil or LPG	0.12	0.12	0.12	NL	lb/MMBtu	27.4.2(a)(2)	1-Jan-1990, with potential to emit 50 tpy NOx
ICI Boilers - Residual Oil > 50 MMBtu/hr - FGR and LNB						27.4.2(b)	
Equivalent Residual Oil (assum 30% control, emissions from AP-42)	0.26	0.26	0.26	NL	lb/MMBtu		
Boiler - Annual Tuning < 50 MMBtu/hr						27.4.2(c)	
Distillate Oil (assume 10% control from AP-42)	NL	NL	NL	0.13	lb/MMBtu		
Natural Gas (Assume 10% control from AP-42)	NL	NL	NL	0.09	lb/MMBtu		
Utility Boilers - Natural Gas or LPG	0.20	0.2	0.2	0.2	lb/MMBtu	27.4.1(a)	1-Jan-1990, with potential to emit 50 tpy NOx
Utility Boilers - Fuel Oil	0.25	0.25	0.25	0.25	lb/MMBtu	27.4.1(b)	1-Jan-1990, with potential to emit 50 tpy NOx

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Fuel Burning Equipment - All fuels	1.10	1.1	1.1	1.1	lb SO2/MMBtu	8.3.1	1-Oct-71
Fuel Burning Equipment - Coal (Limit: 1.21 lb S/MMBtu)	2.42	NL	NL	NL	lb SO2/MMBtu, 30-day period	8.3.4.1(a) & (b)	1-Oct-71
Fuel Burning Equipment - Coal (lLimit: 2.31 lb S/MMBtu)	4.62	NL	NL	NL	lb SO2/MMBtu, 24-hr period	8.3.4.1(a) & (b)	1-Oct-71

Vermont Regulations Summary

Unit	NOx Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Fuel Burning Equipment - Gaseous fossil fuel	0.20	NL	NL	NL	lb/MMBtu	5-251(1)(a)	-
Fuel Burning Equipment - Liquid fossil fuel	0.30	NL	NL	NL	lb/MMBtu	5-251(1)(b)	-
Fuel Burning Equipment - Solid fossil fuel	0.70	NL	NL	NL	lb/MMBtu	5-251(1)(c)	-

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Fuel Burning Equipment - Liquid fossil fuel	0.80	NL	NL	NL	lb SO2/MMBtu	5-252(1)(a)	-
Fuel Burning Equipment - Solid fossil fuel	1.20	NL	NL	NL	lb SO2/MMBtu	5-252(1)(b)	-

APPENDIX 5A

TECHNICAL SUPPORT DOCUMENT FOR 2002 MANE-VU SIP MODELING INVENTORIES, VERSION 3

TECHNICAL SUPPORT DOCUMENT FOR 2002 MANE-VU SIP MODELING INVENTORIES, VERSION 3

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November 20, 2006

for the
Mid-Atlantic/Northeast Visibility Union (MANE-VU)

CONTENTS

TABLES

FIGURES

ACRONYMS AND ABBREVIATIONS

ATP	Anaerobic Thermal Processor
BEIS	Biogenic Emissions Inventory System
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CAMD	Clean Air Markets Division
CAP	criteria air pollutant
CE	Control Equipment (NIF 3.0) table
CEM	Continuous Emissions Monitoring
CENRAP	Central Regional Air Planning Organization
CERR	Consolidated Emissions Reporting Rule
CMU	Carnegie Mellon University
CNG	compressed natural gas
CO	carbon monoxide
CO_2	carbon dioxide
EF	emission factor
EFIG	Emission Factors and Inventory Group
EGU	electricity generating unit
EI	inventory
EM	Emission (NIF 3.0) table
EP	Emission Process (NIF 3.0) table
EPA	U.S. Environmental Protection Agency
ERP	Emission Release Point (NIF 3.0) table
ETBE	ethyl tertiary butyl ether
ETOH	ethanol
ETS	Emission Tracking System
EU	Emission Unit (NIF 3.0) table
FIPS	Federal Information Processing Standard
FIRE	Factor Information and REtrieval Factor
GIS	geographic information system
GSE	ground support equipment
HAP	hazardous air pollutant
HC	hydrocarbon
HPMS	Highway Performance Monitoring System
ID	identification
IDA	Inventory Data Analyzer format
I/M	inspection and maintenance
km	kilometer
LAI	leaf area indices
LEV	low emission vehicle
LPG	liquified petroleum gas
MACT	maximum achievable control technology
MANE-VU	Mid-Atlantic/Northeast Visibility Union
MARAMA	Mid-Atlantic Regional Air Management Association
MTBE	methyl tertiary butyl ether
NAAQS	National Ambient Air Quality Standard
NAICS	North American Industrial Classification System

NEI	National Emissions Inventory
NH_3	ammonia
NIF	NEI Input Format
NMIM	National Mobile Inventory Model
NO	nitrous oxide
NO_x	oxides of nitrogen
NYSDEC	New York State Department of Environmental Conservation
ORIS	Office of Regulatory Information Systems
OTC	Ozone Transport Commission
PAR	photosynthetic active radiation
PE	Emission Period (NIF 3.0) table
Pechan	E.H. Pechan & Associates, Inc.
PFC	portable fuel container
PM	particulate matter
PM-CON	condensible PM
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PM10-FIL	filterable PM_{10}
PM10-PRI	primary PM_{10}
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM25-FIL	filterable $PM_{2.5}$
PM25-PRI	primary $PM_{2.5}$
POTWs	public owned treatment works
ppm	parts per million
psi	pounds per square inch
QA	quality assurance
QAPP	Quality Assurance Project Plan
RPO	Regional Planning Organization
RVP	Reid vapor pressure
SCC	Source Classification Code
SPDPRO	speed profile
SPDREF	speed cross reference
SI	Site (NIF 3.0) table
SIC	Standard Industrial Classification
SIP	State Implementation Plan
S/L	State and Local
SMOKE	Sparse Matrix Operator Kernel Emissions
SO_2	sulfur dioxide
TAME	tertiary amyl methyl ether
TR	Transmittal (NIF 3.0) table
TSD	technical support document
U.S.	United States
VISTAS	Visibility Improvement State and Tribal Association of the Southeast
VMT	vehicle miles traveled
VOC	volatile organic compound
WRAP	Western Regional Air Partnership

CHAPTER I – INTRODUCTION

A. What is the purpose of this TSD?

This technical support document (TSD) explains the data sources, methods, and results for preparing Version 3 of the 2002 base year criteria air pollutant (CAP) and ammonia (NH_3) emissions inventories for point, area, onroad, nonroad, and biogenic sources for the Mid-Atlantic/Northeast Visibility Union (MANE-VU) Regional Planning Organization (RPO). The MANE-VU region includes Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. Local air planning agencies include Philadelphia and Allegheny County, Pennsylvania. The region also includes the Penobscot Tribe of Maine Indian Nation (Tribal code 018) and the St. Regis Band of Mohawk Indians of New York (Tribal code 007). However, these tribal authorities did not provide any data for the 2002 MANE-VU inventory. MANE-VU will use these inventories to support air quality modeling, State Implementation Plan (SIP) development, and implementation activities for the regional haze rule and fine particulate matter (PM) and ozone National Ambient Air Quality Standards (NAAQS).

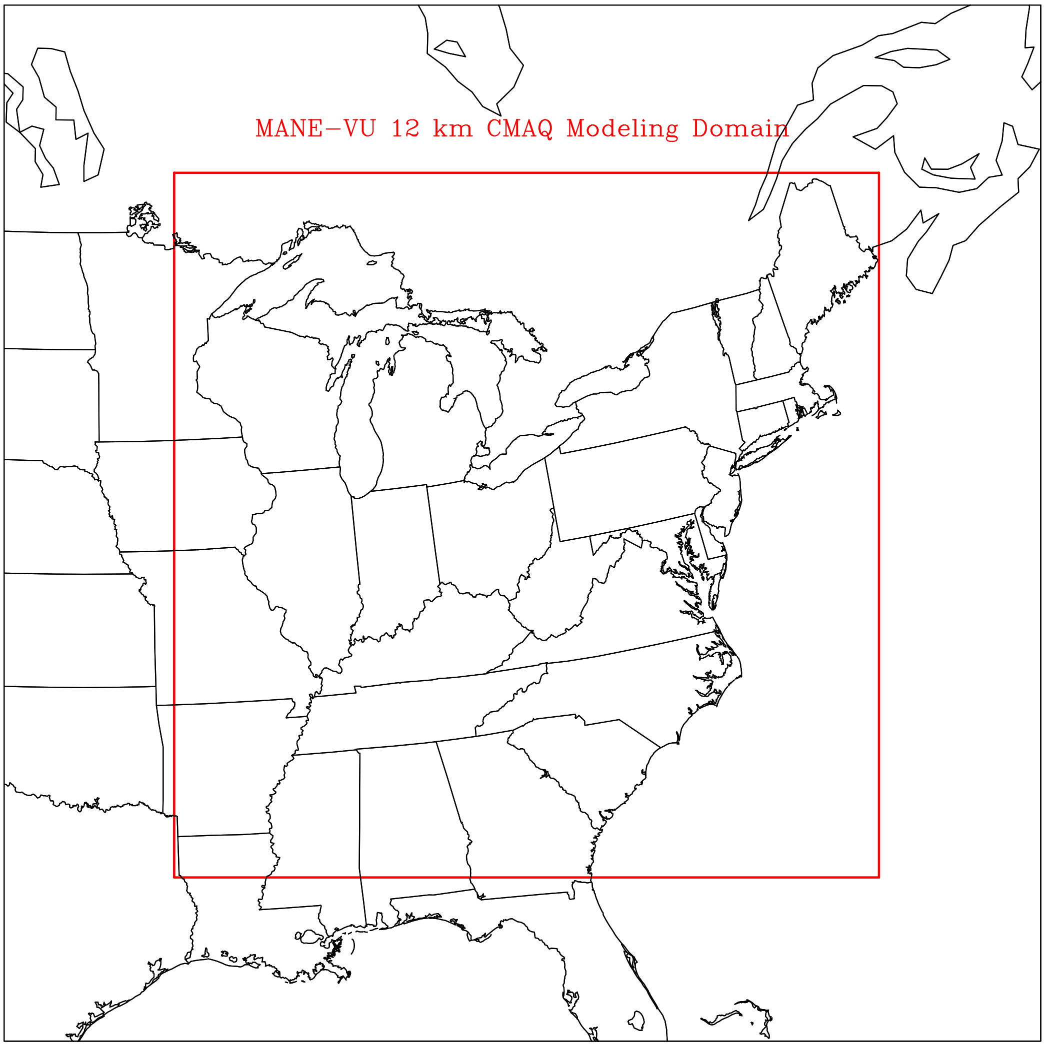
The inventories and supporting data prepared include the following:

(1) Comprehensive, county-level, mass emissions and modeling inventories for of 2002 emissions for CAPs and NH_3 for the State and Local (S/L) agencies included in the MANE-VU region;
(2) The temporal, speciation, and spatial allocation profiles for the MANE-VU region inventories;
(3) Inventories for wildfires, prescribed burning, and agricultural field burning for the southeastern provinces of Canada; and
(4) Inventories for other RPOs, Canada, and Mexico.

The mass emissions inventory files were prepared in the National Emissions Inventory (NEI) Input Format Version 3.0 (NIF 3.0). The modeling inventory files were prepared in Sparse Matrix Operator Kernel Emissions/Inventory Data Analyzer (SMOKE/IDA) format. Ancillary files (holding spatial, temporal, and speciation profile data) were prepared in SMOKE/IDA compatible format. Figure 1 shows the Models-3 Community Multiscale Air Quality Modeling System (CMAQ) modeling domain for the MANE-VU region.

The inventories include annual emissions for sulfur dioxide (SO_2), oxides of nitrogen (NO_x), volatile organic compounds (VOC), carbon monoxide (CO), NH_3, and particles with an aerodynamic diameter less than or equal to a nominal 10 and 2.5 micrometers (i.e., primary PM_{10} and $PM_{2.5}$). The inventories included summer day, winter day, and average day emissions. However, not all agencies included daily emissions in their inventories, and, for the agencies that did, the temporal basis for the daily emissions varied between agencies. The temporal profiles prepared for this project will be used to calculate daily emissions when not available in the inventory files.

Figure 1. MANE-VU 12-Kilometer CMAQ Modeling Domain



B. What are Versions 1, 2, and 3 of the 2002 MANE-VU Inventory?

Work on Version 1 of the 2002 MANE-VU inventory began in April 2004. The consolidated inventory for point, area, onroad, and nonroad sources was prepared by starting with the inventories that S/L agencies submitted to the United States (U.S.) Environmental Protection Agency (EPA) from May through July of 2004 as a requirement of the Consolidated Emissions Reporting Rule (CERR). The EPA's format and content quality assurance (QA) programs (and other QA checks not included in EPA's QA software) were run on each inventory to identify format and/or data content issues (EPA, 2004a). E.H. Pechan & Associates, Inc. (Pechan) worked with the MANE-VU S/L agencies and the staff of the Mid-Atlantic Regional Air Management Association (MARAMA) to resolve QA issues and augment the inventories to fill data gaps in accordance with the Quality Assurance Project Plan (QAPP) prepared for this project (MANE-VU, 2004a). MARAMA is the MANE-VU organization's employees, whereas

MANE-VU is the member S/L agencies plus MARAMA employees. MARAMA is one of three RPOs (in addition to Ozone Transport Commission (OTC) and North East States for Coordinated Air Use Management) supporting the MANE-VU effort.

A draft of the point and area source inventories and summary files were provided for stakeholder review during August 2004. Stakeholder comments were reviewed by the S/L agencies and revisions to the inventory files were made to the files to incorporate stakeholder comments as approved by each S/L agency. The inventories were finalized during December 2004 and the SMOKE input files were prepared and reviewed by the modelers during December 2004 and early January 2005. The final inventory and SMOKE input files were finalized during January 2005.

Work on Version 2 (covering the period from April through September 2005) involved incorporating revisions requested by some S/L agencies on the point, area, and onroad inventories. Work on Version 3 (covering the period from December 2005 through April 2006) included additional revisions to the point, area, and onroad inventories as requested by some states. Thus, the Version 3 inventory for point, area, and onroad sources were built upon Versions 1 and 2. This work also included development of the biogenics inventory. Version 3 of the nonroad inventory was completely redone due to changes that EPA made to the NONROAD2005 model.

C. How is this TSD organized?

Chapters II through V of this TSD present the general and State-specific methods and data sources used to develop Version 3 of MANE-VU's 2002 inventory for point, area, nonroad, and onroad sources. Chapter VI presents the methods, data sources, and model used to develop the biogenics inventory. Chapter VII documents the temporal allocation, speciation, and spatial allocation modeling input files used for Version 3 of MANE-VU's 2002 inventory for all sectors. Chapter VIII describes the non-MANE-VU region inventory data used for MANE-VU BaseB Modeling. References for the TSD are provided in Chapter IX. Appendices A and B provide the QA Summary Report files prepared during development of the State-specific inventories for point and area sources, respectively. Appendices A and B also provide tables that identify for each S/L agency, the Version 3 data sources, emission type period, pollutant, and the number of counties by source classification code (SCC). For the nonroad inventory, Appendix C provides the final county, monthly National Mobile Inventory Model (NMIM) inputs provided or confirmed by the States for Reid vapor pressure (RVP), weight percent oxygen, and gasoline sulfur.

CHAPTER II – POINT SOURCES

A. General Methods for all State and Local Agencies

1. What Data Sources Were Used?

Version 3 of the 2002 MANE-VU point source inventory is based primarily on Version 1 with some state-specific revisions incorporated into Versions 2 and 3. Version 1 was developed using the inventories that S/L agencies submitted to EPA from May through July of 2004 as a requirement of the CERR. All 12 State agencies submitted point source inventories to EPA. In addition, Allegheny and Philadelphia Counties in Pennsylvania each submitted their own point source inventories to EPA. The EPA performed some limited QA review of the S/L inventories to identify format, referential integrity, and duplicate record issues. The EPA revised the inventories to address these issues and made the files available to the S/L agencies on August 6, 2004. These inventory files were used as the starting point for Version 1 of the MANE-VU inventory. These inventory files were obtained from EPA, consolidated into a single data set, subjected to extensive QA review, revised (as approved by the MANE-VU S/L agencies) to address QA issues and to fill data gaps identified while preparing Version 1. Subsequently, the following agencies provided revisions to their point source inventories:

- Version 2 – Connecticut, Delaware, and Maryland
- Version 3 – Massachusetts, New York, and Rhode Island

The revisions that these states provided for Versions 2 and 3 are discussed in the "State-Specific Methods" section of this chapter.

In order to track the origin of data, the temporal period of emissions, and to facilitate generation of emission summaries, the following NIF plus fields were added to the Transmittal (TR), Site (SI), Emission Unit (EU), Emission Release Point (ER), Emission Process (EP), Emission Period (PE), Emission (EM), and Control Equipment (CE) tables:

- Data Source Codes:

Code	Description
S	State agency-supplied data.
L	Local agency-supplied data to incorporate S/L comments for individual records.
P	NH_3 emissions from MANE-VU inventory for cement kilns.
AUG-A	PM Augmentation: ad-hoc change.
AUG-C	PM Augmentation: standard augmentation method.
AUG-O	PM Augmentation: set PMxx-FIL = PMxx-PRI for SCCs starting with 10 (external fuel combustion) and 20 (internal fuel combustion). Note: emission factors and particle-size data for estimating condensible emissions for fuel combustion SCCs starting with 30 were not available; therefore, condensible emissions were not estimated for these processes

if an agency provided filterable and not primary emissions for these processes. In other words, the primary emissions were assumed to equal the filterable emissions.

AUG-Z PM Augmentation: automated fill-in of zero values where all PM for a particular process is zero.

- Revision Date: This field indicates the month and year during which the last revision was made to a record.

- State Federal Information Processing Standard (FIPS): This field indicates the state FIPS code of the submittal.

- County FIPS: This field indicates the county FIPS code of the submittal.

The following NIF plus fields were added to the EM table:

- Emission Ton Value: This field indicates the values of the emissions in tons. This field was used to prepare summaries of emissions on a consistent EU basis.

- Emission Type Period: This field indicates the period of the Emission Type – either ANNUAL or NONANNUAL. This field was used to prepare summaries of annual emissions.

- CAP_HAP: This field identifies records for CAP versus records for hazardous air pollutants (HAPs). For the MANE-VU inventory, the flag is CAP for all records.

- Year: This field indicates the year of the data; for this inventory, it is 2002.

Note that the QAPP for Version 1 includes more data source codes than were used in Version 3 of the point source inventory. The data source codes listed above are the codes used in Version 3. The exception is for Rhode Island, who requested that their Version 2 inventory be replaced with its inventory included in the final 2002 NEI prepared by EPA. Thus, for Rhode Island, it was agreed to maintain the data source codes used in the NEI in Version 3 of the MANE-VU inventory. The data source codes for Rhode Island's point source inventory are explained under the state-specific section for Rhode Island.

2. What Quality Assurance Steps Were Performed?

A QAPP was prepared and approved by MANE-VU/MARAMA and the EPA Regional Office prior to initiating work on Version 1 of the inventory (MANE-VU, 2004a). This QAPP was followed during preparation of all three versions of the inventory. This section provides an overview of the QA checks completed on each version of the inventory. The QA process for each S/L inventory involved the following steps:

- Conduct QA checks on each S/L inventory;
- Prepare a QA Summary Report for submittal to the agency for review;

- Revise the inventory to resolve QA issues as directed by the agency;
- Repeat the QA checks on the revised inventory to verify that the corrections were completed;
- Perform augmentation to correct for missing data; and
- Repeat the QA checks to verify that the augmentation was completed correctly.

a. QA checks for S/L agency inventories

The following discusses the QA diagnoses that were run on the consolidated point source inventory data set. For each S/L agency, a "QA Summary Report" was prepared for each QA check in an Excel Workbook file. The results of each QA check was summarized in a separate spreadsheet and submitted to the S/L agency for review and resolution. The agencies provided corrections to the data in the Excel files or via e-mail and the inventory was updated with the corrections.

i. Continuous Emissions Monitoring (CEM) Analysis

The goal of this analysis was to compare annual NO_x and SO_2 emissions that were measured with CEM systems and reported to EPA to the annual NO_x and SO_2 emissions reported in the S/L inventories. Facilities report hourly CEM data to EPA for units that are subject to CEM reporting requirements of the NO_x SIP Call rule and Title IV of the Clean Air Act (CAA). Thus, hourly CEM emissions were summed to the annual level and compared to the annual emissions in the S/L inventories. If the S/L agencies agreed, the CEM hourly emissions would be used to support air quality modeling to accurately reflect the temporal distribution of emissions from CEM units during 2002. Since some of the states require facilities to certify the emissions they report for inclusion in the inventory, the agencies needed proof that the emissions in the CEM inventory compared well with the emissions in the S/L inventory.

The 2002 CEM inventory containing hourly NO_x and SO_2 emissions and heat input data were downloaded from the EPA/Clean Air Markets Division's (CAMD) web site (www.epa.gov/airmarkets) on July 8, 2004 (CAMD, 2004). The data were provided by quarter and state resulting in 48 separate files for the 12 states in the MANE-VU region. For each state, the hourly emissions were summed to the annual level by facility and EU.

The first stage in the CEM analysis involved preparing a crosswalk file to match facilities and units in the CEM inventory to facilities and units in the S/L inventories. In the CEM inventory, the Office of Regulatory Information Systems (ORIS) identification (ID) code identifies unique facilities and the unit ID identifies unique boilers and internal combustion engines (i.e., turbines and reciprocating engines). In the S/L inventories, the state and county FIPS and state facility ID together identify unique facilities and the EU ID identifies unique boilers or internal combustion engines. However, in some of the S/L inventories, the emissions for multiple EUs were summed and reported under the same EU ID. Thus, an Excel Workbook was sent to the S/L agencies that contained an initial crosswalk with the ORIS ID and unit ID in the CEM inventory matched to the state and county FIPS, state facility ID, and EU ID in the S/L inventory. Agencies were asked to confirm/correct/supplement the information in the crosswalk. The initial crosswalk also contained annual emissions summed from the hourly CEM emissions and flags that indicated if

CEM units were subject to reporting requirements under the NO_x SIP Call and/or Title IV of the CAA. It should be noted that the initial matching of the IDs in both inventories was based on previous crosswalks that had been developed for the 1999 NEI and in-house information compiled by Pechan. The matching at the facility level was nearly complete; however, S/L agency assistance was needed to match most of CEM units to EUs in the S/L inventories.

The crosswalk was updated with corrections to facility and CEM unit-to-EU matches, and with new matches provided by the S/L agencies. The matching of each CEM unit to an EU was still incomplete. Consequently, the comparison of annual emissions was performed at the facility level.

The second stage in the CEM analysis was to prepare an Excel Workbook file for each S/L agency that compared the annual emissions summed from the hourly CEM inventory to the annual emissions reported in the S/L inventory. The file included three spreadsheets that compared annual emissions at the facility level, listed the facilities in the CEM inventory that could not be matched to the facilities in the S/L inventory, and listed the facilities in the S/L inventory identified as an electricity generating unit (EGU) that could not be matched to a facility in the CEM inventory. The Excel files were sent to the S/L agencies for review. The S/L agencies then indicated if they did or did not want to use the hourly CEM inventory.

The facility-level comparison of CEM to emission inventory NO_x and SO_2 emissions found that for some facilities, the annual emissions from the S/L inventory exceeded the CEM annual emissions because the facility in the S/L inventory contained more than just CEM units. This condition was determined to be acceptable. However, S/L agencies were asked to review data for facilities where the CEM emissions were higher than the emissions summed from the S/L inventory. For these cases, CEM emissions may be higher than those reported in a S/L inventory due to methods EPA uses for using artificially high default values to fill in hourly CEM data when not reported or when a CEM unit was not working properly.

After reviewing the comparison of the CEM to S/L inventory emissions, New York and Vermont elected to use the 2002 CEM inventory containing hourly NO_x and SO_2 emissions for all facilities. Maryland; New Hampshire; and Allegheny County, Pennsylvania elected to use the 2002 CEM data for some but not all of the facilities within their jurisdiction. The Excel Workbook files containing the comparison of CEM to S/L inventories provides a spreadsheet identifying the facilities for which these S/L agencies elected to use the CEM inventory.

Subsequent to the completion of this analysis, it was determined that the structure of the EPA/CAMD file would not be compatible with the format of the SMOKE input file. The database structure did not affect the annual emissions summed from the hourly CEM emissions used in the comparison to S/L inventory data. For each of the S/L agencies that elected to use the 2002 CEM data, CAMD agreed to provide separate database files for each state with a structure compatible with the SMOKE input file format. Pechan then used the crosswalk to add to the CEM inventory files the state and county FIPS, state facility ID, and EU ID (if the crosswalk contains a CEM unit to EU match) to the hourly CEM database files provided by CAMD. The modified database was then used to create the SMOKE input files for these states.

Note that Delaware requested that the 2002 CEM inventory for its facilities not be used for regional haze modeling. However, if the consolidated point source inventory prepared under this project is used to support ozone episode modeling, Delaware may consider using the CEM hourly data for the episodes modeled. Therefore, the 2002 CEM inventory was also processed for Delaware's facilities.

ii. PM Emissions Consistency and Completeness Review

The following consistency checks were performed at the EM table data key level (for annual emissions) to compare PM emissions:

- If a process was associated with a PM emission record, but was missing one or more of the following (as appropriate for the SCC [i.e., condensible PM (PM-CON) is associated with fuel combustion only]): filterable PM_{10} (PM10-FIL), primary PM_{10} (PM10-PRI), filterable $PM_{2.5}$ (PM25-FIL), primary $PM_{2.5}$ (PM25-PRI), or PM-CON, the record was flagged for review.

- The following equations were used to determine consistency:

  PM10-FIL + PM-CON = PM10-PRI
  PM25-FIL + PM-CON = PM25-PRI
  PM-FIL + PM-CON = PM-PRI

- The following comparisons were applied to determine consistency:

  PM10-PRI >= PM10-FIL
  PM25-PRI >= PM25-FIL
  PM10-PRI >= PM-CON
  PM25-PRI >= PM-CON
  PM10-FIL >= PM25-FIL
  PM10-PRI >= PM25-PRI
  PM-PRI >= PM10-PRI
  PM-PRI >= PM25-PRI
  PM-FIL >= PM10-FIL
  PM-FIL >= PM25-FIL

If the data failed one of these checks it was diagnosed as an error, summarized in an Excel Workbook file, and provided to the S/L agency for corrections. If a S/L agency did not provide corrections to these errors, the errors were corrected or filled in according to the augmentation procedures.

iii. ERP Coordinate Review

Location coordinates for point sources were evaluated using geographic information system (GIS) mapping to determine if the coordinates were within 0.5-kilometers of the boundary of the county in which the source was located. If not, the S/L agency was asked to review the coordinates and provide corrections to either the coordinates or the state and county FIPS codes. The 0.5-kilometer test resulted in a large number of ERPs for review by the agencies. Therefore, to assist S/L agencies in prioritizing their review of coordinates, ERP records with coordinates located more than 0.5, 1, 2, 3, 5, 7, and 10 or more kilometers from their county boundary, and coordinates that mapped outside of their state boundary were identified. Annual emissions summed to the ERP level were included in the QA Summary Report to identify records with zero emissions for all pollutants and to identify the highest emitting stacks. The QA Summary Report was provided to the S/L agency for review and corrections.

iv. ERP Parameter Review

The EPA's QA guidance for diagnosing ERP issues for the point source NEI (EPA, 2004b) was applied to identify QA issues in the S/L point source inventories. The QA guidance involved diagnosing the correct assignment of the ERP type (i.e., stack or fugitive), parameters with zero values, parameters not within the range of values specified in the EPA's QA procedures, and consistency checks (i.e., comparing calculated values against the values reported in the inventory). In many cases errors were caused by missing or zero values. In other cases, out-of-range errors were caused by unit conversion issues (e.g., stack parameters were in ft, ft/sec, cu ft/sec, or degrees Fahrenheit). The QA issues were summarized in a separate QA Summary Report for each agency and each agency was asked to provide corrections. If an agency did not provide corrections for out-of-range or missing values, the data were corrected or filled in according to the ERP augmentation procedures.

v. Control Device Type and Control Efficiency Data Review

The CE codes in the "Primary Device Type Code" and "Secondary Device Type Code" fields were reviewed to identify invalid codes (i.e., codes that did not exist in the NIF 3.0 reference table) and missing codes (e.g., records with a null or uncontrolled code of 000 but with control efficiency data).

QA review of control efficiency data involved diagnosis of two types of errors. First, records were reviewed to identify control efficiency values that were reported as a decimal rather than as a percent value. Records with control efficiencies with decimal values were flagged as a potential error (although not necessarily an error, since the real control efficiency may be less than 1%).

The second check identified records where 100% control was reported in the CE table, but the emissions in the EM table were greater than zero and the rule effectiveness value in the EM table was null, zero, or 100% (implying 100% control of emissions). Because many agencies did not populate the rule effectiveness field or a default value of zero was assigned, records with null or zero rule effectiveness values were included where the CE was 100% and emissions were greater than zero. The records that met these criteria were summarized in a QA Summary Report for review and correction, if necessary, by the S/L agency.

vi. Start and End Date Checks

QA review was conducted to identify start date and end date values in the PE and EM tables to confirm consistency with the inventory year in the TR table, and to confirm that the end date reported was greater than the start date reported. This check did not identify any QA issues in the three versions of the inventory.

vii. Annual and Daily Emissions Comparison

The following QA checks were conducted to identify potential errors associated with the incorrect reporting of daily and/or annual emissions:

- Any "DAILY" type record that is greater than its associated "ANNUAL".

A review of the daily vs. annual comparison revealed that in many cases, the daily value was nonzero (but very small), but the annual value was zero. This was generally a result of rounding in a S/L agency's original emissions database, where annual records were recorded in tons per year to a set number of decimal places, while the corresponding daily records were recorded in pounds per year to a set number of decimal places. The annual record rounds to zero in the original database, while the daily value remains non-zero. A tolerance check reveals the following (comparison in tons):

- Difference Tolerance (daily - annual)> 0
- Difference Tolerance (daily - annual)> .000001
- Difference Tolerance (daily - annual)> .00001
- Difference Tolerance (daily - annual)> .0001
- Difference Tolerance (daily - annual)> .001
- Difference Tolerance (daily - annual)> .01

For Version 1, the affected S/L agencies were as follows:

- Connecticut (09) 11 records
- Maine (23) 4 records
- Maryland (24) 72 records
- New Jersey (34) 2935 records
- Pennsylvania Allegheny County (42003) 17 records
- Pennsylvania Philadelphia County (42101) 146 records
- Rhode Island (44) 1 record

Rhode Island, Philadelphia, and New Jersey responded that the dailies that were greater than the annuals could be deleted. Maryland determined that they should be kept since the difference values were small. The records for the remaining S/L agencies were kept. This QA issue only occurred during processing of Version 1.

b. Responses from S/L agencies

Each S/L agency reviewed its "QA Summary Report" files and the S/L agency provided direction for correcting QA issues either in the QA Summary Report Excel files or via e-mail. The inventory was then revised to incorporate responses from each agency and the QA checks were run again to verify that the QA issues were addressed. If an agency responded to a QA issue by e-mail, the direction was recorded in the "QA Summary Report" file. The "QA Summary Report" file for each S/L agency was updated to document QA issues and resolution of issues associated with developing Versions 2 and 3 of the point source inventory. The "QA Summary Report" files for Version 3 are provided with this report in a separate zip file. The files in the zip file are organized in separate folders for each S/L agency. Each folder includes a separate Excel workbook file for the following QA checks if a QA issue existed:

- PM Augmentation QA Summary;
- Stack Parameter QA Summary;
- Stack Coordinates QA Summary;
- Stack Parameter and Coordinate Augmentation Summary;
- CEM Comparisons and Revisions; and
- Control Device/Efficiency Summary.

c. Gap Filling and Augmentation

The following discusses the augmentation procedures that were used to fill in missing data that were not supplied by the S/L agencies. The S/L agencies approved the procedures before they were applied. These procedures were applied after revising the inventory to address QA issues as directed by each S/L agency.

i. MANE-VU-Sponsored Inventories

MANE-VU prepared a 2002 NH_3 emissions inventory for cement kilns for SCCs 30500606 and 30500706 located in four MANE-VU states. Maryland chose to add one new facility 24013/0012 (state and county FIPS code/facility ID). New York chose to add the following three sites 36001/4010300016, 36001/4012400001, and 36111/3514800084. Maine and Pennsylvania chose not to add emissions from this inventory. The data for Maryland and New York were added to Version 1. These data were not changed in Versions 2 and 3 of the point source inventory.

ii. PM Augmentation

The PM augmentations process gap-fills missing PM pollutant complements. For example, if a S/L agency provided only PM10-PRI pollutants the PM augmentation process filled in the PM25-PRI pollutants. The steps in the PM augmentation process were as follows:

- Step 1: Initial QA and remediation of S/L provided PM pollutants;

- Step 2: Development of PM factor ratios based on factors from the Factor Information and REtrieval (FIRE) Data System, version 6.2, and the PM Calculator (EPA, 2003a; EPA, 2004c);
- Step 3: Implementation of the ratios developed in step 2.; and
- Step 4: Presentation of PM augmentation results to S/L agencies for review and comment.

An Access database (named *Reference Tables for PM Augmentation*) accompanies this document. This database contains the SCC Control Device Ratio table, the Emission Factors table, and Emission Factors Crosstab table discussed in Step 2. The Emission Factors Crosstab table contains the ratios developed from the Emission Factors table. The Emission Factors table contains detailed information on the emission factors used to develop the ratios. The PM Calculator ratio table can be provided upon request – it contains all possible combinations for SCC and Control Device types that are available in the PM Calculator. Ratios from the PM calculator were developed using a standard input of 100 TONS of uncontrolled PM-FIL emissions.

1. Initial QA and Remediation of PM Pollutants

S/L agencies were initially presented with files that detailed potential inconsistencies and missing information in their PM pollutant inventory. Inconsistencies in PM pollutants include the following:

- PM-PRI less than PM10-PRI, PM25-PRI, PM10-FIL, PM25-FIL, or PM-CON;
- PM-FIL less than PM10-FIL, PM25-FIL;
- PM10-PRI less than PM25-PRI, PM10-FIL, PM25-FIL or PM-CON;
- PM10-FIL less than PM25-FIL;
- PM25-PRI less than PM25-FIL or PM-CON;
- The sum of PM10-FIL and PM-CON not equal to PM10-PRI; and
- The sum of PM25-FIL and PM-CON not equal to PM25-PRI.

Potential missing information was summarized in a table which detailed the variety of cases provided by each S/L agency. For example, an S/L agency might have provided PM10-FIL and PM25-FIL for some processes, but provided only PM10-FIL for other processes.

S/L agencies were asked to review this information and provide corrections where possible. In general, corrections (or general directions) were provided in the case of the potential inconsistency issues. An example of a general direction provided by a S/L agency was to remove PM25-FIL where greater than PM10-FIL because the PM10-FIL was (in their particular case) known to be more reliable. In other cases, the agency-provided specific process-level pollutant corrections. If specific direction was not provided by the agency, zero PM pollutants were generally removed, or complements were set equal to the higher number.

2. Development of PM Factor Ratio

The primary deliverable of this step of the process was the development of a table keyed by SCC, primary control device, and secondary control device. This table is called the SCC Control Device Ratios table (see Table II-1). This table was filled according to the following steps:

- Ratios (both condensible and noncondensible) were added from FIRE for SCCs starting with 10* (external fuel combustion) and 20* (internal fuel combustion) where there was a direct match between the provided SCC, and primary and secondary control devices.

- Ratios (non-condensable) were added from the PM Calculator for SCCs starting with 10* and 20* where there was not a direct match between the provided SCC, and primary and secondary control devices. Condensible ratios were added from the PM Calculator based on the uncontrolled SCC for these SCCs. In some cases, it was necessary to map the SCC and control devices to the PM calculator to find a match for the noncondensible ratios. In other cases, it was necessary to map the SCC to FIRE to find a match for condensible ratios.

- For natural gas, process gas, and liquified petroleum gas (LPG) SCCs starting with 10* and 20*, it was assumed (based on FIRE emission factors) that the PM-PRI/PM10-PRI/PM25-PRI ratio was equal to 1. It was also assumed that the PM-FIL/PM10- FIL /PM25- FIL was equal to 1. Condensible ratios were calculated from uncontrolled FIRE emission factors for these SCCs. In some cases it was necessary to map the SCC to FIRE to find a match for condensible ratios.

- Ratios for SCCs not like 10* and 20* were obtained from the PM Calculator. It was assumed that the condensible component was zero.

Table II-1. Description of the Field Names and Descriptions for the SCC Control Device Ratios Table

Field Name	Field Description
PM Calculator	A “Yes” in this field indicates that at least some of the information was retrieved from the PM Calculator
FIRE	A “Yes” in this field indicates that at least some of the information was retrieved from the Emission Factors table. A “Condensible Ratios” in this field indicates that the condensible ratios factors were retrieved from this table.
Other	A field to indicate other sources as necessary.
SCC	Source category code from the S/L agency-provided data.
SCC_DESC	Description of source category code from the S/L agency-provided data.
maptoSCC	This field equals SCC unless the SCC provided was not found in the appropriate source table. In that case, the SCC was mapped using the closest available appropriate mapping choice.
maptoSCC_DESC	Description of the maptoSCC.
mapSCCNote	Any notes related to the mapping of the SCC. A “Yes” in this field indicates that the SCC was mapped.
PD	Primary device type from the S/L agency provided data.
PD_DESC	Description of the primary device (PD).
maptoPD	This field equals PD unless the PD provided was not found in the appropriate source table. In that case, the PD was mapped using the closest available appropriate mapping choice.
maptoPD_DESC	Description of the maptoPD.
mapPDNote	Any notes related to the mapping of the PD. A “Yes” in this field indicates that the PD was mapped.
SD	Secondary device type from the S/L agency provided data.
SD_DESC	Description of the secondary device (SD).
maptoSD	This field equals SD unless the SD provided was not found in the appropriate source table. In that case, the SD was mapped using the closest available appropriate mapping choice.
maptoSD_DESC	Description of the maptoSD.
mapSDNote	Any notes related to the mapping of the SD. A “Yes” in this field indicates that the SD was mapped.
PM-FIL/PM10-FIL	This field and the following are ratios calculated from emission factors found either in FIRE or the PM calculator.
PM-FIL/PM25-FIL	This field and the following are ratios calculated from emission factors found either in FIRE or the PM calculator.
PM-FIL/PM-PRI	This field and the following are ratios calculated from emission factors found either in FIRE or the PM calculator.
PM-PRI/PM10-PRI	This field and the following are ratios calculated from emission factors found either in FIRE or the PM calculator.
PM-PRI/PM25-PRI	This field and the following are ratios calculated from emission factors found either in FIRE or the PM calculator.
PM10-FIL/PM25-FIL	This field and the following are ratios calculated from emission factors found either in FIRE or the PM calculator.
PM10-PRI/PM25-PRI	This field and the following are ratios calculated from emission factors found either in FIRE or the PM calculator.
PM-CON/PM10-FIL	Condensible ratios were calculate from FIRE if available for 10* and 20* SCCs. If condensible ratios were not found in FIRE for 10* and 20* these ratios were set to zero.
PM-CON/PM10-PRI	Condensible ratios were calculate from FIRE if available for 10* and 20* SCCs. If condensible ratios were not found in FIRE for 10* and 20* these ratios were set to zero.
PM-CON/PM25-FIL	Condensible ratios were calculate from FIRE if available for 10* and 20* SCCs. If condensible ratios were not found in FIRE for 10* and 20* these ratios were set to zero.
PM-CON/PM25-PRI	Condensible ratios were calculate from FIRE if available for 10* and 20* SCCs. If condensible ratios were not found in FIRE for 10* and 20* these ratios were set to zero.
PM-CON/PM-FIL	Condensible ratios were calculate from FIRE if available for 10* and 20* SCCs. If condensible ratios were not found in FIRE for 10* and 20* these ratios were set to zero.
PM-CON/PM-PRI	Condensible ratios were calculate from FIRE if available for 10* and 20* SCCs. If condensible ratios were not found in FIRE for 10* and 20* these ratios were set to zero.
RPO Specific Note	Indicates SCC and control device combinations are in the RPO inventory.
Additional Notes	Any notes regarding assumptions about ratios.

3. Implementation of the QA Ratios

In order to calculate the additional PM pollutants based on the SCC Control Device ratio table developed in the above step, a crosstab table was created from the EM table based on the following fields:

- State FIPS
- County FIPS
- Tribal Code
- EU ID
- Process ID
- Start Date
- End Date
- Emission Type
- SCC
- Primary Device Type
- Secondary Device Type

The primary and secondary device type fields were added based on information from the CE table. If CE information was not available these fields were defaulted to 000 ("UNCONTROLLED"). In the few cases where there was a conflict between the control devices reported for the same process for PM pollutants (e.g., a PM10-PRI is listed as controlled, but PM-PRI did not have control information), the control device type was selected based on the controlled pollutant.

In addition to the fields listed above, the crosstab included the PM emission amounts for the particular process and a field that indicated whether those emissions existed in the inventory. These fields were as follows:

- PM_PRI
- PM_FIL
- PM10_PRI
- PM10_FIL
- PM25_PRI
- PM25_FIL
- PM_CON
- PM_PRI_EXISTS
- PM_FIL_EXISTS
- PM10_PRI_EXISTS
- PM10_FIL_EXISTS
- PM25_PRI_EXISTS
- PM25_FIL_EXISTS
- PM_CON_EXISTS

The emission values were in the PM_PRI, PM_FIL, PM10_PRI, PM10_FIL, PM25_PRI, PM25_FIL, PM_CON fields. The _EXISTS field indicated whether the pollutant was provided by the S/L agency. A zero indicated that the pollutant was not provided; a number greater than zero (usually one) indicates that it was provided by the S/L agency.

Prior to the development of this crosstab, the EM table was filled in as much as possible using basic assumptions. For example, if the S/L agency provided zero emissions for some but not all forms of PM for a particular process, it was assumed that all forms of PM for that process were zero and they were filled in accordingly. Since that assumption was that for non 10* and 20* SCCs, the condensible value was zero – that would lead to PM10-FIL = PM10-PRI and PM25-FIL = PM25-PRI and PM-FIL = PM-PRI. Given that assumption, values for these pollutants were also filled in. After this data insertion, a subset of the crosstab was created. This subset only contained processes that required additional augmentation. The SCC Control Device Type ratio table was based on only those SCC and control device types that required augmentation.

The next step was to fill in the missing information in this crosstab using the information found in the SCC Control Device Ratio table.

In calculating PM complement pollutants, priority was given to calculating –PRI and –CON pollutants. FIL pollutants were only calculated if necessary to calculate other pollutants or if it was a by-product of this calculation.

In augmenting the PM pollutants, the non 10* and 20* SCCs were augmented first, with order given to augmenting based on PM_{10} where available, $PM_{2.5}$ where available, and then PM.

Augmenting the PM pollutants for the 10* and 20* SCCs is more complicated, but the basic approach was to augment based on PM_{10} (FIL or PRI) where available, $PM_{2.5}$ (FIL or PRI) where available, and then PM (FIL or PRI) if PM_{10} or $PM_{2.5}$ variations were not available. Where both PM_{10} (FIL or PRI) and $PM_{2.5}$ (FIL or PRI) variations were both available, the calculation for PM-CON was generally driven from the PM_{10} number and the complements as necessary were back calculated. Where a PRI emission factor ratio was required and was not available, the FIL emission factor ratio was used.

After completing the calculations, the data was QA checked to ensure that the calculations resulted in consistent values for the PM complement. On a few occasions, the mix of ratio value and the pollutants and values provided by the S/L agency resulted in negative values when FIL was back-calculated. In this case the negative FIL value was set to zero and the PRI value was readjusted. In a few cases the appropriate combination of ratios, SCC, and control efficiencies were not available to calculate the PM10-PRI and PM25-PRI values. In these cases, PM10-PRI and PM25-PRI were set equal. The resultant PM table information was appended to the EM table.

Note: The augmentation procedures resulted in some high condensible ratios that were calculated for some SCC control device type combinations. In most cases, these high condensible ratios were the result of the back calculation of PM-CON from PMxx-PRI records.

Since the state had already provided the PMxx-PRI records, these PM-CON values were not added.

The data source code field was used to identify records that were added to the inventory to complete the set of PM10-PRI and PM25-PRI emissions.

iii. ERP Coordinates

If an S/L agency did not provide corrections for ERP coordinates that map more than 5 km outside of the county boundary, or provide coordinates for ERP records that did not have any coordinates in the S/L inventory, the following procedures were applied to replace the coordinates:

- Coordinates for other ERPs at the same facility, if available, that map within the county;
- Coordinates for the centroid of the zip code for a facility if a valid zip code was provided or could be obtained from the agency if it is not valid; or
- County centroid coordinates.

The zip code was taken from the SI NIF 3.0 table. The zip code was compared to a reference table of valid zip codes to verify that it was an active zip code and existed in the state and county reported in the inventory. If a valid zip code for a facility could not be identified, the centroid for the facility's county was used as a last resort. In some cases, the S/L agency provided confirmation that the S/L coordinates were correct even if the analysis indicated that the coordinates were outside of the county. These coordinates were not changed. Additionally, all coordinates were converted to latitude/longitude measurements.

iv. ERP Parameters

If valid ERP parameters were not provided by the S/L agency, the ERP augmentation procedures that EPA developed for the 2002 point source NEI were applied to the MANE-VU inventory (EPA, 2004b). It has been determined that the augmentation procedures in this document regarding SCC-specific ERP types and temperatures may be difficult to resolve. When this situation occurs, preference was given to the S/L agency -supplied ERP type and SCC. For example, the procedures do not account for cases where an EU has two processes with one defined as a stack source and the other as a fugitive source. Therefore, the S/L-supplied ERP type was used when this situation occurred. If the ERP type was null, and information was not available from the S/L agency, the stack height information was used as a guide. If stack height information was available, the ERP was treated as a stack, if stack height information was not available, the ERP was treated as a fugitive. An additional modification to the augmentation procedure was also implemented. Since in many cases null values were filled in with zeros by S/L local databases when comparing out-of-range velocities and flows (after it was determined that the stack and diameter information was correct) – null and zero values were treated in the same manner to prevent inappropriate replacement of stack parameter values. Additionally, stack parameter values were rounded to 1 decimal place when comparing with range values (just for the purposes of comparison) to prevent replacement of S/L parameter values based on negligible decimal differences.

v. Control Device Type and Control Efficiency Data

Control efficiencies that were 100% and rule effectiveness of 100% with non-zero emissions were diagnosed as potential errors and sent to the S/L agencies. Where possible these data were updated with S/L data corrections. Decimal control efficiencies were also diagnosed and sent to the S/L agencies. A decimal control efficiency was usually a sign that a control efficiency had not been entered as a percentage as is required by NIF 3.0. Where possible these data was updated with S/L data corrections.

c. QA Review of Final Inventory

Final QA checks were run on the revised point source inventory data set to ensure that all corrections provided by the S/L agencies were incorporated into the S/L inventories and that there were no remaining QA issues that could be addressed during the duration of the project. The EPA QA program was run on the inventory and the QA output was reviewed to verify that all QA issues that could be addressed were resolved. The QA output file was provided in an Access database along with Version 3 of the inventory.

3. Version 3 Emissions Summary

Table II-2 presents a State-level summary of the annual point source emissions in Version 3 of the 2002 MANE-VU inventory. Note that PM10-PRI and PM25-PRI emissions are included in the inventory for all SCCs for which S/L agencies reported any form of PM, PM_{10}, and/or $PM_{2.5}$ emissions. If an agency did not report PM10-PRI and/or PM25-PRI but reported PM-PRI, PM-FIL, PM-CON, PM10-FIL, and/or PM25-FIL, the PM augmentation procedures discussed in the TSD were applied to the form of PM emissions supplied by the agency to calculate emissions for the other forms of PM emissions. If an agency reported PM10-PRI and/or PM25-PRI emissions but not PM10-FIL, PM25-FIL, or PM-CON emissions, the agency's inventory was not augmented to calculate filterable or condensible emissions. Note that PM-CON is associated with only fuel combustion sources.

Table II-2. Version 3 2002 MANE-VU Point Source Emissions by State (Tons/Year)

State	CO	NH_3	NO_x	PM10-FIL	PM10-PRI	PM25-FIL	PM25-PRI	PM-CON	SO_2	VOC
Connecticut	4,053		12,923	738	1,617	0	1,283	389	15,988	4,907
Delaware	9,766	196	16,345	2,466	4,217	1,919	3,666	1,750	73,744	4,755
District of Columbia	248	4	780	91	161	54	132	68	963	69
Maine	17,005	845	19,939	4,535	7,289	2,567	5,787	2,753	23,711	5,319
Maryland	99,024	305	95,328	3,723	9,029	0	5,054	2,018	290,927	6,184
Massachusetts	21,262	1,463	47,086	2,776	5,852	997	4,161	2,984	101,049	8,263
New Hampshire	2,725	74	9,759	1,180	3,332	786	2,938	2,151	46,560	1,599
New Jersey	12,300		51,593	2,928	6,072	2,543	4,779	3	61,217	14,401
New York	66,427	1,861	118,978	1,808	10,392	1,965	7,080	210	294,729	11,456
Pennsylvania	121,524	1,388	297,379	18,044	40,587	6,038	20,116	5,065	995,175	37,323
Rhode Island	2,234	58	2,764	233	300	117	183	68	2,666	1,928
Vermont	1,078		787	130	304	97	267	2	905	1,097
MANE-VU	**357,645**	**6,194**	**673,660**	**38,654**	**89,150**	**17,083**	**55,447**	**17,462**	**1,907,634**	**97,300**

B. State-Specific Methods

For each of the MANE-VU states and two local agencies in Pennsylvania, this section identifies the temporal basis of the emissions included in Version 3 and discusses revisions incorporated into Version 3. In addition, this section also discusses the origin of each S/L agency's emissions included in Version 3. For each agency, a table is provided in Appendix A that lists the data source codes by SCC, emission type period, and pollutant. In addition, an electronic folder is provided for each S/L agency containing the QA Summary Reports prepared during Version 1 and other files documenting revisions included in Versions 2 and 3.

1. Connecticut

Connecticut's Version 3 point source inventory originates from Version 1 except for the following revisions that Connecticut provided for Version 2 and included in Version 3:

- Changed coordinates for AES Thames, Inc. in New London County to -72.3184, 41.4499 (FIPS code 09011, facility identifier 1544).

- Changed values for Hartford Steam (FIPS code 09003, facility identifier 3471), EU P0250, process 02 for summer daily values as follows: Changed actual throughput from 1934 E6FT3 to 1.934 E6FT3, CO summer daily emissions from 53.185 tons to 0.0532 tons, NO_x summer daily emissions from 255.288 tons to 0.1021 tons, and VOC summer daily emissions from 1.2569 tons to 0.0027 tons.

Table II-3 shows the emission type periods for which Connecticut provided emissions.

Table II-3. Connecticut 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
NONANNUAL	20011201	20020228	27
NONANNUAL	20011201	20020228	29
NONANNUAL	20020601	20020831	27
NONANNUAL	20020601	20020831	29

Table A-1 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Connecticut provided the data for CO, NO_x, PM10-PRI, SO_2, and VOC. Connecticut did not provide any data for NH_3. Emissions for PM10-FIL, PM25-PRI, PM25-FIL, and PM-CON were calculated from the PM10-PRI emissions provided by Connecticut using the PM augmentation procedures.

2. Delaware

Delaware's Version 3 point source inventory originates from Version 1 except for some updates to ORIS Boiler IDs in the EU table that were incorporated into Version 2 and included in Version 3. Table II-4 shows the emission type periods for which Delaware provided emissions.

Table II-4. Delaware 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
NONANNUAL	20020601	20020831	29

Table A-2 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Delaware provided the data for CO, NH_3, NO_x, SO_2, and VOC. Delaware also provided much of the PM emissions data but in some cases the PM augmentation procedures were applied to the PM data provided by Delaware to calculate emissions for other forms of PM (e.g., to estimate PM10-PRI from PM10-FIL, PM25-PRI from PM25-FIL, PM10-PRI and PM10-FIL from PM25-PRI and PM25-FIL).

3. District of Columbia

The District of Columbia's Version 3 point source inventory originates from Version 1. Table II-5 shows the emission type period for which the District of Columbia provided emissions.

Table II-5. District of Columbia 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Type

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30

Table A-3 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. The District of Columbia provided the data for CO, NH_3, NO_x, SO_2, and VOC. The District of Columbia provided at least one form of PM emissions and the PM augmentation procedures were applied to the emissions provided by the District of Columbia to calculate emissions for the other forms of PM.

4. Maine

Maine's Version 3 point source inventory originates from Version 1. Table II-6 shows the emission type periods for which Maine provided emissions.

Table II-6. Maine 2002 Point, Version 3:
Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
NONANNUAL	20020601	20020831	29

Table A-4 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Maine provided the emissions data for CO, NH_3, NO_x, SO_2, and VOC. Maine provided PM10-FIL and/or PM25-FIL emissions data and the PM augmentation procedures were applied to the emissions that Maine provided to calculate emissions for the other forms of PM.

5. Maryland

Maryland's Version 3 point source inventory originates from Version 1 except for some updates to ORIS Boiler IDs in the EU table that were incorporated into Version 2 and included in Version 3. Table II-7 shows the emission type periods for which Maryland provided emissions.

Table II-7. Maryland 2002 Point, Version 3:
Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
ANNUAL	20040101	20041231	30
NONANNUAL	20020101	20021231	29
NONANNUAL	20020501	20020930	29
NONANNUAL	20040101	20041231	29

Table A-5 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Maryland provided the emissions data for CO, NH_3, NO_x, SO_2, VOC, PM10-PRI, and PM-PRI. The PM augmentation procedures were applied to the PM10-PRI emissions that Maryland provided to calculate emissions for the other forms of PM. Maryland provided NH_3 emissions for its point sources except for one new facility (state and county FIPS code 24013, facility ID 0012, SCC 30500622, data source code P) for which it used NH_3 emissions for four EUs (preheater kiln/dry process) prepared by MANE-VU.

6. Massachusetts

Massachusetts' Version 3 point source inventory originates from Version 1 except for the some stack parameter revisions that Massachusetts provided and were incorporated into Version 3. For Version 3, Massachusetts provided revisions to stack parameters in the ERP table for six EUs at three facilities. The revisions are listed in the Excel file named "MA Revisions to MANEVU V3 Point EI_040706.xls". Table II-8 shows the emission type periods for which Massachusetts provided emissions.

Table II-8. Massachusetts 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
ANNUAL	20030101	20031231	30

Table A-6 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Massachusetts provided the emissions data for CO, NH_3, NO_x, SO_2, and VOC. Massachusetts provided PM-FIL, PM10-FIL, and/or PM25-FIL emissions data and the PM augmentation procedures were applied to the emissions that Massachusetts provided to calculate emissions for the other forms of PM.

7. New Hampshire

New Hampshire's Version 3 point source inventory originates from Version 1.
Table II-9 shows the emission type periods for which New Hampshire provided emissions.

Table II-9. New Hampshire 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
NONANNUAL	20020601	20020831	29

Table A-7 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. New Hampshire provided the emissions data for CO, NH_3, NO_x, SO_2, and VOC. New Hampshire provided PM-FIL, PM10-FIL, and/or PM25-FIL emissions data and the PM augmentation procedures were applied to the emissions that New Hampshire provided to calculate emissions for the other forms of PM.

8. New Jersey

New Jersey's Version 3 point source inventory originates from Version 1. In addition to the QA checks discussed previously in this TSD, New Jersey's original inventory submittal to EPA contained several issues with SCCs. For Version 1, per direction provided by New Jersey, SCCs that were less than 8 digits were changed to SCCs with 8 digits. Also, as approved by New Jersey, inactive SCC 39999901 was changed to active SCC 39999999. The invalid unit "GAL" was changed to the valid unit "E6GAL" in the EP table.

Table II-10 shows the emission type periods for which New Jersey provided emissions.

Table II-10. New Jersey 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
NONANNUAL	20011201	20020228	29
NONANNUAL	20020601	20020831	29

Table A-8 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. New Jersey provided the emissions data for CO, NO_x, SO_2, and VOC. New Jersey provided PM-PRI, PM10-PRI, and/or PM25-PRI emissions data and the PM augmentation procedures were applied to the emissions that New Jersey provided to calculate emissions for the other forms of PM. New Jersey did not provide any data for NH_3.

9. New York

New York's Version 3 point source inventory originates from Version 1 except for the following revisions that New York provided and were incorporated into Version 3.

For Version 3, New York provided an Access database named "MANEVU_NY2002_ Point_Corrected_093005.mdb" with revisions to records in the EM table. New York also provided in this database 651 records that were not included in Version 2 of MANE-VU's point source inventory, and, therefore, these records were added to Version 3 of MANE-VU's point source inventory. The new records added emissions for pollutants (not in Version 2) for EUs and processes that existed in Version 2 of MANE-VU's point source inventory.

The records in Version 2 that were revised and the records that were added to Version 3 are listed in the Excel file named "NY Revisions to MANE-VU V3 Point EI_040706.xls".
Table II-11 shows the emission type period for which New York provided emissions.

Table II-11. New York 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Type

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30

Table A-9 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. New York provided the emissions data for CO, NH_3, NO_x, SO_2, and VOC. New York provided PM-PRI, PM10-PRI, and/or PM25-PRI emissions data and the PM augmentation procedures were applied to the emissions that New York provided to calculate emissions for the other forms of PM. New York provided NH_3 emissions for its point sources except for four cement kilns for which it used NH_3 emissions from a MANE-VU-sponsored inventory. The following identifies the facilities for which the MAEN-VU-sponsored NH_3 emissions inventory for cement kilns was used.

FIPS Code	Facility ID	SCC	Data Source
36001	4010300016	30500606 (2 kilns/dry process)	P
36001	4012400001	30500706 (1 kiln/wet process)	P
36111	3514800084	30500606 (1 kiln/dry process)	P

10. Pennsylvania (State, Excluding Allegheny and Philadelphia Counties)

The Version 3 point source inventory for the state of Pennsylvania originates from Version 1. The following summary excludes Allegheny and Philadelphia Counties who provided their own point source inventories for Versions 1, 2, and 3.

Table II-12 shows the emission type periods for which Pennsylvania provided emissions. Table A-10 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Pennsylvania provided the emissions data for CO, NH_3, NO_x, SO_2, and VOC. Pennsylvania provided PM10-PRI and/or PM25-PRI emissions data and the PM augmentation procedures were applied to the emissions that Pennsylvania provided to calculate emissions for the other forms of PM.

Table II-12. Pennsylvania 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type	Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20020104	30	ANNUAL	20020131	20020812	30
ANNUAL	20020101	20020111	30	ANNUAL	20020131	20021231	30
ANNUAL	20020101	20020120	30	ANNUAL	20020201	20020228	30
ANNUAL	20020101	20020123	30	ANNUAL	20020201	20020424	30
ANNUAL	20020101	20020130	30	ANNUAL	20020201	20020831	30
ANNUAL	20020101	20020131	30	ANNUAL	20020201	20020930	30
ANNUAL	20020101	20020212	30	ANNUAL	20020201	20021030	30
ANNUAL	20020101	20020215	30	ANNUAL	20020201	20021130	30
ANNUAL	20020101	20020221	30	ANNUAL	20020201	20021231	30
ANNUAL	20020101	20020228	30	ANNUAL	20020205	20021223	30
ANNUAL	20020101	20020313	30	ANNUAL	20020213	20020913	30
ANNUAL	20020101	20020329	30	ANNUAL	20020214	20021231	30
ANNUAL	20020101	20020331	30	ANNUAL	20020216	20020331	30
ANNUAL	20020101	20020412	30	ANNUAL	20020301	20020331	30
ANNUAL	20020101	20020414	30	ANNUAL	20020301	20020430	30
ANNUAL	20020101	20020422	30	ANNUAL	20020301	20020531	30
ANNUAL	20020101	20020427	30	ANNUAL	20020301	20021031	30
ANNUAL	20020101	20020430	30	ANNUAL	20020301	20021130	30
ANNUAL	20020101	20020503	30	ANNUAL	20020301	20021231	30
ANNUAL	20020101	20020514	30	ANNUAL	20020311	20021213	30
ANNUAL	20020101	20020517	30	ANNUAL	20020311	20021231	30
ANNUAL	20020101	20020521	30	ANNUAL	20020314	20021209	30
ANNUAL	20020101	20020531	30	ANNUAL	20020318	20021223	30
ANNUAL	20020101	20020603	30	ANNUAL	20020320	20020915	30
ANNUAL	20020101	20020614	30	ANNUAL	20020320	20021231	30
ANNUAL	20020101	20020626	30	ANNUAL	20020328	20021120	30
ANNUAL	20020101	20020628	30	ANNUAL	20020330	20021122	30
ANNUAL	20020101	20020630	30	ANNUAL	20020401	20020430	30
ANNUAL	20020101	20020701	30	ANNUAL	20020401	20020531	30
ANNUAL	20020101	20020731	30	ANNUAL	20020401	20020731	30
ANNUAL	20020101	20020813	30	ANNUAL	20020401	20020930	30
ANNUAL	20020101	20020831	30	ANNUAL	20020401	20021231	30
ANNUAL	20020101	20020909	30	ANNUAL	20020409	20021205	30
ANNUAL	20020101	20020930	30	ANNUAL	20020415	20021117	30
ANNUAL	20020101	20021031	30	ANNUAL	20020415	20021231	30
ANNUAL	20020101	20021101	30	ANNUAL	20020421	20021024	30
ANNUAL	20020101	20021112	30	ANNUAL	20020424	20021016	30
ANNUAL	20020101	20021130	30	ANNUAL	20020428	20021231	30
ANNUAL	20020101	20021213	30	ANNUAL	20020429	20020922	30
ANNUAL	20020101	20021216	30	ANNUAL	20020429	20021031	30
ANNUAL	20020101	20021217	30	ANNUAL	20020501	20020630	30
ANNUAL	20020101	20021220	30	ANNUAL	20020501	20020930	30
ANNUAL	20020101	20021223	30	ANNUAL	20020501	20021013	30
ANNUAL	20020101	20021230	30	ANNUAL	20020501	20021031	30
ANNUAL	20020101	20021231	30	ANNUAL	20020501	20021231	30
ANNUAL	20020102	20020703	30	ANNUAL	20020506	20021202	30
ANNUAL	20020102	20021203	30	ANNUAL	20020511	20021231	30
ANNUAL	20020102	20021215	30	ANNUAL	20020515	20021231	30
ANNUAL	20020102	20021223	30	ANNUAL	20020519	20020727	30
ANNUAL	20020102	20021227	30	ANNUAL	20020525	20021231	30

Table II-12. (Continued)

Emission Type Period	Start Date	End Date	Emission Type	Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020102	20021228	30	ANNUAL	20020601	20020602	30
ANNUAL	20020102	20021229	30	ANNUAL	20020601	20020831	30
ANNUAL	20020102	20021230	30	ANNUAL	20020601	20020930	30
ANNUAL	20020102	20021231	30	ANNUAL	20020601	20021019	30
ANNUAL	20020103	20021126	30	ANNUAL	20020603	20021231	30
ANNUAL	20020103	20021228	30	ANNUAL	20020606	20021127	30
ANNUAL	20020103	20021231	30	ANNUAL	20020629	20021231	30
ANNUAL	20020104	20020930	30	ANNUAL	20020701	20020731	30
ANNUAL	20020104	20021223	30	ANNUAL	20020701	20020930	30
ANNUAL	20020104	20021231	30	ANNUAL	20020701	20021231	30
ANNUAL	20020105	20021218	30	ANNUAL	20020708	20021231	30
ANNUAL	20020105	20021231	30	ANNUAL	20020801	20020831	30
ANNUAL	20020106	20021231	30	ANNUAL	20020801	20020930	30
ANNUAL	20020107	20021231	30	ANNUAL	20020801	20021130	30
ANNUAL	20020108	20021221	30	ANNUAL	20020801	20021231	30
ANNUAL	20020108	20021228	30	ANNUAL	20020802	20021231	30
ANNUAL	20020110	20021204	30	ANNUAL	20020901	20020930	30
ANNUAL	20020111	20021231	30	ANNUAL	20020901	20021231	30
ANNUAL	20020113	20021006	30	ANNUAL	20020920	20021231	30
ANNUAL	20020114	20021203	30	ANNUAL	20021001	20021030	30
ANNUAL	20020115	20020318	30	ANNUAL	20021001	20021231	30
ANNUAL	20020115	20020323	30	ANNUAL	20021028	20021231	30
ANNUAL	20020115	20020326	30	ANNUAL	20021101	20021231	30
ANNUAL	20020115	20020830	30	ANNUAL	20021118	20021231	30
ANNUAL	20020123	20020127	30	ANNUAL	20021201	20021231	30
ANNUAL	20020124	20021127	30				

11. Pennsylvania (Allegheny County, FIPS code 42003)

The Version 3 point source inventory for Allegheny County, Pennsylvania originates from Version 1. Table II-13 shows the emission type periods for which Allegheny County provided emissions.

Table II-13. Pennsylvania - Allegheny County 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
NONANNUAL	20011201	20020228	29
NONANNUAL	20020601	20020831	29

Table A-11 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Allegheny County provided the emissions data for CO, NH_3, NO_x, SO_2, and VOC. Allegheny County provided PM-FIL, PM10-FIL, PM25-FIL, and/or PM-CON emissions data and the PM augmentation procedures were applied to the emissions that Allegheny County provided to calculate emissions for the other forms of PM.

12. Pennsylvania (Philadelphia County, FIPS code 42101)

The Version 3 point source inventory for Philadelphia County, Pennsylvania originates from Version 1. Table II-14 shows the emission type periods for which Philadelphia County provided emissions.

Table II-14. Pennsylvania - Philadelphia County 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
NONANNUAL	20011201	20020228	29
NONANNUAL	20020601	20020831	29

Table A-12 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Philadelphia County provided the emissions data for CO, NH_3, NO_x, SO_2, and VOC. Philadelphia County provided PM-FIL, PM10-FIL, and/or PM25-FIL emissions data and the PM augmentation procedures were applied to the emissions that Philadelphia County provided to calculate emissions for the other forms of PM.

13. Rhode Island

Rhode Island requested that their Version 2 inventory be replaced with the CAP and NH_3 inventory in the final 2002 point source NEI that EPA released during March 2006. Therefore, all of Rhode Island's point source data in Version 2 was replaced with the point source data provided in the final 2002 point source NEI. The following provides a summary of the QA issues identified and addressed in Version 1. The Excel file named "RI Revisions to MANE-VU V3 Point EI_040706.xls" provides documentation and correction of each of these issues for Version 3.

The Site table in the NEI did not include the ORIS IDs for all of the EGUs identified in the EGU crosswalk table. Therefore, the crosswalk table was used to add the ORIS IDs to the Site table. Matching of boiler IDs to the EU table for one facility was maintained in the NEI, and, therefore, included in Version 3 of MANE-VU's inventory. However, matching of boiler IDs for other facilities was not available in the crosswalk table.

The data source codes that EPA used in the Rhode Island's point source inventory for the NEI were maintained in the MANE-VU inventory. The following defines the codes:

Code	**Description**
A	Augmented PM data.
CAMD	Record only in 2002 Emission Tracking System (ETS)/CEM for SO_2, NO_x, and heat input values; other emissions estimated.
SCAMD1	Data were received from the state. The state's NO_x and SO_2 emission values were replaced with the ETS values.
99_PMPRI	Not defined – presumed to mean PM-PRI data originating from the 1999 NEI.
SUM	Primary PM emissions calculated as the sum of the filterable PM and PM-CON emissions
DIFF	PM-CON emissions calculated as the difference between the primary PM and filterable PM emissions

QA of PM emissions was also performed in accordance with the QAPP for the 2002 base year inventory for EM table records that were revised or added for Rhode Island and New York. As a result, it was identified that the emission ton value was not correctly calculated from the emission unit numerator and emission numeric value fields in the NEI file, therefore, the emission ton value was corrected for the MANE-VU inventory. In addition, the final NEI for Rhode Island contained NH_3 emissions for several facilities but no SCCs were provided for the NH_3 emissions; therefore, the NH_3 emissions were removed for the MANE-VU inventory as requested by Rhode Island.

For Version 3 of MANE-VU's inventory, Facility ID EGU1036 and Facility Name MANCHESTER STREET in the final 2002 NEI was changed to Facility ID AIR936 and Facility Name USGEN NEW ENGLAND INC per Rhode Island's request because this is the same facility (with ORIS ID 3236). Also, for State Facility ID AIR594, EU ID 2, ERP 2, and Process ID 2, the SCC was changed from 39000589 to 39000599. In addition, the ORIS IDs reported in the NEI were revised to make them consistent with the crosswalk prepared for MANE-VU that matches state facility IDs to ORIS IDs.

One issue was identified with one record for Rhode Island where the sum of the PM10-FIL and PM-CON emissions was more than the PM10-PRI emissions, and the sum of the PM25-FIL and PM-CON emissions was more than the PM25-PRI emissions for facility ID AIR1248 in County FIPS 44007; SCC 10300601 (External Combustion Boilers : Commercial/Institutional : Natural Gas : > 100 Million Btu/hr). In addition, the PM10-FIL emissions reported was 1.6 tons more than the PM10-PRI emissions reported, and the PM25-FIL emissions reported was 1.6 tons more than the PM25-PRI emissions reported for this facility. The record has very low emissions and it was not clear how the PM consistency issues should be addressed; therefore, due to time and resource constraints, this issue was not corrected in Version 3.

Table II-15 shows the emission type periods for which Rhode Island provided emissions.

Table II-15. Rhode Island 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020601	20020831	29
NONANNUAL	20020601	20020831	29
NONANNUAL	20020601	20020831	30

Table A-13 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Rhode Island provided the emissions data for CO, NO_x, SO_2, VOC, and PM-PRI. The EPA applied PM augmentation procedures to the PM-PRI emissions that Rhode Island provided to calculate emissions for the other forms of PM. The EPA added NH_3 emissions for an EGU from EPA's CAMD data; otherwise, NH_3 emissions are not available for other point sources in Rhode Island.

14. Vermont

Vermont's Version 3 point source inventory originates from Version 1. Table II-16 shows the emission type periods for which Vermont provided emissions.

Table II-16. Vermont 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
NONANNUAL	20020101	20020331	27
NONANNUAL	20020101	20021231	29
NONANNUAL	20020601	20020831	27

Table A-14 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Vermont provided the emissions data for CO, NO_x, SO_2, and VOC. Vermont provided PM-FIL, PM10-FIL, and/or PM25-FIL emissions data and the PM augmentation procedures were applied to the emissions that Vermont provided to calculate emissions for the other forms of PM. Vermont's inventory does not include NH_3 emissions.

C. What Issues Need to be Addressed in Future Versions?

This section provides a summary of potential revisions to incorporate into future versions of the MANE-VU point source inventory.

All States – A coordinated effort between the S/L agencies should be developed to apply consistent methods to avoid having to apply procedures to augment inventory data to correct for the QA issues and fill in missing data as discussed previously in this chapter. For example, this will ensure that consistent methods are applied across S/L agencies to ensure accurate reporting of stack parameters, PM emissions, and minimize other QA issues that were identified during the development of Versions 1, 2, and 3 of the inventory.

For PM emissions, the S/L agencies should develop and apply a consistent method for including condensible emissions for fuel combustion sources that can be applied when the agencies develop their inventories. This may include compiling the emission factors for all forms of PM into one database, organized by SCC and control type (for filterable emissions), and sharing the database among the MANE-VU S/L agencies. Use of a consistent set of emission factors will help to avoid the PM consistency issues identified in Versions 1, 2, and 3 of the MANE-VU inventory as well as ensure that condensible emissions are included in the primary emissions reported in the inventory.

The EGU crosswalk should be maintained to ensure that State Facility IDs and EU IDs are correctly matched with ORIS IDs and boiler IDs.

State-specific suggestions are as follows:

Connecticut, New Jersey, Rhode Island, and Vermont – Include NH_3 emissions.

New Jersey – Develop a method to translate the SCCs that are less than 8 digits reported by facilities to 8 digit SCCs for reporting in the inventory.

CHAPTER III – AREA SOURCES

A. General Methods for all States

1. What Data Sources Were Used?

Version 1 of the 2002 MANE-VU area source inventory was built on the inventories that the State agencies submitted to EPA from May through July of 2004 as a requirement of the CERR. Except for Rhode Island, all of the MANE-VU States also submitted area source inventories to EPA. Rhode Island elected to use the preliminary 2002 NEI for its area source inventory. The EPA performed some limited QA review of the State inventories to identify format, referential integrity, and duplicate record issues. The EPA revised the inventories to address these issues and made the files available to the State agencies on August 6, 2004. These inventory files were used as the starting point for the MANE-VU inventory. These inventory files were obtained from EPA, consolidated into a single data set, subjected to extensive QA review, and revised (as approved by the MANE-VU State agencies) to address QA issues and fill data gaps identified while preparing Version 1. Subsequently, the following agencies provided revisions to their area source inventories:

- Version 2 – District of Columbia, Massachusetts, Maryland, New Hampshire, New Jersey, New York, and Vermont.

- Version 3 – Massachusetts, Maine, New Jersey, New York, and Rhode Island.

The Version 2 and 3 revisions for these States are discussed in section III.B (State-Specific Methods) of this chapter. In addition, as requested by MANE-VU, revisions were made to Version 3 to (1) add emissions for portable fuel containers (PFCs), industrial adhesives, and outdoor residential wood combustion for some States; (2) decrease the $PM_{2.5}$ emissions for paved and unpaved roads and construction for all States; and (3) remove invalid CE records that originated from the preliminary 2002 NEI for some States. These revisions are explained in section III.A.3 of this chapter.

To track the origin of data, the temporal period of emissions, and to facilitate generation of emission summaries, the following NIF plus fields were added to the EP, PE, EM, and CE tables:

- Data Source Codes:

For the area source inventory data, the data source codes are based on the following 9-character format:

[Data Origin]-[Year]-[Grown/Not Grown/Carried Forward]-[PM Augmentation Code]

Code	**Field Length**
Data Origin	1
Year	3 (including leading hyphen)
Grown/Not Grown/Carried Forward	2 (including leading hyphen)
PM Augmentation	3 (including leading hyphen)

Data Origin Codes

Code	Description
S	State agency-supplied data
L	Local agency-supplied data
R	Tribal agency-supplied data
P	Regional Planning Organization
E	EPA/Emission Factors and Inventory Group (EFIG)-generated data

Year Codes

Year for which data are supplied (e.g., Year = -02 for 2002), or from which prior year data are taken (e.g., Year = -99 for 1999; -01=2001).

Grown/Carried Forward/Not Grown Codes

Code	Description
-G	Used when emissions in a pre-2002 inventory are grown to represent 2002 emissions.
-F	Used when emissions in a pre-2002 inventory are carried forward and included in the 2002 inventory without adjustment for growth.
-X	Used when the emissions are not grown or are not carried forward. For example, X is used when emissions are calculated for the 2002 inventory using 2002 activity, or when data are replaced with 2002 State data.

PM Augmentation Codes

-PA	PM Augmented Emissions: Record for $PM_{10}/PM_{2.5}$ emissions that were updated or added using ad-hoc updates.
-PC	PM Augmented Emissions: Record added for $PM_{10}/PM_{2.5}$ emissions estimated using the PM Calculator.
-PR	PM Augmented Emissions: Record added for $PM_{10}/PM_{2.5}$ emissions estimated using ratios of PM_{10}-to-PM or $PM_{2.5}$-to-PM_{10}. If PM_{10} and $PM_{2.5}$ emissions are equal and one of the pollutants is assigned this code, the ratio is assumed to be 1.

- Revision Date: This field indicates the month and year during which the last revision was made to a record.

- State FIPS: This field indicates the State FIPS code of the submittal.

- County FIPS: This field indicates the county FIPS code of the inventory.

The following NIF plus fields were added to the EM table:

- Emission Ton Value: This field indicates the values of the emissions in tons. This field was used to prepare summaries of emissions on a consistent EU basis.

- Emission Type Period: This field indicates the period of the Emission Type – either ANNUAL, SEASONAL, MONTHLY, or DAILY. Emission table records designated as ANNUAL were used to prepare summaries of annual emissions.

- CAP_HAP: This field identifies records for CAP versus records for HAPs. For the MANE-VU inventory, the flag is CAP for all records.

- Year: This field indicates the year of the data; for this inventory, it is 2002.

2. What Quality Assurance Steps Were Performed?

A QAPP was prepared and approved by MANE-VU/MARAMA and the EPA Regional Office prior to initiating work on Version 1 of the inventory (MANE-VU, 2004a). This QAPP was followed during preparation of all three versions of the inventory. This section provides an overview of the QA checks completed on each version of the inventory. The QA process for each State inventory involved the following steps that are also included in the following discussion:

- Conduct QA checks on each State inventory;
- Prepare a QA Summary Report for submittal to the agency for review;
- Revise the inventory to resolve QA issues as directed by the agency;
- Repeat the QA checks on the revised inventory to verify that the corrections were completed;

- Perform augmentation to correct for missing data; and
- Repeat the QA checks to verify that the augmentation was completed correctly.

a. QA checks for State emission inventories

The following QA checks were run on each State inventory:

i. County and SCC coverage
ii. Pollutant coverage
iii. EPA QA summaries sent to State agencies
iv. Range errors
v. PM emissions consistency and completeness review
vi. Control device type and control efficiency data review
vii. Start and end date checks
viii. Annual and daily emissions comparison

<u>County and SCC Coverage</u>

The county coverage in the State inventories appeared to be reasonable for all States. The SCC coverage was difficult to evaluate simply by showing a count of the number of SCCs by State. Each State inventory was compared to the preliminary 2002 NEI, and area source categories in the NEI but not in a State inventory were sent to each agency for review. Each State agency then selected the NEI categories that were then added to the MANE-VU inventory.

<u>Pollutant Coverage</u>

The pollutant coverage in the State inventories was complete for all pollutants except for PM_{10} and $PM_{2.5}$. Diagnosis and resolution of PM_{10} and $PM_{2.5}$ pollutant emissions is discussed later in section III.A.2.c. The exception was Connecticut who included only VOC, NO_x, and CO emissions in its inventory submittal to EPA.

<u>EPA QA Summaries Sent to State Agencies</u>

Under a separate project with EPA, Pechan performed QA review of the State area source inventories. This QA review involved running EPA's QA program on each data set to identify and resolve QA issues. Using the results of this QA work, Pechan prepared two sets of QA summaries that EPA sent to the State agencies. Pechan contacted each State agency with QA issues identified in the EPA reports to obtain direction for correcting the QA issues identified in the reports. The following explains these two summaries:

High-level Summary of State Inventories Submitted to EPA:

The first summary was an Excel workbook file with four spreadsheets that provided the following information:

- 2002 Nonpoint File Names: This spreadsheet documented names and formats of the files that EPA received from the State agencies and the dates on which they were transferred to Pechan.

- 2002 Nonpoint Summary: This spreadsheet documented the name of the state agency, type of inventory (i.e., CAP, HAP, or both), a comparison of the number of the counties in the inventory to the total number of counties in the State to identify the geographic coverage of the inventory, a unique list of CAP codes, and the total number of area source SCCs. This spreadsheet also indicated if any nonroad or onroad emissions data were moved from the agency's area source inventory to its nonroad or onroad inventory.

- 2002 Nonpoint Emission Sums: This spreadsheet summarized emissions by start date, end date, and emission type and assigned the appropriate code to the emission type period NIF plus field.

- 2002 Nonpoint Error Summary: This spreadsheet provided a copy of the "SummaryStats" table from the EPA QA program (EPA, 2004a). This table provided the count of records for each NIF 3.0 table and identified the number of records with errors by type of error.

Detailed Summary of QA Issues:

This summary (sent to State agencies on August 11) was prepared in a text file that listed by State and NIF table the number of records with errors, and provided corrections for the errors. To support documentation of corrections to some of the errors in the text file, Pechan prepared an Excel workbook file that summarized the following errors and corrections by State: invalid pollutants codes; invalid units; invalid maximum achievable control technology (MACT) codes; and invalid and inactive SCCs. A spreadsheet was also included to show the mapping of standard industrial classification (SIC) codes to North American Industrial Classification System (NAICS) codes. This crosswalk was used to correct invalid NAICS codes if a valid SIC code was available in the State inventories and vice versa.

Additional QA for the MANE-VU Area Source Inventory

The following explains additional QA and data tracking that was performed for the MANE-VU inventory. The following data elements were reviewed to identify QA issues:

- Range Errors;
- PM Emissions Consistency and Completeness;
- Control Device Codes and Control Efficiency Values;
- Start and End Dates;
- Annual and Daily Emissions Comparison; and
- Comparison of State Inventories to the 2002 Preliminary NEI.

For each State inventory for which QA issues were identified, a separate QA Summary Report was prepared in an Excel workbook file, and sent to each State agency for review. The State agencies provided directions in the Excel Workbook file, via e-mail, or by submitting revised records in NIF 3.0 in an Access database to correct the inventories. The QA reports are discussed under section III.A.2.b.

Range Errors

The EPA's QA program contains routines that compare annual emission values, numeric fields in the PE and EP tables, and other temporal numeric fields against a range of values. The QA program flags records that are less than or greater than the range of values for review. Pechan summarized the range errors for the State agencies to review and provide corrections. According to EPA, the ranges to which values in inventories are compared represent "normal" ranges that are based on percentiles from previous inventories. The range values are conservative in that EPA wants to identify suspicious values even though the values may be real (Thompson, 2002).

PM Emissions Consistency and Completeness Review

The following consistency checks were performed at the EM table data key level (for annual emissions) to compare PM emissions:

- If an SCC was associated with a PM emission record, but was missing one or more of the following (as appropriate for the SCC [i.e., PM-CON is associated with fuel combustion only]): PM10-FIL, PM10-PRI, PM25-FIL, PM25-PRI, or PM-CON, the record was flagged for review.

- The following equations were used to determine consistency:

  PM10-FIL + PM-CON = PM10-PRI
  PM25-FIL + PM-CON = PM25-PRI

- The following comparisons were made to determine consistency:

  PM10-PRI >= PM10-FIL
  PM25-PRI >= PM25-FIL
  PM10-PRI >= PM-CON
  PM25-PRI >= PM-CON
  PM10-FIL >= PM25-FIL
  PM10-PRI >= PM25-PRI

If the data failed one of these checks it was diagnosed as an error. If a State agency did not provide corrections to these errors, the errors were corrected/filled in according to an augmentation procedure explained in section III.A.2.c.

For information purposes, all PM-PRI and PM-FIL records were flagged to indicate that these pollutants were included instead of, or in addition to, the standard PM10-PRI/FIL, PM25-PRI/FIL, and PM-CON pollutants.

Control Device Type and Control Efficiency Data Review

The CE codes in the "Primary Device Type Code" and "Secondary Device Type Code" fields were reviewed to identify invalid codes (i.e., codes that did not exist in the NIF 3.0 reference table) and missing codes (e.g., records with a null or uncontrolled code of 000 but with control efficiency data).

QA review of control efficiency data involved diagnosis of two types of errors. First, records were reviewed to identify control efficiency values that were reported as a decimal rather than as a percent value. Records with control efficiencies with decimal values were flagged as a potential error (although not necessarily an error, since the real control efficiency may be less than 1%). Records with a 1% control efficiency value were also identified for review by the State agency to determine if the value was reported as a decimal in its internal data system but rounded to 1% when the data were converted to NIF 3.0.

The second check identified records where 100% control was reported in the CE table, but the emissions in the EM table were greater than zero and the rule effectiveness value in the EM table was null, zero, or 100% (implying 100% control of emissions). Because many agencies did not populate the rule effectiveness field or a default value of zero was assigned, records with null or zero rule effectiveness values were included where the CE was 100% and emissions were greater than zero. For records that met these criteria, Pechan consulted with the State agency to determine if corrections were needed to any of the fields.

Start and End Date Checks

QA review was conducted to identify start and end date values in the PE and EM tables to confirm consistency with the inventory year in the TR table, and to confirm that the end date reported was greater than the start date reported.

Annual and Daily Emissions Comparison

The State inventories were reviewed to determine if any of the following conditions existed:

- Multiple records coded at the SCC level as emission type 30, but with different start and end dates. While not a true duplicate, this may indicate an error or inclusion of both annual and seasonal values.

- Multiple records coded at the SCC level as a daily emission type (27, 29, etc.) but with different start and end dates. While not a true duplicate, this may indicate an error or just inclusion of additional types of daily emissions.

- Multiple records coded at the SCC level with the same start and end date, but different emission types. While not a true duplicate, this may indicate an error or just inclusion of additional types of daily emissions.

- Any "DAILY" type record that was missing its associated "ANNUAL" record was flagged for review.

- Any "DAILY" type record that was greater than its associated "ANNUAL" record was flagged for review.

b. Responses from State Agencies

QA Summary Reports were sent to the State agencies to review the QA issues identified. The State agencies were asked to return these reports to MANE-VU with their corrections documented in the reports. These reports were then used to document revisions to the State inventories. The QA Summary Reports containing the revisions provided by the State agencies are provided in Excel Workbook files with this TSD.

c. Gap Filling and Augmentation

This section explains the methods used to add data for categories and/or pollutants missing in a State's inventory after revising the inventory to address QA issues.

i. MANE-VU sponsored inventories
ii. PM augmentation
iii. Fossil fuel combustion sources
iv. Other sources of PM emissions
v. Merging of NEI data into S/L inventories
vi. Revisions to the preliminary 2002 NEI incorporated into Version 1 of the MANE-VU inventory
vii. Additional work on Area source methods
    - Fugitive Dust Emissions from Paved and Unpaved Roads
    - Wildfires and Prescribed Burning

The following discusses the augmentation procedures that were applied to the State inventories to improve the inventories or to fill in missing data not supplied by the State agencies.

MANE-VU -Sponsored Inventories

MANE-VU sponsored inventory development for residential wood combustion, open burning, public owned treatment works (POTWs), compositing, and industrial refrigeration. At the beginning of the project for developing Version 1, each State agency was requested to indicate if it (1) included the MANE-VU-sponsored inventory for one or more of these categories in the inventory it submitted to EPA; (2) included its own estimates for a category in the inventory it submitted to EPA; or (3) if it did not include a category in its inventory, if the MANE-VU-sponsored inventory or the 2002 preliminary NEI should be used as the source of data for the category. The results of this Version 1 inventory development request are summarized in Table III-1.

Improvements to fugitive dust emissions for the paved and unpaved road categories were completed after the draft version of the consolidated area source inventory was prepared. Agencies provided guidance on if they wanted the MANE-VU-sponsored inventory for these two categories to replace the paved and unpaved road inventories they had included in their inventories. For paved roads, all States requested that the MANE-VU-sponsored inventory be used; however, New Jersey and Maryland requested that the winter-time sand/silt adjustment not be included in their inventories. For unpaved roads, nine of the 12 States requested that the MANE-VU-sponsored inventory be used. New Jersey requested that its unpaved road inventory be used instead of the MANE-VU-sponsored inventory. In addition, the District of Columbia and Delaware do not have any unpaved road activity and excluded this category from their inventories.

PM Augmentation

Procedures were developed to estimate missing pollutant data from data provided by the State agencies in order to develop a complete set of PM10-PRI and PM25-PRI emissions to support air quality modeling. The following discusses the procedures for fossil fuel combustion sources first followed by the procedures for all other area sources of PM emissions.

Fossil Fuel Combustion Sources

Fossil fuel combustion sources include industrial, commercial/institutional, and residential anthracite coal, bituminous/subbituminous coal, distillate oil and kerosene, residual oil, natural gas, and LPG. All of these sources emit both filterable and condensible emissions. The QA review of the PM emissions data for these sources focused on verifying that the emissions reported in the State inventories included both filterable and condensible emissions. The emissions for these pollutants can be reported in State inventories individually (i.e., as filterable and condensible separately) or as primary emissions (i.e., the sum of the filterable and condensible emissions). The QA review also focused on evaluating the emission factors reported in the State inventories to determine if they were reasonable.

Table III-1. Summary of MANE-VU-Sponsored Inventories Included in Version 1 of the Area Source Consolidated Emissions Inventory

Area Source Category	Pollutant	SCCs	MANE-VU Inventory Included in State's Inventory Submitted to EPA			Not Included in State's Inventory - Add to MANE-VU Inventory			State's Inventory Includes State-Developed Estimates			Not Included in State's Inventory - Add 2002 Preliminary NEI Data to State's Inventory
			Annual	Summer Day	Winter Day	Annual	Summer Day	Winter Day	Annual	Summer Day	Winter Day	Annual
POTWs	NH_3, VOC	2630020010 (Wastewater Treatment)	DE, NJ, PA	DE, NJ, PA		VT	VT		CT, DC, DE, MA, MD, NH, NJ, NY	CT, DC, DE, MA, MD, NH, NJ	NJ	ME, RI
		2630020020 (Biosolids Processes)	DE, NJ, PA	DE, NJ, PA		VT	VT		CT, DC, DE, MA, MD, NH, NJ, NY	CT, DC, DE, MA, MD, NH, NJ	NJ	ME, RI
		2630050000 (Digested Sludge)	DE, NH, NJ, PA	DE, NH, NJ, PA		VT	VT		CT, DC, DE, MA, MD, NY	CT, DC, DE, MA, MD		ME, RI
Composting	NH_3, VOC	2680001000 (Biosolids)	NH, NJ	NH, NJ		CT, DC, MA, ME, PA, VT	CT, DC, MA, ME, PA, VT					
		2680002000 (Mixed Biosolids and Green Waste)	NH, NJ	NH, NJ		CT, DC, MA, ME, PA, VT	CT, DC, MA, ME, PA, VT					
		2680003000 (Composting; Green Waste)				DC, MA, ME	DC, MA, ME					
Industrial Refrigeration	NH_3	2399010000	ME, NH, NJ	ME, NH, NJ		CT, MA, PA, VT	CT, MA, PA, VT					
Residential Wood Combustion	All criteria pollutants/ precursors, and many toxic air pollutants	2104008000 (Indoor)	MA, MD, NH	MA, MD, NH	MA, MD, NH	CT, DE, ME	CT, DE, ME	CT, DE, ME	NJ, NY, VT	NJ	NJ	DC, PA, RI
		2104008070 (Outdoor)	MA, MD, NH	MA, MD, NH	MA, MD, NH	CT, DE, ME	CT, DE, ME	CT, DE, ME				
Open Burning	All criteria pollutants/ precursors, and many toxic air pollutants	2610000100 (Leaves)	MA, MD, NH, PA			DC, DE, NY, VT			NJ	NJ	NJ	ME, RI
		2610000400 (Brush)	MA, MD, PA			CT, DC, DE, NY, VT			NJ	NJ	NJ	ME, NH, RI
		2610030000 (Municipal Solid Waste)	MA, MD, PA			DC, DE, NY			NH, NJ	NH, NJ	NJ	ME, RI, VT
		2610040400 (Municipal Yard Waste)	MA, NY, PA			DC, NY, VT			DE, NJ	DE, NJ	DE, NJ	

Table III-1 (continued)

Notes:

Gray shading identifies categories for which daily emissions are not available.

POTWs:

CT, MD: Provided VOC but not NH_3 emissions in its State inventory.

DC, MA, MD, ME, NH, RI: Reported POTW emissions under SCC 2630020000 (Total Processed).

DE: MANE-VU inventory used for NH_3; DE provided its own VOC emissions under SCC 2630020000 (Total Processed).

NJ: MANE-VU-sponsored inventory used for NH_3 only. NJ included its own inventory for the other criteria pollutants under SCCs 2630010000 and 2630020000.

NY: Reported VOC emissions under SCC 2630000000 (from the preliminary 2002 NEI) and SCC 2630020000 (State-developed inventory). MANE-VU-sponsored NH_3 inventory was not used.

Composting:

CT, NH: SCC 2680003000 is not in the MANE-VU-sponsored composting inventory for these States.

DE: This State does not have composting activity.

MD: State requested that the MANE-VU inventory for this category not be included in its inventory.

NY, RI: Did not include emissions for this category in the 2002 inventory.

Industrial Refrigeration:

DC: Requested that the preliminary 2002 NEI be used but the NEI does not contain any emissions for this category in DC.

DE: State-developed emissions are included in point source inventory.

MD, RI: Did not include emissions for this category in its inventory.

ME: Used the MANE-VU inventory emissions under SCC 2302080002 (Miscellaneous Food and Kindred Products/Refrigeration).

NH: Original inventory submittal to EPA includes SO_2 and PM emissions for SCC 2399000000 from the preliminary 2002 NEI; NH_3 emissions for SCC 2399010000 are from the MANE-VU inventory.

NY: Original inventory submittal to EPA includes SO_2 and PM emissions for SCC 2399000000 from the preliminary 2002 NEI; NY did not use the MANE-VU-sponsored NH_3 inventory for SCC 2399010000.

Residential Wood Combustion:

DC: RWC inventory in 2002 NEI covers seven SCCs and does not include daily emissions.

Open Burning:

CT: Statewide activity for SCC 2610000100 (Leaves) and SCC 2610030000 (Municipal Solid Waste) is negligible.

For SCCs 2610000400 (Brush) and 2610040400 (Municipal Yard Waste), State initially provided VOC, NO_x, and CO emissions under SCC 2610000000 which is no longer a valid SCC in EPA's master SCC list. CT recalculated emissions to include VOC, NO_x, CO, PM10-PRI/-FIL, and PM25-PRI/-FIL, and placed the emissions on valid SCC 2610000500 (Land Clearing Debris) since the majority of the activity is associated with activities covered by this SCC.

MD: The MANE-VU inventory for SCC 2610040400 (Municipal Yard Waste) reports zero emissions indicating that the activity for the category does not occur in MD. MD did not include the SCC in its inventory for this reason.

NH: Did not include NH_3 emissions in MANE-VU inventory for SCC 2610040400 (Municipal Yard Waste).

To support the QA review effort, the uncontrolled PM emission factors shown in Table III-2 were compiled from AP-42. The emission factors reported in the State inventories were compared to the emission factors in this table. Emission factors that appeared too high or too low were flagged for review by the State agency. In addition, inventory data were flagged for review by the State agency if the emissions were reported under the primary PM pollutant codes but the emission factors matched with the emission factors for filterable PM in Table III-2. Finally, if emission factors were not reported in the State agency inventory, the emission factors were back-calculated using the throughput data (if available), emissions, rule effectiveness values, and control efficiency data (if available). The back-calculated emission factors were compared to the factors in Table III-2 to identify data with major difference between the factors. It is emphasized that the uncontrolled emission factors in Table III-2 were used as a reference for reviewing State inventory data. The emission factors in this table should not be construed to be the best available for all State agencies since the emission factors will vary depending on the composition of the boiler population in an agency's area source inventory.

Delaware, Massachusetts, Maryland, New Hampshire, New Jersey, New York, and Pennsylvania provided their own inventory for all fossil fuel combustion categories. Connecticut, the District of Columbia, Maine, Rhode Island, and Vermont used fossil fuel combustion inventory data in the preliminary 2002 NEI for some or all of the categories. The following provides details on the origin of the fossil fuel combustion inventories for these States:

> Connecticut supplied VOC, NO_x, and CO emissions from its 1999 inventory for industrial and commercial/institutional fossil fuel combustion. PM10-PRI, PM25-PRI, SO_2, and NH_3 emissions were taken from preliminary NEI estimates (carried forward from Version 3 of the 1999 NEI). For the residential sector, Connecticut's inventory was taken from the preliminary 2002 NEI. Connecticut provided guidance on the counties with natural gas and LPG activity for which to use the NEI estimates.
>
> For the District of Columbia, the preliminary NEI was used to gap fill missing PM10-PRI and PM25-PRI emissions for commercial/institutional bituminous/ subbituminous coal combustion and PM10-PRI, PM25-PRI, SO_2, and NH_3 for commercial/institutional natural gas combustion. The NEI estimates for these commercial/institutional categories were carried forward from Version 3 of the 1999 NEI. The District of Columbia used the NEI estimates for residential bituminous/subbituminous coal combustion.
>
> Maine and Rhode Island used the preliminary 2002 NEI for all three sectors. The NEI estimates for the industrial and commercial/institutional sectors were carried forward from Version 3 of the 1999 NEI, while the residential sector estimates are based on 2000 or 2002 activity estimates prepared by EPA.
>
> Vermont used the preliminary 2002 NEI for the industrial and commercial/ institutional sectors and residential anthracite coal (carried forward from Version 3 of the 1999 NEI), but provided its own inventory for residential distillate oil, natural gas, and LPG.

Table III-2. Area Source Industrial, Commercial/Institutional, and Residential Fossil Fuel Combustion Uncontrolled Emission Factors for PM10-PRI/FIL, PM25-PRI/FIL, and PM-CON

Pollutant1	Uncontrolled Emission Factor (EF)	EF Numerator	EF Denominator	Calculated Uncontrolled EF	Reference
Industrial Boilers: Anthracite Coal (SCC 2102001000)					
PM10-FIL	2.3 x % Ash content of coal	LB	TON	30.77	AP-42 Table 1.2-4 EF calculated from formula of 2.3 * % Ash Content (13.38%). Reference for ash content is EPA, 2002.
PM25-FIL	0.6 x % Ash content of coal	LB	TON	8.03	AP-42 Table 1.2-4 EF calculated from formula of 0.6 * % Ash Content (13.38%) (used Commercial/Institutional emission factors). Reference for ash content is EPA, 2002.
PM-CON	0.08 x % Ash content of coal	LB	TON	1.07	AP-42 Table 1.2-3 Used formula for SCC 10300101, EF calculated from formula of .08 * % Ash Content (13.38%). Reference for ash content is EPA, 2002.
PM10-PRI		LB	TON	31.84	
PM25-PRI		LB	TON	9.10	
Industrial Boilers: Bituminous/Subbituminous Coal (SCC 2102002000)					
PM10-FIL	13.2	LB	TON	13.2	AP-42 Table 1.1-9 EF (used Commercial/Institutional emission factors)
PM25-FIL	4.6	LB	TON	4.6	AP-42 Table 1.1-9 EF (used Commercial/Institutional emission factors)
PM-CON	1.04	LB	TON	1.04	AP-42 Table 1.1-5 (used Commercial/Institutional emission factors)
PM10-PRI		LB	TON	14.24	
PM25-PRI		LB	TON	5.64	
Industrial Boilers and IC Engines: Distillate Oil (SCC 2102004000)					
PM10-FIL	1	LB	E3GAL	1	AP-42 Table 1.3-6
PM25-FIL	0.25	LB	E3GAL	0.25	AP-42 Table 1.3-6
PM-CON	1.3	LB	E3GAL	1.3	AP-42 Table 1.3-2
PM10-PRI		LB	E3GAL	2.30	
PM25-PRI		LB	E3GAL	1.55	
Industrial Boilers: Residual Oil (SCC 2102005000)					
PM10-FIL	7.17 x % Sulfur content of oil	LB	E3GAL	10.683	AP-42 Table 1.3-5. EF calculated from formula of 7.17(A); where A=1.12(S)+0.37; Assumed S=1% for purpose of calculating EF ratios.
PM25-FIL	4.67 x % Sulfur content of oil	LB	E3GAL	6.958	AP-42 Table 1.3-5. EF calculated from formula of 7.17(A); where A=1.12(S)+0.37; Assumed S=1% for purpose of calculating EF ratios.
PM-CON	1.5	LB	E3GAL	1.5	AP-42 Table 1.3-2
PM10-PRI		LB	E3GAL	12.18	
PM25-PRI		LB	E3GAL	8.46	
Industrial Boilers and IC Engines: Natural Gas (SCC 2102006000)					
PM10-FIL	1.9	LB	E6FT3	1.9	AP-42 Table 1.4-2
PM25-FIL	1.9	LB	E6FT3	1.9	AP-42 Table 1.4-2
PM-CON	5.7	LB	E6FT3	5.7	AP-42 Table 1.4-2
PM10-PRI	7.6	LB	E6FT3	7.60	
PM25-PRI	7.6	LB	E6FT3	7.60	

Table III-2 (continued)

Pollutant1	Uncontrolled Emission Factor (EF)	EF Numerator	EF Denominator	Calculated Uncontrolled EF	Reference
Industrial Boilers - Liquified Petroleum Gas (SCC 2102007000)					
PM10-FIL	0.6	LB	E3GAL	0.6	AP-42 Table 1.5-1
PM25-FIL	0.6	LB	E3GAL	0.6	AP-42 Table 1.5-1
PM-CON	0.506	LB	E3GAL	0.506	Used natural gas PM-CON emission factor of 5.7 lb/Million Cubic Feet (for all PM controls and uncontrolled). Used factor of 0.0887 to convert emission factor from lb/Million Cubic Feet of natural gas to lb/1,000 gallons of propane. Reference: AP-42, Table 1.4-2. Conversion factor assumes 1020 Btu/scf for natural gas (AP-42, Table 1.4-2) and 90,500 Btu/gallon for propane (AP-42, Appendix A, page A-5).
PM10-PRI		LB	E3GAL	1.11	
PM25-PRI		LB	E3GAL	1.11	
Industrial Boilers: Kerosene (SCC 2102011000)					
PM10-FIL	1	LB	E3GAL	1	AP-42 Table 1.3-6
PM25-FIL	0.25	LB	E3GAL	0.25	AP-42 Table 1.3-6
PM-CON	1.3	LB	E3GAL	1.3	AP-42 Table 1.3-6
PM10-PRI		LB	E3GAL	2.30	
PM25-PRI		LB	E3GAL	1.55	
Commercial/Institutional Heating: Anthracite Coal (SCC 2103001000)					
PM10-FIL	2.3 x % Ash content of coal	LB	TON	30.77	AP-42 Table 1.2-4 EF calculated from formula of 2.3 * % Ash Content (13.38%). Reference for ash content is EPA, 2002.
PM25-FIL	0.6 x % Ash content of coal	LB	TON	8.03	AP-42 Table 1.2-4 EF calculated from formula of 0.6 * % Ash Content (13.38%). Reference for ash content is EPA, 2002.
PM-CON	0.08 x % Ash content of coal	LB	TON	1.07	AP-42 Table 1.2-3 Used formula for SCC 10300101, EF calculated from formula of 0.08 * % Ash Content (13.38%). Reference for ash content is EPA, 2002.
PM10-PRI		LB	TON	31.84	
PM25-PRI		LB	TON	9.10	
Commercial/Institutional Heating: Bituminous and Lignite (SCC 2103002000)					
PM10-FIL	13.2	LB	TON	13.2	AP-42 Table 1.1-9 EF
PM25-FIL	4.6	LB	TON	4.6	AP-42 Table 1.1-9 EF
PM-CON	1.04	LB	TON	1.04	AP-42 Table 1.1-5 (0.04 lb/MMBtu * 26MMBtu/ton=1.04)
PM10-PRI		LB	TON	14.24	
PM25-PRI		LB	TON	5.64	
Commercial/Institutional Heating: Distillate Oil (SCC 2103004000)					
PM10-FIL	1.08	LB	E3GAL	1.08	AP-42 Table 1.3-7
PM25-FIL	0.83	LB	E3GAL	0.83	AP-42 Table 1.3-7
PM-CON	1.3	LB	E3GAL	1.3	AP-42 Table 1.3-2
PM10-PRI		LB	E3GAL	2.38	
PM25-PRI		LB	E3GAL	2.13	

Table III-2 (continued)

Pollutant[1]	Uncontrolled Emission Factor (EF)	EF Numerator	EF Denominator	Calculated Uncontrolled EF	Reference
Commercial/Institutional Heating: Residual Oil (SCC 2103005000)					
PM10-FIL	5.17 x % Sulfur content of oil	LB	E3GAL	7.703	AP-42 Table 1.3-7. EF calculated from formula of 5.17(A); where A=1.12(S)+0.37; Assumed S=1% for purpose of calculating EF ratios.
PM25-FIL	1.92 x % Sulfur content of oil	LB	E3GAL	2.861	AP-42 Table 1.3-7. EF calculated from formula of 5.17(A); where A=1.12(S)+0.37; Assumed S=1% for purpose of calculating EF ratios.
PM-CON	1.5	LB	E3GAL	1.5	AP-42, Table 1.3-2
PM10-PRI		LB	E3GAL	9.20	
PM25-PRI		LB	E3GAL	4.36	
Commercial/Institutional Heating: Natural Gas (SCC 2103006000)					
PM10-FIL	1.9	LB	E6FT3	1.9	AP-42 Table 1.4-2
PM25-FIL	1.9	LB	E6FT3	1.9	AP-42 Table 1.4-2
PM-CON	5.7	LB	E6FT3	5.7	AP-42 Table 1.4-2
PM10-PRI		LB	E6FT3	7.60	
PM25-PRI		LB	E6FT3	7.60	
Commercial/Institutional Heating: Liquified Petroleum Gas (SCC 2103007000)					
PM10-FIL	0.4	LB	E3GAL	0.4	AP-42 Table 1.5-1 (Propane for Commercial Boilers)
PM25-FIL	0.4	LB	E3GAL	0.4	AP-42 Table 1.5-1 (Propane for Commercial Boilers)
PM-CON	0.506	LB	E3GAL	0.506	Used natural gas PM-CON emission factor of 5.7 lb/Million Cubic Feet (for all PM controls and uncontrolled). Used factor of 0.0887 to convert emission factor from lb/Million Cubic Feet of natural gas to lb/1,000 gallons of propane. Reference: AP-42, Table 1.4-2. Conversion factor assumes 1020 Btu/scf for natural gas (AP-42, Table 1.4-2) and 90,500 Btu/gallon for propane (AP-42, Appendix A, page A-5).
PM10-PRI		LB	E3GAL	0.91	
PM25-PRI		LB	E3GAL	0.91	
Commercial/Institutional Heating: Kerosene (SCC 2103011000)					
PM10-FIL	1.08	LB	E3GAL	1.08	AP-42 Table 1.3-7 Used EF for Distillate Oil (per EIIP)
PM25-FIL	0.83	LB	E3GAL	0.83	AP-42 Table 1.3-7 Used EF for Distillate Oil (per EIIP)
PM-CON	1.3	LB	E3GAL	1.3	AP-42 Table 1.3-2 Used EF for Distillate Oil (per EIIP)
PM10-PRI		LB	E3GAL	2.38	
PM25-PRI		LB	E3GAL	2.13	
Residential Heating: Anthracite Coal (SCC 2104001000)					
PM10-FIL	10	LB	TON	10	EPA, 2002.
PM25-FIL	0.6 x % Ash content of coal	LB	TON	8.03	EF calculated from formula of 0.6 * % Ash Content (13.38%). Reference for EF and ash content is EPA, 2002.
PM-CON	0.08 x % Ash content of coal	LB	TON	1.07	EF calculated from formula of 0.08 * % Ash Content (13.38%). Reference for EF and ash content is EPA, 2002.
PM10-PRI		LB	TON	11.07	
PM25-PRI		LB	TON	9.10	

Table III-2 (continued)

Pollutant[1]	Uncontrolled Emission Factor (EF)	EF Numerator	EF Denominator	Calculated Uncontrolled EF	Reference
Residential Heating: Bituminous and Lignite Coal (SCC 2104002000)					
PM10-FIL	6.2	LB	TON	6.2	AP-42 Table 1.1-11
PM25-FIL	3.8	LB	TON	3.8	AP-42 Table 1.1-11
PM-CON	1.04	LB	TON	1.04	AP-42 Table 1.1-5 (0.04 lb/MMBtu * 26 MMBtu/ton=1.04)
PM10-PRI		LB	TON	7.24	
PM25-PRI		LB	TON	4.84	
Residential Heating: Distillate Oil (SCC 2104004000)					
PM10-FIL	1.08	LB	E3GAL	1.08	AP-42 Table 1.3-7 (Commercial/Institutional EF)
PM25-FIL	0.83	LB	E3GAL	0.83	AP-42 Table 1.3-7 (Commercial/Institutional EF)
PM-CON	1.3	LB	E3GAL	1.3	AP-42 Table 1.3-2
PM10-PRI		LB	E3GAL	2.38	
PM25-PRI		LB	E3GAL	2.13	
Residential Heating: Natural Gas - All types (SCC 2104006000)					
PM10-FIL	1.9	LB	E6FT3	1.9	AP-42 Table 1.4.2
PM25-FIL	1.9	LB	E6FT3	1.9	AP-42 Table 1.4.2
PM-CON	5.7	LB	E6FT3	5.7	AP-42 Table 1.4.2
PM10-PRI		LB	E6FT3	7.60	
PM25-PRI		LB	E6FT3	7.60	
Residential Heating: Liquified Petroleum Gas (SCC 2104007000)					
PM10-FIL	0.4	LB	E3GAL	0.4	AP-42 Table 1.5-1 (Same factor used for Propane for Commercial Boilers; based on EIIP)
PM25-FIL	0.4	LB	E3GAL	0.4	AP-42 Table 1.5-1 (Same factor used for Propane for Commercial Boilers; based on EIIP)
PM-CON	0.506	LB	E3GAL	0.506	Used natural gas PM-CON emission factor of 5.7 lb/Million Cubic Feet (for all PM controls and uncontrolled). Used factor of 0.0887 to convert emission factor from lb/Million Cubic Feet of natural gas to lb/1,000 gallons of propane. Reference: AP-42, Table 1.4-2. Conversion factor assumes 1020 Btu/scf for natural gas (AP-42, Table 1.4-2) and 90,500 Btu/gallon for propane (AP-42, Appendix A, page A-5).
PM10-PRI		LB	E3GAL	0.91	
PM25-PRI		LB	E3GAL	0.91	
Residential Heating: Kerosene (SCC 2104011000)					
PM10-FIL	1.08	LB	E3GAL	1.08	AP-42 Table 1.3-7 Used EF for Distillate Oil (per EIIP)
PM25-FIL	0.83	LB	E3GAL	0.83	AP-42 Table 1.3-7 Used EF for Distillate Oil (per EIIP)
PM-CON	1.3	LB	E3GAL	1.3	AP-42 Table 1.3-2 Used EF for Distillate Oil (per EIIP)
PM10-PRI		LB	E3GAL	2.38	
PM25-PRI		LB	E3GAL	2.13	

1 PM10-PRI EF = sum of PM10-FIL and PM-CON emission factors; PM25-PRI EF = sum of PM25-FIL and PM-CON emission factors.

Revisions to the NEI for residential LPG and kerosene were completed after the preliminary 2002 NEI was released in February 2004. Connecticut, the District of Columbia, Maine, and Rhode Island approved replacement of the preliminary 2002 NEI estimates with the revised estimates for LPG. Connecticut was the only State that elected to use the NEI for the residential kerosene category, and Connecticut approved replacing the preliminary 2002 NEI for this category with the revised inventory prepared by EPA.

Other Sources of PM Emissions

For States that provided only PM10-FIL and PM25-FIL emissions, PM10-PRI emissions were set equal to PM10-FIL emissions and PM25-PRI emissions were set equal to PM25-FIL emissions. The PM10-PRI and PM25-PRI emissions that were added to the inventory were assigned a data source code of S-02-X-PR where S-02-X represents the code assigned to the PM10-FIL and PM25-FIL emissions provided by the State agency and the "-PR" indicates that the ratio was applied to estimate the primary emissions (in this case, the ratio of primary to filterable emissions is "1").

PM25-PRI emissions missing from State inventories were estimated by applying a ratio of PM25-PRI-to-PM10-PRI emissions to the PM10-PRI emissions provided by the State agency. Table III-3 identifies the agencies with SCCs for which ratios were applied to estimate PM25-PRI emissions. This table also shows the ratios and the reference for the ratios.

Table III-3. SCCs for which PM25-PRI Emissions were Estimated by Applying a Ratio to the PM10-PRI Emissions in the State inventory

SCC	SCC Description	Agency	Ratio of PM25-PRI to PM10-PRI	Reference
2309100010	Industrial Processes: Fabricated Metals: SIC 34: Coating, Engraving, and Allied Services: Electroplating	NY	0.947	AP-42 emission factors for hard chrome plating tank controlled with mist eliminator. AP-42 (Table 12.20-3) shows 94.7% of total PM as less than 2.35 micrometers. Applied factor to State-supplied PM10-PRI emissions to estimate PM25-PRI emissions.
2461023000	Solvent Utilization: Miscellaneous Non-industrial: Commercial: Asphalt Roofing: Total: All Solvent Types	MA	1	No data available; assumed PM25-PRI equals PM10-PRI.
2601000000	Waste Disposal, Treatment, and Recovery: On-site Incineration: All Categories: Total	MD, NH	1	No data available; assumed PM25-PRI equals PM10-PRI.
2610000100	Waste Disposal, Treatment, and Recovery: On-site Incineration: All Categories: Yard Waste - Leaf Species Unspecified	NH	1	No data available; assumed PM25-PRI equals PM10-PRI.
2810001000	Miscellaneous Area Sources: Other Combustion: Forest Wildfires: Total	MD	1	No data available; assumed PM25-PRI equals PM10-PRI.
2810015000	Miscellaneous Area Sources: Other Combustion: Prescribed Burning for Forest Management: Total	MD	1	No data available; assumed PM25-PRI equals PM10-PRI.
2810020000	Miscellaneous Area Sources: Other Combustion: Prescribed Burning of Rangeland: Total	MD	0.86	Based on ratio of PM25-PRI to PM10-PRI for same SCC used by States in 2002 NEI.
2810030000	Miscellaneous Area Sources: Other Combustion: Structure Fires: Total	MD, NH	0.91	NEI Method.
2810050000	Miscellaneous Area Sources: Other Combustion: Motor Vehicle Fires: Total	MD, NH	0.91	NEI Method.

d. 2002 NEI

Merging of NEI Data into State Inventories

The area source inventory provided by each State agency was compared to the 2002 NEI to identify categories in the NEI that were not in each State inventory. The list of categories identified was provided to each State agency and each agency then selected the NEI categories to be added to its inventory. Identification of categories included in the 2002 NEI but not in a State inventory involved a two-step process. First, Pechan identified the categories in the NEI that did not have an electronic match on the data key of the EM table between the State inventory and the NEI. Then, Pechan manually compared the NEI categories without an electronic match to the State inventory to identify and eliminate NEI categories that were in the State inventory but had a different SCC. For example, a State inventory may use a general SCC for a category while the NEI may use different SCCs to breakout emissions at a finer detail. Examples of categories where this typically occurred include the residential wood combustion, open burning of land clearing debris, solvent utilization, and petroleum marketing and transportation categories. In addition, if a State agency requested that a MANE-VU-sponsored inventory be added to its inventory, the NEI categories that overlapped with the MANE-VU -sponsored categories were removed from the list of NEI categories considered for incorporation into a State inventory.

The source categories in the 2002 NEI that were added to a State inventory can be identified where the data source code starts with “E”. These categories can be identified using the data source code field in the NIF 3.0 files or in the summary of area source emissions that contains the data source code.

Revisions to the Preliminary 2002 NEI

During preparation of the MANE-VU inventory, EPA completed revisions to the emissions for six categories in the preliminary 2002 NEI released in February 2004. As agreed to with each State agency, the revised emissions were used in the MANE-VU inventory in lieu of the preliminary 2002 NEI emissions if the agency requested that the category be included.

- Non-Residential Construction (SCC 2311020000): 2002 emissions data replaced data in preliminary 2002 NEI that were carried forward from 1999 NEI.

- Highway Construction (SCC 2311030000): 2002 emissions data replaced data in preliminary 2002 NEI that were carried forward from 1999 NEI.

- Open Burning of Land Clearing Debris (SCC 2610000500): 2002 emissions data replaced data in preliminary 2002 NEI that were carried forward from 1999 NEI. The activity for this category was based on activity prepared for the non-residential and highway construction categories. For 2002, emissions were set to zero for counties with a population that was 80% urban or more based on 2000 Census data. This was not done for the 1999 NEI. For the NEI method, it was assumed that highly urban counties do not allow this activity to take place. Note that 2002 emissions data were already included in the preliminary 2002 NEI for the open burning of residential municipal solid waste, open burning of yard waste, and the residential construction categories.

- Residential LPG Combustion (SCC 2104007000): 2000 emissions data replaced data in the preliminary 2002 NEI that were carried forward from 1999 NEI.

- Residential Kerosene Combustion (SCC 2104011000): 2000 emissions data replaced data in the preliminary 2002 NEI that were carried forward from 1999 NEI.

- Residential Wood Combustion (SCCs starting with 2104008xxx; 4 SCCs for fireplaces and 3 SCCs for woodstoves): The preliminary 2002 NEI emissions were revised to:

- Correct the CO, PM10-PRI, and PM25-PRI emission factors for fireplaces without inserts (this change doubled the emission factors associated with correcting an error in converting the values from g/kg to lb/ton);

- Correct the climate zone map for allocating national activity to States;

- Replace 1997 total residential wood consumption with 2001 estimates (this change reduced wood consumption for fireplaces with inserts and woodstoves);

- Update urban/rural population data to reflect 2002 estimates based on year 2002 total county population and year 2000 county ratios of urban/rural population to total population; and

- Change the data source code from E-02-X (this was incorrect) to E-01-X to reflect 2001 activity data adjusted to 2002.

e. QA Review of Final Inventory

Final QA checks were run on the revised data set to ensure that all corrections provided by the State agencies were incorporated into the State inventories and that there were no remaining QA issues that could be addressed during the duration of the project. After exporting the inventory in Oracle to an Access database in NIF 3.0, the EPA's QA program was run on the Access database and the QA output was reviewed to verify that all QA issues that could be addressed were resolved (EPA, 2004a).

The output file from the EPA's QA program run on the area source inventory is provided in an Access 2000 database along with the Access database containing the area source inventory in NIF 3.0.

Additional Work on Area Source Methods

- Fugitive Dust Emissions from Paved and Unpaved Roads

Review of Methods

This work involved compiling and summarizing information on emission estimation methods and data sources from the MANE-VU State agencies, RPOs, and EPA for the following fugitive dust area source categories: windblown dust, paved and unpaved roads, agricultural tiling and harvesting, and construction activities. A short survey form was prepared and sent to the MANE-VU State agencies to collect information on whether an agency had activity for each category during 2002. For each agency for which activity occurred in its jurisdiction during 2002, information was requested on the methods and data sources it used to prepare its 2002 inventory for each category. This information was used to prioritize the categories (e.g., work on agricultural field burning was eliminated from further consideration if MANE-VU State agencies did not have activity for this category). The methods and data applied by RPOs other than MANE-VU were obtained from RPO websites and discussions with the RPOs.

The results of this review were documented in a technical memorandum (MANE-VU, 2004b). Based on the results of the review, MANE-VU decided to proceed with developing a paved and unpaved road fugitive dust inventory that incorporated improvements to activity data used in the NEI methodology.

Methods for Improving Paved and Unpaved Road Fugitive Dust Inventory

Fugitive dust emissions from paved and unpaved roads are classified under SCCs 2294000000 and 2296000000, respectively. Fugitive dust emissions from paved and unpaved road traffic were estimated for PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL. Since these categories are not sources of PM-CON, PM10-PRI emissions are equal to PM10-FIL emissions and PM25-PRI emissions are equal to PM25-FIL. The following provides a summary of the methods.

Paved Roads

Several changes were made in the paved road fugitive dust emission calculations to improve these estimates over those prepared for EPA’s 2002 NEI. First, the monthly precipitation data representing the number of days in a month with at least 0.01 inches of precipitation were developed at the county level. In comparison, a single monthly precipitation value was used to model an entire State in the 2002 NEI. Thus, the resulting MANE-VU county-specific paved road fugitive dust emission estimates should be more representative of each county than the NEI data since precipitation events can vary significantly from one part of the State to another.

The second improvement made to the paved road fugitive dust emission calculations was the use of county and road-type-specific average vehicle weights. This is an improvement over the NEI where a single average vehicle weight is applied nationwide. Thus, in the MANE-VU inventory, county/road type combinations with significant heavy truck traffic have a higher average vehicle weight and a corresponding emission factor compared to county/road type combinations with primarily lighter vehicle traffic.

The final improvement made to the MANE-VU paved road emission calculations was the use of the winter silt loading adjustments. These adjustments account for the application of sand and salt on the roads during months with frozen precipitation. The 2002 NEI does not include any wintertime silt loading adjustments. The effect of the wintertime silt loading adjustments is an increase in the paved road emission factors during the months in which it is applied. The months during which this adjustment was applied varied by State in the MANE-VU inventory.

Unpaved Roads

The county-specific precipitation data used in the paved road fugitive dust calculations were also used to improve the unpaved road fugitive dust calculations. As with the paved roads, this represents an improvement over the State-specific precipitation data used in the 2002 NEI unpaved road emission inventory. The other improvement made to the unpaved roads was the use of State-supplied unpaved road mileage data by county for Maine.

- Wildfires and Prescribed Burning

Review of Methods

This work involved compiling and summarizing information on emission estimation methods and data sources from the MANE-VU State agencies, RPOs, and EPA for the following area source categories: wildfires, prescribed burning, slash burning, and agricultural field burning. The approach previously described for the fugitive dust categories was used to collect and compile data from the MANE-VU State agencies, RPOs other than MANE-VU, and EPA for the fire categories. All of the information collected from these various information sources was summarized in a technical memorandum (MANE-VU, 2004c).

Results of Methods Review

MANE-VU recognized the need to improve the methods for estimating emissions for the fire categories. The most important revision would be to inventory fire events as point sources rather than as area sources at the county-level. However, due to resource constraints, it was decided not to pursue improvements to the methods for estimating emissions from the fire categories. It should be noted that during this project, some of the MANE-VU States provided revisions to their wildfire and prescribed burning inventories to add PM25-PRI emissions and to improve the spatial allocation of activity data at the county level. These improvements were incorporated into the MANE-VU area source inventory.

3. Version 3 Revisions

The following explains revisions to Version 3 that applied to several or all of the MANE-VU States.

<u>Gap Filling</u>

In Version 2 of MANE-VU's inventory, emissions for PFCs, industrial adhesives, and residential outdoor wood burning existed for some States but were missing for other States. Since these are categories for which SIP rules may be developed, it was determined that emissions for these categories should be added to Version 3. The following provides a summary of the Version 3 revisions to address missing data concerns for these categories:

- PFCs: MANE-VU estimated default 2002 emissions for these States using a per capita emission factor and county population data for each State. The derivation of the emission factor, population data, and calculation of annual and daily VOC emissions for PFCs is provided in an Excel file named "PFC_Adhesive Calcs for 2002_022106.xls" along with this TSD.

Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont elected to use MANE-VU's default inventory which was added to Version 3. Massachusetts elected to use the per capita emission factor but provided revisions to the population data, used 2002 owner occupied units to allocate the emissions to counties, and then allocated emissions between the commercial (16%) and residential (84%) sectors. Massachusetts' calculations are provided in the spreadsheet named "Version 3 Revisions" in the Excel file named MA_AR_QA_Report_030806.xls" provided with this TSD.

- Industrial Adhesives: Emissions for industrial adhesives were missing in Version 2 for Connecticut, the District of Columbia, Delaware, Maryland, Massachusetts, and Rhode Island. MANE-VU estimated default 2002 emissions for these States using a per capita emission factor and county population data for each State. The derivation of the emission factor, population data, and calculation of annual and daily VOC emissions for industrial adhesives is provided in an Excel file named "PFC_Adhesive Calcs for 2002_022106.xls" along with this TWD.

  Massachusetts elected to use MANE-VU's gap-filling inventory which was added to Version 3. The rest of the States elected to use EPA's 2002 inventory which is based on a top-down, mass balance methodology where national industrial adhesive solvent estimates were allocated to counties using industrial employment. The EPA estimates were adjusted to remove uncontrolled VOC emissions included in the final 2002 point source NEI. The point-source adjustments were conducted at the county level. Note that the point-source-adjusted emissions for Rhode Island are zero for all three counties.

  Note New Jersey is the only State that prepared its own 2002 inventory for this category that is included in Version 3. The industrial adhesive inventory data for the rest of the MANE-VU States originates from the 1999 NEI. These States were contacted to determine if they wanted the 1999 data replaced with the default estimates or with the EPA's 2002 inventory for industrial adhesives. Maine commented that the 1999 estimates are more realistic of the solvent emissions for their State than the 2002 NEI or MANE-VU default estimates. The other States did not indicate that they wanted their data replaced. Therefore, the 1999 NEI data for Maine, New Hampshire, New York, Pennsylvania, and Vermont was not changed in Version 3 of MANE-VU's inventory.

- Residential Wood Burning: Residential outdoor wood burning emissions were missing in Version 2 of the MANE-VU inventory for the District of Columbia, Pennsylvania, Rhode Island, and Vermont. In Versions 1 and 2, New Jersey's and New York's emissions for outdoor wood burning were included with their inventory for indoor wood burning. The District of Columbia, Rhode Island, and Vermont elected to use MANE-VU's outdoor wood burning inventory which was added to Version 3. In addition, per direction provided by New Jersey, its wood burning inventory was replaced with the MANE-VU-sponsored indoor wood burning inventory in Version 3, and the MANE-VU outdoor wood burning inventory was added to Version 3.

New York's inventory in Version 2 included emissions for both residential indoor and outdoor wood burning. For Version 3, New York provided revisions that lowered its overall emissions relative to Version 2 and broke out its inventory to show emissions for fireplaces, woodstoves, and outdoor equipment separately. New York also added NH_3 emissions to its inventory for Version 3.

Adjustments to $PM_{2.5}$ Emissions for Fugitive Dust Categories

Information developed by the Western Governors' Association, Western Regional Air Partnership (WRAP) Dust Emissions Joint Forum and EPA indicates that, for paved and unpaved roads and the construction nonpoint source categories, the $PM_{2.5}$-to-PM_{10} ratio is lower than the ratio used in the EPA method to estimate PM25-PRI/-FIL emissions from PM10-PRI/-FIL emissions (WRAP, 2005). Therefore, for the final 2002 NEI, EPA applied an adjustment factor to the PM25-PRI/-FIL emissions to correct for overestimates of PM25-PRI/-FIL emissions for these categories. Because the $PM_{2.5}$-to-PM_{10} ratio used for the MANE-VU States is based on the EPA method, this information was communicated to the MANE-VU States and all of the States agreed that these adjustments should be made to the MANE-VU inventory. Table III-4 identifies the categories to which this adjustment was applied, the old and new $PM_{2.5}$-to-PM_{10} ratios, and the adjustment factors applied to the PM25-PRI/-FIL emissions in Version 3 of MANE-VU's inventory. Note that these adjustments to $PM_{2.5}$ emissions were applied prior to applying the transport adjustment factors for PM_{10} and $PM_{2.5}$ emissions. The modelers applied the transport adjustment factors to the mass emissions in Version 3. Documentation of the file containing the transport adjustment factors is provided under "Speciation Profiles" section of Table VII-1 in Chapter VII.

For the construction categories, the EPA assumed an original $PM_{2.5}$-to-PM_{10} ratio of 0.15 and an adjustment factor of 0.67. However, the original $PM_{2.5}$-to-PM_{10} ratio used for both the NEI method and MANE-VU's inventory for construction is 0.2. Based on discussions with EPA, the goal is to revise the original $PM_{2.5}$ emissions such that the $PM_{2.5}$-to-PM_{10} ratio is 0.1. Therefore, for Version 3 of MANE-VU's 2002 area source inventory, an adjustment factor of 0.5 (ratio of 0.1-to-0.2) was applied to adjust the $PM_{2.5}$ emissions.

Note that based on Pechan's discussions with EPA during the week of March 6, 2006 concerning the application of the paved road $PM_{2.5}$ adjustment factor, it was determined that adjusting the emissions by applying the factor (shown in Table III-4) to the $PM_{2.5}$ emissions is a simplistic approach. The EPA noted that it is evaluating this issue and will be issuing guidance in the near future for revising the equation for estimating $PM_{2.5}$ emissions which, when applied, will likely yield different results. Because EPA was unable to provide guidance on how to address this issue before Version 3 needed to be completed during the week of March 6, the adjustment factor shown in Table III-4 was applied to the $PM_{2.5}$ emissions for paved roads because this adjustment will provide a better estimate of $PM_{2.5}$ emissions than the unadjusted emissions.

Table III-4. Revisions to PM25-PRI and PM25-FIL Emissions for Paved and Unpaved Roads and Construction

SCC	SCC Description	Original $PM_{2.5}$-to-PM_{10} Ratio	Revised $PM_{2.5}$-to-PM_{10} Ratio	Adjustment Factor[1,2]
2294000000	Mobile Sources : Paved Roads : All Paved Roads : Total: Fugitives	0.25	0.15	0.6
2296000000	Mobile Sources : Unpaved Roads : All Unpaved Roads : Total: Fugitives	0.15	0.1	0.67
2296005000	Mobile Sources : Unpaved Roads : Public Unpaved Roads : Total: Fugitives	0.15	0.1	0.67
2296010000	Mobile Sources : Unpaved Roads : Industrial Unpaved Roads : Total: Fugitives	0.15	0.1	0.67
2311000000	Industrial Processes : Construction: SIC 15 - 17 : All Processes : Total	0.2	0.1	0.50
2311010000	Industrial Processes : Construction: SIC 15 - 17 : Residential : Total	0.2	0.1	0.50
2311010040	Industrial Processes : Construction: SIC 15 - 17 : Residential : Ground Excavations	0.2	0.1	0.50
2311020000	Industrial Processes : Construction: SIC 15 - 17 : Industrial/Commercial/Institutional : Total	0.2	0.1	0.50
2311020040	Industrial Processes : Construction: SIC 15 - 17 : Industrial/Commercial/Institutional : Ground Excavations	0.2	0.1	0.50
2311030000	Industrial Processes : Construction: SIC 15 - 17 : Road Construction : Total	0.2	0.1	0.50

1 For these categories, filterable and primary emissions are equal because they are not sources of condensible emissions. The adjustment factor was applied to both the PM25-PRI and PM25-FIL emissions and emission factors in the MANE-VU inventory.
2 See text for discussion of issue concerning the adjustment factor for paved road $PM_{2.5}$ emissions. Also, for construction, see text for explanation of $PM_{2.5}$ adjustment factor shown in this table.

Removal of Invalid CE Records

For the following SCCs, Version 2 contained invalid CE records for Connecticut, the District of Columbia, Maine, New Hampshire, New York, Pennsylvania, Rhode Island, and Vermont that were removed in Version 3:

SCC	SCC Description
2311020000	Construction: SIC 15 - 17 : Industrial/Commercial/Institutional : Total
2311030000	Construction: SIC 15 - 17 : Road Construction : Total
2610000100	Open Burning : All Categories : Yard Waste - Leaf Species Unspecified
2610000400	Open Burning : All Categories : Yard Waste - Brush Species Unspecified
2610030000	Open Burning : Residential : Household Waste

The CE records all originate from the preliminary 2002 NEI that have been removed from the final 2002 nonpoint NEI. They are invalid because they have a control efficiency value of 100% and corresponding records in the EM table with rule effectiveness and rule penetration values of 100% (implying that the emissions are zero), but with emissions greater than zero. The Excel spreadsheet file named “CE_records_removed from V3.xls” provides the CE records by State and county FIPS, SCC, and pollutant code that were removed in Version 3.

4. Version 3 Emissions Summary

Table III-5 presents a State-level summary of the annual area source emissions in Version 3 of the 2002 MANE-VU inventory. Note that PM10-PRI and PM25-PRI emissions are included in the inventory for all SCCs for which State agencies reported any form of PM, PM_{10}, and/or $PM_{2.5}$ emissions. If an agency did not report PM10-PRI and/or PM25-PRI but reported PM-PRI, PM-FIL, PM-CON, PM10-FIL, and/or PM25-FIL, the PM augmentation procedures discussed in the TSD were applied to the form of PM emissions supplied by the agency to calculate emissions for the other forms of PM emissions. If an agency reported PM10-PRI and/or PM25-PRI emissions but not PM10-FIL, PM25-FIL, or PM-CON emissions, the agency's inventory was not augmented to calculate filterable or condensible emissions. Note that PM-CON is associated with only fuel combustion sources.

For NH_3, the area source inventory includes emissions for natural sources for the following States: SCCs 28060xxxxx for domestic cats and dogs in Delaware, Massachusetts, and New Jersey; 28070xxxxx for wild animals in Delaware, Massachusetts, New Jersey, and New York; and SCC 2810010000 for human perspiration in Delaware, Massachusetts, and New Jersey. The area source inventory also includes NH_3 biogenic emissions (SCC 2701420000) for Massachusetts.

Table III-5. Version 3 2002 MANE-VU Area Source Emissions by State (Tons/Year)

State	CO	NH_3	NO_x	PM10-FIL	PM10-PRI	PM25-FIL	PM25-PRI	PM-CON	SO_2	VOC
Connecticut	70,198	5,318	12,689	37,790	48,281	4,038	14,247	846	12,418	87,302
Delaware	14,052	13,279	2,608	12,910	13,039	3,075	3,204	128	1,588	15,519
District of Columbia	2,300	14	1,644	5,745	6,293	507	1,029	147	1,337	6,432
Maine	109,223	8,747	7,360	155,237	168,953	19,090	32,774	686	13,149	100,621
Maryland	141,178	25,834	15,678	31,116	95,060	3,375	27,318	611	12,393	120,254
Massachusetts	136,552	18,809	31,358	150,046	192,839	23,354	42,067	1,156	54,923	162,016
New Hampshire	79,647	2,158	10,960	32,138	43,328	6,688	17,532	449	7,072	65,370
New Jersey	97,657	17,572	26,692	37,282	61,601	2,811	19,350	476	10,744	167,882
New York	356,254	67,422	98,803	288,991	369,595	30,894	87,154	102	130,409	507,292
Pennsylvania	266,935	79,911	47,591	363,173	391,897	51,792	74,925	266	63,679	240,785
Rhode Island	8,007	883	3,886	7,090	8,295	887	2,064	336	4,557	31,402
Vermont	43,849	9,848	3,208	51,392	56,131	6,729	11,065	180	4,087	23,265
MANE-VU	**1,325,853**	**249,795**	**262,477**	**1,172,909**	**1,455,311**	**153,243**	**332,729**	**5,383**	**316,357**	**1,528,141**

B. State-Specific Methods

For each of the MANE-VU States, this section identifies the temporal basis of the emissions included in Version 3 and discusses revisions incorporated into Version 3. In addition, this section also discusses the origin of each State agency's emissions included in Version 3. For each agency, a table is provided in Appendix B that lists the data source codes by SCC, emission type period, and pollutant. In addition, an electronic folder is provided for each State agency containing the QA Summary Reports prepared for Versions 1, 2, and/or 3 and other files documenting revisions included in Versions 2 and 3. Except for Rhode Island, a QA Summary Report was prepared for Version 1. Subsequently, a QA Summary Report was prepared for States that provided Version 2 or 3 revisions. Rhode Island elected to use EPA's draft 2002 NEI for Versions 1 and 2 but provided revisions for Version 3; therefore, a QA Summary Report is available for Version 3 only for Rhode Island.

1. Connecticut

Table III-6 shows the emission type periods for which Connecticut provided emissions.

Table III-6. Connecticut 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
DAILY	20011201	20020228	27
DAILY	20020601	20020831	27
DAILY	20020601	20020831	29

Table B-1 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Connecticut provided 2002 emissions for many of the area source categories in Version 3. Connecticut elected to use the EPA's 2002 inventory for industrial adhesives. Connecticut elected to use MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for indoor and outdoor residential wood combustion;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads;
- Annual and daily NH_3 emissions for industrial refrigeration processes;
- Annual and daily VOC emissions for PFCs; and
- Annual and daily VOC and NH_3 emissions for composting.

Emissions for the remaining area source categories were taken from the draft 2002 NEI. For Connecticut, these emissions are either based on 2002 data prepared by EPA or carried forward from final Version 3 of the 1999 NEI. Data carried forward from the 1999 NEI originate from either State data included in the 1999 NEI or EPA data developed for the 1999 NEI.

2. Delaware

Table III-7 shows the emission type periods for which Delaware provided emissions.

Table III-7. Delaware 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type	Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20020831	30	DAILY	20011201	20020228	27
ANNUAL	20020101	20021231	30	DAILY	20020101	20020831	27
ANNUAL	20020512	20020512	30	DAILY	20020512	20020512	27
ANNUAL	20020629	20020629	30	DAILY	20020601	20020831	27
ANNUAL	20021029	20021029	30	DAILY	20020629	20020629	27
ANNUAL	20021104	20021104	30	DAILY	20021029	20021029	27
ANNUAL	20021205	20021205	30	DAILY	20021104	20021104	27
				DAILY	20021205	20021205	27

Table B-2 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Delaware provided 2002 emissions for the majority of the area source categories in Version 3, and used 2002 data that EPA prepared for the draft 2002 NEI or MANE-VU-sponsored inventories for the remaining categories. Delaware elected to use the EPA's 2002 inventory for industrial adhesives, and prepared its own inventory for PFCs. Delaware elected to use data from MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for indoor and outdoor wood burning;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved roads (note: there are no unpaved roads in Delaware);
- Annual and daily NH_3 emissions for POTWs; and
- Annual VOC, NO_x, CO, NH_3, PM10-PRI, PM10-FIL, PM25-PRI, PM25-FIL, and SO_2 emissions for open burning categories.

3. District of Columbia

Table III-8 shows the emission type periods for which the District of Columbia provided emissions.

Table III-8. District of Columbia 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
DAILY	20011201	20020228	27
DAILY	20020601	20020831	27

Table B-3 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. The District of Columbia provided 2002 emissions for the majority of the area source categories in Version 3. The District of Columbia provided annual VOC emissions for PFCs for Version 2 that were kept in Version 3. The District of Columbia elected to use the EPA's 2002 inventory for industrial adhesives and indoor wood burning. The exception is for the following categories for which the District of Columbia elected to use data from MANE-VU-sponsored inventories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for outdoor wood burning;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved roads (note: there are no unpaved roads in the District of Columbia);
- Annual and daily VOC and NH_3 emissions for composting; and
- Annual VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for open burning categories.

4. Maine

Table III-9 shows the emission type periods for which Maine provided emissions.

Table III-9. Maine 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
DAILY	20011201	20020228	27
DAILY	20020601	20020831	27
DAILY	20020601	20020831	29
DAILY	20020601	20020929	29

Table B-4 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Maine provided 2002 emissions for many of the area source categories in Version 3. Maine's inventory for industrial adhesives originates from the 1999 NEI. Maine provided annual and daily VOC and annual NH_3 emissions for industrial wastewater treatment that were added to Version 3. Maine elected to use data from MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for indoor and outdoor wood burning;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads;
- Annual and daily VOC emissions for PFCs; and
- Annual and daily VOC and NH_3 emissions for composting.

5. Maryland

Table III-10 shows the emission type periods for which Maryland provided emissions. Table B-5 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC.

Table III-10. Maryland 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type	Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30	MONTHLY	20020101	20020131	30
SEASONAL	20020401	20020930	30	MONTHLY	20020201	20020228	30
SEASONAL	20020401	20021031	30	MONTHLY	20020301	20020331	30
SEASONAL	20020601	20020831	30	MONTHLY	20020401	20020430	30
DAILY	20011201	20020228	27	MONTHLY	20020501	20020531	30
DAILY	20020101	20021231	29	MONTHLY	20020601	20020630	30
DAILY	20020401	20020930	29	MONTHLY	20020701	20020731	30
DAILY	20020401	20021031	29	MONTHLY	20020801	20020831	30
DAILY	20020601	20020831	27	MONTHLY	20020901	20020930	30
DAILY	20020601	20020831	29	MONTHLY	20021001	20021031	30
				MONTHLY	20021101	20021130	30
				MONTHLY	20021201	20021231	30

Maryland provided 2002 annual, seasonal, and daily emissions for the majority of the area source categories in Version 3 and used 2002 data that EPA prepared for the draft 2002 NEI for industrial adhesives and commercial cooking. Maryland prepared its own inventory for PFCs.

Maryland elected to use data from MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for indoor and outdoor wood burning;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads;
- Annual VOC, NO_x, CO, NH_3, PM10-PRI, PM10-FIL, PM25-PRI, PM25-FIL, and SO_2 emissions for open burning categories; and
- Annual and monthly NH_3 emissions for agricultural crop fertilizers.

For Version 2, Maryland provided revisions to annual, seasonal, and daily VOC emissions for SCC 2505030120 (Storage and Transport : Petroleum and Petroleum Product Transport : Truck : Gasoline). Maryland also removed PM10-FIL and PM25-FIL annual, seasonal, and daily records for open burning of land clearing debris (SCC 2610000500). Maryland had revised the PM10-PRI and PM25-PRI emissions in an earlier version of the MANE-VU inventory but not the PM10-FIL and PM25-FIL. As a result of revising the primary emissions, the filterable emissions were no longer met the consistency check as compared to the primary emissions.

QA of PM emissions in Version 3 identified one record for Maryland in county 510 for SCC 2801000003 (Agriculture - Crops : Tilling) where PM10-PRI annual emissions are 2317.2 tons and PM25-PRI annual emissions are 0 tons. For the other counties in Maryland with this SCC, PM25-PRI emissions are about 20% of the PM10-PRI emissions. This issue was not addressed due to time and resource constraints for completing revisions to Version 3.

6. Massachusetts

Table III-11 shows the emission type periods for which Massachusetts provided emissions.

Table III-11. Massachusetts 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
DAILY	20011201	20020228	27
DAILY	20020601	20020831	27
DAILY	20020601	20020831	29

Table B-6 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. Massachusetts provided 2002 annual and daily emissions for the majority of the area source categories in Version 3 and used 2002 data that EPA prepared for the draft 2002 NEI for residential coal combustion, asphalt roofing, and agricultural livestock (NH_3).

Massachusetts elected to use data from MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for indoor and outdoor wood burning;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads;
- Annual and daily VOC emissions for industrial adhesives and PFCs;
- Annual and daily NH_3 emissions for industrial refrigeration processes;
- Annual and daily VOC and NH_3 emissions for composting; and
- Annual VOC, NO_x, CO, NH_3, PM10-PRI, PM10-FIL, PM25-PRI, PM25-FIL, and SO_2 emissions for open burning categories.

For Version 2, Massachusetts revised annual and summer day VOC emissions for 14 counties for the following categories: aircraft refueling, surface coating, degreasing, miscellaneous non-industrial: consumer and commercial products and pesticides, and gasoline service stations (stage 1: balanced submerged fill). Massachusetts also revised annual and daily emissions for 14 counties for forest wildfires, revised annual emissions for four counties for residential open burning of brush using the correct rule penetration factors for the counties, and revised control efficiency and control device data for selected categories in the CE table.

For Version 3, Massachusetts revised annual and summer day VOC emissions for 14 counties for auto refinishing. In the CE table, Massachusetts changed control device code 102 (low-solvent coatings) to 000 (uncontrolled) and associated control efficiency values were set to null for all counties. Massachusetts also added annual and summer day VOC emissions for 14 counties for gasoline service stations (stage 2: displacement loss/controlled).

For PFCs, Massachusetts elected to use the per capita emission factor but provided revisions to the population data, used 2002 owner occupied units to allocate the emissions to counties, and then allocated emissions between the commercial (16%) and residential (84%) sectors. Massachusetts' calculations are provided in the spreadsheet named "Version 3 Revisions" in the Excel file named MA_AR_QA_Report_030806.xls".

7. New Hampshire

Table III-12 shows the emission type periods for which New Hampshire provided emissions. Table B-7 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. New Hampshire provided 2002 emissions for many of the area source categories in Version 3. New Hampshire's inventory for industrial adhesives originates from the 1999 NEI.

Table III-12. New Hampshire 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
DAILY	20011201	20020228	27
DAILY	20020601	20020831	27
DAILY	20020601	20020831	29
MONTHLY	20020101	20020131	30
MONTHLY	20020201	20020228	30
MONTHLY	20020301	20020331	30
MONTHLY	20020401	20020430	30
MONTHLY	20020501	20020531	30
MONTHLY	20020601	20020630	30
MONTHLY	20020701	20020731	30
MONTHLY	20020801	20020831	30
MONTHLY	20020901	20020930	30
MONTHLY	20021001	20021031	30
MONTHLY	20021101	20021130	30
MONTHLY	20021201	20021231	30

New Hampshire elected to use data from MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for indoor and outdoor wood burning;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads;
- Annual and daily VOC emissions for PFCs;
- Annual and daily NH_3 emissions for industrial refrigeration processes and POTWs;
- Annual and daily VOC and NH_3 emissions for composting;
- Annual VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for open burning categories; and
- Annual and monthly NH_3 emissions for agricultural crop fertilizers and livestock.

Emissions for the remaining area source categories were taken from the draft 2002 NEI; these emissions are either based on 2002 data prepared by EPA or EPA data carried forward from final Version 3 of the 1999 NEI.

New Hampshire provided revisions to Version 2 that were kept in Version 3. For Version 2, New Hampshire revised annual and daily VOC emissions for the gasoline storage and transport sector to reflect revisions it made to the 2002 inventory that EPA prepared for the 2002 NEI. The categories revised include bulk plant breathing losses, gasoline service stations (stages 1 and 2 total and underground tank breathing and emptying losses), and gasoline tank trucks.

8. New Jersey

Table III-13 shows the emission type periods for which New Jersey provided emissions.

Table III-13. New Jersey 2002 Area, Version 3:
Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
DAILY	20011201	20020228	27
DAILY	20011201	20020228	29
DAILY	20020601	20020831	27
DAILY	20020601	20020831	29

Table B-8 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. New Jersey provided 2002 emissions for the majority of the area source categories. New Jersey provided its own 2002 inventory for industrial adhesives and PFCs. Emissions for the remaining area source categories were taken from the draft 2002 NEI (that are either based on 2002 data prepared by EPA or EPA data carried forward from final Version 3 of the 1999 NEI) or MANE-VU-sponsored inventories. New Jersey elected to use MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for indoor and outdoor residential wood combustion (replacing New Jersey's indoor residential wood combustion inventory provided in Versions 1 and 2);
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved roads;
- Annual and daily NH_3 emissions for industrial refrigeration processes and POTWs; and
- Annual and daily VOC and NH_3 emissions for composting.

For Version 3, New Jersey added annual and summer day VOC emissions for 21 counties for SCC 2501060100 (gasoline service stations : stage 2: total). The emissions are summarized in the spreadsheet named "Version 3 Revisions" in the Excel file named "NJ_AR_QA_Report_ 030806.xls". New Jersey provided 2002 emissions data for the industrial adhesives and PFC categories in Version 1. For Version 2, New Jersey corrected PM25-PRI emissions that were greater than PM10-PRI emissions for SCC 2601000000 (on-site incineration : all categories : total).

9. New York

Table III-14 shows the emission type periods for which New York provided emissions. Table B-9 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination or because emissions are not reported for all pollutants for the same SCC and emission type period combination.

Table III-14. New York 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
MONTHLY	20020101	20020131	30
MONTHLY	20020201	20020228	30
MONTHLY	20020301	20020331	30
MONTHLY	20020401	20020430	30
MONTHLY	20020501	20020531	30
MONTHLY	20020601	20020630	30
MONTHLY	20020701	20020731	30
MONTHLY	20020801	20020831	30
MONTHLY	20020901	20020930	30
MONTHLY	20021001	20021031	30
MONTHLY	20021101	20021130	30
MONTHLY	20021201	20021231	30

New York provided revisions to annual emissions for all 62 counties for the categories and pollutants shown in Table III-15. This revision completely replaced the 2002 emissions that New York provided in Version 2. Table III-15 also identifies categories and pollutants for which emissions were added to Version 3 (i.e., not in Version 2). The emissions are summarized in the spreadsheet named "Version 3 Revisions" in the Excel file named NY_AR_QA_Report_030806.xls".

New York's inventory in Version 2 included emissions for both residential indoor and outdoor wood burning. For Version 3, New York provided revisions that lowered its overall emissions relative to Version 2 and broke out its inventory to show emissions for fireplaces, woodstoves, and outdoor equipment separately. New York also added NH_3 emissions to its inventory for Version 3. New York's inventory for industrial adhesives originates from the 1999 NEI. New York provided its own 2002 inventory for PFCs. Emissions for the remaining area source categories were taken from the draft 2002 NEI (that are either based on 2002 data prepared by EPA or EPA data carried forward from final Version 3 of the 1999 NEI) or MANE-VU-sponsored inventories.

New York elected to use MANE-VU-sponsored inventories for the following source categories:

- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads;
- Annual and daily NH_3 emissions for agricultural livestock; and
- Annual VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for open burning categories.

A QA issue that may affect the use of the MANE-VU inventory for air quality modeling and revisions to the projection year inventory is the addition of SCCs 2103004001 and 2103004002 by New York that are not in EPA's master SCC list used by the EPA QA program. These SCCs are defined in Table III-15. In addition, the QA program shows SCCs for PFCs and outdoor wood burning as invalid because EPA has not updated the master list to include these SCCs for the EPA QA program. These SCCs were included in Version 2 and should have been assigned speaciation profiles and included in the projection year inventory prepared from Version 2.

Table III-15. Summary of New York's Revisions to Version 3 of MANE-VU's Area Source Inventory

SCC	SCC Description	Pollutant	Type of Revision to Emissions
Revisions to Waste Disposal, Treatment, and Recovery : Wastewater Treatment			
2630020000	Public Owned : Total Processed	VOC	Revised emissions for all pollutants
Revisions to Stationary Source Fuel Combustion : Residential : Wood			
2104008001	Fireplaces: General	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Added NH3, revised emissions for rest of pollutants
2104008052	Non-catalytic Woodstoves: Low Emitting	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Added emissions for all pollutants
2104008070	Outdoor Wood Burning Equipment	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Added emissions for all pollutants
Revisions to Stationary Source Fuel Combustion : Electric Utility			
2101001000	Anthracite Coal : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	No change to emissions
2101002000	Bituminous/Subbituminous Coal : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2101004000	Distillate Oil : Total: Boilers and IC Engines	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2101005000	Residual Oil : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2101006000	Natural Gas : Total: Boilers and IC Engines	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
Revisions to Stationary Source Fuel Combustion : Industrial			
2102001000	Anthracite Coal : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	No change to emissions
2102002000	Bituminous/Subbituminous Coal : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2102004000	Distillate Oil : Total: Boilers and IC Engines	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2102005000	Residual Oil : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2102006000	Natural Gas : Total: Boilers and IC Engines	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2102007000	Liquified Petroleum Gas (LPG) : Total: All Boiler Types	VOC, NOX, CO, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2102008000	Wood : Total: All Boiler Types	VOC, NOX, CO, SO2, PM10-PRI, PM25-PRI	No change to emissions
2102011000	Kerosene : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Added emissions for all pollutants
Revisions to Stationary Source Fuel Combustion : Commercial/Institutional			
2103001000	Anthracite Coal : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	No change to emissions
2103002000	Bituminous/Subbituminous Coal : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2103005000	Residual Oil : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2103004000	Residual Oil : Total: Boilers and IC Engines	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Removed and replaced with data for SCCs 2103004001 and 2103004002
2103004001	Distillate Oil : Boilers	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Added emissions for all pollutants
2103004002	Distillate Oil : IC Engines	VOC, NOX, CO, SO2, PM10-PRI, PM25-PRI	Added emissions for all pollutants
2103006000	Natural Gas : Total: Boilers and IC Engines	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2103007000	Liquified Petroleum Gas (LPG) : Total: All Combustor Types	VOC, NOX, CO, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2103008000	Wood : Total: All Boiler Types	VOC, NOX, CO, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2103011000	Kerosene : Total: All Combustor Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Added emissions for all pollutants

Table III-15. Summary of New York's Revisions to Version 3 of MANE-VU's Area Source Inventory (Continued)

SCC	SCC Description	Pollutant	Type of Revision to Emissions
Revisions to Stationary Source Fuel Combustion : Residential			
2104001000	Anthracite Coal : Total: All Combustor Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	No change to emissions
2104002000	Bituminous/Subbituminous Coal : Total: All Combustor Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2104004000	Distillate Oil : Total: All Combustor Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2104006010	Natural Gas : Residential Furnaces	VOC, NOX, CO, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2104007000	Liquified Petroleum Gas (LPG) : Total: All Combustor Types	VOC, NOX, CO, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2104011000	Kerosene : Total: All Heater Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Added emissions for all pollutants

10. Pennsylvania

Table III-16 shows the emission type periods for which Pennsylvania provided emissions.

Table III-16. Pennsylvania 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type	Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30	MONTHLY	20020101	20020131	30
DAILY	20011201	20020228	27	MONTHLY	20020201	20020228	30
DAILY	20020601	20020831	27	MONTHLY	20020301	20020331	30
				MONTHLY	20020401	20020430	30
				MONTHLY	20020501	20020531	30
				MONTHLY	20020601	20020630	30
				MONTHLY	20020701	20020731	30
				MONTHLY	20020801	20020831	30
				MONTHLY	20020901	20020930	30
				MONTHLY	20021001	20021031	30
				MONTHLY	20021101	20021130	30
				MONTHLY	20021201	20021231	30

Table B-10 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Pennsylvania provided 2002 emissions for the majority of the area source categories. Pennsylvania provided its own 2002 inventory for PFCs and residential indoor wood burning. Pennsylvania's inventory for industrial adhesives originates from the 1999 NEI. Emissions for the remaining area source categories were taken from the draft 2002 NEI (that are either based on 2002 data prepared by EPA or EPA data carried forward from final Version 3 of the 1999 NEI) or MANE-VU-sponsored inventories.

Pennsylvania elected to use MANE-VU-sponsored inventories for the following source categories:

- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads;
- Annual and daily NH_3 emissions for industrial refrigeration processes and agricultural crop fertilizers and livestock;
- Annual and daily VOC and NH_3 emissions for POTWs and composting; and
- Annual VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for open burning categories.

11. Rhode Island

Table III-17 shows the emission type periods for which Rhode Island provided emissions.

Table III-17. Rhode Island 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
DAILY	20011201	20020228	27
DAILY	20020601	20020831	27
DAILY	20020601	20020831	29

Table B-11 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. Rhode Island provided 2002 annual VOC emissions for several solvent utilization categories (surface coating, degreasing, graphic arts, rubber/plastics, and industrial adhesive); annual and daily VOC emissions for petroleum and petroleum product storage (gasoline service stations and all transport types); and annual VOC emissions for POTWs. Rhode Island's indoor wood burning inventory originates from the draft 2002 NEI. Emissions for the remaining area source categories were taken from the draft 2002 NEI (that are either based on 2002 data prepared by EPA or EPA data carried forward from final Version 3 of the 1999 NEI) or MANE-VU-sponsored inventories.

Rhode Island elected to use MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for outdoor wood burning;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads; and
- Annual and daily VOC emissions for PFCs.

12. Vermont

Table III-18 shows the emission type periods for which Vermont provided emissions.

Table III-18. Vermont 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
DAILY	20011201	20020228	27
DAILY	20020601	20020831	27
DAILY	20020601	20020831	29

Table B-12 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. Vermont provided 2002 annual VOC, NO_x, CO, PM10-PRI or PM10-FIL, PM25-PRI or PM25-FIL, and SO_2 emissions for residential fuel combustion (distillate oil, natural gas, LPG, and indoor wood burning); annual VOC emissions for gasoline service stations and breathing losses at bulk terminals; annual VOC, NO_x, CO, PM10-PRI, PM25-PRI, and SO_2 emissions for residential open burning; annual VOC, NO_x, CO, NH_3, PM10-PRI, and PM25-PRI emissions for forest fires, and annual VOC, NO_x, CO, PM10-PRI, and PM25-PRI emissions for structure fires. Vermont's inventory for industrial adhesives originates from the 1999 NEI.

For Version 2, Vermont provided revisions to EPA's draft 2002 inventory for SCC 2501050120 (bulk stations and terminals : breathing loss : gasoline) to incorporate the effects of vapor balance controls not accounted for in the EPA estimates. The revised inventory for this category was added to Version 2 (and kept in Version 3) that did not include this category. Control records were added to the NIF 3.0 CE table for the counties with vapor balance controls. In addition, Vermont provided emissions for three counties (i.e., county FIPS codes 50015, 50017, and 50019) that were not in EPA's inventory. Emissions for the remaining area source categories were taken from the draft 2002 NEI (that are either based on 2002 data prepared by EPA or EPA data carried forward from final Version 3 of the 1999 NEI) or MANE-VU-sponsored inventories. Vermont elected to use MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for outdoor wood burning;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads;
- Annual and daily NH_3 emissions for industrial refrigeration processes and POTWs;
- Annual and daily VOC emissions for PFCs;
- Annual and daily VOC and NH_3 emissions for composting; and
- Annual VOC, NO_x, CO, NH_3, PM10-PRI, PM10-FIL, PM25-PRI, PM25-FIL, and SO_2 emissions for open burning categories.

C. What Issues Need to be Addressed in Future Versions?

This section provides a summary of potential revisions to incorporate into future versions of the MANE-VU area source inventory.

All States – A coordinated effort between the State agencies should be developed to apply consistent methods to avoid having to apply procedures to augment inventory data to correct for the QA issues and fill in missing data as discussed previously in this chapter. For example, this will ensure that consistent methods are applied across State agencies to ensure consistent and accurate reporting of source categories using the same SCCs across States, PM emissions, and minimize other QA issues that were identified during the development of Versions 1, 2, and 3 of the inventory.

For PM emissions, the State agencies should develop and apply a consistent method for including condensible emissions for fuel combustion sources that can be applied when the agencies develop their inventories. This may include compiling the emission factors for all forms of PM into one database, organized by SCC and control type (for filterable emissions), and sharing the database among the MANE-VU State agencies. Use of a consistent set of emission factors will help to avoid the PM consistency issues identified in Versions 1, 2, and 3 of the MANE-VU inventory as well as ensure that condensible emissions are included in the primary emissions reported in the inventory.

State-specific suggestions are as follows:

Delaware: Revise the residential wood combustion emissions inventory with the latest revisions sponsored by MARAMA.

Rhode Island: This State felt that the area sources (from the nonpoint inventory EPA prepared) which they had changed to zeros in Version 3 would revert back to the Version 2 numbers which were from the EPA report. Rhode Island would like to see this change in the next version of the inventory. (Table with changes can be received upon request).

New Jersey:

- Why is the EPA VOC emission factor for fireplaces completely out of proportion with the other emission factors? The ratio of conventional wood stoves/fireplaces = 0% to 10% for other pollutants and is 77% for VOC. It is discussed in the Pechan Technical Memo #5, 9/3/03, page 19, how a study of the accuracy of the emission factors showed the VOC should be more like 10 to 30 lb/ton, instead of 229 lb/ton and the woodstove emission factors (certified) should be higher than Emission Inventory Improvement Program guidance.

- The summer seasonal adjustment factors for indoor wood burning used in the model appear high. This combined with the very high VOC emission factor results in high ozone season wood burning emissions.

- In general, the accuracy of the very large residential wood burning numbers, all pollutants.

- The large fugitive dust inventory numbers don not correlate to dust found in monitors, even with the latest 30% to 40% reduction in paved and unpaved road emissions.

- We need consistent guidance from the EPA for adhesives and sealants, PFC, and commercial cooking.

CHAPTER IV – NONROAD SOURCES

A. General Methods for all States

This section provides an overview of the data sources and QA steps used in preparing the 2002 nonroad sector inventory for the MANE-VU States. The nonroad sector is comprised of nonroad engines included in EPA's NONROAD model, as well as other engines not modeled in NONROAD, including aircraft, commercial marine vessels and locomotives.

1. What Data Sources Were Used?

Data sources used for the various nonroad categories are described below.

a. Aircraft, Commercial Marine, and Locomotive Categories

As a starting point, aircraft, commercial marine vessel and locomotive inventories were prepared using the inventories that State agencies submitted to the EPA in June 2004 as a requirement of the CERR. In addition, some States provided data directly to MANE-VU for use in this inventory that were not submitted for the CERR.

Missing data were supplemented with estimates from EPA's preliminary 2002 NEI. For the aircraft and commercial marine vessel source categories, the 2002 NEI CAP emissions were estimated by carrying over the 2001 estimates. 2001 emissions were estimated using the methodologies described in EPA's *Documentation for Aircraft, Commercial Marine Vessel, Locomotive, and Other Nonroad Components of the National Emissions Inventory* (EPA, 2003b). The 2002 locomotive emissions were calculated using 2002 activity data and the methodologies described in the EPA, 2003b documentation.

Table IV-1 provides a summary of the aircraft, commercial marine, and locomotive emission SCCs reported in the MANE-VU inventory. Table IV-2 provides a summary of the basis for these nonroad subsector emissions by State.

Table IV-1. List of Unique Aircraft, Commercial Marine, and Locomotive SCCs Reported by States in MANE-VU Inventory

SCC	SCC Description 1	SCC Description 2	SCC Description 3	SCC Description 4
2275000000	Mobile Sources	Aircraft	All Aircraft Types and Operations	Total
2275001000	Mobile Sources	Aircraft	Military Aircraft	Total
2275020000	Mobile Sources	Aircraft	Commercial Aircraft	Total: All Types
2275050000	Mobile Sources	Aircraft	General Aviation	Total
2275060000	Mobile Sources	Aircraft	Air Taxi	Total
2275070000	Mobile Sources	Aircraft	Aircraft Auxiliary Power Units	Total
2280000000	Mobile Sources	Marine Vessels, Commercial	All Fuels	Total, All Vessel Types
2280002000	Mobile Sources	Marine Vessels, Commercial	Diesel	Total, All Vessel Types
2280002010	Mobile Sources	Marine Vessels, Commercial	Diesel	Ocean-going Vessels
2280002020	Mobile Sources	Marine Vessels, Commercial	Diesel	Harbor Vessels
2280002100	Mobile Sources	Marine Vessels, Commercial	Diesel	Port emissions
2280002200	Mobile Sources	Marine Vessels, Commercial	Diesel	Underway emissions
2280003100	Mobile Sources	Marine Vessels, Commercial	Residual	Port emissions
2280003200	Mobile Sources	Marine Vessels, Commercial	Residual	Underway emissions
2285000000	Mobile Sources	Railroad Equipment	All Fuels	Total
2285002000	Mobile Sources	Railroad Equipment	Diesel	Total
2285002005	Mobile Sources	Railroad Equipment	Diesel	Total Line Haul Locomotives
2285002006	Mobile Sources	Railroad Equipment	Diesel	Line Haul Locomotives: Class I Operations
2285002007	Mobile Sources	Railroad Equipment	Diesel	Line Haul Locomotives: Class II / III Operations
2285002008	Mobile Sources	Railroad Equipment	Diesel	Line Haul Locomotives: Passenger Trains (Amtrak)
2285002009	Mobile Sources	Railroad Equipment	Diesel	Line Haul Locomotives: Commuter Lines
2285002010	Mobile Sources	Railroad Equipment	Diesel	Yard Locomotives

Table IV-2. Summary of Basis for 2002 MANE-VU Aircraft, Commercial Marine, and Locomotive Inventory

FIPSST	State	Basis for Subsector of Nonroad Inventory		
		Aircraft	Commercial Marine Vessels	Locomotives
09	Connecticut	2002 Preliminary NEI	2002 Preliminary NEI	State supplied in March 2006
10	Delaware	June 2004 CERR Submittal; State supplied revisions in Sep 2004	June 2004 CERR Submittal	June 2004 CERR Submittal
11	District of Columbia	Not supplied by State and not available from NEI	2002 Preliminary NEI	June 2004 CERR Submittal
23	Maine	State supplied in Oct 2004	State supplied in Oct 2004	State supplied in Oct 2004
24	Maryland	June 2004 CERR Submittal; State supplied revisions in Sep 2004	June 2004 CERR Submittal; State supplied revisions in Oct 2004	June 2004 CERR Submittal
25	Massachusetts	June 2004 CERR Submittal	State-supplied for June 2004 CERR Submittal, with revisions as directed by State	June 2004 CERR Submittal
33	New Hampshire	June 2004 CERR Submittal	2002 Preliminary NEI	June 2004 CERR Submittal
34	New Jersey	June 2004 CERR Submittal	June 2004 CERR Submittal	June 2004 CERR Submittal
36	New York	2002 Preliminary NEI	State supplied in Oct 2004	2002 Preliminary NEI
42	Pennsylvania	State supplied to Pechan in June 2004	State supplied to Pechan in June 2004	State supplied to Pechan in June 2004; State supplied revisions in Aug 2005
44	Rhode Island	State-supplied for June 2004 CERR Submittal, with revisions as directed by State	State-supplied for June 2004 CERR Submittal, with revisions as directed by State	State-supplied in Oct 2004
50	Vermont	2002 Preliminary NEI	Not supplied by State and not available from NEI	Not supplied by State and not available from NEI

b. NONROAD Model Categories

NONROAD model categories include equipment such as recreational marine and land-based vehicles, farm and construction machinery, and lawn and garden equipment. Aircraft ground support equipment (GSE) and rail maintenance equipment are also included in NONROAD. These equipment are powered by diesel, gasoline, compressed natural gas (CNG) and LPG engines.

EPA released a final version of NONROAD during December 2005 called NONROAD2005 (EPA, 2005a). To reflect the updates made to EPA's final NONROAD model, all MANE-VU Version 2 NONROAD model estimates were replaced with updated NONROAD2005 emission estimates.

EPA also released an updated version of its NMIM, which incorporates the final NONROAD2005 model. EPA's NMIM2005 is a consolidated modeling system that incorporates the NONROAD and MOBILE models, along with a county database of inputs (EPA, 2005b). The NMIM county database contains monthly input data to reflect county-specific fuel parameters and temperatures. Because incorporating revised monthly inputs for use in NMIM2005 is more efficient than preparing county-specific monthly option files needed to run NONROAD2005 independently, Pechan used NMIM2005 for most MANE-VU States. The two exceptions were for the District of Columbia and Maine due to the differences in oxygenated fuel inputs used for NMIM versus NONROAD.

As a first step, Pechan compiled fuel input data available from NMIM2005 by county and by month for all MANE-VU states for 2002. Pechan developed a spreadsheet that summarized the gasoline RVP, gasoline weight percent oxygen, and gasoline and diesel sulfur content proposed as inputs to the updated runs. Values consistent with State-supplied MOBILE6 inputs used for the development of 2002 MANE-VU highway vehicle inventories were presented for use where they differed from NMIM. Pechan requested that States confirm the use of these data for the NONROAD model runs, or provide alternative inputs.

The final county, monthly NMIM inputs provided or confirmed by the States for RVP, weight percent oxygen, and gasoline sulfur are presented in Appendix C, Table C-1. Pechan used NMIM's 2002 default value for nonroad diesel sulfur content. This value is 2,457 parts per million (ppm) for land-based equipment, and 2,767 ppm for recreational marine, for all MANE-VU counties.

Pechan also requested that States provide any local activity data in the format of updated NONROAD external data files. These include data files which specify activity parameters such as equipment populations, equipment annual hours of use, county allocation factors, and monthly allocation profiles.

Pechan updated the NMIM county database for 2002 to add in new gasoline profiles to reflect the monthly and county fuel input values provided by States. Pechan also updated the NMIM county database to cross reference the State-supplied NONROAD data files that replaced default

NONROAD2005 inputs. Pechan then ran NMIM/NONROAD2005 at the county and monthly level for 2002 and generated the results in NIF 3.0.

c. NONROAD2005 Model Runs

The majority of the model runs were performed using NMIM2005. NMIM and NONROAD have differences in the required format of the oxygenated fuel inputs. For NONROAD, this variable is required to be expressed as a composite weight percent oxygen that accounts for the market share and the percent oxygen of all contributing oxygenates. Since NMIM models HAP emissions, the volume percent and market share of each of four oxygenates must be entered as fuel inputs. These oxygenates include methyl tertiary butyl ether (MTBE), ethyl tertiary butyl ether (ETBE), ethanol (ETOH), and tertiary amyl methyl ether (TAME). In cases where only one known oxygenate is present, this is straightforward to reflect in NMIM, as weight percent can be easily converted to volume percent. However, two States (the District of Columbia and Maine) provided a composite weight percent value for more than one oxygenate, but could not provide the corresponding volume percent and market share for each oxygenate to use in NMIM. As such, Pechan used NONROAD2005 for both the District of Columbia and Maine so that their submitted values for weight percent oxygen could be used directly. The 2002 minimum, maximum, and average hourly temperatures included in NMIM2005 were used to calculate average monthly temperature inputs to NONROAD for both States.

Pechan developed monthly NONROAD option files and ran these files through NONROAD2005 to generate monthly emissions that were then summed to develop an annual 2002 inventory. Pechan performed additional calculations using NMIM emission factors and fuel consumption to calculate NH_3, since NONROAD does not calculate NH_3 emissions.

2. What Quality Assurance Steps Were Performed?

The final MANE-VU nonroad inventory was comprised of emission estimates that were either: 1) submitted by States for the June 2004 CERR submittal or as additional revisions after this date; 2) developed using NONROAD model inputs provided or approved by States; or 3) reported by EPA in the preliminary 2002 NEI. As such, the QA steps were tailored to each of these types of submittals. Note that a Quality Assurance Plan was prepared prior to initiating work on Version 1 (MANE-VU, 2003). This plan was applied during development of all three versions of the MANE-VU inventory.

a. Summary of QA checks for State emission submittals

Nonroad emission submittals were accepted as part of the June 2004 CERR submittals to EPA or as direct submittals to MANE-VU. Upon receipt of an emissions submittal, Pechan prepared spreadsheets providing a unique list of errors identified by running the EPA NIF 3.0 QA software tool on the nonroad source inventory (EPA, 2004a). Notes were provided to identify the NIF 3.0 tables in which the errors appeared, as well as clarification as to where an error occurred (e.g., for what SCC and pollutant). For many of the errors, Pechan provided a potential correction, and States indicated whether they agreed with the correction, or provided their own instructions for correcting the error. These spreadsheets served to document each state's direction on how to correct errors and the state's representative authorizing the correction.

The list of general QA checks include the following:

- Duplicate records (i.e., only one record allowed for each unique county/SCC/ pollutant)
- Invalid record type
- Mandatory field is not populated
- Invalid field length
- Invalid data type (e.g., invalid SCCs or pollutants)
- "Out-of-range" emission values
- Referential integrity (i.e., the presence of widow or orphan records in the NIF 3.0 relational tables)

Note that EPA's NIF 3.0 QA software tool also checks for other specific QA issues by field not listed above. See EPA's User Guide, Appendix A for a listing of all potential errors that are checked by the program, and EPA's guidance for how they should be resolved.

Pechan also performed other general QA procedures outside of EPA's NIF 3.0 QA software tool, including pollutant augmentation, SCC reconciliation, and completeness and reasonableness checks.

Pechan performed pollutant augmentation in cases where the complete set of CAPs and NH_3 were not provided by a State. For example, several States did not provide PM25-PRI, but did provide PM10-PRI, so that PM25-PRI was estimated using EPA-published particle-size multipliers. Where multipliers were not available from EPA documentation, Pechan used available pollutant emission estimates reported by all other MANE-VU States to develop "emission ratios" for a given SCC. These "emission ratios" were then used to multiply available pollutant estimates to estimate values for the missing pollutants. Specific values used for a given State and SCC are cited in the "State-Specific Methods" section below.

In addition, SCC assignments were reviewed and reassigned after clarification from States as to what the specific SCC estimate represented. For example, a State may have reported all aircraft activity under one of the specific aircraft type SCCs (e.g., commercial or general aviation), when it should more accurately be reported under the general SCC 2275000000 (All Aircraft Types and Operations).

Finally, completeness checks were performed on the inventory to determine that emissions for nonroad categories known to operate in a State or county were being reported. Note that emissions may not be reported for all NONROAD SCCs for all counties in the MANE-VU RPO, and will depend on the geographic allocation methods used by the model, or specific allocation data provided by a State.

NONROAD model category estimates originally provided by States for the June 2004 submittal were replaced by emission estimates developed using NMIM/NONROAD 2005. As such, this

TSD will not document corrections made by Pechan to these original NONROAD model estimates, since they were replaced for Version 3.

b. Data input summary spreadsheets for State review

As mentioned above for NONROAD model categories, Pechan prepared the MANE-VU emission estimates using EPA's final NMIM/NONROAD2005 model. An important QA step in running NONROAD is to ensure that the inputs used for fuel specifications and temperatures for a given county and month in 2002 are representative. As such, Pechan compiled the RVP, percent oxygen, and gasoline sulfur inputs reported by NMIM2005 by county and month for States to review. If a State had previously submitted input data for the MANE-VU onroad inventory, these data were proposed in lieu of NMIM data. States either confirmed use of the default NMIM/onroad MANE-VU inputs, or provided alternate data in the specified format to replace the proposed inputs. Pechan updated the *gasoline* table in the NMIM county database to add in new gasoline profiles to reflect revised fuel input values provided by States. These profiles were then cross-referenced to the appropriate county and month in a separate table called *countyyearmonth*. Pechan performed QA checks of these NMIM county database tables for each State to ensure that the correct fuel data were input by county and by month as requested by the State.

c. QA of final mass emissions

After performing QA of the inputs, Pechan ran NMIM/NONROAD2005 at the county and monthly level for 2002 and generated the results in NIF 3.0. As a QA step, Pechan ran EPA's NIF 3.0 QA software tool on the NIF 3.0 files. Errors identified were resolved and checked to ensure they were corrected in the final files.

As part of final processing of the inventories, and to assist in tracking revisions and preparing emission summaries, Pechan added the following NIF plus fields to each table:

TblCE : State FIPS, County FIPS, Data Source, Revision Date
TblEM : State FIPS, County FIPS, Data Source, Revision Date, CAP/HAP, Year, Emission Ton Value, Emission Type Period
TblEP : State FIPS, County FIPS, Data Source, Revision Date
TblPE : State FIPS, County FIPS, Data Source, Revision Date
TblTR : State FIPS, County FIPS, Revision Date

Data source codes are included to document the origin of the emissions data, which assists in tracking and quality-assuring revisions made to the emission estimates. Table IV-3 provides a listing of the data source codes included in the MANE-VU nonroad inventories, as well as a definition of each code. State FIPS and County FIPS are separated out to assist in developing area-specific emission summaries, and the Emission Ton Value places all emissions on the same basis. The Emission Type Period describes the temporal basis of the estimates (in this case, they are all annual). Finally, the Revision Date tracks when record-specific changes are made.

Table IV-3. Data Source Code Descriptions

Data Source Code	Description
E-02-F	E = EPA-generated data; -02 = year 2002; -F = emissions are carried forward for inclusion in the 2002 base year
E-02-X	E = EPA-generated data; -02 = year 2002; -F = emissions are not grown or carried forward
P-02-X	P = RPO-generated data; -02 = year 2002; -X = emissions are not grown or carried forward
S-02-X	S = State data; -02 = year 2002 data; -X = emissions are not grown or carried forward

3. Version 3 Emission Summaries

Table IV-4 presents a summary of the annual 2002 nonroad sector pollutant emissions for each MANE-VU State, as well as a regional total. These emissions include SCCs for all NONROAD model engines, as well as aircraft, commercial marine vessel, and locomotive categories, where applicable, for each State. Table IV-5 presents the emission results for NONROAD model equipment only, while Table IV-6 provides emission estimates for aircraft, commercial marine vessel, and locomotive categories separately.

Table IV-4. Annual 2002 Nonroad Sector Emissions by MANE-VU State (Tons/Year)

State	CO	NH_3	NO_x	PM10-PRI	PM25-PRI	SO_2	VOC
Connecticut	276,773.0	16.6	25,460.2	1,952.1	1,793.9	2,087.4	33,880.2
Delaware	68,782.0	5.2	16,226.5	1,021.4	925.6	3,983.3	8,010.1
District of Columbia	18,844.7	2.4	3,571.3	310.2	298.7	375.4	2,072.5
Maine	153,423.6	11.4	9,820.4	1,436.8	1,329.4	916.8	31,144.1
Maryland	437,400.3	28.2	37,472.2	4,936.0	4,357.1	7,941.6	56,330.4
Massachusetts	461,514.3	28.2	42,768.5	3,531.2	3,226.4	3,791.2	56,748.5
New Hampshire	130,782.2	9.1	9,912.1	1,057.8	965.4	891.0	22,376.5
New Jersey	704,396.4	43.0	63,479.0	5,495.1	4,997.2	15,686.0	83,918.9
New York	1,233,968.3	79.3	109,878.3	9,605.3	8,820.9	12,919.7	157,611.7
Pennsylvania	931,978.0	55.0	103,824.2	9,737.9	8,440.1	7,915.0	102,331.0
Rhode Island	73,012.7	4.1	5,001.5	500.2	443.1	377.2	7,779.7
Vermont	62,248.1	4.5	4,217.1	529.9	485.8	372.1	10,547.6
Total MANE-VU	**4,553,123.5**	**286.9**	**431,631.3**	**40,113.9**	**36,083.6**	**57,256.6**	**572,751.3**

Table IV-5. Annual 2002 NONROAD2005 Model Emissions by MANE-VU State (Tons/Year)

State	CO	NH_3	NO_x	PM10-PRI	PM25-PRI	SO_2	VOC
Connecticut	274,387.6	16.6	17,897.0	1,712.9	1,577.6	1,376.6	33,519.0
Delaware	65,954.1	4.9	5,798.3	570.4	525.1	513.0	7,530.5
District of Columbia	18,774.9	2.4	3,066.4	298.4	287.8	341.3	2,052.9
Maine	148,555.3	11.4	8,228.9	1,204.2	1,135.1	771.8	30,741.0
Maryland	424,776.8	28.2	27,789.1	3,118.7	2,870.4	2,569.2	53,035.0
Massachusetts	448,398.7	28.2	30,046.7	2,887.2	2,658.8	2,428.1	54,835.8
New Hampshire	128,571.5	9.1	8,149.5	946.8	871.7	672.7	22,237.8
New Jersey	692,547.9	43.0	43,515.2	4,285.4	3,950.5	3,524.9	81,900.4
New York	1,219,308.7	79.3	78,648.3	8,338.9	7,677.1	6,966.3	155,475.1
Pennsylvania	903,167.7	55.0	62,265.2	6,281.5	5,784.3	5,292.4	99,240.9
Rhode Island	71,573.1	4.1	4,563.9	402.8	371.1	335.5	7,698.7
Vermont	61,732.1	4.5	4,169.9	517.6	476.6	367.6	10,520.4
Total MANE-VU	**4,457,748.6**	**286.6**	**294,138.2**	**30,564.8**	**28,186.1**	**25,159.4**	**558,787.4**

Table IV-6. Annual 2002 Aircraft, Commercial Marine, and Locomotive Emissions by MANE-VU State (Tons/Year)

State	CO	NH_3	NO_x	PM10-PRI	PM25-PRI	SO_2	VOC
Connecticut	2,385.4	0.0	7,563.2	239.2	216.4	710.8	361.2
Delaware	2,827.9	0.3	10,428.2	451.1	400.5	3,470.3	479.6
District of Columbia	69.7	0.0	505.0	11.8	10.9	34.1	19.7
Maine	4,868.3	0.0	1,591.5	232.6	194.3	145.0	403.1
Maryland	12,623.5	0.0	9,683.2	1,817.3	1,486.7	5,372.3	3,295.4
Massachusetts	13,115.6	0.0	12,721.7	644.0	567.6	1,363.1	1,912.7
New Hampshire	2,210.7	0.0	1,762.5	111.0	93.7	218.3	138.6
New Jersey	11,848.5	0.0	19,963.9	1,209.7	1,046.7	12,161.1	2,018.6
New York	14,659.6	0.0	31,230.0	1,266.4	1,143.8	5,953.4	2,136.6
Pennsylvania	28,810.2	0.0	41,559.0	3,456.4	2,655.8	2,622.7	3,090.2
Rhode Island	1,439.6	0.0	437.6	97.4	72.1	41.7	81.0
Vermont	516.0	0.0	47.3	12.2	9.2	4.5	27.2
Total MANE-VU	**95,374.9**	**0.3**	**137,493.1**	**9,549.1**	**7,897.4**	**32,097.3**	**13,963.9**

B. State-Specific Methods

The following sections describe the methods used and QA issues addressed for each MANE-VU State in developing Version 3.0 of MANE-VU's nonroad sector inventory.

1. Connecticut

a. What Data Sources Were Used?

Pechan ran EPA's NMIM2005 to generate NONROAD model SCC emission estimates. Pechan incorporated Connecticut-supplied data for gasoline sulfur content and RVP into the NMIM database. Pechan used NMIM defaults for diesel sulfur content and for weight percent oxygenate values. The final input data by county and by month are summarized in Table B-1.

Aircraft and commercial marine vessel emissions are based on the preliminary 2002 nonroad NEI. In March 2006, Connecticut provided county-level emission estimates for VOC, NO_x, and CO for all line-haul and switchyard locomotive SCCs.

b. What QA Issues were Identified and Addressed?

For commercial aircraft (SCC 2275020000), PM10-PRI and PM25-PRI were not reported in the EPA's NEI. For completeness, Pechan estimated PM10-PRI emissions by applying an average PM10-PRI/NO_x emission ratio of 0.058 to available NO_x emissions. Commercial aircraft PM25-PRI emissions were estimated by multiplying PM10-PRI emissions by a particle size multiplier of 0.976 (ERG, 2004).

c. What Issues Need to be Addressed in Future Versions?

Because EPA's NEI does not include locomotive category emission estimates for Connecticut, and since Connecticut only provided emission estimates for VOC, NO_x, and CO, estimates are still missing for PM10-PRI, PM25-PRI, and SO_2.

2. Delaware

a. What Data Sources Were Used?

Pechan used NMIM2005 to generate NONROAD model SCC emission estimates. Delaware approved of the fuel inputs used in NMIM2005. The final fuel input data by county and by month are summarized in Table B-1. Delaware provided updated files listed in Table IV-7 to replace the default files used in NMIM. These included county allocation files for five nonroad categories, and a revised equipment population file with updated populations for specific SCCs.

Table IV-7. Delaware NONROAD External Data Files

County NR File Name	File Type
10000air.alo	County allocation for airport GSE
10000gc.alo	County allocation for golf carts
10000hou.alo	County allocation for lawn & garden
10000log.alo	County allocation for logging
10000rvp.alo	County allocation for land-based recreational
10000.pop	Equipment population

Pechan used Delaware's June 2004 CERR submittal as the basis for aircraft, locomotive and commercial marine vessel category estimates in the 2002 MANE-VU inventory.

i. What Revisions Were Requested by State?

In September 2004, Delaware provided corrections to the general aviation emissions (SCC 227505000) for all pollutants for Kent County to add in general aviation activity at Dover Air Force Base.

b. What QA Issues were Identified and Addressed?

Pechan performed QA of the file, and revised the file to address QA issues as approved by Delaware. Commercial aircraft (SCC 2275020000) included emission estimates for all pollutants except PM25-PRI. Pechan calculated commercial aircraft PM25-PRI emissions using the assumption that 97.6% of PM10-PRI is PM25-PRI (ERG, 2004).

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

3. District of Columbia

a. What Data Sources Were Used?

Pechan developed NONROAD Model SCC emissions for District of Columbia using NONROAD2005. NONROAD2005 was used directly instead of NMIM2005 to incorporate State-supplied weight percent oxygen data. The District of Columbia also requested changes to the default NMIM RVP and gasoline values for some months. The final fuel input data by county and by month are summarized in Table B-1.

The 2002 minimum, maximum, and average hourly temperatures included in NMIM were used to calculate average monthly temperature inputs to NONROAD. Pechan developed monthly NONROAD2005 option files for the District of Columbia. Pechan ran the option files through NONROAD2005 to generate monthly emissions that were then summed to develop an annual 2002 inventory. Pechan performed additional calculations using NMIM emission factors and NONROAD2005 fuel consumption to calculate NH_3, since NONROAD does not calculate NH_3 emissions. NMIM reports NH_3 emission factors of 116 grams NH_3 per gallon gasoline for gasoline engines, and 83 grams NH_3 per gallon fuel for diesel engines.

The District of Columbia provided locomotive emissions for their nonroad sector June 2004 CERR submittal.

b. What QA Issues were Identified and Addressed?

Pechan performed QA of the file, and revised the file to address QA issues as approved by the District of Columbia. PM emissions in the inventory were not identified as either PM_{10} or $PM_{2.5}$, nor were the emissions identified as primary or filterable. The District of Columbia authorized Pechan to change PM to PM10-PRI. Locomotive PM25-PRI emissions were estimated using the assumption that 90 percent of PM_{10} is $PM_{2.5}$ (EPA, 2003b). Hydrocarbon (HC) pollutant emissions were also removed from the inventory, as this is not a valid pollutant code in NIF3.0.

Pechan added commercial marine vessel emissions from the preliminary 2002 Nonroad NEI. There are no aircraft emission estimates in the NEI for the District of Columbia, since there are not airports located in the District of Columbia.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

4. Maine

a. What Data Sources Were Used?

Pechan developed NONROAD model SCC emissions using NONROAD2005. For Maine, weight percent oxygen values were submitted based on actual fuel survey results by county and by month, but Maine had not tracked the corresponding oxygenate volume percent and market share. As such, Pechan used NONROAD2005 so that Maine's values for weight percent oxygen could be reflected. Maine also provided revisions to the RVP and gasoline sulfur values reported in NMIM2005. Pechan developed NONROAD2005 monthly option files for two county groups in Maine that shared values for all three fuel inputs (see Appendix C, Table C-1). The 2002 minimum, maximum, and average hourly temperatures included in NMIM were used to calculate average monthly temperature inputs to NONROAD. Pechan ran the option files through NONROAD2005 to generate monthly emissions that were then summed to develop an annual 2002 inventory. Pechan performed additional calculations using NMIM emission factors and fuel consumption to calculate NH_3, since NONROAD does not calculate NH_3 emissions. NMIM reports NH_3 emission factors of 116 grams NH_3 per gallon gasoline for gasoline engines, and 83 grams NH_3 per gallon fuel for diesel engines.

i. What Revisions Were Requested by State?

In October 2004, Maine provided aircraft, commercial marine vessel, and locomotive SCC emissions to be added to their inventory. Commercial marine emissions submitted by Maine only represented in-port emissions. Diesel and residual commercial marine underway emissions (SCCs 2280002200 and 2280003200) were based on EPA's 2002 preliminary NEI.

b. What QA Issues were Identified and Addressed?

PM25-PRI estimates were missing from all aircraft SCC records provided by Maine. Pechan estimated general aviation, military aircraft, and air taxi PM25-PRI emissions by multiplying PM10-PRI emissions by a particle size multiplier of 0.69 (EPA, 2003b). Commercial aircraft PM25-PRI emissions were estimated by multiplying PM10-PRI emissions by a particle size multiplier of 0.976 (ERG, 2004). In-port commercial marine emissions (SCC 2280002100) were missing estimates for PM10-PRI and PM25-PRI. Pechan estimated PM10-PRI emissions by applying a PM10-PRI/NO_x emission ratio of 0.042 to available NO_x emissions. PM25-PRI emissions were estimated by multiplying PM10-PRI emissions by a particle size multiplier of 0.92 (EPA, 2003b).

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

5. Maryland

a. What Data Sources Were Used?

Pechan used NMIM2005 to prepare NONROAD model SCC emission estimates. Maryland reviewed the default NMIM inputs and provided revisions to the input values for RVP and weight percent oxygen for all months. Maryland requested that a value of 2.1 percent oxygen be used for all counties and months. This weight percent value was then converted to a volume percent of 11.8 percent for use in NMIM, assuming MTBE was the only oxygenate. In addition, gasoline sulfur content revisions were incorporated into NMIM for select counties for the months of April through September. The final fuel input data by county and by month are summarized in Table B-1.

Maryland also provided updated files listed in Table IV-8 to replace the default files used in NMIM. These included county allocation files for several nonroad categories.

Table IV-8. Maryland NONROAD External Data Files

County NR File Name	File Type
24000pop.alo	County allocation for several nonroad categories (population)
24000con.alo	County allocation for construction
24000hou.alo	County allocation for lawn & garden

Pechan used Maryland's nonroad sector CERR submittal as the basis for the MANE-VU inventory for the aircraft, locomotive and commercial marine vessel categories.

i. What Revisions Were Requested by State?

In September 2004, Maryland provided revised aircraft and commercial marine vessel emission estimates. Pechan replaced the aircraft and commercial marine vessel emissions from their CERR submittal with the revised emissions.

b. What QA Issues were Identified and Addressed?

Pechan performed QA of the file, and revised the file to address QA issues as approved by Maryland. Maryland did not provide PM25-PRI aircraft emissions in their inventory. Pechan estimated general aviation, military aircraft, and air taxi PM25-PRI emissions by multiplying PM10-PRI emissions by a particle size multiplier of 0.69 (EPA, 2003b). Commercial aircraft PM25-PRI emissions were estimated by multiplying PM10-PRI emissions by a particle size multiplier of 0.976 (ERG, 2004).

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

6. Massachusetts

a. What Data Sources Were Used?

Pechan used NMIM2005 to generate NONROAD model SCC emission estimates. Massachusetts reviewed the NMIM inputs and approved of the fuel input values for RVP and gasoline sulfur content. NMIM2005 reported a weight percent oxygen of 2.1 percent for all months for all counties in Massachusetts, and the State requested a value of 1.5 percent be used for all counties from October through April. This weight percent value was then converted to a volume percent of 8.4 percent for use in NMIM, given that MTBE was the only oxygenate. Final fuel input data by county and by month are presented in Table B-1.

Massachusetts provided annual emissions for aircraft, locomotive and commercial marine vessel categories for their nonroad sector CERR submittal. These inventories included all CAP.

i. What Revisions Were Requested by State?

Massachusetts requested that Pechan incorporate revisions supplied for annual emissions for in-port diesel commercial marine (SCC 2280002010) for Dukes County (25007).

b. What QA Issues were Identified and Addressed?

Pechan changed the aircraft SCC “2275050000” to “2275000000,” since Massachusetts verified that this emission record represents all aircraft types, not just general aviation.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

7. New Hampshire

a. What Data Sources Were Used?

Pechan used NMIM2005 to generate NONROAD model SCC emission estimates. New Hampshire reviewed and approved of the fuel inputs used in NMIM2005. See Table B-1 for a summary of the final fuel input data by county and month.

Pechan used New Hampshire’s nonroad sector CERR submittal as the basis for the MANE-VU aircraft and locomotive inventory. Pechan added commercial marine vessel emissions from the preliminary 2002 Nonroad NEI.

b. What QA Issues were Identified and Addressed?

Pechan performed QA of the file, and revised the file to address QA issues as approved by New Hampshire. New Hampshire did not provide PM_{10} and $PM_{2.5}$ aircraft emissions in their inventory. New Hampshire authorized Pechan to develop aircraft PM_{10} emissions for all aircraft types by applying an average PM10/NO_x emission ratio to the aircraft NO_x emissions in their inventory. The PM_{10}/NO_x ratios used were 3.819 for military and air taxi, 3.642 for general aviation, and 0.058 for commercial aircraft. Pechan estimated general aviation, military aircraft, and air taxi PM25-PRI emissions by multiplying PM10-PRI emissions by a particle size multiplier of 0.69 (EPA, 2003b). For commercial aircraft, Pechan estimated PM25-PRI emissions using the assumption that 97.6% of PM_{10} is $PM_{2.5}$ (ERG, 2004).

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

8. New Jersey

a. What Data Sources Were Used?

Pechan used NMIM2005 to generate NONROAD model SCC emission estimates. New Jersey approved of the default fuel inputs used in NMIM2005. See Table B-1 for a summary of the final fuel input data by county and month. New Jersey provided an updated data input file containing revised equipment populations (34000.pop) for specific SCCs for the NMIM model runs.

Pechan used New Jersey's nonroad sector CERR submittal as the basis for the aircraft, locomotive and commercial marine vessel categories. These inventories included all CAPs.

b. What QA Issues were Identified and Addressed?

Pechan performed QA of the file, and revised the file to address QA issues as approved by New Jersey. The only QA issue identified was the inclusion of carbon dioxide (CO_2) in the inventory, which is not a valid pollutant code in NIF3.0, so these records were removed.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

9. New York

a. What Data Sources Were Used?

Pechan used NMIM2005 to generate NONROAD model SCC emission estimates. New York reviewed the default NMIM inputs and provided revisions to the input values for RVP and gasoline sulfur for all months. New York also requested revisions to weight percent oxygen values for all counties and months. These weight percent values were then converted to a volume percent for use in NMIM, based on MTBE as the only oxygenate for all counties, with the exception of four counties. These included Cattaraugus, Chautauqua, Erie, and Niagara counties, which use ETOH as the oxygenate. The final fuel input data by county and by month are summarized in Table B-1.

For the aircraft and locomotive categories, Pechan used emissions reported in the preliminary 2002 Nonroad NEI.

i. What Revisions Were Requested by State?

In October 2004, New York provided commercial marine vessel emissions to be added to their inventory. New York did not provide PM-2.5 commercial marine vessel emissions for some counties in their inventory. Pechan estimated the commercial marine vessel PM25-PRI emissions from PM10-PRI using the assumption that 92% of PM_{10} is $PM_{2.5}$ (EPA, 2003b).

b. What QA Issues were Identified and Addressed?

Commercial aircraft (SCC 2275020000) emissions for PM10-PRI and PM25-PRI were not reported in the EPA's preliminary 2002 NEI. Pechan estimated PM10-PRI emissions by applying a PM10-PRI/NO_x emission ratio of 0.058 to available NO_x emissions for this SCC. Commercial aircraft PM25-PRI emissions were estimated by multiplying PM10-PRI emissions by a particle size multiplier of 0.976 (ERG, 2004).

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

10. Pennsylvania

a. What Data Sources Were Used?

Pechan used NMIM2005 to generate NONROAD model SCC emission estimates. Pennsylvania approved of the fuel inputs provided, which were based on the onroad MOBILE6 inputs. Since these differed from the values in NMIM2005, Pechan updated the NMIM profiles accordingly. See Table B-1 for a summary of the final fuel input data by county and month. Pennsylvania provided one county allocation file for the lawn and garden category (42000hou.alo) to replace the default file used in NMIM.

Pennsylvania submitted an aircraft, locomotive, and commercial marine vessel emissions inventory to MANE-VU after the CERR submittal date.

i. What Revisions Were Requested by State?

In August 2005, Pennsylvania provided Pechan with county-level updates to SCC 2285002006 (Line Haul Locomotives: Class I Operations) emissions for all pollutants. Pechan updated all emission records for this SCC in Pennsylvania's inventory.

b. What QA Issues were Identified and Addressed?

Pennsylvania authorized Pechan to remove the CO_2 emission records from their inventory. In addition, the following data augmentation was performed to add missing SCCs and pollutants. Pennsylvania did not provide commercial aircraft emissions in their inventory. Pechan added commercial aircraft emissions from the 2002 preliminary NEI to Pennsylvania's inventory. Pennsylvania did not provide PM10-PRI and PM25-PRI aircraft emissions in their inventory. Pechan developed aircraft PM_{10} emissions for all aircraft types by applying an average PM_{10}/ NO_x emission ratio to Pennsylvania's available aircraft NO_x emissions. The PM_{10}/NO_x ratios used were 3.819 for military and air taxi, 3.642 for general aviation, and 0.058 for commercial aircraft. Pechan estimated general aviation, military aircraft, and air taxi PM25-PRI emissions by multiplying PM10-PRI emissions by a particle size multiplier of 0.69 (EPA, 2003b). For commercial aircraft, Pechan estimated PM25-PRI emissions using the assumption that 97.6% of PM_{10} is $PM_{2.5}$ (ERG, 2004).

Pennsylvania also did not provide SO_2 general aviation and air taxi emissions in the inventory. Pechan estimated the SO_2 emissions by applying a SO_2/NO_x emission ratio to the general aviation and air taxi NO_x emissions, using ratios of 0.154 and 0.095, respectively.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

11. Rhode Island

a. What Data Sources Were Used?

Pechan used NMIM2005 to generate NONROAD model SCC emission estimates. Rhode Island approved of the fuel inputs used in NMIM2005. See Table B-1 for a summary of the final fuel input data by county and month. Rhode Island provided a revised equipment population file (44000.pop) with updated populations for specific SCCs to replace the default file used in NMIM.

Rhode Island provided emissions for aircraft, locomotive and commercial marine vessel categories for their nonroad sector CERR submittal.

i. What Revisions Were Requested by State?

Rhode Island provided updates in September 2004 to their county-level railroad equipment emissions. The new emissions fall under SCC 2285002005 and replace all line haul locomotive emissions provided in their CERR submittal. Emission estimates for yard locomotives were also provided (SCC 2285002010).

b. What QA Issues were Identified and Addressed?

Pechan performed QA of the file, and revised the file to address QA issues as approved by Rhode Island.

PM_{10} was not identified as either primary or filterable. Rhode Island authorized Pechan to change it to PM10-PRI. To avoid double counting, Pechan removed the following SCCs from Rhode Island's inventory: 2275000000, 2280002000, 2280002020, 2280003000, and 2280003020. These emissions are accounted for under more specific SCCs for aircraft, and more aggregate SCCs for commercial marine.

Rhode Island did not provide PM10-PRI and PM25-PRI aircraft emissions in their inventory. Pechan developed aircraft PM_{10} emissions for all aircraft types by applying an average PM_{10}/NO_x emission ratio to the aircraft NO_x emissions in their inventory. The PM_{10}/NO_x ratios used were 3.819 for military and air taxi, 3.642 for general aviation, and 0.058 for commercial aircraft. Pechan estimated general aviation, military aircraft, and air taxi PM25-PRI emissions by multiplying PM10-PRI emissions by a particle size multiplier of 0.69 (EPA, 2003b). For commercial aircraft, Pechan estimated PM25-PRI emissions using the assumption that 97.6% of PM_{10} is $PM_{2.5}$ (ERG, 2004).

Rhode Island did not provide yard locomotive, and commercial marine vessel PM25-PRI emissions in their inventory. Pechan estimated the yard locomotive PM25-PRI emissions from PM10-PRI using the assumption that 90% of PM_{10} is PM25 (EPA, 2003b). Pechan estimated the commercial marine vessel PM25-PRI emissions from PM10-PRI using the assumption that 92% of PM_{10} is $PM_{2.5}$ (EPA, 2003b).

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

12. Vermont

a. What Data Sources Were Used?

Pechan developed NONROAD model SCC emissions for Vermont using NMIM2005. Vermont approved of the default fuel input values used in NMIM2005 for weight percent oxygen, but requested that the RVP and gasoline sulfur values reflect values used for onroad mobile source emissions.

Pechan added aircraft emissions for Vermont from the preliminary 2002 Nonroad NEI.

b. What QA Issues were Identified and Addressed?

Commercial aircraft (SCC 2275020000) emissions for PM10-PRI and PM25-PRI were not reported in the EPA's preliminary 2002 NEI. Pechan estimated PM10-PRI emissions by applying an average PM10-PRI/NO_x emission ratio of 0.058 to available NO_x emissions. Commercial aircraft PM25-PRI emissions were estimated by multiplying PM10-PRI emissions by a particle size multiplier of 0.976 (ERG, 2004).

c. What Issues Need to be Addressed in Future Versions?

Note that there are no locomotive or commercial marine vessel emissions in the NEI for Vermont. Where activity for any of these SCCs occurs in Vermont, these categories are not represented in the State's inventory.

CHAPTER V – ONROAD SOURCES

A. General Methods for All States

This section provides an overview of the data sources and QA steps used in preparing the 2002 onroad sector inventory for the MANE-VU States and in preparing the corresponding modeling inputs for the MANE-VU Version 3 modeling inventory. The onroad sector is comprised of all motorized vehicles that travel on the public highways including passenger cars, light-duty trucks, minivans, sport utility vehicles, heavy-duty trucks, and buses. It should be noted that, unlike the other emission sectors, the modeling inventory inputs for the onroad sector do not include any emissions data. The primary modeling inputs for the onroad sector instead are the activity inputs (vehicle miles traveled (VMT)) and SMOKE-formatted MOBILE6 input files. The SMOKE model then generates full MOBILE6 input files using the MOBILE6 inputs, speed inputs, and meteorological inputs for the episode(s) to be modeled, runs the MOBILE6 emission factor model to calculate the appropriate emission factors, and calculates emissions using the supplied VMT and additional temporal allocation factors for the VMT.

1. Data Sources

a. Source of default model data

The MANE-VU 2002 onroad emissions inventory was compiled from data supplied by the MANE-VU State agencies in the form of onroad emissions input data or emissions inventories either directly to MANE-VU or to EPA through their CERR submittal. States provided information in one or more of the following ways: (1) an onroad emission inventory submittal to EPA, (2) MOBILE6 inputs and VMT data in NMIM format to EPA, (3) portions of MOBILE6 inputs or full MOBILE6 input files and supporting files plus VMT to EPA, or (4) portions of MOBILE6 inputs or full MOBILE6 input files and supporting files plus VMT to MANE-VU. Different procedures were followed in developing the MANE-VU 2002 onroad emission inventory depending upon how the data were submitted.

As discussed above, the primary data needed in preparing the inputs for the onroad modeling files were the VMT data and MOBILE6 input files. All of the MANE-VU States provided VMT data, which were incorporated in the SMOKE modeling. The level of detail of the supplied VMT data and any additional processing of the VMT data are discussed individually by State, below, in Section B: State-Specific Methods. Therefore, no default data were needed for the VMT inputs. Default model inputs for the SMOKE MOBILE6 input files were needed in some cases. The source of default information to be included in these input files was the NMIM national county database, as this was also the default source of data for EPA in preparing the 2002 NEI. This database includes information on monthly fuel data by county, control program information by county, such as inspection and maintenance (I/M) program inputs, and other fleet information, such as vehicle registration distributions, that may have been supplied by the States. Additionally, vehicle speed information is needed in the SMOKE modeling files. Some States supplied this information. In cases where no speed data were supplied, the default speeds used by EPA in calculating the NEI were used. These speeds differ by road class group and by vehicle class group.

For the SMOKE modeling, Pechan did not provide any ambient data such as temperature or humidity. Instead, the SMOKE model needs meteorological input data specific to the episode(s) being modeled. Thus, although the SMOKE MOBILE6 input files do include temperature data and in some cases humidity data, these inputs will be replaced by the SMOKE model with the appropriate episode-specific data.

b. Model inputs and revisions provided by States

The model inputs and revisions provided by the States are discussed in detail in Section B, below. These inputs include VMT data, VMT temporal data, vehicle speeds, I/M program inputs, registrations distributions, and other MOBILE6 input data.

c. Model inputs provided vs. model inputs used

Pechan prepared the following model input files for Version 3 of the MANE-VU modeling inventory:

- MANEVU_2002_mbinv_02022006.txt—contains VMT and speeds by county and SCC;
- MANEVU_2002_mtpro_02022006.txt—contains VMT temporal profiles;
- MANEVU_2002_mtref_02022006.txt—contains cross references between temporal profiles and county/SCC;
- MANEVU_2002_vmtmix_02022006.txt—contains VMT vehicle mix fractions;
- MANEVU_2002_mcref_02022006.txt—contains cross reference between MANE-VU counties and the SMOKE MOBILE6 input files;
- MANEVU_2002_mvref_02022006.txt—contains general county-level information for SMOKE;
- MANEVU_2002_spdpro.txt—contains hourly speed profiles (SPDPRO);
- MANEVU_2002_spdref.txt—contains cross references between speed profiles and MANE-VU county/SCC;
- MANEVU_2002_mcodes.txt—contains information on SCCs used in MBINV file;
- MANEVU_SMOKE_M6Inputs_MA_NJ_02022006.zip—contains monthly SMOKE-formatted MOBILE6 input files for Massachusetts and New Jersey, updated for Version 3;
- MANEVU_2002_SMOKE_M6_InputFiles032004.zip—contains monthly SMOKE-formatted MOBILE6 input files for all MANE-VU States. Files for Massachusetts and New Jersey from this zip file should be replaced by the Version 3 files dated 02/02/2006.
- MANEVU_2002_SMOKE_M6_ExternalFiles.zip—contains external data files called by the SMOKE MOBILE6 input files.

2. What Quality Assurance Steps were Performed?

This section provides a brief summary of the QA steps and processes that were performed in the development of the onroad sector modeling inputs for MANE-VU. The initial QA procedures were performed on the emissions and input data used to calculate the MANE-VU 2002 onroad emission inventory. Some of these QA procedures are also relevant here to the modeling inventory as many of the inputs are either the same or start with common information.

For States submitting onroad emission inventories to EPA, Pechan performed QA checks on the State-provided emission inventory data to ensure completeness, referential integrity, and correct formatting of the data. Where necessary as a result of these QA checks, and with the approval of the affected State, Pechan revised the inventories to meet the necessary inventory standards. For the modeling inventory, the VMT checks included in these QA checks are relevant. Note that a Quality Assurance Plan was prepared prior to initiating work on Version 1 (MANE-VU, 2003). This plan was applied during development of all three versions of the MANE-VU inventory.

a. Data input summary spreadsheets for State review

In reviewing the data submitted for both the annual onroad inventory and the onroad modeling files, Pechan prepared a State QA report for each State. These reports were in the form of Excel spreadsheets. In each of the State QA reports, a page was included that summarized the modeling inputs. This included MOBILE6 input parameters, such as I/M data, registration data, and fuel data. Columns were included indicating the data file name, data coverage (e.g., statewide or for specific counties), data source, any comments regarding the data, an indication of whether any guidance was requested from the State agency before proceeding, and columns for State agency approval of the listed inputs. These reports were provided to each State agency and the State could either approve the inputs summarized or provide an alternate data source or calculation method. For States that had submitted emission inventories in NIF format, results of the NIF QA checks were also included in these State QA reports for the states to review and approve and provide alternate data or methods. This table also include information on the VMT data source and any proposed methodologies needed for processing the VMT.

b. Responses from State Agencies

The appropriate State agency staff reviewed the State QA reports and provided direction for correcting QA issues either in the QA Summary Report Excel file or via e-mail. The modeling inputs were then revised to incorporate responses from the agencies.

3. Version 3 Emission Summaries

Table V-1 presents a summary of the annual 2002 Version 3 MANE-VU onroad sector pollutant emissions for each MANE-VU State, as well as a regional total. Differences between these Version 3 annual emission totals and the Version 2 totals documented in the January 2005 MANE-VU mobile sources inventory report are the result of updated data provided by New Jersey and Massachusetts. Emissions for the remaining states have not changed. It should be noted that these emission results are from the annual inventory modeling. These will differ from the results obtained by the SMOKE onroad modeling. Additionally, the emissions in this table do not reflect VMT updates from Vermont that were provided after the Version 2 MANE-VU annual inventory had been calculated, but were included in the SMOKE Version 2 and Version 3 modeling inputs.

Table V-1. Annual 2002 Onroad Sector Emissions by MANE-VU State (Tons/Year)

State	VOC	NO_x	CO	SO_2	PM10-PRI	PM25-PRI	NH_3
Connecticut	31,755.3	68,816.2	562,124.0	1,666.9	1,580.0	1,041.6	3,293.9
Delaware	10,563.8	21,340.5	160,760.4	583.9	581.1	414.9	902.8
District of Columbia	4,895.3	8,902.0	66,017.6	271.1	222.0	153.0	397.8
Maine	23,037.4	54,686.8	410,957.8	1,803.9	1,239.1	934.4	1,467.5
Maryland	61,846.7	122,210.0	1,000,762.8	4,057.6	3,168.3	2,200.4	5,594.3
Massachusetts	57,185.5	143,367.6	1,039,100.1	4,398.8	3,407.5	2,409.9	5,499.1
New Hampshire	16,762.3	33,283.0	306,792.5	776.9	814.3	561.8	1,447.0
New Jersey	89,752.9	152,076.1	1,273,513.1	3,648.6	3,725.3	2,469.0	7,382.0
New York	287,845.2	319,732.5	3,711,149.6	10,639.5	8,457.5	5,897.7	14,680.9
Pennsylvania	176,090.3	346,471.5	2,784,196.5	10,924.1	7,351.5	5,331.2	10,532.3
Rhode Island	12,537.8	16,677.2	186,196.8	425.3	345.1	210.5	852.6
Vermont	17,287.8	20,669.9	248,247.6	893.8	669.6	482.8	934.1
Total MANE-VU	**789,560.3**	**1,308,233.3**	**11,749,818.8**	**40,090.5**	**31,561.3**	**22,107.2**	**52,984.3**

B. State-Specific Methods

The following sections describe what modeling inputs were used for each State and how these inputs were developed.

1. Connecticut

a. What Data Sources Were Used?

Table V-2 summarizes the onroad SMOKE input files that were prepared containing information for the State of Connecticut. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

The VMT inputs provided by Connecticut were in the form of three sets of data. This included a file with VMT by county and four road types (Expressway, Arterial/Collector, Local, and Ramp), a set of Statewide VMT mixes at the 16 vehicle type-level for each of the four Connecticut road types, and a Statewide hourly VMT distribution file. Additional data provided by Connecticut showing the correspondence between the four Connecticut road types and the 12 Highway Performance Monitoring System (HPMS) road types were used to first distribute the county VMT to the 12 road types. Average daily miles were converted to annual miles by multiplying the average daily miles by 365. Pechan then developed a simple MOBILE6 input file that used the Connecticut registration distribution and with a separate scenario for each of the VMT mixes provided at the 16 vehicle type level. Pechan used the resulting MOBILE6 output file to extract the 28 vehicle type VMT mix corresponding to each of the four Connecticut road types. The VMT data by county and 12 road types were then multiplied by the 28 vehicle type VMT fractions to obtain a VMT file at the 28 vehicle type level and 12 road type level by county (for use in calculating the annual emission inventory). VMT from these 28 vehicle types were then aggregated to the 12 vehicle types needed for the SMOKE MBINV input file. The VMT mix fractions by vehicle type for each county and road type were also calculated for inclusion in the SMOKE VMTMIX file.

Table V-2. Connecticut Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	CT
Speeds	MANEVU_2002_mbinv_02022006.txt	Road type/3 vehicle groups	Default NEI
Speed profiles	MANEVU_2002_spdpro.txt and MANEVU_2002_spdref.txt	County/hour/road type	CT
VMT mix	MANEVU_2002_vmtmix_02022006.txt	Statewide/road type	CT
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

For Connecticut, speed information is contained in both the MBINV SMOKE file as well as in the SMOKE speed profile (SPDPRO) and speed cross reference file (SPDREF) files. The speed information contained in the MBINV file is simply the default NEI speed data. The actual speed data to be used in the modeling inventory for Connecticut are contained in the SMOKE SPDPRO and SPDREF. The speed data from these two files should overwrite the default speed information contained in the MBINV file during the SMOKE modeling. The data used to develop the speed profiles were provided by Connecticut in the form of NMIM speed input files with the fraction of VMT occurring within each of 14 speed bins. These speed distributions differ by hour of day and by freeways versus arterials and collectors. Separate speed distribution files were provided by Connecticut for each county. Pechan then converted these speed data into the speed profile format needed for SMOKE—hourly average speeds by county and the two specified road types.

Connecticut provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- Statewide registration distribution;
- Hourly VMT distributions;
- Statewide I/M program inputs and Anaerobic Thermal Processor (ATP); and
- RVP and fuel program data.

The data submitted by Connecticut indicated that Federal Northern reformulated gasoline is in place in the State, with an ozone season RVP of 6.8 pounds per square inch (psi). Based on the NMIM modeling that was performed for the annual emission inventory, the reformulated gasoline program was modeled in the SMOKE MOBILE6 input files using the combination of the FUEL PROGRAM: 4 command (indicating user-supplied gasoline sulfur inputs), RVP command, and the OXYGENATED FUELS command. The monthly oxygenated fuel and gasoline sulfur inputs, and the non-ozone season monthly RVP values were obtained from the

NMIM national county database for Connecticut. During the ozone season months, the RVP value submitted by Connecticut of 6.8 psi was modeled. The fuel data obtained from NMIM are the same for all counties in Connecticut, except Fairfield, which shows different fuel properties, but all represent reformulated gasoline. These values for both Fairfield and the remaining counties differed by season (i.e., the ozone season from May through September, transition months of March, April, October, and November, and the winter months of December, January, and February). Statewide diesel sulfur values modeled from NMIM were 367 ppm sulfur in the summer months (June, July, and August), 340 ppm sulfur in the winter months (December, January, and February), and 353 ppm sulfur in the spring and fall months.

Data provided by Connecticut indicated that the State follows the OTC low emission vehicle (LEV) program vehicle implementation schedule. Therefore, the OTC-LEV program LEV implementation schedule was included in the MOBILE6 SMOKE input files, starting implementation in the 1999 model year followed by a full implementation of the National LEV program in the 2001 model year.

b. What QA Issues were Identified and Addressed?

No QA issues were identified for Connecticut.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

2. Delaware

a. What Data Sources Were Used?

Table V-3 summarizes the onroad SMOKE input files that were prepared containing information for the State of Delaware. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Delaware provided VMT data in the form of the NEI NIF PE table as well as in the NMIM BaseYearVMT table format. Additionally, Delaware provided monthly VMT fractions developed from VMT counts on a variety of road types. These monthly VMT fractions were provided for each of the Delaware counties. Since the data in the NEI NIF PE table were at the level of detail needed for the SMOKE MBINV file, the format of the VMT data was simply converted from the NIF format to the SMOKE MBINV format. Similarly, the monthly VMT fractions were converted to the profile format needed in the SMOKE MTPRO file, with the appropriate cross references in the MTREF file. The average speeds provided by Delaware at the county/road type level were included in the SMOKE MBINV file.

Table V-3. Delaware Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	DE
Speeds	MANEVU_2002_mbinv_02022006.txt	County/road type	DE
VMT mix	MANEVU_2002_vmtmix_02022006.txt	County/road type	
Temporal profiles	MANEVU_2002_mtpro_02022006.txt and MANEVU_2002_mtref_02022006.txt	Monthly by county/road type	DE
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

The fuel data submitted by Delaware was based on the NMIM defaults with the NMIM October data replaced by the NMIM November data. The reformulated gas fuel parameters were modeled in the SMOKE MOBILE6 input files by using the combination of the OXYGENATED FUELS, FUEL RVP, and FUEL PROGRAM (for gasoline sulfur contents) commands for each month. Statewide diesel sulfur values modeled from NMIM were 300 ppm sulfur in the summer months (June, July, and August), 280 ppm sulfur in the winter months (December, January, and February), and 290 ppm sulfur in the spring and fall months.

Data provided by Delaware indicated that the State follows the OTC-LEV program vehicle implementation schedule. Therefore, the OTC-LEV program LEV implementation schedule was included in the MOBILE6 SMOKE input files, starting implementation in the 1999 model year followed by a full implementation of the National LEV program in the 2001 model year.

b. What QA Issues were Identified and Addressed?

No QA issues were identified for Delaware.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

3. District of Columbia

a. What Data Sources Were Used?

Table V-4 summarizes the onroad SMOKE input files that were prepared containing information for the District of Columbia. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-4. District of Columbia Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	DC
Speeds	MANEVU_2002_mbinv_02022006.txt	Road type	DC
VMT mix	MANEVU_2002_vmtmix_02022006.txt	Road type	DC
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

The District of Columbia provided 2002 VMT data in the form of the NMIM BaseYearVMT table. This table included VMT at the 28 vehicle type level for each of the six urban road types in the District of Columbia. VMT from these 28 vehicle types were then aggregated to the 12 vehicle types needed for the SMOKE MBINV input file. The VMT mix fractions by vehicle type for each county and road type were also calculated for inclusion in the SMOKE VMTMIX file. The District also provided a spreadsheet including the daily average weighted speed by roadway class. These speeds were incorporated in the SMOKE MBINV file. The District of Columbia provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- District-wide registration distribution;
- I/M program and ATP inputs; and
- Weekday trip length distribution file.

The District of Columbia specified that the NMIM fuel program default data for the District should be used for the MANE-VU modeling. This included reformulated gasoline district wide, modeled using the FUEL RVP, and FUEL PROGRAM (for gasoline sulfur contents) commands for each month. Statewide diesel sulfur values modeled from NMIM were 329 ppm sulfur in the summer months (June, July, and August), 324 ppm sulfur in the winter months (December, January, and February), and 326 ppm sulfur in the spring and fall months.

Data provided by the District of Columbia indicated that the District follows the OTC-LEV program vehicle implementation schedule. Therefore, the OTC-LEV program LEV implementation schedule was included in the MOBILE6 SMOKE input files, starting implementation in the 1999 model year followed by a full implementation of the National LEV program in the 2001 model year.

b. What QA Issues were Identified and Addressed?

No QA issues were identified for the District of Columbia.

c. What Issues Need to be Addressed in Future Versions?

The SMOKE MOBILE6 files for the District of Columbia should include the OXYGENATED FUELS command to fully model reformulated gasoline in the District of Columbia. This command was inadvertently left out of the SMOKE MOBILE6 files.

4. Maine

a. What Data Sources Were Used?

Table V-5 summarizes the onroad SMOKE input files that were prepared containing information for the State of Maine. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-5. Maine Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	ME
Speeds	MANEVU_2002_mbinv_02022006.txt	County/road type	ME
VMT mix	MANEVU_2002_vmtmix_02022006.txt	Statewide/road type	Default
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

Maine provided 2002 average daily VMT by county and 12 roadway types. Maine had no information available on the distribution of VMT among vehicle types. Therefore, Pechan developed the VMT by county, roadway type, and vehicle type by using the default MOBILE6 2002 VMT mix by vehicle type. These VMT data were converted to annual VMT by multiplying the average daily VMT by 365. The MOBILE6 VMT default mix fractions by vehicle type for 2002 were included for Maine in the SMOKE VMTMIX file. Maine also provided average speed data by county and roadway type. These data were included in the SMOKE MBINV file.

Maine provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- I/M program inputs and ATP inputs for Cumberland County only; and
- Monthly average RVP data.

Statewide diesel sulfur values were obtained from the NMIM defaults for Maine. A diesel sulfur value of 390 ppm sulfur was modeled in the summer months (June, July, and August), 338 ppm sulfur in the winter months (December, January, and February), and 364 ppm sulfur in the spring and fall months.

Data provided by Maine indicated that the State follows the OTC-LEV program vehicle implementation schedule. Therefore, the OTC-LEV program LEV implementation schedule was included in the MOBILE6 SMOKE input files, starting implementation in the 1999 model year followed by a full implementation of the National LEV program in the 2001 model year.

b. What QA Issues were Identified and Addressed?

No QA issues were identified for Maine.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

5. Maryland

a. What Data Sources Were Used?

Table V-6 summarizes the onroad SMOKE input files that were prepared containing information for the State of Maryland. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Maryland submitted annual VMT data in the form of a NIF tblMobilePE table. This included VMT by county, 12 vehicle types, and 12 road types. These VMT data were then converted to the format needed for the SMOKE MBINV file. Pechan calculated VMT mix fractions from the VMT data supplied by Maryland to obtain the VMT mixes by county and road type contained in the SMOKE VMTMIX file. In addition, Maryland provided monthly VMT distribution data by road type. Pechan converted these data to the format needed for the SMOKE MTPRO and MTREF files. The same set of monthly temporal profiles were applied to all counties in Maryland. Maryland also provided a spreadsheet showing the average speed Statewide for each of the 12 roadway types. These speed data were included in the SMOKE MBINV file.

Maryland provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- County-specific registration distribution;
- County-specific diesel sales fractions;
- I/M program inputs and ATP inputs to be applied in the 14 I/M counties; and
- Statewide monthly diesel sulfur content data.

Maryland indicated that the NMIM default fuel parameters for Maryland should be used in the MANE-VU modeling. This fuel data includes reformulated gasoline in 14 of the Maryland counties. The reformulated gasoline program was modeled using the FUEL RVP, and FUEL PROGRAM (for gasoline sulfur contents) commands for each month. Maryland provided monthly Statewide diesel sulfur values. These values ranged from 455 ppm sulfur to 500 ppm sulfur. These values were included in the corresponding monthly SMOKE MOBILE6 input files.

Table V-6. Maryland Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	MD
Speeds	MANEVU_2002_mbinv_02022006.txt	County/road type	MD
VMT mix	MANEVU_2002_vmtmix_02022006.txt	County/road type	MD
Temporal profiles	MANEVU_2002_mtpro_02022006.txt and MANEVU_2002_mtref_02022006.txt	Statewide monthly by road type	MD
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

Data provided by Maryland indicated that the State follows the OTC-LEV program vehicle implementation schedule. Therefore, the OTC-LEV program LEV implementation schedule was included in the MOBILE6 SMOKE input files, starting implementation in the 1999 model year followed by a full implementation of the National LEV program in the 2001 model year.

b. What QA Issues were Identified and Addressed?

No QA issues were identified for Maryland affecting the modeling inventory files.

c. What Issues Need to be Addressed in Future Versions?

The SMOKE MOBILE6 files for Maryland should include the OXYGENATED FUELS command to fully model reformulated gasoline in the Maryland counties that implement the reformulated gasoline program. This command was inadvertently left out of the Maryland SMOKE MOBILE6 files.

6. Massachusetts

a. What Data Sources Were Used?

Table V-7 summarizes the onroad SMOKE input files that were prepared containing information for the State of Massachusetts. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-7. Massachusetts Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	**Level of Detail**	**Data Source**
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	MA
Speeds	MANEVU_2002_mbinv_02022006.txt	County/road type	MA
VMT mix	MANEVU_2002_vmtmix_02022006.txt	County/road type	Default
Temporal profiles	MANEVU_2002_mtpro_02022006.txt and MANEVU_2002_mtref_02022006.txt	Monthly by county	MA
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

The Version 3 MANE-VU onroad modeling for Massachusetts differed from the Version 2 modeling, based on updates provided by Massachusetts in December 2005. The primary changes for Massachusetts from Version 3 is the use of updated 2002 VMT data and vehicle speed date. Massachusetts provided a spreadsheet containing revised VMT values and vehicle speeds for 2002 by county and SCC. Pechan prepared the revised Massachusetts VMT data and the speed data in the format of the SMOKE MBINV file. Using the revised VMT data by SCC, Pechan calculated the updated VMT mixes by vehicle type for each county and road type in Massachusetts and formatted the resulting data to be included in the SMOKE VMTMIX file.

The original VMT data submitted by Massachusetts included VMT for each of the four seasons. Pechan used these data to develop monthly VMT temporal profiles. Seasonal VMT was assigned to the months in that season based on the ratio of the number of days in a specific month to the number of days in the season. Pechan then formatted the monthly temporal VMT allocation factors for inclusion in the SMOKE MTPRO and MTREF files.

Massachusetts provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- Statewide registration distribution;
- Statewide I/M program inputs and ATP inputs;
- RVP and fuel program data;
- Diesel sulfur content of 350 ppm sulfur year-round and statewide; and
- Massachusetts-specific LEV and Tier 2 implementation files.

Northern reformulated gasoline was modeled statewide throughout the State, with a RVP value of 6.7 psi during the ozone season and 13.5 psi during the remaining months, based on inputs provided by Massachusetts. The section below on QA issues for Massachusetts discusses the fuel inputs modeled in the Version 3 SMOKE MOBILE6 input files in more detail. Massachusetts provided the necessary inputs to model the State's LEV implementation schedule and Tier 2 data, which differ from the OTC-LEV program and from the default MOBILE6 Tier 2 data.

b. What QA Issues were Identified and Addressed?

In addition to the VMT updates, Pechan revised the SMOKE MOBILE6 input files for Massachusetts for Version 3. This was done because Version 2 of the MANE-VU modeling inventory was prepared using the default setting of MOBILE6 to model reformulated gasoline (i.e., using the command line "FUEL PROGRAM : 2 N"). Since the time that the Version 2 inventory was created, EPA found a bug with the sulfur content values used when the default reformulated gasoline command is used. To eliminate this problem, Pechan created revised SMOKE MOBILE6 input files for Massachusetts that model reformulated gasoline by explicitly setting the RVP, gasoline sulfur contents, and gasoline oxygen contents. The gasoline sulfur contents and gasoline oxygen contents were set according to the default parameters laid out in the MOBILE6 user's guide. The summer (May through September) sulfur content is 129 ppm in 2002 and the winter sulfur content is 279 ppm in 2002. The summer gasoline contains 2.1 percent oxygen, with MTBE as the oxygenate. The winter gasoline contains 1.5 percent oxygen in 70 percent of the fuel having MTBE as the oxygenate, and 3.5 percent oxygen in 30 percent of the fuel having ETOH as the oxygenate. The RVP values were not changed from those modeled in Version 2 (6.7 psi in the summer and 13.5 psi in the winter).

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

7. New Hampshire

a. What Data Sources Were Used?

Table V-8 summarizes the onroad SMOKE input files that were prepared containing information for the State of New Hampshire. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-8. New Hampshire Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	NH
Speeds	MANEVU_2002_mbinv_02022006.txt	County/road type	NH
VMT mix	MANEVU_2002_vmtmix_02022006.txt	Statewide	NH
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

The VMT inputs provided by New Hampshire were in the form of summer day VMT by county or nonattainment area and roadway type. In addition, New Hampshire provided a Statewide VMT mix distribution by 16 vehicle types in the MOBILE6 files provided by the State. Pechan then developed a simple MOBILE6 input file that used the New Hampshire Statewide registration distribution and the Statewide VMT mix by vehicle type. Pechan used the resulting MOBILE6 output file to extract the 28 vehicle type VMT mix to be applied Statewide to the county/roadway type VMT data. Summer day miles were converted to annual miles by using national data from the Federal Highway Administration's Travel Volume Trends which provides 2002 monthly VMT for groups of road categories. Additionally, the VMT data from the three New Hampshire nonattainment areas represented four counties. To allocate these VMT by county, Pechan first totaled the VMT data from these three nonattainment areas by roadway type. Then, using ratios developed from the preliminary 2002 NEI VMT, Pechan allocated the grouped VMT by county and roadway type. With VMT for the entire State at the county/roadway type level of detail, Pechan then multiplied the VMT data by the 28 vehicle type VMT fractions to obtain a VMT file at the 28 vehicle type level and 12 roadway type level by county for use in preparing the annual onroad emission inventory. VMT from these 28 vehicle types were then aggregated to the 12 vehicle types needed for the SMOKE MBINV input file. The VMT mix fractions by vehicle type for each county and road type were also calculated for inclusion in the SMOKE VMTMIX file. New Hampshire also provided a spreadsheet including the average speed by roadway class for each county or county group. These speeds were incorporated in the SMOKE MBINV file.

New Hampshire provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- Statewide registration distribution; and
- Statewide ATP inputs.

New Hampshire specified that the NMIM fuel program default data for New Hampshire should be used for the MANE-VU modeling. This included reformulated gasoline in four counties, modeled using the FUEL RVP, and FUEL PROGRAM (for gasoline sulfur contents) commands for each month. Statewide diesel sulfur values modeled from NMIM were 400 ppm sulfur in the summer months (June, July, and August), 340 ppm sulfur in the winter months (December, January, and February), and 370 ppm sulfur in the spring and fall months.

Data provided by New Hampshire indicated that the State follows the OTC-LEV program vehicle implementation schedule. Therefore, the OTC-LEV program LEV implementation schedule was included in the MOBILE6 SMOKE input files, starting implementation in the 1999 model year followed by a full implementation of the National LEV program in the 2001 model year.

b. What QA Issues were Identified and Addressed?

Through the State QA report process, New Hampshire provided updated inputs for VMT and speeds that were incorporated in the modeling inventory inputs.

c. What Issues Need to be Addressed in Future Versions?

The SMOKE MOBILE6 files for the four New Hampshire that implement reformulated gasoline should include the OXYGENATED FUELS command to fully model the benefits reformulated gasoline. This command was inadvertently left out of the SMOKE MOBILE6 files.

8. New Jersey

a. What Data Sources Were Used?

Table V-9 summarizes the onroad SMOKE input files that were prepared containing information for the State of New Jersey. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-9. New Jersey Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	NJ
Speeds	MANEVU_2002_mbinv_02022006.txt	Road type/3 vehicle groups	Default NEI
VMT mix	MANEVU_2002_vmtmix_02022006.txt	County/road type	NJ
Temporal profiles	MANEVU_2002_mtpro_02022006.txt and MANEVU_2002_mtref_02022006.txt	Monthly by 3 county groups and weekday/weekend	NJ
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

Updates were made to the Version 2 MOBILE6 SMOKE inputs for New Jersey in December 2005 to create Version 3, based on revised data provided by the State. New Jersey provided the following files:

- a set of SMOKE MOBILE6 input files by county and month;
- NJ_2002_mbinv.txt file that contained revised VMT and speeds by county and SCC, generated by NJDEP in August 2005, in SMOKE format;
- amptref.m3.manevu.vistascem.032805_NJVMT.txt—a SMOKE-formatted file containing county/SCC-level temporal profile cross-references;
- amptro.m3.manevu.vistascem.032805_NJVMT.txt—a SMOKE-formatted file containing county-specific VMT temporal profiles prepared by NJDEP in August 2005; and
- zip files containing external files needed to run the SMOKE MOBILE6 files.

After an initial review of these files, Pechan did not note any differences in the SMOKE MOBILE6 files from the Version 2 files. Pechan then confirmed with New Jersey that the only changes from the Version 2 date were in the VMT data. The VMT and speed data by county and SCC in the MBINV file provided by New Jersey were copied to the MANE-VU SMOKE MBINV file, replacing the VMT and speed data from the Version 2 SMOKE MBINV file for New Jersey. The speed data included by New Jersey are the default NEI speeds by road type and vehicle type. Using the new VMT data provided by New Jersey, Pechan calculated a revised set of VMT mix fractions by vehicle type and included these in the Version 3 SMOKE VMTMIX file. Pechan pasted the temporal profiles provided for New Jersey into the SMOKE MTPRO file. This included monthly temporal profiles and diurnal temporal profiles. The diurnal temporal profiles were applied to both weekdays and weekends. Similarly the temporal cross reference data included in the file provided by New Jersey was pasted into the SMOKE MTREF file for MANE-VU Version 3.

The following New Jersey-provided were included in the monthly MOBILE6 input files for the SMOKE modeling:

- Statewide registration distribution;
- Statewide diesel sales fractions;
- Statewide I/M program and ATP inputs; and
- Diesel sulfur content data (340 ppm statewide).

Northern reformulated gasoline was modeled statewide throughout the State, using NMIM fuel program input defaults for New Jersey. The section below on QA issues for New Jersey discusses the fuel inputs modeled in the Version 3 SMOKE MOBILE6 input files in more detail.

Data provided by New Jersey indicated that the State follows the OTC-LEV program vehicle implementation schedule. Therefore, the OTC-LEV program LEV implementation schedule was included in the MOBILE6 SMOKE input files, starting implementation in the 1999 model year followed by a full implementation of the National LEV program in the 2001 model year.

b. What QA Issues were Identified and Addressed?

As discussed above for New Jersey, the Version 2 New Jersey SMOKE MOBILE6 input files modeled reformulated gasoline using the command line “FUEL PROGRAM   : 2 N”, which is the default method for modeling reformulated gasoline with MOBILE6. To eliminate the effects of the MOBILE6 reformulated gasoline bug from the SMOKE MOBILE6 inputs, Pechan explicitly modeled the reformulated gasoline program in the New Jersey MOBILE6 input files by explicitly modeling the appropriate settings of the RVP, oxygenated fuel content commands, and gasoline sulfur commands. The values for oxygenated fuel settings and gasoline sulfur contents by month were extracted from the NMIM county-level database used in developing the annual emissions inventory for the MANE-VU Version 2 onroad emissions inventory.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

9. New York

a. What Data Sources Were Used?

Table V-10 summarizes the onroad SMOKE input files that were prepared containing information for the State of New York. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-10. New York Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	NY
Speeds	MANEVU_2002_mbinv_02022006.txt	Road type/3 vehicle groups	Default NEI
Speed profiles	MANEVU_2002_spdpro.txt and MANEVU_2002_spdref.txt	County/hour/road type	NY
VMT mix	MANEVU_2002_vmtmix_02022006.txt	County/road type	NY
Temporal profiles	MANEVU_2002_mtpro_02022006.txt and MANEVU_2002_mtref_02022006.txt	Monthly by 3 county groups	NY
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

VMT for New York was provided in the form of a NIF PE table. These VMT data were extracted and included in the SMOKE MBINV file. VMT mix fractions by vehicle type were calculated from these VMT data and included in the SMOKE VMTMIX file.

New York provided a spreadsheet with average speeds in each of four daily time periods by county and road type. Pechan converted these speed data to the SMOKE SPDPRO format, assigning the speed for a given time period to all hours included in that time period. Pechan also prepared the SMOKE SPDREF file to appropriately cross reference each county and road type to the corresponding hourly speed profile. Because these more detailed speed files were provided for New York, the average speed by road type and county in the MBINV file was populated with default NEI speeds.

New York also provided spreadsheets showing monthly VMT by county and roadtype. After processing these VMT values to develop monthly temporal factors, Pechan observed that there were only three unique monthly profiles in this data set. These three profiles were then added to the SMOKE MTPRO file. Pechan then matched each county and road type in the State to the corresponding monthly VMT profile in the SMOKE MTREF file.

New York provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- Registration distributions—one for the New York metropolitan area and one for the rest of the State;
- Diesel sales fractions—one for the New York metropolitan area and one for the rest of the State;
- Statewide mileage accumulation rate input;
- Monthly RVP data—one set for the New York metropolitan area and one for the rest of the State;
- Reformulated gasoline program inputs for affected counties modeled with MOBILE6 defaults (i.e., "FUEL PROGRAM : 2 N");
- I/M program inputs for affected counties;
- Statewide ATP inputs;
- Hourly VMT distributions by county group;
- Start distributions by county;
- Diesel sulfur content data (400 ppm statewide).

New York also provided the necessary input files to model the State's LEV program implementation schedule, which differs from the OTC LEV program. New York also provided MOBILE6 Tier 2 modeling files to be used along with the New York LEV program inputs. These inputs were included in the SMOKE MOBILE6 modeling.

b. What QA Issues were Identified and Addressed?

No QA issues were identified for New York affecting the modeling inventory files.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

10. Pennsylvania

a. What Data Sources Were Used?

Table V-11 summarizes the onroad SMOKE input files that were prepared containing information for the State of Pennsylvania. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-11. Pennsylvania Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	PA
Speeds	MANEVU_2002_mbinv_02022006.txt	County/road type	PA
VMT mix	MANEVU_2002_vmtmix_02022006.txt	County/road type	PA
Temporal profiles	MANEVU_2002_mtpro_02022006.txt and MANEVU_2002_mtref_02022006.txt	Monthly by county	PA
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

Pennsylvania provided a database file (NEIANN02.dbf) that contained the VMT and speed data by county, roadway type, and vehicle type. This included the same VMT used in the calculation of the annual onroad inventory submitted by Pennsylvania for MANE-VU. Pechan converted the data from this database file into VMT and speed data in the format of the SMOKE MBINV file. From the VMT data, Pechan calculated VMT fractions by vehicle type by county and road type for inclusion in the SMOKE VMTMIX file. Pennsylvania also provided estimates of VMT by month for each county. Pechan converted these data to monthly allocation factors in the format needed by the SMOKE MTPRO and MTREF files. A separate monthly profile was developed for each county, but applied to all road types within that county.

Pennsylvania provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- Registration distributions for each individual county;
- I/M program and ATP inputs for affected Philadelphia and Pittsburgh area counties (inputs differ for the two areas);
- Monthly RVP data for all counties including 7.8 psi RVP program from May through September for Pittsburgh counties;
- Reformulated gasoline for the 5-county Philadelphia area modeled with MOBILE6 defaults (i.e., "FUEL PROGRAM : 2 N"); and
- Diesel sulfur content data (500 ppm statewide).

Data provided by Pennsylvania indicated that the State follows the OTC-LEV program vehicle implementation schedule. Therefore, the OTC-LEV program LEV implementation schedule was included in the MOBILE6 SMOKE input files, starting implementation in the 1999 model year followed by a full implementation of the National LEV program in the 2001 model year.

b. *What QA Issues were Identified and Addressed?*

No QA issues were identified for Pennsylvania affecting the modeling inventory files.

c. *What Issues Need to be Addressed in Future Versions?*

None identified by the State.

11. Rhode Island

a. *What Data Sources Were Used?*

Table V-12 summarizes the onroad SMOKE input files that were prepared containing information for the State of Rhode Island. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-12. Rhode Island Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	RI
Speeds	MANEVU_2002_mbinv_02022006.txt	County group/road type	RI
VMT mix	MANEVU_2002_vmtmix_02022006.txt	Statewide	RI
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

Rhode Island provided a spreadsheet with the 2002 VMT as well as Statewide 2002 VMT fractions by 16 vehicle types. Pechan prepared a simple MOBILE6 input file including this Rhode Island 2002 VMT mix by vehicle type and the 2002 Rhode Island registration distribution. The VMT mix in the MOBILE6 output file at the 28 vehicle type level was then used to distribute the VMT by vehicle category. The 2002 daily VMT was at the State level, broken down by the 12 roadway types. To allocate these VMT data to the county/road type level of detail, Pechan summed the VMT from the preliminary version of EPA's 2002 NEI for Rhode Island first by State and roadway type and then by county and roadway type. Pechan calculated county/roadway type VMT fractions by dividing the VMT at the county/roadway type level by the State/roadway type VMT for the same roadway type. These fractions were then multiplied by the VMT supplied by Rhode Island at the State/roadway type level of detail to obtain county/roadway type VMT data. These county/roadway type VMT data were then multiplied by the 28 vehicle type VMT fractions to obtain VMT at the level of detail needed to populate the NMIM BaseYearVMT table for calculating the annual inventory and were then summed to the 16-vehicle type level of detail for use in the SMOKE MBINV file. The data were also converted from daily VMT to annual by multiplying the average daily VMT by 365. VMT mix fractions from this final data set were then formatted in the SMOKE VMTMIX format at the State level of detail. Statewide speeds by road type, as provided by Rhode Island, were included in the SMOKE MBINV file.

Rhode Island provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- Statewide registration distribution; and
- Statewide I/M program inputs.

Data for fuel parameters were obtained from the NMIM national county database for Rhode Island. This included reformulated gasoline Statewide, modeled using the FUEL RVP, and FUEL PROGRAM (for gasoline sulfur contents) commands for each month. These values differed by season, but were consistent Statewide. Statewide diesel sulfur values modeled from NMIM were 400 ppm sulfur in the summer months (June, July, and August), 340 ppm sulfur in the winter months (December, January, and February), and 370 ppm sulfur in the spring and fall months.

The NMIM default LEV program for Rhode Island was modeled, which includes the OTC-LEV program LEV implementation schedule.

b. What QA Issues were Identified and Addressed?

No QA issues were identified for Rhode Island.

c. What Issues Need to be Addressed in Future Versions?

The Rhode Island SMOKE MOBILE6 input files did not include the OXYGENATED FUELS command. This should have been used to fully characterize the parameters of reformulated gasoline that is used Statewide in Rhode Island.

12. Vermont

a. What Data Sources Were Used?

Table V-13 summarizes the onroad SMOKE input files that were prepared containing information for the State of Vermont. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-13. Vermont Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	VT
Speeds	MANEVU_2002_mbinv_02022006.txt	Road type/vehicle group (light-duty vs. heavy-duty)	VT
VMT mix	MANEVU_2002_vmtmix_02022006.txt	County/road type	VT
Temporal profiles	MANEVU_2002_mtpro_02022006.txt and MANEVU_2002_mtref_02022006.txt	Monthly statewide	
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

Vermont submitted VMT data in the format of the NIF PE table. Vermont then provided updated VMT data for three road classifications (rural minor collectors, rural local roads, and urban local roads) in December 2004, after the time that these changes could be included in the MANE-VU annual onroad emission inventory. However, the updated VMT were included in the MANE-VU Version 3 onroad SMOKE modeling files. This VMT change resulted in a Statewide decrease in VMT from about 9.5 billion miles to about 7.8 billion miles. As a result, the SMOKE modeling performed by MANE-VU will not match the MANE-VU emission inventory for Vermont. The VMT data were converted to the SMOKE MBINV file format. VMT mix fractions were calculated from the VMT data and included in the SMOKE VMTMIX file. Vermont also provided information on the temporal allocation of VMT. From these data, Pechan prepared a monthly VMT profile for Vermont and included the data in the SMOKE MTPRO and MTREF files.

Vermont provided information on Statewide speeds by roadway type. These speeds differed for light-duty vehicles and heavy-duty vehicles. Pechan incorporated this speed information into the SMOKE MBINV file.

Vermont provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- Statewide registration distribution;
- Statewide I/M program inputs; and
- RVP data.

The RVP data provided by Vermont were based on data from a local gasoline tank farm and resulted in an RVP value of 8.5 psi during the ozone season months (May through September) and 9.47 psi for the remaining months. Data for fuel parameters other than RVP (e.g., diesel and gasoline fuel sulfur content) were obtained from the NMIM national county database for Vermont. These values differed by season, but were consistent Statewide. Statewide diesel sulfur values modeled from NMIM were 300 ppm sulfur in the summer months (June, July, and August), 290 ppm sulfur in the winter months (December, January, and February), and 295 ppm sulfur in the spring and fall months.

The NMIM default LEV program for Vermont was modeled, which includes Vermont's State-specific LEV implementation schedule.

b. What QA Issues were Identified and Addressed?

Through the State QA report process, Vermont provided a missing registration data file, RVP data and revised VMT.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

CHAPTER VI – BIOGENIC SOURCES

A. General Methods for all States

1. What Data Sources Were Used?

Biogenic emissions for the time period from January 1, 2002 – December 31, 2002 were calculated by the New York State Department of Environmental Conservation (NYSDEC) for all of the MANE-VU states using the Biogenic Emissions Inventory System (BEIS) version 3.12 integrated within SMOKE2.1. The inventory was prepared at the state-level for CO, nitrous oxide (NO), and VOC.

General information about BEIS is available at http://www.epa.gov/AMD/biogen.html while documentation about biogenic emissions processing within SMOKE2.1 is available at http://cf.unc.edu/cep/empd/products/smoke/version2.1/html/ch06s10.html and http://cf.unc.edu/cep/empd/products/smoke/version2.1/html/ch06s17.html. Note that the SMOKE documentation refers to BEIS3.09 and has not yet been updated for BEIS3.12. This affects the number of species modeled as well as the use of different speciation profiles. However, the general processing approach has not changed from BEIS3.09 to BEIS3.12. In short, this processing approach is as follows and was utilized by NYSDEC for its biogenic emission processing for MANE-VU and the OTC modeling:

- **Normbeis3** reads gridded land use data and emissions factors and produces gridded normalized biogenic emissions for 34 species/compounds. The gridded land use file utilized by NYSDEC includes the fractional coverage of 230 different land use types for each of the 172 * 172 12-km grid cells in the MANE-VU/OTC modeling domain. In a separate BEIS3.12 input file, both summer and winter emissions factors for each species/compound are provided for each of the 230 land use types. On output, **Normbeis3** generates a file `B3GRD` which contains gridded summer and winter emission fluxes for the modeling domain that are normalized to 30 °C and a photosynthetic active radiation (PAR) of 1000 µmol/m^2s. In addition, gridded summer and winter leaf area indices (LAI) are also written to `B3GRD`.

- **Tmpbeis3** reads the gridded, normalized emissions file B3GRD and meteorological data from the MCIP-processed MM5 meteorological fields generated by the University of Maryland for MANE-VU/OTC modeling. Specifically, the following MM5/MCIP meteorological variables are used by **Tmpbeis3** to compute hour-specific, gridded biogenic emissions from the normalized emission fluxed contained in B3GRD: layer-1 air temperature (“TA”), layer-1 pressure (“PRES”), total incoming solar radiation at the surface (“RGRND”), and convective (“RC”) and non-convective (“RN”) rainfall. Additionally, the emissions for the 34 species/compounds modeled by BEIS3.12 are converted to CO, NO, and the CB-IV VOC species utilized in CMAQ via the use of the BEIS3.12-CB-IV speciation profile. Furthermore, an external file, BIOSEASON, was utilized to decide whether to use summer or winter emissions factors for any given grid cell on any given day. This file was generated by the SMOKE2.1 utility **Metscan** based on MM5 layer-1 air temperatures to determine the date of the last spring frost and first fall frost at each grid cell. Summer emission factors are used by **Tmpbeis3** for the time period between the day of the last spring frost and the day of the first fall frost at any given grid cell, and winter emission factors are used for the remaining time period. Documentation for the **Metscan** utility is available at http://cf.unc.edu/cep/empd/products/smoke/version2.1/html/ch05s07.html. An animated GIF file showing the BIOSEASON file used by NYSDEC can be found at ftp://ftp.dec.state.ny.us/dar/air_research/chogrefe/biog_reports/b3season_movie.gif.

- For reporting purposes, the hourly, speciated, gridded emissions were aggregated to the county level for each day. For any given grid cell, emissions were distributed among the counties intersecting this grid cell in proportion to the area of each of these counties within the grid cell. The area gridding surrogates needed for this aggregation are based on a file obtained from EPA via http://www.epa.gov/ttn/chief/emch/spatial/new/bgpro.2km_041604.us.gz, followed by windowing for the MANE-VU/OTC modeling domain.

2. Version 3 Emissions Summary

Table VI-1 presents a State-level summary of the annual biogenic source emissions in Version 3 of the 2002 MANE-VU inventory. The annual emissions are based on the sum of the daily emissions prepared using the modeling approach previously discussed.

Table VI-1. Version 3 2002 MANE-VU Biogenic Source Emissions by State (Tons/Year)

State	CO	NO	VOC*
Connecticut	6,889	560	64,017
Delaware	4,274	990	46,343
District of Columbia	150	30	1,726
Maine	64,936	2,018	600,205
Maryland	18,351	2,934	210,104
Massachusetts	11,594	1,257	113,958
New Hampshire	14,306	482	141,894
New Jersey	14,058	1,813	181,617
New York	63,436	8,313	492,487
Pennsylvania	59,946	8,646	585,272
Rhode Island	1,764	211	19,233
Vermont	14,745	1,142	118,377
MANE-VU	274,451	28,396	2,575,232

* VOC emissions were calculated by adding the emissions for the following pollutants: ALD2, ETH, FORM, ISOP, NR, OLE, PAR, TERB, TOL, XYL.

B. State-Specific Methods

No state-specific methods were used in Version 3 of the MANE-VU inventory for biogenic emissions.

CHAPTER VII. TEMPORAL, SPECIATION, AND SPATIAL ALLOCATION PROFILES AND PREPARATION OF SMOKE (IDA) AND RPO DATA EXCHANGE PROTOCOL (NIF 3.0) FORMATS

Table VII-1 provides a summary of the file names and documentation used for modeling inputs for Version 3 of MANE-VU's 2002 inventory for point, area, nonroad, and onroad sources. The final input files used for temporal allocation, speciation, and spatial allocation of emissions were developed for Version 1 of the 2002 inventory and delivered to MARAMA during January 2005 (MANE-VU, 2005). These files were developed starting with the latest model input files available from EPA and then revised to include updates needed for the MANE-VU region or to add SCCs and profile assignments not included in the initial EPA data sets. The files were revised between September 2004 and January 2005 to incorporate comments provided by MANE-VU. Files in Table VII-1 with a date that is later than January 2005 were prepared to support modeling for Version 3. The notes column in the table identifies the modifications made to the files if the files were changed after this date. Otherwise, files with a date later than January 2005 were either provided by a state agency or were obtained from EPA and used for modeling Version 3.

The remainder of this chapter provides a brief summary of the revisions made to the EPA data sets prepared for Version 1 of the 2002 MANE-VU inventory and subsequently carried for the modeling for Version 3. Sections A, B, and C of this chapter discuss how the temporal allocation, speciation, and spatial allocation profiles, respectively, were developed. Section D of this chapter describes how the emissions inventory data were prepared in the SMOKE (IDA) and RPO Data Exchange Protocol (NIF 3.0) Formats.

A. Temporal Profiles

1. Point and Area Sources

The most recent SMOKE temporal cross-reference files available from EPA during the summer of 2004 were used as the starting point for developing the cross-reference files for point and area sources. The following 3 classes of modifications were completed to improve the temporal allocation input files:

- Update temporal cross-reference to assign an existing profile in the default SMOKE profiles for SCCs in the MANE-VU inventory
- Create a new temporal cross-reference to an existing profile in the default SMOKE profiles for SCCs in the MANE-VU inventory; the cross-reference did not previously exist in the default SMOKE files but the profile did exist.
- Create new temporal profiles and cross-references for SCCs in the MANE-VU inventory; neither the cross-reference nor profiles for the MANE-VU SCCs previously existed in the default SMOKE files.

a. Point Sources

A total of 30 point SCCs existed in the MANE-VU point source inventory that were not in the point source cross-reference file; therefore, the SCCs were added to the cross-reference file and assigned to existing profiles based on the assignment of similar SCCs already assigned to the profiles. Table II-2 lists the SCCs along with the state and county FIPS where they occurred in the MANE-VU inventory. Temporal profiles could not be identified for the SCCs listed in Table VII-3 due to either the SCC being shorter than 8-digits or the lack of information about the source categories for identifying an appropriate profile assignment. These SCCs were assigned the default profile by SMOKE.

b. Area Sources

For area sources, the improvements to the EPA cross-reference file included updates to existing profiles in the file based on MANE-VU-specific data (see Table VII-4), addition of SCCs that were assigned to existing profiles based on the assignment of similar SCCs already assigned to the profiles (see Table VII-5), and addition of new SCCs and profiles based on MANE-VU- or RPO-specific data (see Table VII-6).

Additional cross-referencing information used to revise the temporal cross-reference file included MANE-VU county-level information for residential wood combustion, monthly temporal profiles developed for NH_3 source categories using the Carnegie Mellon University (CMU) model, and a Delaware-specific cross-reference file associated with the Delaware inventory. The additions of new SCCs and new profiles shown in Table VII-6 mostly apply to the state of Delaware (State FIPS=10). For the FIPS column, the "-9" designation means the cross-reference is applied for all counties that do not have a county or state-specific SCC cross-reference record. These changes to the temporal cross-reference file allowed for the assignment of a non-flat temporal profile (262= uniform monthly, 7=uniform weekly and 24=uniform diurnal) to 95% of the SCCs in the area inventory.

2. Nonroad Sources

Nonroad sources used the same temporal profile and cross-reference files as area sources.

3. Onroad Sources

For onroad sources, the following States provided their own data to update the default temporal profile files and the temporal cross reference files: Connecticut, Delaware, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, and Vermont. Each of these States provided VMT information that could be used to develop monthly temporal profiles. The data were provided in a variety of formats, ranging from monthly or seasonal VMT to SMOKE-formatted monthly VMT temporal profiles. Where necessary, the monthly or seasonal VMT data were converted into the SMOKE monthly temporal profile format. In addition, New Jersey provided information for diurnal temporal profiles. However, the level of detail or variability provided in these monthly profiles varied by State. Connecticut's and Delaware's profiles each varied by county and road type. Maryland's profiles applied Statewide, with variability in the profiles by road type. Massachusetts' profiles varied by county, road type, and vehicle type. Both New Jersey and New York provided information for three monthly temporal profiles, each used throughout one of the three county groups in each State. The Pennsylvania profiles varied by county, but not by road type. Vermont provided information for a single monthly temporal profile to be used throughout the State.

B. Speciation Profiles

1. Point and Area Sources

The most recent SMOKE speciation cross-reference files available from EPA during the summer of 2004 were used as the starting point for developing the cross-reference files for point and area sources. These files were revised to complete SCC assignments for the Carbon Bond IV (CB-IV) with PM mechanism for point and area sources. In addition, sulfur tagging species were added to the REMSAD7 CB-IV with PM mechanism (see Table VII-1).

a. Point Sources

Thirty-one SCCs in the MANE-VU point source inventory did not have chemical speciation profile assignments for the CB-IV with PM mechanism in the default SMOKE chemical cross-reference file. For 10 of the SCCs, assignments for VOC and $PM_{2.5}$ were added to the speciation cross-reference file based on the speciation profile codes assigned to similar SCCs. Table VII-7 shows the SCCs where an SCC speciation cross-reference record was added, the VOC and $PM_{2.5}$ speciation profile code assigned, and the method used to assign the profiles. Assignments were not completed for the remaining 21 point source SCCs because of a lack of information on the emission sources needed to complete the assignments (see Table VII-8 for the list of the SCCs).

b. Area Sources

Speciation profile assignments were completed for many area source SCCs for the CB-IV with PM mechanism and were documented in separate spreadsheet files provided to MARAMA during September 2004. Assignments for VOC and $PM_{2.5}$ were added to the speciation cross-reference file based on the speciation profile codes assigned to similar SCCs. Note that the transport fractions for fugitive dust were applied as a part of the modeling effort to adjust the mass emissions in Version 3 of the inventory.

2. Nonroad Sources

No updates to the speciation profiles or speciation assignments for nonroad sources were provided by the MANE-VU States.

3. Onroad Sources

No updates to the speciation profiles or speciation assignments for onroad sources were provided by the MANE-VU States.

C. Spatial Allocation Profiles

The most recent spatial profile data files available from EPA during the summer of 2004 were used as the starting point for developing the spatial profile file for point and area sources. A detailed description of this surrogate dataset was provided in a file named "surrogate_ documentation_workbook052804.xls" from EPA's website at: http://www.epa.gov/ttn/ chief/emch/spatial/newsurrogate.html. Many SCCs in the MANE-VU inventory did not have surrogate assignments in the default SMOKE gridding cross-reference file. About 200 SCC assignments were added to the gridding cross-reference file. The assignments were based on matching surrogate descriptions from the EPA99 surrogate data with the SCC descriptions.

No updates to the spatial allocation files for nonroad and onroad sources were provided by the MANE-VU States.

D. Preparation of SMOKE (IDA) and RPO Data Exchange Protocol (NIF 3.0) Formats

Table VII-9 identifies the mass emissions and SMOKE input files for Version 3 of the MANE-VU point, area, nonroad, and onroad inventories.

The SMOKE input file format contains one field for storing daily emissions for each pollutant. The area source inventory contains summer day, winter day, and average day emissions depending on the state and source category. Thus, two sets of SMOKE input files were prepared for the area source inventory. One file contains annual, summer day, and average day emissions and the other file contains annual, winter day, and average day emissions. If summer day and average day emissions were provided for the same process and pollutant in the inventory, the summer day value was included in the SMOKE input file. If winter day and average day emissions were provided for the same process and pollutant in the inventory, the winter day value was included in the SMOKE input file.

The point source inventory contains summer day and winter day emissions. Two sets of SMOKE input files were prepared for point sources as well (one file containing annual and summer day emissions and the other containing annual and winter day emissions).

Table VII-10 provides the unique list of the start date, end date, and emission type combinations for daily emissions in the point and area source inventories that were used to define summer, winter, and average day emissions. This table also shows the names of the SMOKE input files in which the emissions are included.

For onroad sources, daily emissions were calculated by SMOKE using the monthly MOBILE6 input files included in the SMOKE input files.

The nonroad IDA file only has annual total emissions. The values in the "typical day" column are zero. Annual total emissions were allocated for each hour using the monthly, weekly, and diurnal profiles described in Section A.2 of this chapter.

Table VII-1. Profiles, Cross-references, and Documentation for Model Inputs for Version 3 of 2002 MANE-VU Inventory

Description	File Name	Format	Date of File used for Version 3	Size (Bytes)	Notes
SCC descriptions file	scc_desc_manevu.083104.txt	SMOKE	8/31/2004	1,335,524	
Temporal Allocation Profiles					
Technical memo on profile/cross-reference review for area sources	MANE-VU_AreaEI_review_draft_090304.doc	MS Word	9/3/2004	760,320	
Technical memo on profile/cross-reference review for point sources	MANE-VU_PointEI_review_draft_090304.doc	MS Word	9/3/2004	262,144	
Temporal profile cross-reference file for point sources	amptref.m3.manevu.vistascem.032805.txt	SMOKE	3/28/2005	704,998	Based on "amptref.m3.manevu.012405.txt" prepared for Version 1, but added VISTAS BaseD cross-references to the state-specific 2002 continuous emissions monitoring (CEM)-derived point source temporal profiles generated by VISTAS for their BaseD modeling.
Temporal profiles file for point sources	amptpro.m3.us+can.manevu.vistascem.032805.txt	SMOKE	3/28/2005	178,427	Based on "amptpro.m3.us+can.manevu.030205.txt" prepared for Version 1, but added state-specific 2002 CEM-derived point source temporal profiles generated by VISTAS for their BaseD modeling.
Temporal profile cross-reference file for area sources	amptref.m3.manevu.012405.txt	SMOKE	1/24/2005	687,196	
Temporal profiles file for area sources	amptpro.m3.us+can.manevu.030205.txt	SMOKE	3/2/2005	136,131	
Temporal cross-reference file containing state-specific onroad mobile source data for Connecticut, Delaware, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, and Vermont	MANEVU_2002_mtref_02022006_addCT.txt	SMOKE	2/22/2006	2,522,013	Data for Connecticut were added to the file after the file was prepared for the other states. Hence the reason "_addCT" is included at the end of the file name.

Table VII-1 (continued)

Description	File Name	Format	Date of File used for Version 3	Size (Bytes)	Notes
Temporal profiles file containing state-specific onroad mobile source data for Connecticut, Delaware, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, and Vermont	MANEVU_2002_mtpro_02022006_addCT.txt	SMOKE	2/22/2006	23,122	Data for Connecticut were added to the file after the file was prepared for the other states. Hence the reason "_addCT" is included at the end of the file name.
Spatial/Gridding					
Spreadsheet summary generated for area source gridding review	MANE-VU_agref_review.xls		8/31/2004	1,607,680	
Spatial profile cross-reference file	amgref.m3.us+can+mex.manevu.082404.txt	SMOKE	8/31/2004	89,860	
Gridding surrogate cross-reference file	amgref_us_051704_manevu_added	SMOKE	5/17/2004	35,825	Based on the surrogate cross-reference file downloaded from the EPA/CHIEF site that corresponds to the gridding surrogates file. However, several MANE-VU-specific additions included in "amgref.m3.us+can+mex.manevu.082404.txt" for Version 1 were added to the gridding-cross reference file downloaded from EPA. These are cross-references for SCCs 2806010000, 2806015000, 2870000011, 2870000015, 2870000021, and 2870000022.
Modeling grid (12-km)	amgpro.12km_041604.otc12.us.txt	SMOKE	4/16/2004	150,689,358	Based on downloaded 12-km EPA gridding surrogates windowed for the OTC domain
Speciation Profiles					
Spreadsheet summary generated for area source speciation review	MANE-VU_asref_review.xls	Excel	8/31/2004	5,626,880	
Speciation profiles file for CB-IV	gspro.cmaq.cb4p25.txt	SMOKE		142,255	
Speciation cross-reference file for CB-IV	gsref.cmaq.cb4p25.manevu.083104.txt	SMOKE	8/31/2004	786,998	

Table VII-1 (continued)

Description	File Name	Format	Date of File used for Version 3	Size (Bytes)	Notes
Speciation profile cross-reference assignment file	gsref.cmaq.cb4p25.txt	SMOKE	2/1/2005	754,302	This file is based on the file "gsref.cmaq.cb4p25.manevu.083104.txt" prepared for version 1 of the MANE-VU inventory. The only revision was to change the PM2_5 speciation profile # from its default 99999 to 35501 for some mobile source categories. This update had been done by either CENRAP or VISTAS in the speciation profiles they provided and the update had a more recent creation date than the MANE-VU files created for Version 1, so this appeared to be a refinement.
Speciation profiles for REMSAD7	gspro.remsad7.cb4mpm.txt_tag	SMOKE	5/1/2005	532,990	Based on "gspro.remsad7.cb4mpm.txt" in the SMOKE, but added tagged species for REMSAD state-level sulfur tagging.
Speciation cross-reference for REMSAD7	gsref.remsad7.cb4mpm.txt_tag	SMOKE	5/1/2005	2,614,360	Based on "gsref.remsad7.cb4mpm.txt" in the SMOKE, but added tagged species for REMSAD state-level sulfur tagging.
Transport fractions for fugitive dust	gcntl.xportfrac.txt	SMOKE	2/1/2004	124,495	File obtained from input file EPA used to adjust for PM transport for modeling of Clean Air Interstate Rule (CAIR).

Table VII-2. Point Source Temporal Cross-reference Additions

State	FIPS	SCC	Recommended profiles			Method of assignment	SCC Description (Complete description not always available)
			Monthly	Weekly	Diurnal		
VT	50005	10200908	262	7	24	Use SCC=102009XX profiles	External Combustion Boilers;Industrial;Wood/Bark Waste;Wood-fired Boiler - Dry Wood (<20% moisture)
VT	50019	10200908	262	7	24	Use SCC=102009XX profiles	External Combustion Boilers;Industrial;Wood/Bark Waste;Wood-fired Boiler - Dry Wood (<20% moisture)
VT	50021	10200908	262	7	24	Use SCC=102009XX profiles	External Combustion Boilers;Industrial;Wood/Bark Waste;Wood-fired Boiler - Dry Wood (<20% moisture)
VT	50017	10300908	262	7	24	Use SCC=103009XX profiles	External Combustion Boilers;Commercial/Institutional;Wood/Bark Waste;Wood-fired Boiler - Dry Wood (<20% moisture)
PA	42009	20200299	262	7	24	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42029	20200299	262	7	24	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42045	20200299	262	7	24	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42061	20200299	262	7	24	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42067	20200299	262	7	24	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42015	20300299	262	7	24	Use SCC=203002XX profiles	Internal Combustion Engines;Commercial/Institutional;Natural Gas;Unknown
PA	42029	20300299	262	7	24	Use SCC=203002XX profiles	Internal Combustion Engines;Commercial/Institutional;Natural Gas;Unknown
PA	42037	20300299	262	7	24	Use SCC=203002XX profiles	Internal Combustion Engines;Commercial/Institutional;Natural Gas;Unknown
PA	42071	20300299	262	7	24	Use SCC=203002XX profiles	Internal Combustion Engines;Commercial/Institutional;Natural Gas;Unknown
PA	42011	28888899	262	7	24	Use SCC=288888XX profiles	Internal Combustion Engines;Fugitive Emissions;Other Not Classified;Specify in Comments
PA	42123	28888899	262	7	24	Use SCC=288888XX profiles	Internal Combustion Engines;Fugitive Emissions;Other Not Classified;Specify in Comments
PA	42123	28888899	262	7	24	Use SCC=288888XX profiles	Internal Combustion Engines;Fugitive Emissions;Other Not Classified;Specify in Comments
PA	42129	28888899	262	7	24	Use SCC=288888XX profiles	Internal Combustion Engines;Fugitive Emissions;Other Not Classified;Specify in Comments
MD	24031	30500261	262	7	24	Use SCC=30500260 profile	Industrial Processes;Mineral Products;Asphalt Concrete;Drum Mix Plant: Rotary Drum Dryer/Mixer, Waste/Drain/#6 Oil-Fired

Table VII-2 (continued)

State	FIPS	SCC	Recommended profiles			Method of assignment	SCC Description (Complete description not always available)
			Monthly	Weekly	Diurnal		
NY	36055	31603001	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Substrate Preparation;Extrusion Operations
NY	36055	31603002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Substrate Preparation;Film Support Operations
NY	36055	31604001	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Chemical Preparation;Chemical Manufacturing
NY	36055	31604002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Chemical Preparation;Emulsion Making Operations
NY	36055	31604003	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Chemical Preparation;Chemical Mixing Operations
NY	36055	31605001	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Surface Treatments;Surface Coating Operations
NY	36055	31605002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Surface Treatments;Grid Ionizers
NY	36055	31605003	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Surface Treatments;Corona Discharge Treatment
NY	36055	31606001	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Finishing Operations;General Film Manufacturing
NY	36055	31606002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Finishing Operations;Cutting/Slitting Operations
PA	42101	31606002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Finishing Operations;Cutting/Slitting Operations
NY	36055	31612001	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Cleaning Operations;Tank Cleaning Operations
NY	36055	31612002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Cleaning Operations;General Cleaning Operations
NY	36055	31613002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Storage Operations;General Storage Operations

Table VII-2 (continued)

State	FIPS	SCC	Recommended profiles			Method of assignment	SCC Description (Complete description not always available)
			Monthly	Weekly	Diurnal		
NY	36055	31614001	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Material Transfer Operations;Filling Operations (non petroleum)
NY	36055	31614002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Material Transfer Operations;Transfer of Chemicals
NY	36055	31615001	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Separation Processes;Recovery Operations
NY	36055	31615003	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Separation Processes;Distillation Operations
NY	36055	31616002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Other Operations;General Process Tank Operations
NY	36055	31616003	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Other Operations;Miscellaneous Manufacturing Operations
NY	36055	31616004	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Other Operations;Paint Spraying Operations
NY	36055	31616006	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Other Operations;Chemical Weighing Operations
PA	Numerous counties	39000698	262	7	24	Use SCC=39000699 profile	Industrial Processes;In-process Fuel Use;Natural Gas;Unknown
NJ	Numerous counties	39999901	262	7	24	Use SCC=399999XX profiles	Industrial Processes;Miscellaneous Manufacturing Industries;Miscellaneous Industrial Processes;Unknown
PA	42015	40202598	266	7	16	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42017	40202598	266	7	16	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42091	40202598	266	7	16	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42095	40202598	266	7	16	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42097	40202598	266	7	16	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42013	40400299	262	7	24	Use SCC=404002XX profiles	Petroleum and Solvent Evaporation;Petroleum Liquids Storage (non-Refinery);Bulk Plants;Unknown
PA	42041	40400299	262	7	24	Use SCC=404002XX profiles	Petroleum and Solvent Evaporation;Petroleum Liquids Storage (non-Refinery);Bulk Plants;Unknown

Table VII-2 (continued)

State	FIPS	SCC	Recommended profiles			Method of assignment	SCC Description (Complete description not always available)
			Monthly	Weekly	Diurnal		
PA	42045	40400299	262	7	24	Use SCC=404002XX profiles	Petroleum and Solvent Evaporation;Petroleum Liquids Storage (non-Refinery);Bulk Plants;Unknown
PA	42071	40400299	262	7	24	Use SCC=404002XX profiles	Petroleum and Solvent Evaporation;Petroleum Liquids Storage (non-Refinery);Bulk Plants;Unknown

Table VII-3. Unknown SCCs in the MANE-VU Point Source Inventory

State	FIPS	SCC	Description
PA	42101	24950002	Need more info: Unknown SCC
PA	42061	40500299	Need more info:Printing/Publishing; General
PA	42091	40500299	Need more info:Printing/Publishing; General
PA	42133	40500299	Need more info:Printing/Publishing; General

Table VII-4. Area Source Temporal Cross-Reference Updates

SCC	SCC description	SMOKE Default profile			New MANE-VU profile		
		Monthly	Weekly	Diurnal	Monthly	Weekly	Diurnal
30502713	Industrial Processes;Mineral Products;Industrial Sand and Gravel;Screening: Size Classification	262	7	24	262	5	12
30502760	Industrial Processes;Mineral Products;Industrial Sand and Gravel;Sand Handling, Transfer, and Storage	262	7	24	262	5	12
2302000000	Industrial Processes;Food and Kindred Products: SIC 20;All Processes;Total	262	7	26	262	7	250
2302050000	Industrial Processes;Food and Kindred Products: SIC 20;Bakery Products;Total	262	7	26	262	5	26
2305000000	Industrial Processes;Mineral Processes: SIC 32;All Processes;Total	262	7	26	262	5	10
2309100010	Industrial Processes;Fabricated Metals: SIC 34;Coating, Engraving, and Allied Services;Electroplating	262	7	26	262	5	10
2311010000	Industrial Processes;Construction: SIC 15 - 17;General Building Construction;Total	262	7	26	262	5	12
2311020000	Industrial Processes;Construction: SIC 15 - 17;Heavy Construction;Total	262	7	26	262	5	12
2311030000	Industrial Processes;Construction: SIC 15 - 17;Road Construction;Total	262	7	26	262	5	12
2325000000	Industrial Processes;Mining and Quarrying: SIC 14;All Processes;Total	262	7	26	262	5	10
2399000000	Industrial Processes;Industrial Processes: NEC;Industrial Processes: NEC;Total	262	7	26	262	5	10
2399010000	Industrial Processes; Industrial Refrigeration; Refrigerant Losses; All Processes	262	7	26	262	5	10
2401015000	Solvent Utilization;Surface Coating;Factory Finished Wood: SIC 2426 thru 242;Total: All Solvent Types	173	7	26	173	5	26
2401020000	Solvent Utilization;Surface Coating;Wood Furniture: SIC 25;Total: All Solvent Types	287	7	26	287	5	26
2401025000	Solvent Utilization;Surface Coating;Metal Furniture: SIC 25;Total: All Solvent Types	287	7	26	287	5	26
2401030000	Solvent Utilization;Surface Coating;Paper: SIC 26;Total: All Solvent Types	257	7	26	257	5	26
2401040000	Solvent Utilization;Surface Coating;Metal Cans: SIC 341;Total: All Solvent Types	253	7	26	253	5	26
2401045000	Solvent Utilization;Surface Coating;Metal Coils: SIC 3498;Total: All Solvent Types	253	7	26	253	5	26
2401050000	Solvent Utilization;Surface Coating;Miscellaneous Finished Metals: SIC 34 - (341 + 3498);Total: All Solvent Types	253	7	26	253	5	26

Table VII-4 (continued)

SCC	SCC description	SMOKE Default profile			New MANE-VU profile		
		Monthly	Weekly	Diurnal	Monthly	Weekly	Diurnal
2401055000	Solvent Utilization;Surface Coating;Machinery and Equipment: SIC 35;Total: All Solvent Types	253	7	26	253	5	26
2401060000	Solvent Utilization;Surface Coating;Large Appliances: SIC 363;Total: All Solvent Types	262	7	26	262	5	26
2401065000	Solvent Utilization;Surface Coating;Electronic and Other Electrical: SIC 36 - 363;Total: All Solvent Types	253	7	26	253	5	26
2401070000	Solvent Utilization;Surface Coating;Motor Vehicles: SIC 371;Total: All Solvent Types	140	7	26	140	5	26
2401075000	Solvent Utilization;Surface Coating;Aircraft: SIC 372;Total: All Solvent Types	169	7	26	169	5	26
2401080000	Solvent Utilization;Surface Coating;Marine: SIC 373;Total: All Solvent Types	266	7	26	266	5	26
2401085000	Solvent Utilization;Surface Coating;Railroad: SIC 374;Total: All Solvent Types	169	7	26	169	5	26
2401090000	Solvent Utilization;Surface Coating;Miscellaneous Manufacturing;Total: All Solvent Types	260	7	26	260	5	26
2401090999	Solvent Utilization;Surface Coating;Miscellaneous Manufacturing;Solvents: NEC	260	7	26	260	5	26
2401200000	Solvent Utilization;Surface Coating;Other Special Purpose Coatings;Total: All Solvent Types	260	7	26	260	5	26
2401990000	Solvent Utilization;Surface Coating;All Surface Coating Categories;Total: All Solvent Types	260	7	26	260	5	26
2401990999	Solvent Utilization;Surface Coating;All Surface Coating Categories;Solvents: NEC	260	7	26	260	5	26
2415000000	Solvent Utilization;Degreasing;All Processes/All Industries;Total: All Solvent Types	253	7	26	253	5	26
2415020000	Solvent Utilization;Degreasing;Fabricated Metal Products (SIC 34): All Processes;Total: All Solvent Types	253	7	26	253	5	12
2415025000	Solvent Utilization;Degreasing;Industrial Machinery and Equipment (SIC 35): All Processes;Total: All Solvent Types	253	7	26	253	5	12
2415030000	Solvent Utilization;Degreasing;Electronic and Other Elec. (SIC 36): All Processes;Total: All Solvent Types	253	7	26	253	5	12
2415035000	Solvent Utilization;Degreasing;Transportation Equipment (SIC 37): All Processes;Total: All Solvent Types	253	7	26	253	5	12
2415045000	Solvent Utilization;Degreasing;Miscellaneous Manufacturing (SIC 39): All Processes;Total: All Solvent Types	253	7	26	253	5	12
2415055000	Solvent Utilization;Degreasing;Automotive Dealers (SIC 55): All Processes;Total: All Solvent Types	253	7	26	253	5	12
2415060000	Solvent Utilization;Degreasing;Miscellaneous Repair Services (SIC 76): All Processes;Total: All Solvent Types	253	7	26	253	5	12

Table VII-4 (continued)

SCC	SCC description	SMOKE Default profile			New MANE-VU profile		
		Monthly	Weekly	Diurnal	Monthly	Weekly	Diurnal
2415065000	Solvent Utilization;Degreasing;Auto Repair Services (SIC 75): All Processes;Total: All Solvent Types	253	7	26	253	6	12
2415100000	Solvent Utilization;Degreasing;All Industries: Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415105000	Solvent Utilization;Degreasing;Furniture and Fixtures (SIC 25): Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415110000	Solvent Utilization;Degreasing;Primary Metal Industries (SIC 33): Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415120000	Solvent Utilization;Degreasing;Fabricated Metal Products (SIC 34): Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415125000	Solvent Utilization;Degreasing;Industrial Machinery and Equipment (SIC 35): Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415130000	Solvent Utilization;Degreasing;Electronic and Other Elec. (SIC 36): Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415135000	Solvent Utilization;Degreasing;Transportation Equipment (SIC 37): Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415140000	Solvent Utilization;Degreasing;Instruments and Related Products (SIC 38): Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415145000	Solvent Utilization;Degreasing;Miscellaneous Manufacturing (SIC 39): Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415200000	Solvent Utilization;Degreasing;All Industries: Conveyerized Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415230000	Solvent Utilization;Degreasing;Electronic and Other Elec. (SIC 36): Conveyerized Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415300000	Solvent Utilization;Degreasing;All Industries: Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415305000	Solvent Utilization;Degreasing;Furniture and Fixtures (SIC 25): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415310000	Solvent Utilization;Degreasing;Primary Metal Industries (SIC 33): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415320000	Solvent Utilization;Degreasing;Fabricated Metal Products (SIC 34): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415325000	Solvent Utilization;Degreasing;Industrial Machinery and Equipment (SIC 35): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415330000	Solvent Utilization;Degreasing;Electronic and Other Elec. (SIC 36): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12

Table VII-4 (continued)

SCC	SCC description	SMOKE Default profile			New MANE-VU profile		
		Monthly	Weekly	Diurnal	Monthly	Weekly	Diurnal
2415335000	Solvent Utilization;Degreasing;Transportation Equipment (SIC 37): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415340000	Solvent Utilization;Degreasing;Instruments and Related Products (SIC 38): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415345000	Solvent Utilization;Degreasing;Miscellaneous Manufacturing (SIC 39): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415355000	Solvent Utilization;Degreasing;Automotive Dealers (SIC 55): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415360000	Solvent Utilization;Degreasing;Auto Repair Services (SIC 75): Cold Cleaning;Total: All Solvent Types	253	7	26	253	6	12
2415365000	Solvent Utilization;Degreasing;Miscellaneous Repair Services (SIC 76): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2425000000	Solvent Utilization;Graphic Arts;All Processes;Total: All Solvent Types	257	7	26	257	5	26
2425010000	Solvent Utilization;Graphic Arts;Lithography;Total: All Solvent Types	257	7	26	257	5	26
2425020000	Solvent Utilization;Graphic Arts;Letterpress;Total: All Solvent Types	257	7	26	257	5	26
2425030000	Solvent Utilization;Graphic Arts;Rotogravure;Total: All Solvent Types	262	7	26	262	5	26
2425040000	Solvent Utilization;Graphic Arts;Flexography;Total: All Solvent Types	257	7	26	257	5	26
2430000000	Solvent Utilization;Rubber/Plastics;All Processes;Total: All Solvent Types	200	7	26	200	5	26
2601010000	Waste Disposal, Treatment, and Recovery;On-site Incineration;Industrial;Total	262	7	26	262	5	12
2601020000	Waste Disposal, Treatment, and Recovery;On-site Incineration;Commercial/Institutional;Total	262	7	26	262	5	12
2610010000	Waste Disposal, Treatment, and Recovery;Open Burning;Industrial;Total	262	7	26	262	5	12
2610020000	Waste Disposal, Treatment, and Recovery;Open Burning;Commercial/Institutional;Total	262	7	26	262	5	12
2805020000	Miscellaneous Area Sources;Agriculture Production - Livestock;Cattle and Calves Waste Emissions;Total	489	7	26	1500	7	26
2805025000	Miscellaneous Area Sources;Agriculture Production - Livestock;Hogs and Pigs Waste Emissions;Total	489	7	26	1500	7	26
2805030000	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry Waste Emissions;Total	489	7	26	1500	7	26

Table VII-4 (continued)

SCC	SCC description	SMOKE Default profile			New MANE-VU profile		
		Monthly	Weekly	Diurnal	Monthly	Weekly	Diurnal
2805035000	Miscellaneous Area Sources;Agriculture Production - Livestock;Horses and Ponies Waste Emissions;Total	262	7	26	1500	7	26
2805040000	Miscellaneous Area Sources;Agriculture Production - Livestock;Sheep and Lambs Waste Emissions;Total	489	7	26	1500	7	26
2805045001	Miscellaneous Area Sources;Agriculture Production - Livestock;Goats Waste Emissions;Total	489	7	26	262	7	24
2810015000	Miscellaneous Area Sources;Other Combustion;Prescribed Burning for Forest Management;Total	14	7	24	3	11	13

Table VII-5. Area Source Temporal Cross-Reference Additions

SCC	Description	Month	Week	Diurnal
2104008002	Stationary Source Fuel Combustion;Residential;Wood;Fireplaces: Insert; non-EPA certified	485	7	26
2104008003	Stationary Source Fuel Combustion;Residential;Wood;Fireplaces: Insert; EPA certified; non-catalytic	485	7	26
2104008004	Stationary Source Fuel Combustion;Residential;Wood;Fireplaces: Insert; EPA certified; catalytic	485	7	26
2302002100	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Charbroiling;Conveyorized Charbroiling	262	7	26
2302002200	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Charbroiling;Under-fired Charbroiling	262	7	26
2302003000	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Total	262	7	26
2302003100	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Flat Griddle Frying	262	7	26
2302003200	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Clamshell Griddle Frying	262	7	26
2302080002	Industrial Processes;Food and Kindred Products: SIC 20;Miscellaneous Food and Kindred Products;Refrigeration	262	7	26
2401002000	Solvent Utilization;Surface Coating;Architectural Coatings - Solvent-based;Total: All Solvent Types	467	7	26
2401003000	Solvent Utilization;Surface Coating;Architectural Coatings - Water-based;Total: All Solvent Types	467	7	26
2401102000	Solvent Utilization;Surface Coating;Industrial Maintenance Coatings-Solvent-based;Total: All Solvent Types	500	5	26
2401103000	Solvent Utilization;Surface Coating;Industrial Maintenance Coatings-Water-based;Total: All Solvent Types	500	5	26
2415270000	Solvent Utilization;Degreasing;All Manufacturing (except SIC 36): Vapor and In-Line Cleaning;Total: All Solvent Types	253	5	12
2415280000	Solvent Utilization;Degreasing;Electronic and Other Elec. (SIC 36): Vapor and In-Line Cleaning;Total: All Solvent Types	253	5	12
2415370000	Solvent Utilization;Degreasing;Transportation Equipment Repair Services: Cold Cleaning;Total: All Solvent Types	253	5	12
2415380000	Solvent Utilization;Degreasing;All Manufacturing: Cold Cleaning;Total: All Solvent Types	253	5	12
2610000400	Waste Disposal, Treatment, and Recovery;Open Burning;All Categories;Yard Waste - Brush Species Unspecified	262	7	26
2610000500	Waste Disposal, Treatment, and Recovery;Open Burning;All Categories;Land Clearing Debris (use 28-10-005-000 for Logging Debris Burning)	262	7	26
2610040400	Waste Disposal, Treatment, and Recovery;Open Burning;Municipal (collected from residences, parks,other for central burn);Yard Waste - Total	262	7	26
2630020010	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Wastewater Treatment Processes Total	262	7	24

Table VII-5 (continued)

SCC	Description	Month	Week	Diurnal
2630020020	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Biosolids Processes Total	262	7	24
2630020030	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Land Application - Digested Sludge	262	7	24
2630050000	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Land Application - Digested Sludge	262	7	24
2680001000	Waste Disposal, Treatment, and Recovery;Composting;100% Biosolids (e.g., sewage sludge, manure, mixtures of these matls);All Processes	262	7	26
2680002000	Waste Disposal, Treatment, and Recovery;Composting;Mixed Waste (e.g., a 50:50 mixture of biosolids and green wastes);All Processes	262	7	26
2801700011	Miscellaneous Area Sources;Agriculture Production - Crops;Fertilizer Application;Calcium Ammonium Nitrate	998	7	26
2801700012	Miscellaneous Area Sources;Agriculture Production - Crops;Fertilizer Application;Potassium Nitrate	998	7	26
2801700013	Miscellaneous Area Sources;Agriculture Production - Crops;Fertilizer Application;Diammonium Phosphate	998	7	26
2801700014	Miscellaneous Area Sources;Agriculture Production - Crops;Fertilizer Application;Monoammonium Phosphate	998	7	26
2801700015	Miscellaneous Area Sources;Agriculture Production - Crops;Fertilizer Application;Liquid Ammonium Polyphosphate	998	7	26
2801700099	Miscellaneous Area Sources;Agriculture Production - Crops;Fertilizer Application;Miscellaneous Fertilizers	998	7	26
2805001100	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef cattle - finishing operations on feedlots (drylots);Confinement	1500	7	26
2805001200	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef cattle - finishing operations on feedlots (drylots);Manure handling and storage	1500	7	26
2805001300	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef cattle - finishing operations on feedlots (drylots);Land application of manure	1500	7	26
2805002000	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef Cattle Composite; Not Elsewhere Classified	1500	7	26
2805003100	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef cattle - finishing operations on pasture/range;Confinement	1500	7	26
2805007100	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with dry manure management systems;Confinement	1500	7	26
2805007200	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - layers with dry manure management systems;Management	1500	7	26
2805007300	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with dry manure management systems;Land application of manure	262	7	24
2805007330	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - layers with dry manure management systems; Land application	1500	7	26
2805007340	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - layers with dry manure management systems; Land application	1500	7	26

Table VII-5 (continued)

SCC	Description	Month	Week	Diurnal
2805008100	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with wet manure management systems;Confinement	1500	7	26
2805008200	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with wet manure management systems;Manure handling and storage	1500	7	26
2805008300	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with wet manure management systems;Land application of manure	1500	7	26
2805009100	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - broilers;Confinement	1500	7	26
2805009300	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - broilers;Land application of manure	1500	7	26
2805010100	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - turkeys;Confinement	262	7	24
2805010200	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - turkeys;Manure handling and storage	262	7	24
2805010300	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - turkeys;Land application of manure	1500	7	26
2805018000	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle composite; Not Elsewhere Classified	1501	7	26
2805019100	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - flush dairy;Confinement	1500	7	26
2805019200	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - flush dairy;Manure handling and storage	1500	7	26
2805019300	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - flush dairy;Land application of manure	1500	7	26
2805020001	Miscellaneous Area Sources;Agriculture Production - Livestock;Cattle and Calves Waste Emissions;Milk Cows	1500	7	26
2805020002	Miscellaneous Area Sources;Agriculture Production - Livestock;Cattle and Calves Waste Emissions;Beef Cows	1500	7	26
2805020003	Miscellaneous Area Sources;Agriculture Production - Livestock;Cattle and Calves Waste Emissions;Heifers and Heifer Calves	1500	7	26
2805021300	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - scrape dairy;Land application of manure	1500	7	26
2805022100	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - deep pit dairy;Confinement	1500	7	26
2805022200	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - deep pit dairy;Manure handling and storage	1500	7	26
2805022300	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - deep pit dairy;Land application of manure	1500	7	26
2805023300	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - drylot/pasture dairy;Land application of manure	1500	7	26
2805030001	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry Waste Emissions;Pullet Chicks and Pullets less than 13 weeks old	1500	7	26

Table VII-5 (continued)

SCC	Description	Month	Week	Diurnal
2805030002	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry Waste Emissions;Pullets 13 weeks old and older but less than 20 weeks	1500	7	26
2805030003	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry Waste Emissions;Layers	1500	7	26
2805030004	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry Waste Emissions;Broilers	1500	7	26
2805030008	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry Waste Emissions;Geese	1500	7	26
2805039100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - operations with lagoons;Confinement	1500	7	26
2805039200	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - operations with lagoons;Manure handling and storage	1500	7	26
2805039300	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - operations with lagoons;Land application of manure	1500	7	26
2805045000	Miscellaneous Area Sources;Agriculture Production - Livestock;Goats Waste Emissions;Not Elsewhere Classified	1500	7	26
2805045002	Miscellaneous Area Sources;Agriculture Production - Livestock;Goats Waste Emissions;Angora Goats	1500	7	26
2805045003	Miscellaneous Area Sources;Agriculture Production - Livestock;Goats Waste Emissions;Milk Goats	1500	7	26
2805047100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - deep-pit house operations;Confinement	1500	7	26
2805047300	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - deep-pit house operations;Land application of manure	1500	7	26
2805053100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - outdoor operations; Confinement	1500	7	26
2805054000	Miscellaneous Area Sources;Agricultural Production - Livestock;"Mules; Donkeys; and Burros Waste Emissions";Not Elsewhere Classified	262	7	24
2806010000	Miscellaneous Area Sources;Domestic Animals Waste Emissions;Cats;Total	262	7	24
2806015000	Miscellaneous Area Sources;Domestic Animals Waste Emissions;Dogs;Total	262	7	24
2807020001	Miscellaneous Area Sources;Wild Animals Waste Emissions;Bears;Black Bears	262	7	26
2807020002	Miscellaneous Area Sources;Wild Animals Waste Emissions;Bears;Grizzly Bears	262	7	26
2807025000	Miscellaneous Area Sources;Wild Animals Waste Emissions;Elk;Total	262	7	26
2807030000	Miscellaneous Area Sources;Wild Animals Waste Emissions;Deer;Total	262	7	26
2807040000	Miscellaneous Area Sources;Wild Animals Waste Emissions;Birds;Total	262	7	26
2810060100	Miscellaneous Area Sources;Other Combustion;Cremation;Humans	262	7	24
2870000001	Miscellaneous Area Sources;Humans;Respiration and Perspiration;Total	262	7	24
2870000002	Miscellaneous Area Sources;Humans;Infant Diapered Waste;Total	262	7	24
2870000011	Miscellaneous Area Sources;Domestic Activity;Household Products;Total	262	7	24

Table VII-5 (continued)

SCC	Description	Month	Week	Diurnal
2870000015	Miscellaneous Area Sources;Domestic Activity;Non-agricultural Fertilizers;Total	3	7	24
2870000021	Miscellaneous Area Sources;Domestic Animals;Dogs;Total	262	7	24
2870000022	Miscellaneous Area Sources;Domestic Animals;Cats;Total	262	7	24
2870000031	Miscellaneous Area Sources;Wild Animals;Deer;Total	262	7	24

Table VII-6. Area Source Temporal Cross-Reference and Profile Additions for the MANE-VU Inventory

SCC	Description	Month	Week	Diurnal	FIPS
2102002000	Stationary Source Fuel Combustion;Industrial;Bituminous/Subbituminous Coal;Total: All Boiler Types	1726	8	26	10000
2102006000	Stationary Source Fuel Combustion;Industrial;Natural Gas;Total: Boilers and IC Engines	1727	8	26	10000
2102007000	Stationary Source Fuel Combustion;Industrial;Liquified Petroleum Gas (LPG);Total: All Boiler Types	1727	8	26	10000
2103001000	Stationary Source Fuel Combustion;Commercial/Institutional;Anthracite Coal;Total: All Boiler Types	1720	8	26	10000
2103004000	Stationary Source Fuel Combustion;Commercial/Institutional;Distillate Oil;Total: Boilers and IC Engines	1721	8	26	10000
2103006000	Stationary Source Fuel Combustion;Commercial/Institutional;Natural Gas;Total: Boilers and IC Engines	1722	8	26	10000
2103007000	Stationary Source Fuel Combustion;Commercial/Institutional;Liquified Petroleum Gas (LPG);Total: All Combustor Types	1723	8	26	10000
2104002000	Stationary Source Fuel Combustion;Residential;Bituminous/Subbituminous Coal;Total: All Combustor Types	1732	7	26	10000
2104004000	Stationary Source Fuel Combustion;Residential;Distillate Oil;Total: All Combustor Types	1733	7	26	10000
2104006000	Stationary Source Fuel Combustion;Residential;Natural Gas;Total: All Combustor Types	1734	7	26	10000
2104007000	Stationary Source Fuel Combustion;Residential;Liquified Petroleum Gas (LPG);Total: All Combustor Types	1735	7	26	10000
2104008000	Stationary Source Fuel Combustion;Residential;Wood;Total: Woodstoves and Fireplaces	1740	2007	2014	10001
2104008000	Stationary Source Fuel Combustion;Residential;Wood;Total: Woodstoves and Fireplaces	1741	2008	2015	10003
2104008000	Stationary Source Fuel Combustion;Residential;Wood;Total: Woodstoves and Fireplaces	1742	2009	2016	10005
2104008000	Stationary Source Fuel Combustion;Residential;Wood;Total: Woodstoves and Fireplaces	1742	2009	2016	10005
2104008070	Stationary Source Fuel Combustion;Residential;Wood;Outdoor Wood Burning Equipment;	1743	2010	2017	10001
2104008070	Stationary Source Fuel Combustion;Residential;Wood;Outdoor Wood Burning Equipment;	1744	2011	2017	10003
2104008070	Stationary Source Fuel Combustion;Residential;Wood;Outdoor Wood Burning Equipment;	1745	2012	2017	10005
2104011000	Stationary Source Fuel Combustion;Residential;Kerosene;Total: All Heater Types	1736	7	26	10000
2294000000	Mobile Sources;Paved Roads;All Paved Roads;Total: Fugitives	1729	7	26	10000
2302002100	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Charbroiling;Conveyorized Charbroiling	262	7	26	10000
2302002100	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Charbroiling;Conveyorized Charbroiling	262	7	26	10000
2302002200	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Charbroiling;Under-fired Charbroiling	262	7	26	10000

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2302002200	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Charbroiling;Under-fired Charbroiling	262	7	26	10000
2302003000	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Total	262	7	26	10000
2302003000	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Total	262	7	26	10000
2302003100	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Flat Griddle Frying	262	7	26	10000
2302003100	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Flat Griddle Frying	262	7	26	10000
2302003200	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Clamshell Griddle Frying	262	7	26	10000
2302003200	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Clamshell Griddle Frying	262	7	26	10000
2311030000	Industrial Processes;Construction: SIC 15 - 17;Road Construction;Total	262	7	9	10000
2401002000	Solvent Utilization;Surface Coating;Architectural Coatings - Solvent-based;Total: All Solvent Types	467	7	26	-9
2401002000	Solvent Utilization;Surface Coating;Architectural Coatings - Solvent-based;Total: All Solvent Types	500	20	27	10000
2401003000	Solvent Utilization;Surface Coating;Architectural Coatings - Water-based;Total: All Solvent Types	467	7	26	-9
2401003000	Solvent Utilization;Surface Coating;Architectural Coatings - Water-based;Total: All Solvent Types	500	20	27	10000
2401005000	Solvent Utilization;Surface Coating;Auto Refinishing: SIC 7532;Total: All Solvent Types	1702	5	27	10000
2401005500	Solvent Utilization;Surface Coating;Auto Refinishing: SIC 7532;Surface Preparation Solvents	1702	5	27	10000
2401005600	Solvent Utilization;Surface Coating;Auto Refinishing: SIC 7532;Primers	1702	5	27	10000
2401005700	Solvent Utilization;Surface Coating;Auto Refinishing: SIC 7532;Top Coats	1702	5	27	10000
2401005800	Solvent Utilization;Surface Coating;Auto Refinishing: SIC 7532;Clean-up Solvents	1702	5	27	10000
2401005800	Solvent Utilization;Surface Coating;Auto Refinishing: SIC 7532;Clean-up Solvents	1702	5	27	10001
2401008000	Solvent Utilization;Surface Coating;Traffic Markings;Total: All Solvent Types	1700	7	26	-9
2401008000	Solvent Utilization;Surface Coating;Traffic Markings;Total: All Solvent Types	1700	5	26	10000
2401008999	Solvent Utilization;Surface Coating;Traffic Markings;Solvents: NEC	1700	7	26	-9
2401102000	Solvent Utilization;Surface Coating;Industrial Maintenance Coatings-Solvent-based;Total: All Solvent Types	500	5	26	10000
2401103000	Solvent Utilization;Surface Coating;Industrial Maintenance Coatings-Water-based;Total: All Solvent Types	500	5	26	10000
2415100000	Solvent Utilization;Degreasing;All Industries: Open Top Degreasing;Total: All Solvent Types	262	6	5	10000
2415130000	Solvent Utilization;Degreasing;Electronic and Other Elec. (SIC 36): Open Top Degreasing;Total: All Solvent Types	262	6	5	10000
2415300000	Solvent Utilization;Degreasing;All Industries: Cold Cleaning;Total: All Solvent Types	262	6	5	10000
2415360000	Solvent Utilization;Degreasing;Auto Repair Services (SIC 75): Cold Cleaning;Total: All Solvent Types	262	5	5	10000
2461021000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Cutback Asphalt;Total: All Solvent Types	1712	7	26	10001
2461021000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Cutback Asphalt;Total: All Solvent Types	1714	7	26	10001
2461021000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Cutback Asphalt;Total: All Solvent Types	1713	7	26	10003

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2461021000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Cutback Asphalt;Total: All Solvent Types	1712	7	26	10003
2461021000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Cutback Asphalt;Total: All Solvent Types	1714	7	26	10005
2461021000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Cutback Asphalt;Total: All Solvent Types	1713	7	26	10005
2461022000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Emulsified Asphalt;Total: All Solvent Types	1709	7	26	10001
2461022000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Emulsified Asphalt;Total: All Solvent Types	1711	7	26	10001
2461022000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Emulsified Asphalt;Total: All Solvent Types	1710	7	26	10003
2461022000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Emulsified Asphalt;Total: All Solvent Types	1709	7	26	10003
2461022000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Emulsified Asphalt;Total: All Solvent Types	1711	7	26	10005
2461022000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Emulsified Asphalt;Total: All Solvent Types	1710	7	26	10005
2461850001	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Pesticide Application: Agricultural;Herbicides, Corn	536	7	26	10000
2461850005	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Pesticide Application: Agricultural;Herbicides, Soy Beans	536	7	26	10000
2461850006	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Pesticide Application: Agricultural;Herbicides, Hay & Grains	536	7	26	10000
2461850051	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Pesticide Application: Agricultural;Other Pesticides, Corn	536	7	26	10000
2461850055	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Pesticide Application: Agricultural;Other Pesticides, Soy Beans	536	7	26	10000
2461850056	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Pesticide Application: Agricultural;Other Pesticides, Hay & Grains	536	7	26	10000
2501011010	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Vapor Losses	1701	7	26	10000
2501011010	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Vapor Losses	1701	7	26	10000
2501011011	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Permeation	1701	7	26	10000
2501011011	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Permeation	1701	7	26	10000
2501011012	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Diurnal	1701	7	26	10000
2501011012	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Diurnal	1701	7	26	10000
2501011015	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Spillage	1701	7	26	10000
2501011015	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Spillage	1701	7	26	10000
2501011016	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Transport	1701	7	26	10000
2501011016	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Transport	1701	7	26	10000
2501012010	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Vapor Losses	1701	7	26	10000
2501012010	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Vapor Losses	1701	7	26	10000

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2501012011	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Permeation	1701	7	26	10000
2501012011	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Permeation	1701	7	26	10000
2501012012	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Diurnal	1701	7	26	10000
2501012012	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Diurnal	1701	7	26	10000
2501012015	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Spillage	1701	7	26	10000
2501012015	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Spillage	1701	7	26	10000
2501012016	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Transport	1701	7	26	10000
2501012016	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Transport	1701	7	26	10000
2501060000	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Total: All Gasoline/All Processes	1701	7	26	-9
2501060050	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 1: Total	1701	7	26	-9
2501060051	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 1: Submerged Filling	1701	7	26	-9
2501060052	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 1: Splash Filling	1701	7	26	-9
2501060053	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 1: Balanced Submerged Filling	1701	7	26	-9
2501060100	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 2: Total	1701	7	26	-9
2501060100	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 2: Total	1724	7	26	10000
2501060101	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 2: Displacement Loss/Uncontrolled	1701	7	26	-9
2501060102	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 2: Displacement Loss/Controlled	1701	7	26	-9
2501060103	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 2: Spillage	1701	7	26	-9
2501060201	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Underground Tank: Breathing and Emptying	1701	7	26	-9
2501060204	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 2: Off-Highway Equipment Displacement Loss/Controlled	1701	7	26	10000
2501060205	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 2: Off-Highway Equipment Spillage	1701	7	26	10000
2501080050	Storage and Transport;Petroleum and Petroleum Product Storage;Airports : Aviation Gasoline;Stage 1: Total	1701	7	26	10000
2501080102	Storage and Transport;Petroleum and Petroleum Product Storage;Airports: Aviation Gasoline;Stage 2: Displacement Loss	1701	7	26	10000
2501080103	Storage and Transport;Petroleum and Petroleum Product Storage;Airports: Aviation Gasoline;Stage 2: Spillage	1701	7	26	10000
2501080201	Storage and Transport;Petroleum and Petroleum Product Storage;Airports: Aviation Gasoline;Underground Tank: Breathing and Emptying	1701	7	26	10000

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2501090050	Storage and Transport;Petroleum and Petroleum Product Storage;Airports: Jet A or JP-8;Stage 1: Total	1701	7	26	10000
2501090060	Storage and Transport;Petroleum and Petroleum Product Storage;Airports: Jet A or JP-8;Stage 2: Total	1701	7	26	10000
2501090070	Storage and Transport;Petroleum and Petroleum Product Storage;Airports: Jet Naphtha or JP-4;Stage 1: Total	1701	7	26	10000
2501090080	Storage and Transport;Petroleum and Petroleum Product Storage;Airports: Jet Naphtha or JP-4;Stage 2: Total	1701	7	26	10000
2501090101	Storage and Transport;Petroleum and Petroleum Product Storage;Airports: Jet A or JP-8;Stage 2: Total	1701	7	26	10000
2501090102	Storage and Transport;Petroleum and Petroleum Product Storage;Marinas: Gasoline;Stage 2: Displacement Loss	1701	7	26	10000
2501090103	Storage and Transport;Petroleum and Petroleum Product Storage;Marinas: Gasoline;Stage 2: Spillage	1701	7	26	10000
2501090201	Storage and Transport;Petroleum and Petroleum Product Storage;Marinas: Gasoline;Underground Tank: Emptying and Breathing	1701	7	26	10000
2505000000	Storage and Transport;Petroleum and Petroleum Product Transport;All Transport Types;Total: All Products	1701	7	26	-9
2610010000	Waste Disposal, Treatment, and Recovery;Open Burning;Industrial;Total	262	9	2013	10000
2630020000	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Total Processed	262	7	24	10000
2630020010	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Wastewater Treatment Processes Total	262	7	24	10000
2630020020	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Biosolids Processes Total	262	7	24	10000
2630020030	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Land Application - Digested Sludge	262	7	24	10000
2630050000	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Land Application - Digested Sludge	262	7	24	10000
2680001000	Waste Disposal, Treatment, and Recovery;Composting;100% Biosolids (e.g., sewage sludge, manure, mixtures of these matls);All Processes	262	7	26	10000
2730100000	Natural Sources;Geogenic;Wind Erosion;Total	1704	7	26	10000
2801001001	Miscellaneous Area Sources;Agriculture Production - Crops;Corn;Land preparation and cultivation	1703	20	132	10000
2801001005	Miscellaneous Area Sources;Agriculture Production - Crops;Wheat;Land preparation and cultivation	1703	20	132	10000
2801001009	Miscellaneous Area Sources;Agriculture Production - Crops;Barley;Land preparation and cultivation	1703	20	132	10000
2801001013	Miscellaneous Area Sources;Agriculture Production - Crops;Soybeans;Land preparation and cultivation	1703	20	132	10000
2801001017	Miscellaneous Area Sources;Agriculture Production - Crops;Hay/Alfalfa;Land preparation and cultivation	1703	20	132	10000
2801001021	Miscellaneous Area Sources;Agriculture Production - Crops;Vegetables;Land preparation and cultivation	1703	20	132	10000
2801002001	Miscellaneous Area Sources;Agriculture Production - Crops;Corn;Harvesting	1703	20	132	10000
2801002002	Miscellaneous Area Sources;Agriculture Production - Crops;Wheat;Harvesting	1703	20	132	10000
2801002003	Miscellaneous Area Sources;Agriculture Production - Crops;Barley;Harvesting	1703	20	132	10000
2801002004	Miscellaneous Area Sources;Agriculture Production - Crops;Soybeans;Harvesting	1703	20	132	10000
2801002005	Miscellaneous Area Sources;Agriculture Production - Crops;Hay/Alfalfa;Harvesting	1703	20	132	10000
2801002006	Miscellaneous Area Sources;Agriculture Production - Crops;Vegetables;Harvesting	1703	20	132	10000

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2801700020	Miscellaneous Area Sources;Agricultural Production - Crops;Fertilizer Application;Corn	1705	7	26	10000
2801700021	Miscellaneous Area Sources;Agricultural Production - Crops;Fertilizer Application;Sorghum	1705	7	26	10000
2801700022	Miscellaneous Area Sources;Agricultural Production - Crops;Fertilizer Application;Wheat	1705	7	26	10000
2801700023	Miscellaneous Area Sources;Agricultural Production - Crops;Fertilizer Application;Barley	1705	7	26	10000
2801700024	Miscellaneous Area Sources;Agricultural Production - Crops;Fertilizer Application;Soybeans	1705	7	26	10000
2801700025	Miscellaneous Area Sources;Agricultural Production - Crops;Fertilizer Application;Hay/Alfalfa	1705	7	26	10000
2801700026	Miscellaneous Area Sources;Agricultural Production - Crops;Fertilizer Application;Vegetables	1705	7	26	10000
2805001100	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef cattle - finishing operations on feedlots (drylots);Confinement	1706	7	24	10000
2805001200	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef cattle - finishing operations on feedlots (drylots);Manure handling	1706	7	24	10000
2805001300	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef cattle - finishing operations on feedlots (drylots);Land application of	1706	7	24	10000
2805001310	Miscellaneous Area Sources;Agricultural Production - Livestock;Beef Cattle - finishing operations on feedlots (drylots);Land Appl	1706	7	24	10000
2805001320	Miscellaneous Area Sources;Agricultural Production - Livestock;Beef Cattle - finishing operations on feedlots (drylots);Land Appl	1706	7	24	10000
2805001330	Miscellaneous Area Sources;Agricultural Production - Livestock;Beef Cattle - finishing operations on feedlots (drylots);Land Appl	1706	7	24	10000
2805001340	Miscellaneous Area Sources;Agricultural Production - Livestock;Beef Cattle - finishing operations on feedlots (drylots);Land Appl	1706	7	24	10000
2805002000	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef Cattle Composite; Total	1706	7	24	10000
2805007100	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with dry manure management systems;Confinement	262	7	24	10000
2805007200	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - layers with dry manure management systems;Man	262	7	24	10000
2805007300	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with dry manure management systems;Land applicati	262	7	24	10000
2805007340	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - layers with dry manure management systems;Lan	262	7	24	10000
2805008100	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with wet manure management systems;Confinement	262	7	24	10000
2805008200	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with wet manure management systems;Manure handlin	262	7	24	10000
2805008310	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - layers with wet manure management systems;Lan	1708	7	24	10000
2805008320	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - layers with wet manure management systems;Lan	1708	7	24	10000

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2805009100	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - broilers;Confinement	262	7	24	10000
2805009200	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - broilers;Manure handling and storage	262	7	24	10000
2805009330	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - broilers;Land Application of solid manure wit	1708	7	24	10000
2805009340	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - broilers;Land Application of solid manure wit	1708	7	24	10000
2805010100	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - turkeys;Confinement	262	7	24	10000
2805010200	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - turkeys;Manure handling and storage	262	7	24	10000
2805010330	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - turkeys;Land Application of solid manure with	1708	7	24	10000
2805010340	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - turkeys;Land Application of solid manure with	1708	7	24	10000
2805019100	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - flush dairy;Confinement	1706	7	24	10000
2805019200	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - flush dairy;Manure handling and storage	1706	7	24	10000
2805019300	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - flush dairy;Land application of manure	1706	7	24	10000
2805019310	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - flush dairy;Land Application of liquid manure with	1706	7	24	10000
2805019320	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - flush dairy;Land Application of liquid manure witho	1706	7	24	10000
2805019330	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - flush dairy;Land Application of solid manure with i	1706	7	24	10000
2805019340	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - flush dairy;Land Application of solid manure withou	1706	7	24	10000
2805021100	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - scrape dairy;Confinement	1706	7	24	10000
2805021200	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - scrape dairy;Manure handling and storage	1706	7	24	10000
2805021310	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - scrape dairy;Land Application of liquid manure with	1706	7	24	10000
2805021320	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - scrape dairy;Land Application of liquid manure with	1706	7	24	10000
2805021330	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - scrape dairy;Land Application of solid manure with	1706	7	24	10000
2805021340	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - scrape dairy;Land Application of solid manure witho	1706	7	24	10000
2805023100	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - drylot/pasture dairy;Confinement	1706	7	24	10000

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2805023200	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - drylot/pasture dairy;Manure handling and storage	1706	7	24	10000
2805023310	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - drylot/pasture dairy;Land Application of liquid man	1706	7	24	10000
2805023320	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - drylot/pasture dairy;Land Application of liquid man	1706	7	24	10000
2805023330	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - drylot/pasture dairy;Land Application of solid manu	1706	7	24	10000
2805023340	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - drylot/pasture dairy;Land Application of solid manu	1706	7	24	10000
2805035000	Miscellaneous Area Sources;Agriculture Production - Livestock;Horses and Ponies Waste Emissions;Total	262	7	24	10000
2805038100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - operations with lagoons (unspecified animal age);Confineme	1707	7	24	10000
2805038200	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - operations with lagoons (unspecified animal age);Manure ha	1707	7	24	10000
2805038300	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - operations with lagoons (unspecified animal age);Land appl	1707	7	24	10000
2805039100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - operations with lagoons;Confinement	1707	7	24	10000
2805039200	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - operations with lagoons;Manure handling and storage	1707	7	24	10000
2805039310	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - operations with lagoon (unspecified animal age)	1707	7	24	10000
2805039320	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - operations with lagoon (unspecified animal age)	1707	7	24	10000
2805039330	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - operations with lagoon (unspecified animal age)	1707	7	24	10000
2805039340	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - operations with lagoon (unspecified animal age)	1707	7	24	10000
2805040000	Miscellaneous Area Sources;Agriculture Production - Livestock;Sheep and Lambs Waste Emissions;Total	262	7	24	10000
2805045001	Miscellaneous Area Sources;Agriculture Production - Livestock;Goats Waste Emissions;Total	262	7	24	10000
2805046100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - deep-pit house operations (unspecified animal age);Confine	1707	7	24	10000
2805046300	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - deep-pit house operations (unspecified animal age);Land ap	1707	7	24	10000
2805047100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - deep-pit house operations;Confinement	1707	7	24	10000
2805047200	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - deep pit house operations (unspecified animal a	1707	7	24	10000

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2805047310	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - deep pit house operations (unspecified animal a	1707	7	24	10000
2805047320	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - deep pit house operations (unspecified animal a	1707	7	24	10000
2805047330	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - deep pit house operations (unspecified animal a	1707	7	24	10000
2805047340	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - deep pit house operations (unspecified animal a	1707	7	24	10000
2805052100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - outdoor operations (unspecified animal age);Confinement	1707	7	24	10000
2805053100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - outdoor operations; Confinement	1707	7	24	10000
2805053200	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - outdoor operations (unspecified animal age);Man	1707	7	24	10000
2805053310	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - outdoor operations (unspecified animal age);Lan	1707	7	24	10000
2805053320	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - outdoor operations (unspecified animal age);Lan	1707	7	24	10000
2805053330	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - outdoor operations (unspecified animal age);Lan	1707	7	24	10000
2805053340	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - outdoor operations (unspecified animal age);Lan	1707	7	24	10000
2805054000	Miscellaneous Area Sources;Agricultural Production - Livestock;"Mules; Donkeys; and Burros Waste Emissions";Not Elsewhere Classif	262	7	24	10000
2806010000	Miscellaneous Area Sources;Domestic Animals Waste Emissions;Cats;Total	262	7	24	10000
2806015000	Miscellaneous Area Sources;Domestic Animals Waste Emissions;Dogs;Total	262	7	24	10000
2807030000	Miscellaneous Area Sources;Wild Animals Waste Emissions;Deer;Total	262	7	24	10000
2807040000	Miscellaneous Area Sources;Wild Animals Waste Emissions;Birds;Total	262	7	24	10000
2810010000	Miscellaneous Area Sources;Other Combustion;Human Perspiration and Respiration;Total	1739	2006	24	10000
2810015000	Miscellaneous Area Sources;Other Combustion;Prescribed Burning for Forest Management;Total	1731	7	24	10000
2810030000	Miscellaneous Area Sources;Other Combustion;Structure Fires;Total	1715	7	24	10000
2810035000	Miscellaneous Area Sources;Other Combustion;Firefighting Training;Total	1716	2004	24	10000
2870000001	Miscellaneous Area Sources;Humans;Respiration and Perspiration;Total	262	7	24	10000
2870000002	Miscellaneous Area Sources;Humans;Infant Diapered Waste;Total	262	7	24	10000
2870000011	Miscellaneous Area Sources;Domestic Activity;Household Products;Total	262	7	24	10000
2870000015	Miscellaneous Area Sources;Domestic Activity;Non-agricultural Fertilizers;Total	3	7	24	10000

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2870000021	Miscellaneous Area Sources;Domestic Animals;Dogs;Total	262	7	24	10000
2870000022	Miscellaneous Area Sources;Domestic Animals;Cats;Total	262	7	24	10000
2870000031	Miscellaneous Area Sources;Wild Animals;Deer;Total	262	7	24	10000
2870000032	Miscellaneous Area Sources;Wild Animals;Birds;Total	1728	7	24	10000

Table VII-7. Point Source Speciation Profiles Added to Speciation Cross-reference File for CB-IV with PM Mechanism

State	FIPS	SCC	Recommended Profiles VOC	Recommended Profiles $PM_{2.5}$	Method of Assignment	SCC Description (Complete description not always available)
VT	50005	10200908	1084	NWWAS	Use SCC=102009XX profiles	External Combustion Boilers;Industrial;Wood/Bark Waste;Wood-fired Boiler - Dry Wood (<20% moisture)
VT	50019	10200908	1084	NWWAS	Use SCC=102009XX profiles	External Combustion Boilers;Industrial;Wood/Bark Waste;Wood-fired Boiler - Dry Wood (<20% moisture)
VT	50021	10200908	1084	NWWAS	Use SCC=102009XX profiles	External Combustion Boilers;Industrial;Wood/Bark Waste;Wood-fired Boiler - Dry Wood (<20% moisture)
VT	50017	10300908	1084	NWWAS	Use SCC=103009XX profiles	External Combustion Boilers;Commercial/Institutional;Wood/Bark Waste;Wood-fired Boiler - Dry Wood (<20% moisture)
PA	42009	20200299	0007	22004	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42029	20200299	0007	22004	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42045	20200299	0007	22004	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42061	20200299	0007	22004	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42067	20200299	0007	22004	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42015	20300299	0007	22004	Use SCC=203002XX profiles	Internal Combustion Engines;Commercial/Institutional;Natural Gas;Unknown
PA	42029	20300299	0007	22004	Use SCC=203002XX profiles	Internal Combustion Engines;Commercial/Institutional;Natural Gas;Unknown
PA	42037	20300299	0007	22004	Use SCC=203002XX profiles	Internal Combustion Engines;Commercial/Institutional;Natural Gas;Unknown
PA	42071	20300299	0007	22004	Use SCC=203002XX profiles	Internal Combustion Engines;Commercial/Institutional;Natural Gas;Unknown
PA	42011	28888899	9002	35602	Use SCC=288888XX profiles	Internal Combustion Engines;Fugitive Emissions;Other Not Classified;Specify in Comments
PA	42123	28888899	9002	35602	Use SCC=288888XX profiles	Internal Combustion Engines;Fugitive Emissions;Other Not Classified;Specify in Comments
PA	42123	28888899	9002	35602	Use SCC=288888XX profiles	Internal Combustion Engines;Fugitive Emissions;Other Not Classified;Specify in Comments
PA	42129	28888899	9002	35602	Use SCC=288888XX profiles	Internal Combustion Engines;Fugitive Emissions;Other Not Classified;Specify in Comments
MD	24031	30500261	0025	22035	Use SCC=30500260 profile	Industrial Processes;Mineral Products;Asphalt Concrete;Drum Mix Plant: Rotary Drum Dryer/Mixer, Waste/Drain/#6 Oil-Fired
PA	Numerous counties	39000698	0000	22004	Use SCC=39000699 profile	Industrial Processes;In-process Fuel Use;Natural Gas;Unknown
NJ	Numerous counties	39999901	9003	22054	Use SCC=399999XX profiles	Industrial Processes;Miscellaneous Manufacturing Industries;Miscellaneous Industrial Processes;Unknown
PA	42015	40202598	1003	99999	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42017	40202598	1003	99999	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42091	40202598	1003	99999	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42095	40202598	1003	99999	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42097	40202598	1003	99999	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42013	40400299	1014	22042	Use SCC=404002XX profiles	Petroleum and Solvent Evaporation;Petroleum Liquids Storage (non-Refinery);Bulk Plants;Unknown
PA	42041	40400299	1014	22042	Use SCC=404002XX profiles	Petroleum and Solvent Evaporation;Petroleum Liquids Storage (non-Refinery);Bulk Plants;Unknown
PA	42045	40400299	1014	22042	Use SCC=404002XX profiles	Petroleum and Solvent Evaporation;Petroleum Liquids Storage (non-Refinery);Bulk Plants;Unknown
PA	42071	40400299	1014	22042	Use SCC=404002XX profiles	Petroleum and Solvent Evaporation;Petroleum Liquids Storage (non-Refinery);Bulk Plants;Unknown

Table VII-8. Point Source SCCs Lacking Speciation Profile Assignments for CB-IV with PM Mechanism

State	FIPS	SCC	Description
NY	36055	31603001	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Substrate Preparation;Extrusion Operations
NY	36055	31603002	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Substrate Preparation;Film Support Operations
NY	36055	31604001	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Chemical Preparation;Chemical Manufacturing
NY	36055	31604002	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Chemical Preparation;Emulsion Making Operations
NY	36055	31604003	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Chemical Preparation;Chemical Mixing Operations
NY	36055	31605001	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Surface Treatments;Surface Coating Operations
NY	36055	31605002	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Surface Treatments;Grid Ionizers
NY	36055	31605003	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Surface Treatments;Corona Discharge Treatment
NY	36055	31606001	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Finishing Operations;General Film Manufacturing
NY	36055	31606002	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Finishing Operations;Cutting/Slitting Operations
PA	42101	31606002	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Finishing Operations;Cutting/Slitting Operations
NY	36055	31612001	Industrial Processes;Photographic Film Manufacturing;Support Activities - Cleaning Operations;Tank Cleaning Operations
NY	36055	31612002	Industrial Processes;Photographic Film Manufacturing;Support Activities - Cleaning Operations;General Cleaning Operations
NY	36055	31613002	Industrial Processes;Photographic Film Manufacturing;Support Activities - Storage Operations;General Storage Operations
NY	36055	31614001	Industrial Processes;Photographic Film Manufacturing;Support Activities - Material Transfer Operations;Filling Operations (non petroleum)
NY	36055	31614002	Industrial Processes;Photographic Film Manufacturing;Support Activities - Material Transfer Operations;Transfer of Chemicals
NY	36055	31615001	Industrial Processes;Photographic Film Manufacturing;Support Activities - Separation Processes;Recovery Operations
NY	36055	31615003	Industrial Processes;Photographic Film Manufacturing;Support Activities - Separation Processes;Distillation Operations
NY	36055	31616002	Industrial Processes;Photographic Film Manufacturing;Support Activities - Other Operations;General Process Tank Operations
NY	36055	31616003	Industrial Processes;Photographic Film Manufacturing;Support Activities - Other Operations;Miscellaneous Manufacturing Operations
NY	36055	31616004	Industrial Processes;Photographic Film Manufacturing;Support Activities - Other Operations;Paint Spraying Operations
NY	36055	31616006	Industrial Processes;Photographic Film Manufacturing;Support Activities - Other Operations;Chemical Weighing Operations

Table VII-9. Summary of Version 3 Mass Emissions and SMOKE Input Files

S/L Agencies Included in Files	NIF 3.0 File Name Containing Mass Emissions Inventory (Access 2000 Database Files)	Temporal Period of Mass Emissions Inventory	SMOKE Input File Name	Temporal Period of Emissions in SMOKE/IDA File
Point Source Inventory				
CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA (state and Philadelphia, and Allegheny Counties), RI, VT	MANEVU_2002_Pt_Version 3_040706.mdb	Annual, Summer Day, and Winter Day	MANEVU_Point_SMOKE_INPUT_ANNUAL_SUMMERDAY_042706.txt	Annual and Summer Day
"	"	"	MANEVU_Point_SMOKE_INPUT_ANNUAL_WINTERDAY_042706.txt	Annual and Winter Day
Area Source Inventory				
CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT	MANEVU_2002_Area_040606.mdb	Annual, Summer Day, Winter Day, and Average Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt	Annual, Summer Day, and Average Day
"	"	"	MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt	Annual, Winter Day, and Average Day
Nonroad Source Inventory				
CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT	MANEVU_NRD2002_NIF_030306.mdb	Annual	MANEVU_NRD2002_SMOKE_030306.ida	Annual
Onroad Source Inventory				
CT	CT2002MANEVUORCAP_122004.mdb	Annual		
DE	DE2002MANEVUORCAP_072004.mdb	Annual		
DC	DC2002MANEVUORCAP_072004.mdb	Annual		
ME	ME2002MANEVUORCAP_072004.mdb	Annual		
MD	MD2002MANEVUORCAP_072004.mdb	Annual		
MA	MA2002MANEVUORCAP_022006_Access2000.mdb MA2002MANEVUORCAP_022006_Access97.mdb	Annual		
NH	NH2002MANEVUORCAP_072004.mdb	Annual		
NJ	NJ2002MANEVUORCAP_022006_Access2000.mdb NJ2002MANEVUORCAP_022006_Access97.mdb	Annual		
NY	NY2002MANEVUORCAP_072004.mdb	Annual		
PA	PA2002MANEVUORCAP_072004.mdb	Annual		
RI	DRI2002MANEVUORCAP_072004.mdb	Annual		
VT	VT2002MANEVUORCAP_122004.mdb	Annual		
CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT			MANEVU_2002_mbinv_02022006.txt	
CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT			MANEVU_2002_mcref_02022006.txt	

S/L Agencies Included in Files	NIF 3.0 File Name Containing Mass Emissions Inventory (Access 2000 Database Files)	Temporal Period of Mass Emissions Inventory	SMOKE Input File Name	Temporal Period of Emissions in SMOKE/IDA File
DE, MA, MD, NJ, NY, PA, VT			MANEVU_2002_mtpro_02022006.txt	
DE, MA, MD, NJ, NY, PA, VT			MANEVU_2002_mtref_02022006.txt	
CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT			MANEVU_2002_mvref_02022006.txt	
CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT			MANEVU_2002_vmtmix_02022006.txt	
			MANEVU_2002_mcodes.txt	
CT, NY			MANEVU_2002_spdpro.txt	
CT, NY			MANEVU_2002_spdref.txt	
CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT			SMOKE MOBILE6 input files—too numerous to list individually	

Table VII-10. Unique List of Start Date, End Date, and Emission Type Combinations for Daily Emissions in the MANE-VU 2002 Point and Area Source Inventories, Version 3

Start Date	End Date	Emission Type	Emission Type Period	Season Designation	SMOKE File
Point Source Inventory					
20011201	20020228	27	NONANNUAL	Winter	MANEVU_Point_SMOKE_INPUT_ANNUAL_WINTERDAY_042706.txt
20011201	20020228	29	NONANNUAL	Winter	MANEVU_Point_SMOKE_INPUT_ANNUAL_WINTERDAY_042706.txt
20020101	20020331	27	NONANNUAL	Winter	MANEVU_Point_SMOKE_INPUT_ANNUAL_WINTERDAY_042706.txt
20020101	20021231	29	NONANNUAL	MD-Winter	MANEVU_Point_SMOKE_INPUT_ANNUAL_WINTERDAY_042706.txt
				VT-Summer	MANEVU_Point_SMOKE_INPUT_ANNUAL_SUMMERDAY_042706.txt
20020501	20020930	29	NONANNUAL	Summer	MANEVU_Point_SMOKE_INPUT_ANNUAL_SUMMERDAY_042706.txt
20020601	20020831	27	NONANNUAL	Summer	MANEVU_Point_SMOKE_INPUT_ANNUAL_SUMMERDAY_042706.txt
20020601	20020831	29	NONANNUAL	Summer	MANEVU_Point_SMOKE_INPUT_ANNUAL_SUMMERDAY_042706.txt
20020601	20020831	30	NONANNUAL	Summer	MANEVU_Point_SMOKE_INPUT_ANNUAL_SUMMERDAY_042706.txt
Area Source Inventory					
20020101	20020831	27	Daily	Average Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt and MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt
20020101	20021231	29	Daily	Average Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt and MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt
20020401	20020930	29	Daily	Summer Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt
20020401	20021031	29	Daily	Summer Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt
20020512	20020512	27	Daily	Summer Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt
20020601	20020831	27	Daily	Summer Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt
20020601	20020831	29	Daily	Summer Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt
20020601	20020929	29	Daily	Summer Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt
20020629	20020629	27	Daily	Summer Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt
20011201	20020228	27	Daily	Winter Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt
20011201	20020228	29	Daily	Winter Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt
20021029	20021029	27	Daily	Winter Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt
20021104	20021104	27	Daily	Winter Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt
20021205	20021205	27	Daily	Winter Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt

CHAPTER VIII. METHODS FOR AREAS OUTSIDE OF THE MANE-VU REGION

Figure VIII-1 shows the geographic area for which the 12-kilometer (km) CMAQ modeling domain was used to support air quality modeling for the MANE-VU region. The 36-km domain definition was used for geographical areas outside of the area shown in Figure VIII-1. Table VIII-1 identifies the geographic region as well as the types of emissions inventory and ancillary data used to in modeling for the MANE-VU region. The geographic areas for which data were obtained include the Visibility Improvement State and Tribal Association of the Southeast (VISTAS), Central Regional Air Planning Organization (CENRAP), and WRAP RPOs, the Midwest RPO, Canada, and Mexico.

Figure VIII-1. MANE-VU 12-Kilometer CMAQ Modeling Domain

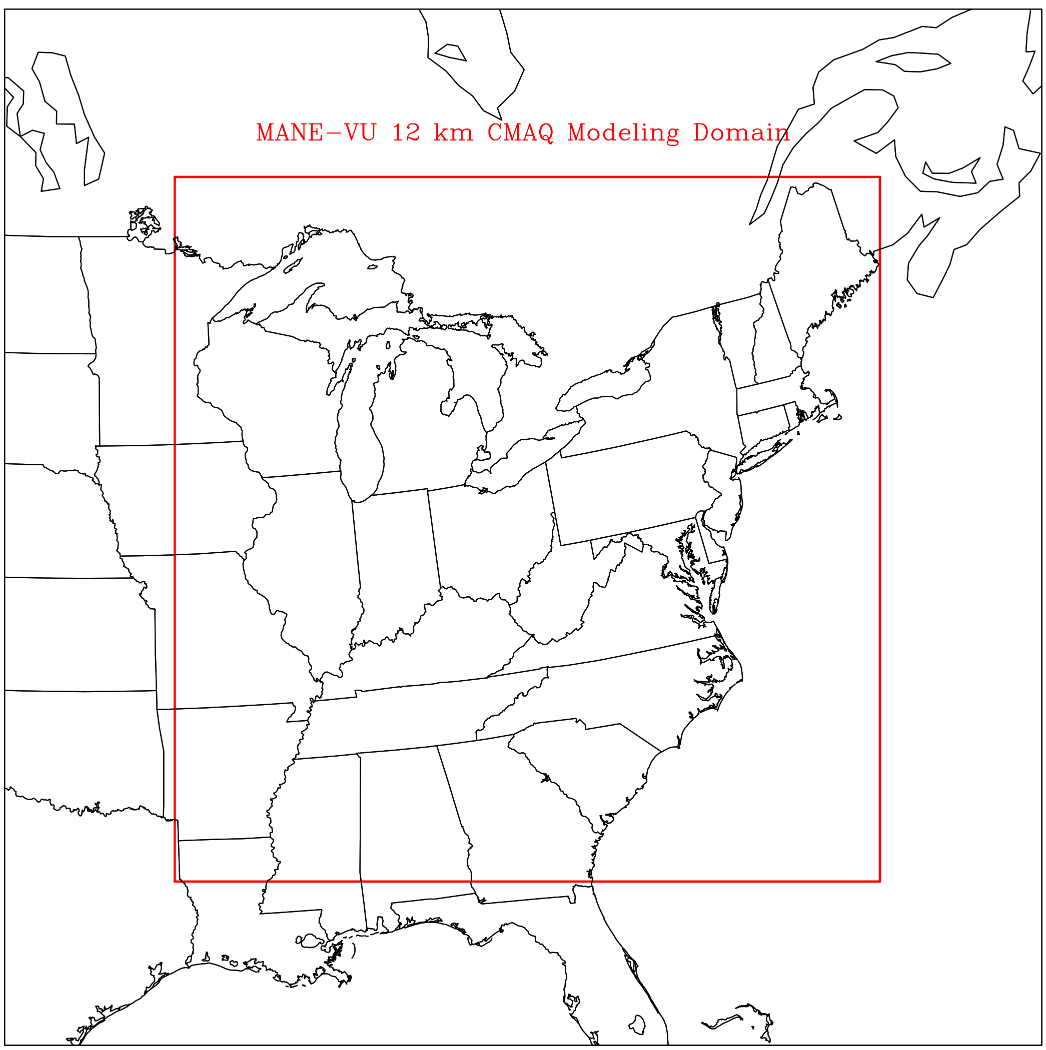


Table VIII-1. Description of Non-MANE-VU Region Inventory Data Used for MANE-VU BaseB Modeling

Geographical Region/RPO	Raw Data	Time Period and Version Number	Raw Data Format	Source of Data	Source of Ancillary Data	Date Data and Summaries Obtained by MANE-VU Modelers
VISTAS	Point, area, nonroad, and mobile	2002 BaseG	SMOKE IDA	Gregory Stella, Alpine Geophysics	Gregory Stella, Alpine Geophysics	June/July 2006
MRPO	Point, area, nonroad, and mobile	2002 BaseK	SMOKE IDA	NIF files provided by Mark Janssen, MRPO, and converted to IDA format by Gregory Stella, Alpine Geophysics	Part of VISTAS 2002 BaseD provided by Gregory Stella, Alpine Geophysics	May 2006
CENRAP	Point, area, nonroad, and mobile	2002 BaseB	SMOKE IDA	CENRAP ftp site Lee Warden, Oklahoma DEQ	CENRAP ftp site Lee Warden, Oklahoma DEQ	March 2006
WRAP *	Point, area, nonroad, and mobile	Part of VISTAS 2002 BaseD	SMOKE IDA	Part of VISTAS 2002 BaseD provided by Gregory Stella, Alpine Geophysics	Part of VISTAS 2002 BaseD provided by Gregory Stella, Alpine Geophysics	January 2005
Canada	Area, nonroad and mobile	2000	SMOKE IDA	ftp://ftp.epa.gov/EmisInventory/canada_2000inventory	SMOKE 2.1 defaults	February 2005
	Point	2002	SMOKE IDA created by NYSDEC from Canadian NPRI database	http://www.ec.gc.ca/pdb/npri/npri_home_e.cfm	SMOKE 2.1 defaults	May 2005
Mexico *	Point, area, nonroad and mobile	1999	SMOKE IDA	EPA CAIR NODA	SMOKE 2.1 defaults	February 2005

* Only utilized for 2002 BaseA 36-km modeling to generate boundary conditions for BaseA/BaseA1/BaseB current and future year 12-km modeling.

CHAPTER IX. REFERENCES

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APPENDIX A

POINT SOURCE INVENTORY, VERSION 3:
DATA SOURCES BY SCC, EMISSION TYPE PERIOD, AND POLLUTANT

[*NOTE: The Appendix A table for each State is provided in a separate MS Word file because of the large size of each table. The Word files are provided in the zip file named "Appendix A.zip"; this zip file also includes an Excel Workbook file that contains the spreadsheet from which the Word file was created for each State.]*

APPENDIX B

AREA SOURCE INVENTORY, VERSION 3:
DATA SOURCES BY SCC, EMISSION TYPE PERIOD, AND POLLUTANT

[*NOTE: The Appendix B table for each State is provided in a separate MS Word file because of the large size of each table. The Word files are provided in the zip file named "Appendix B.zip"; this zip file also includes an Excel Workbook file that contains the spreadsheet from which the Word file was created for each State.]*

APPENDIX C

NONROAD SOURCE INVENTORY, VERSION 3: FINAL COUNTY, MONTHLY NATIONAL MOBILE INVENTORY MODEL (NMIM) INPUTS

CONTENTS

Table C-1. MANE-VU County, Monthly NMIM/NONROAD Inputs

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
09	**CONNECTICUT**														
RVP, psi															
		001	Fairfield County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		003	Hartford County	12.3	12.3	10.0	10.0	6.9	6.9	6.9	6.9	6.9	10.0	10.0	12.3
		005	Litchfield County	12.3	12.3	10.0	10.0	6.9	6.9	6.9	6.9	6.9	10.0	10.0	12.3
		007	Middlesex County	12.3	12.3	10.0	10.0	6.9	6.9	6.9	6.9	6.9	10.0	10.0	12.3
		009	New Haven County	12.3	12.3	10.0	10.0	6.9	6.9	6.9	6.9	6.9	10.0	10.0	12.3
		011	New London County	12.3	12.3	10.0	10.0	6.9	6.9	6.9	6.9	6.9	10.0	10.0	12.3
		013	Tolland County	12.3	12.3	10.0	10.0	6.9	6.9	6.9	6.9	6.9	10.0	10.0	12.3
		015	Windham County	12.3	12.3	10.0	10.0	6.9	6.9	6.9	6.9	6.9	10.0	10.0	12.3
Oxygen Weight Percent															
		001	Fairfield County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		003	Hartford County	1.5667	1.5667	1.6068	1.6068	1.6596	1.6596	1.6596	1.6596	1.6596	1.6068	1.6068	1.5667
		005	Litchfield County	1.5667	1.5667	1.6068	1.6068	1.6596	1.6596	1.6596	1.6596	1.6596	1.6068	1.6068	1.5667
		007	Middlesex County	1.5667	1.5667	1.6068	1.6068	1.6596	1.6596	1.6596	1.6596	1.6596	1.6068	1.6068	1.5667
		009	New Haven County	1.5667	1.5667	1.6068	1.6068	1.6596	1.6596	1.6596	1.6596	1.6596	1.6068	1.6068	1.5667
		011	New London County	1.5667	1.5667	1.6068	1.6068	1.6596	1.6596	1.6596	1.6596	1.6596	1.6068	1.6068	1.5667
		013	Tolland County	1.5667	1.5667	1.6068	1.6068	1.6596	1.6596	1.6596	1.6596	1.6596	1.6068	1.6068	1.5667
		015	Windham County	1.5667	1.5667	1.6068	1.6068	1.6596	1.6596	1.6596	1.6596	1.6596	1.6068	1.6068	1.5667
Gasoline Sulfur, ppm															
		001	Fairfield County	135.0	135.0	135.0	135.0	106.0	106.0	106.0	106.0	106.0	135.0	135.0	135.0
		003	Hartford County	135.0	135.0	135.0	135.0	106.0	106.0	106.0	106.0	106.0	135.0	135.0	135.0
		005	Litchfield County	135.0	135.0	135.0	135.0	106.0	106.0	106.0	106.0	106.0	135.0	135.0	135.0
		007	Middlesex County	135.0	135.0	135.0	135.0	106.0	106.0	106.0	106.0	106.0	135.0	135.0	135.0
		009	New Haven County	135.0	135.0	135.0	135.0	106.0	106.0	106.0	106.0	106.0	135.0	135.0	135.0
		011	New London County	135.0	135.0	135.0	135.0	106.0	106.0	106.0	106.0	106.0	135.0	135.0	135.0
		013	Tolland County	135.0	135.0	135.0	135.0	106.0	106.0	106.0	106.0	106.0	135.0	135.0	135.0
		015	Windham County	135.0	135.0	135.0	135.0	106.0	106.0	106.0	106.0	106.0	135.0	135.0	135.0
10	**DELAWARE**														
RVP, psi															
		001	Kent County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		003	New Castle County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		005	Sussex County	13.4	13.4	10.4	10.4	6.4	6.4	6.4	6.4	6.4	10.4	10.4	13.4
Oxygen Weight Percent															
		001	Kent County	1.8442	1.8442	1.9457	1.9457	2.0896	2.0896	2.0896	2.0896	2.0896	1.9457	1.9457	1.8442
		003	New Castle County	1.8442	1.8442	1.9457	1.9457	2.0896	2.0896	2.0896	2.0896	2.0896	1.9457	1.9457	1.8442
		005	Sussex County	1.4645	1.4645	1.5538	1.5538	1.6431	1.6431	1.6431	1.6431	1.6431	1.5538	1.5538	1.4645
Gasoline Sulfur, ppm															
		001	Kent County	174.0	174.0	155.1	155.1	130.0	130.0	130.0	130.0	130.0	155.1	155.1	174.0
		003	New Castle County	174.0	174.0	155.1	155.1	130.0	130.0	130.0	130.0	130.0	155.1	155.1	174.0
		005	Sussex County	225.0	225.0	186.0	186.0	134.0	134.0	134.0	134.0	134.0	186.0	186.0	225.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
11	**DISTRICT OF COLUMBIA**														
RVP, psi															
		001	District of Columbia	13.1	13.1	10.4	10.4	6.8	6.8	6.8	6.8	6.8	6.8	10.4	13.1
Oxygen Weight Percent															
		001	District of Columbia	1.7681	1.7681	1.8217	1.8217	1.8932	1.8932	1.8932	1.8932	1.8932	1.8932	1.8217	1.7681
Gasoline Sulfur, ppm															
		001	District of Columbia	230.0	230.0	199.6	199.6	159.0	159.0	159.0	159.0	159.0	159.0	199.6	230.0
23	**MAINE**														
RVP, psi															
		001	Androscoggin County	12.3	11.1	11.2	8.4	7.5	7.5	7.7	7.3	9.7	10.7	10.3	11.6
		003	Aroostook County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		005	Cumberland County	12.3	11.1	11.2	8.4	7.5	7.5	7.7	7.3	9.7	10.7	10.3	11.6
		007	Franklin County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		009	Hancock County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		011	Kennebec County	12.3	11.1	11.2	8.4	7.5	7.5	7.7	7.3	9.7	10.7	10.3	11.6
		013	Knox County	12.3	11.1	11.2	8.4	7.5	7.5	7.7	7.3	9.7	10.7	10.3	11.6
		015	Lincoln County	12.3	11.1	11.2	8.4	7.5	7.5	7.7	7.3	9.7	10.7	10.3	11.6
		017	Oxford County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		019	Penobscot County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		021	Piscataquis County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		023	Sagadahoc County	12.3	11.1	11.2	8.4	7.5	7.5	7.7	7.3	9.7	10.7	10.3	11.6
		025	Somerset County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		027	Waldo County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		029	Washington County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		031	York County	12.3	11.1	11.2	8.4	7.5	7.5	7.7	7.3	9.7	10.7	10.3	11.6
Oxygen Weight Percent															
		001	Androscoggin County	0.4334	0.6510	0.5390	0.3235	0.2420	0.1753	0.7061	0.6868	0.5895	0.6930	0.3560	0.2080
		003	Aroostook County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		005	Cumberland County	0.4334	0.6510	0.5390	0.3235	0.2420	0.1753	0.7061	0.6868	0.5895	0.6930	0.3560	0.2080
		007	Franklin County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		009	Hancock County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		011	Kennebec County	0.4334	0.6510	0.5390	0.3235	0.2420	0.1753	0.7061	0.6868	0.5895	0.6930	0.3560	0.2080
		013	Knox County	0.4334	0.6510	0.5390	0.3235	0.2420	0.1753	0.7061	0.6868	0.5895	0.6930	0.3560	0.2080
		015	Lincoln County	0.4334	0.6510	0.5390	0.3235	0.2420	0.1753	0.7061	0.6868	0.5895	0.6930	0.3560	0.2080
		017	Oxford County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		019	Penobscot County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		021	Piscataquis County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		023	Sagadahoc County	0.4334	0.6510	0.5390	0.3235	0.2420	0.1753	0.7061	0.6868	0.5895	0.6930	0.3560	0.2080
		025	Somerset County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		027	Waldo County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		029	Washington County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		031	York County	0.4334	0.6510	0.5390	0.3235	0.2420	0.1753	0.7061	0.6868	0.5895	0.6930	0.3560	0.2080
Gasoline Sulfur, ppm															
		001	Androscoggin County	151.5	236.1	221.1	145.4	319.7	268.1	101.1	83.4	159.9	279.8	190.9	171.0
		003	Aroostook County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0
		005	Cumberland County	151.5	236.1	221.1	145.4	319.7	268.1	101.1	83.4	159.9	279.8	190.9	171.0
		007	Franklin County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
		009	Hancock County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0
23	*MAINE (cont'd)*	011	Kennebec County	151.5	236.1	221.1	145.4	319.7	268.1	101.1	83.4	159.9	279.8	190.9	171.0
		013	Knox County	151.5	236.1	221.1	145.4	319.7	268.1	101.1	83.4	159.9	279.8	190.9	171.0
		015	Lincoln County	151.5	236.1	221.1	145.4	319.7	268.1	101.1	83.4	159.9	279.8	190.9	171.0
		017	Oxford County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0
		019	Penobscot County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0
		021	Piscataquis County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0
		023	Sagadahoc County	151.5	236.1	221.1	145.4	319.7	268.1	101.1	83.4	159.9	279.8	190.9	171.0
		025	Somerset County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0
		027	Waldo County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0
		029	Washington County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0
		031	York County	151.5	236.1	221.1	145.4	319.7	268.1	101.1	83.4	159.9	279.8	190.9	171.0
24	**MARYLAND**														
RVP, psi															
		003	Anne Arundel County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		005	Baltimore County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		009	Calvert County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		011	Caroline County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		013	Carroll County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		015	Cecil County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		017	Charles County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		019	Dorchester County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		021	Frederick County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		023	Garrett County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		025	Harford County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		027	Howard County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		029	Kent County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		031	Montgomery County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		033	Prince George's County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		035	Queen Anne's County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		037	St. Mary's County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		039	Somerset County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		041	Talbot County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		043	Washington County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		045	Wicomico County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		047	Worcester County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		510	Baltimore city	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
Oxygen Weight Percent															
		001	Allegany County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		003	Anne Arundel County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		005	Baltimore County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		009	Calvert County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		011	Caroline County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		013	Carroll County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		015	Cecil County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		017	Charles County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		019	Dorchester County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		021	Frederick County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
		023	Garrett County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
24	*MARYLAND (cont'd)*	025	Harford County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		027	Howard County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		029	Kent County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		031	Montgomery County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		033	Prince George's County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		035	Queen Anne's County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		037	St. Mary's County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		039	Somerset County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		041	Talbot County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		043	Washington County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		045	Wicomico County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		047	Worcester County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		510	Baltimore city	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
Gasoline Sulfur, ppm															
		001	Allegany County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		003	Anne Arundel County	211.0	211.0	184.0	129.0	129.0	129.0	129.0	129.0	129.0	148.0	184.0	211.0
		005	Baltimore County	211.0	211.0	184.0	129.0	129.0	129.0	129.0	129.0	129.0	148.0	184.0	211.0
		009	Calvert County	230.0	230.0	199.6	129.0	129.0	129.0	129.0	129.0	129.0	159.0	199.6	230.0
		011	Caroline County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		013	Carroll County	211.0	211.0	184.0	129.0	129.0	129.0	129.0	129.0	129.0	148.0	184.0	211.0
		015	Cecil County	174.0	174.0	155.1	129.0	129.0	129.0	129.0	129.0	129.0	130.0	155.1	174.0
		017	Charles County	230.0	230.0	199.6	129.0	129.0	129.0	129.0	129.0	129.0	159.0	199.6	230.0
		019	Dorchester County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		021	Frederick County	230.0	230.0	199.6	129.0	129.0	129.0	129.0	129.0	129.0	159.0	199.6	230.0
		023	Garrett County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		025	Harford County	211.0	211.0	184.0	129.0	129.0	129.0	129.0	129.0	129.0	148.0	184.0	211.0
		027	Howard County	211.0	211.0	184.0	129.0	129.0	129.0	129.0	129.0	129.0	148.0	184.0	211.0
		029	Kent County	174.0	174.0	155.1	129.0	129.0	129.0	129.0	129.0	129.0	130.0	155.1	174.0
		031	Montgomery County	230.0	230.0	199.6	129.0	129.0	129.0	129.0	129.0	129.0	159.0	199.6	230.0
		033	Prince George's County	230.0	230.0	199.6	129.0	129.0	129.0	129.0	129.0	129.0	159.0	199.6	230.0
		035	Queen Anne's County	174.0	174.0	155.1	129.0	129.0	129.0	129.0	129.0	129.0	130.0	155.1	174.0
		037	St. Mary's County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		039	Somerset County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		041	Talbot County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		043	Washington County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		045	Wicomico County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		047	Worcester County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		510	Baltimore city	211.0	211.0	184.0	129.0	129.0	129.0	129.0	129.0	129.0	148.0	184.0	211.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
25	**MASSACHUSETTS**														
RVP, psi															
		001	Barnstable County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		003	Berkshire County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		005	Bristol County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		007	Dukes County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		009	Essex County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		011	Franklin County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		013	Hampden County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		015	Hampshire County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		017	Middlesex County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		019	Nantucket County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		021	Norfolk County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		023	Plymouth County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		025	Suffolk County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		027	Worcester County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
Oxygen Weight Percent															
		001	Barnstable County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		003	Berkshire County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		005	Bristol County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		007	Dukes County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		009	Essex County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		011	Franklin County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		013	Hampden County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		015	Hampshire County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		017	Middlesex County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		019	Nantucket County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		021	Norfolk County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		023	Plymouth County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		025	Suffolk County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		027	Worcester County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
Gasoline Sulfur, ppm															
		001	Barnstable County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		003	Berkshire County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		005	Bristol County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		007	Dukes County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		009	Essex County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		011	Franklin County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		013	Hampden County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		015	Hampshire County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		017	Middlesex County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		019	Nantucket County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		021	Norfolk County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		023	Plymouth County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		025	Suffolk County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		027	Worcester County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
33	**NEW HAMPSHIRE**														
RVP, psi															
		001	Belknap County	13.6	13.6	11.2	11.2	7.9	7.9	7.9	7.9	7.9	11.2	11.2	13.6
		003	Carroll County	13.6	13.6	11.2	11.2	7.9	7.9	7.9	7.9	7.9	11.2	11.2	13.6
		005	Cheshire County	13.6	13.6	11.2	11.2	7.9	7.9	7.9	7.9	7.9	11.2	11.2	13.6
		007	Coos County	13.6	13.6	11.2	11.2	7.9	7.9	7.9	7.9	7.9	11.2	11.2	13.6
		009	Grafton County	13.6	13.6	11.2	11.2	7.9	7.9	7.9	7.9	7.9	11.2	11.2	13.6
		011	Hillsborough County	12.9	12.9	10.2	10.2	6.7	6.7	6.7	6.7	6.7	10.2	10.2	12.9
		013	Merrimack County	12.9	12.9	10.2	10.2	6.7	6.7	6.7	6.7	6.7	10.2	10.2	12.9
		015	Rockingham County	12.9	12.9	10.2	10.2	6.7	6.7	6.7	6.7	6.7	10.2	10.2	12.9
		017	Strafford County	12.9	12.9	10.2	10.2	6.7	6.7	6.7	6.7	6.7	10.2	10.2	12.9
		019	Sullivan County	13.6	13.6	11.2	11.2	7.9	7.9	7.9	7.9	7.9	11.2	11.2	13.6
Oxygen Weight Percent															
		001	Belknap County	0.1786	0.1786	0.2322	0.2322	0.2858	0.2858	0.2858	0.2858	0.2858	0.2322	0.2322	0.1786
		003	Carroll County	0.1786	0.1786	0.2322	0.2322	0.2858	0.2858	0.2858	0.2858	0.2858	0.2322	0.2322	0.1786
		005	Cheshire County	0.1786	0.1786	0.2322	0.2322	0.2858	0.2858	0.2858	0.2858	0.2858	0.2322	0.2322	0.1786
		007	Coos County	0.1786	0.1786	0.2322	0.2322	0.2858	0.2858	0.2858	0.2858	0.2858	0.2322	0.2322	0.1786
		009	Grafton County	0.1786	0.1786	0.2322	0.2322	0.2858	0.2858	0.2858	0.2858	0.2858	0.2322	0.2322	0.1786
		011	Hillsborough County	1.8217	1.8217	1.9110	1.9110	2.0182	2.0182	2.0182	2.0182	2.0182	1.9110	1.9110	1.8217
		013	Merrimack County	1.8217	1.8217	1.9110	1.9110	2.0182	2.0182	2.0182	2.0182	2.0182	1.9110	1.9110	1.8217
		015	Rockingham County	1.9825	1.9825	2.0539	2.0539	2.1432	2.1432	2.1432	2.1432	2.1432	2.0539	2.0539	1.9825
		017	Strafford County	1.9825	1.9825	2.0539	2.0539	2.1432	2.1432	2.1432	2.1432	2.1432	2.0539	2.0539	1.9825
		019	Sullivan County	0.1786	0.1786	0.2322	0.2322	0.2858	0.2858	0.2858	0.2858	0.2858	0.2322	0.2322	0.1786
Gasoline Sulfur, ppm															
		001	Belknap County	228.1	228.1	208.6	208.6	182.5	182.5	182.5	182.5	182.5	208.6	208.6	228.1
		003	Carroll County	228.1	228.1	208.6	208.6	182.5	182.5	182.5	182.5	182.5	208.6	208.6	228.1
		005	Cheshire County	228.1	228.1	208.6	208.6	182.5	182.5	182.5	182.5	182.5	208.6	208.6	228.1
		007	Coos County	228.1	228.1	208.6	208.6	182.5	182.5	182.5	182.5	182.5	208.6	208.6	228.1
		009	Grafton County	228.1	228.1	208.6	208.6	182.5	182.5	182.5	182.5	182.5	208.6	208.6	228.1
		011	Hillsborough County	121.0	121.0	101.3	101.3	75.0	75.0	75.0	75.0	75.0	101.3	101.3	121.0
		013	Merrimack County	121.0	121.0	101.3	101.3	75.0	75.0	75.0	75.0	75.0	101.3	101.3	121.0
		015	Rockingham County	148.0	148.0	121.0	121.0	85.0	85.0	85.0	85.0	85.0	121.0	121.0	148.0
		017	Strafford County	148.0	148.0	121.0	121.0	85.0	85.0	85.0	85.0	85.0	121.0	121.0	148.0
		019	Sullivan County	228.1	228.1	208.6	208.6	182.5	182.5	182.5	182.5	182.5	208.6	208.6	228.1
34	**NEW JERSEY**														
RVP, psi															
		001	Atlantic County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		003	Bergen County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		005	Burlington County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		007	Camden County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		009	Cape May County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		011	Cumberland County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		013	Essex County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		015	Gloucester County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		017	Hudson County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		019	Hunterdon County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		021	Mercer County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		023	Middlesex County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
34	*NEW JERSEY (cont'd)*	025	Monmouth County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		027	Morris County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		029	Ocean County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		031	Passaic County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		033	Salem County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		035	Somerset County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		037	Sussex County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		039	Union County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		041	Warren County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
Oxygen Weight Percent															
		001	Atlantic County	1.6922	1.6922	1.8499	1.8499	2.0718	2.0718	2.0718	2.0718	2.0718	1.8499	1.8499	1.6922
		003	Bergen County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		005	Burlington County	1.8442	1.8442	1.9457	1.9457	2.0896	2.0896	2.0896	2.0896	2.0896	1.9457	1.9457	1.8442
		007	Camden County	1.8442	1.8442	1.9457	1.9457	2.0896	2.0896	2.0896	2.0896	2.0896	1.9457	1.9457	1.8442
		009	Cape May County	1.6922	1.6922	1.8499	1.8499	2.0718	2.0718	2.0718	2.0718	2.0718	1.8499	1.8499	1.6922
		011	Cumberland County	1.8442	1.8442	1.9457	1.9457	2.0896	2.0896	2.0896	2.0896	2.0896	1.9457	1.9457	1.8442
		013	Essex County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		015	Gloucester County	1.8442	1.8442	1.9457	1.9457	2.0896	2.0896	2.0896	2.0896	2.0896	1.9457	1.9457	1.8442
		017	Hudson County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		019	Hunterdon County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		021	Mercer County	1.8442	1.8442	1.9457	1.9457	2.0896	2.0896	2.0896	2.0896	2.0896	1.9457	1.9457	1.8442
		023	Middlesex County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		025	Monmouth County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		027	Morris County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		029	Ocean County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		031	Passaic County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		033	Salem County	1.8442	1.8442	1.9457	1.9457	2.0896	2.0896	2.0896	2.0896	2.0896	1.9457	1.9457	1.8442
		035	Somerset County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		037	Sussex County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		039	Union County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		041	Warren County	1.8753	1.8753	1.9110	1.9110	1.9825	1.9825	1.9825	1.9825	1.9825	1.9110	1.9110	1.8753
Gasoline Sulfur, ppm															
		001	Atlantic County	207.0	207.0	174.0	174.0	130.0	130.0	130.0	130.0	130.0	174.0	174.0	207.0
		003	Bergen County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		005	Burlington County	174.0	174.0	155.1	155.1	130.0	130.0	130.0	130.0	130.0	155.1	155.1	174.0
		007	Camden County	174.0	174.0	155.1	155.1	130.0	130.0	130.0	130.0	130.0	155.1	155.1	174.0
		009	Cape May County	207.0	207.0	174.0	174.0	130.0	130.0	130.0	130.0	130.0	174.0	174.0	207.0
		011	Cumberland County	174.0	174.0	155.1	155.1	130.0	130.0	130.0	130.0	130.0	155.1	155.1	174.0
		013	Essex County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		015	Gloucester County	174.0	174.0	155.1	155.1	130.0	130.0	130.0	130.0	130.0	155.1	155.1	174.0
		017	Hudson County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		019	Hunterdon County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		021	Mercer County	174.0	174.0	155.1	155.1	130.0	130.0	130.0	130.0	130.0	155.1	155.1	174.0
		023	Middlesex County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		025	Monmouth County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		027	Morris County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		029	Ocean County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		031	Passaic County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
34	*NEW JERSEY (cont'd)*	033	Salem County	174.0	174.0	155.1	155.1	130.0	130.0	130.0	130.0	130.0	155.1	155.1	174.0
		035	Somerset County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		037	Sussex County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		039	Union County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		041	Warren County	125.0	125.0	123.7	123.7	122.0	122.0	122.0	122.0	122.0	123.7	123.7	125.0
36	**NEW YORK**														
RVP, psi															
		001	Albany County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		003	Allegany County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		005	Bronx County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		007	Broome County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		009	Cattaraugus County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		011	Cayuga County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		013	Chautauqua County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		015	Chemung County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		017	Chenango County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		019	Clinton County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		021	Columbia County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		023	Cortland County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		025	Delaware County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		027	Dutchess County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		029	Erie County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		031	Essex County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		033	Franklin County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		035	Fulton County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		037	Genesee County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		039	Greene County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		041	Hamilton County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		043	Herkimer County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		045	Jefferson County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		047	Kings County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		049	Lewis County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		051	Livingston County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		053	Madison County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		055	Monroe County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		057	Montgomery County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		059	Nassau County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		061	New York County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		063	Niagara County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		065	Oneida County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		067	Onondaga County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		069	Ontario County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		071	Orange County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		073	Orleans County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		075	Oswego County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		077	Otsego County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		079	Putnam County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		081	Queens County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
36	*NEW YORK*	083	Rensselaer County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
	(cont'd)	085	Richmond County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		087	Rockland County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		089	St. Lawrence County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		091	Saratoga County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		093	Schenectady County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		095	Schoharie County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		097	Schuyler County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		099	Seneca County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		101	Steuben County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		103	Suffolk County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		105	Sullivan County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		107	Tioga County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		109	Tompkins County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		111	Ulster County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		113	Warren County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		115	Washington County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		117	Wayne County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		119	Westchester County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		121	Wyoming County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		123	Yates County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
Oxygen Weight Percent															
		001	Albany County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		003	Allegany County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		005	Bronx County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		007	Broome County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		009	Cattaraugus County	0.8965	1.0344	0.8275	0.6551	0.8965	0.5862	0.8275	0.9654	0.6551	0.6896	0.9310	0.8965
		011	Cayuga County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		013	Chautauqua County	0.8965	1.0344	0.8275	0.6551	0.8965	0.5862	0.8275	0.9654	0.6551	0.6896	0.9310	0.8965
		015	Chemung County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		017	Chenango County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		019	Clinton County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		021	Columbia County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		023	Cortland County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		025	Delaware County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		027	Dutchess County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		029	Erie County	0.8965	1.0344	0.8275	0.6551	0.8965	0.5862	0.8275	0.9654	0.6551	0.6896	0.9310	0.8965
		031	Essex County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		033	Franklin County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		035	Fulton County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		037	Genesee County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		039	Greene County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		041	Hamilton County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		043	Herkimer County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		045	Jefferson County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		047	Kings County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		049	Lewis County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		051	Livingston County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		053	Madison County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
36	*NEW YORK*	055	Monroe County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
	(cont'd)	057	Montgomery County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		059	Nassau County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		061	New York County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		063	Niagara County	0.8965	1.0344	0.8275	0.6551	0.8965	0.5862	0.8275	0.9654	0.6551	0.6896	0.9310	0.8965
		065	Oneida County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		067	Onondaga County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		069	Ontario County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		071	Orange County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		073	Orleans County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		075	Oswego County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		077	Otsego County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		079	Putnam County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		081	Queens County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		083	Rensselaer County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		085	Richmond County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		087	Rockland County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		089	St. Lawrence County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		091	Saratoga County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		093	Schenectady County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		095	Schoharie County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		097	Schuyler County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		099	Seneca County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		101	Steuben County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		103	Suffolk County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		105	Sullivan County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		107	Tioga County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		109	Tompkins County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		111	Ulster County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		113	Warren County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		115	Washington County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		117	Wayne County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		119	Westchester County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		121	Wyoming County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		123	Yates County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
Gasoline Sulfur, ppm															
		001	Albany County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		003	Allegany County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		005	Bronx County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		007	Broome County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		009	Cattaraugus County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		011	Cayuga County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		013	Chautauqua County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		015	Chemung County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		017	Chenango County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		019	Clinton County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		021	Columbia County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		023	Cortland County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		025	Delaware County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
36	*NEW YORK*	027	Dutchess County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
	(cont'd)	029	Erie County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		031	Essex County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		033	Franklin County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		035	Fulton County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		037	Genesee County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		039	Greene County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		041	Hamilton County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		043	Herkimer County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		045	Jefferson County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		047	Kings County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		049	Lewis County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		051	Livingston County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		053	Madison County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		055	Monroe County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		057	Montgomery County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		059	Nassau County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		061	New York County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		063	Niagara County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		065	Oneida County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		067	Onondaga County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		069	Ontario County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		071	Orange County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		073	Orleans County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		075	Oswego County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		077	Otsego County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		079	Putnam County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		081	Queens County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		083	Rensselaer County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		085	Richmond County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		087	Rockland County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		089	St. Lawrence County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		091	Saratoga County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		093	Schenectady County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		095	Schoharie County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		097	Schuyler County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		099	Seneca County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		101	Steuben County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		103	Suffolk County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		105	Sullivan County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		107	Tioga County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		109	Tompkins County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		111	Ulster County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		113	Warren County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		115	Washington County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		117	Wayne County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		119	Westchester County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		121	Wyoming County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		123	Yates County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
42	**PENNSYLVANIA**														
RVP, psi															
		001	Adams County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		003	Allegheny County	13.5	13.5	11.0	11.0	7.8	7.8	7.8	7.8	7.8	11.0	11.0	13.5
		005	Armstrong County	13.5	13.5	11.0	11.0	7.8	7.8	7.8	7.8	7.8	11.0	11.0	13.5
		007	Beaver County	13.5	13.5	11.0	11.0	7.8	7.8	7.8	7.8	7.8	11.0	11.0	13.5
		009	Bedford County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		011	Berks County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		013	Blair County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		015	Bradford County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		017	Bucks County	13.5	13.5	10.6	10.6	6.7	6.7	6.7	6.7	6.7	10.6	10.6	13.5
		019	Butler County	13.5	13.5	11.0	11.0	7.8	7.8	7.8	7.8	7.8	11.0	11.0	13.5
		021	Cambria County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		023	Cameron County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		025	Carbon County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		027	Centre County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		029	Chester County	13.5	13.5	10.6	10.6	6.7	6.7	6.7	6.7	6.7	10.6	10.6	13.5
		031	Clarion County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		033	Clearfield County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		035	Clinton County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		037	Columbia County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		039	Crawford County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		041	Cumberland County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		043	Dauphin County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		045	Delaware County	13.5	13.5	10.6	10.6	6.7	6.7	6.7	6.7	6.7	10.6	10.6	13.5
		047	Elk County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		049	Erie County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		051	Fayette County	13.5	13.5	11.0	11.0	7.8	7.8	7.8	7.8	7.8	11.0	11.0	13.5
		053	Forest County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		055	Franklin County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		057	Fulton County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		059	Greene County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		061	Huntingdon County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		063	Indiana County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		065	Jefferson County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		067	Juniata County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		069	Lackawanna County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		071	Lancaster County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		073	Lawrence County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		075	Lebanon County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		077	Lehigh County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		079	Luzerne County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		081	Lycoming County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		083	McKean County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		085	Mercer County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		087	Mifflin County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		089	Monroe County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		091	Montgomery County	13.5	13.5	10.6	10.6	6.7	6.7	6.7	6.7	6.7	10.6	10.6	13.5
		093	Montour County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
42	*PENNSYLVANIA*	095	Northampton County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
	(cont'd)	097	Northumberland County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		099	Perry County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		101	Philadelphia County	13.5	13.5	10.6	10.6	6.7	6.7	6.7	6.7	6.7	10.6	10.6	13.5
		103	Pike County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		105	Potter County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		107	Schuylkill County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		109	Snyder County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		111	Somerset County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		113	Sullivan County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		115	Susquehanna County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		117	Tioga County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		119	Union County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		121	Venango County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		123	Warren County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		125	Washington County	13.5	13.5	11.0	11.0	7.8	7.8	7.8	7.8	7.8	11.0	11.0	13.5
		127	Wayne County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		129	Westmoreland County	13.5	13.5	11.0	11.0	7.8	7.8	7.8	7.8	7.8	11.0	11.0	13.5
		131	Wyoming County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		133	York County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
Oxygen Weight Percent															
		001	Adams County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		003	Allegheny County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		005	Armstrong County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		007	Beaver County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		009	Bedford County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		011	Berks County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		013	Blair County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		015	Bradford County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		017	Bucks County	2.5303	2.5303	2.5303	2.5303	2.1075	2.1075	2.1075	2.1075	2.1075	2.5303	2.5303	2.5303
		019	Butler County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		021	Cambria County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		023	Cameron County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		025	Carbon County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		027	Centre County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		029	Chester County	2.5303	2.5303	2.5303	2.5303	2.1075	2.1075	2.1075	2.1075	2.1075	2.5303	2.5303	2.5303
		031	Clarion County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		033	Clearfield County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		035	Clinton County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		037	Columbia County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		039	Crawford County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		041	Cumberland County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		043	Dauphin County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		045	Delaware County	2.5303	2.5303	2.5303	2.5303	2.1075	2.1075	2.1075	2.1075	2.1075	2.5303	2.5303	2.5303
		047	Elk County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		049	Erie County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		051	Fayette County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		053	Forest County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		055	Franklin County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
42	*PENNSYLVANIA*	057	Fulton County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
	(cont'd)	059	Greene County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		061	Huntingdon County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		063	Indiana County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		065	Jefferson County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		067	Juniata County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		069	Lackawanna County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		071	Lancaster County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		073	Lawrence County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		075	Lebanon County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		077	Lehigh County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		079	Luzerne County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		081	Lycoming County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		083	McKean County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		085	Mercer County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		087	Mifflin County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		089	Monroe County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		091	Montgomery County	2.5303	2.5303	2.5303	2.5303	2.1075	2.1075	2.1075	2.1075	2.1075	2.5303	2.5303	2.5303
		093	Montour County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		095	Northampton County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		097	Northumberland County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		099	Perry County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		101	Philadelphia County	2.5303	2.5303	2.5303	2.5303	2.1075	2.1075	2.1075	2.1075	2.1075	2.5303	2.5303	2.5303
		103	Pike County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		105	Potter County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		107	Schuylkill County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		109	Snyder County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		111	Somerset County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		113	Sullivan County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		115	Susquehanna County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		117	Tioga County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		119	Union County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		121	Venango County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		123	Warren County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		125	Washington County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		127	Wayne County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		129	Westmoreland County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		131	Wyoming County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		133	York County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
Gasoline Sulfur, ppm															
		001	Adams County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		003	Allegheny County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		005	Armstrong County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		007	Beaver County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		009	Bedford County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		011	Berks County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		013	Blair County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		015	Bradford County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		017	Bucks County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
42	*PENNSYLVANIA*	019	Butler County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
	(cont'd)	021	Cambria County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		023	Cameron County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		025	Carbon County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		027	Centre County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		029	Chester County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		031	Clarion County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		033	Clearfield County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		035	Clinton County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		037	Columbia County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		039	Crawford County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		041	Cumberland County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		043	Dauphin County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		045	Delaware County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		047	Elk County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		049	Erie County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		051	Fayette County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		053	Forest County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		055	Franklin County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		057	Fulton County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		059	Greene County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		061	Huntingdon County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		063	Indiana County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		065	Jefferson County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		067	Juniata County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		069	Lackawanna County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		071	Lancaster County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		073	Lawrence County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		075	Lebanon County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		077	Lehigh County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		079	Luzerne County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		081	Lycoming County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		083	McKean County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		085	Mercer County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		087	Mifflin County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		089	Monroe County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		091	Montgomery County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		093	Montour County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		095	Northampton County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		097	Northumberland County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		099	Perry County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		101	Philadelphia County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		103	Pike County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		105	Potter County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		107	Schuylkill County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		109	Snyder County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		111	Somerset County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		113	Sullivan County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		115	Susquehanna County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
42	*PENNSYLVANIA (cont'd)*	117	Tioga County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		119	Union County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		121	Venango County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		123	Warren County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		125	Washington County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		127	Wayne County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		129	Westmoreland County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		131	Wyoming County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		133	York County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
44	**RHODE ISLAND**														
RVP, psi															
		001	Bristol County	12.5	12.5	10.1	10.1	6.9	6.9	6.9	6.9	6.9	10.1	10.1	12.5
		003	Kent County	12.5	12.5	10.1	10.1	6.9	6.9	6.9	6.9	6.9	10.1	10.1	12.5
		005	Newport County	12.5	12.5	10.1	10.1	6.9	6.9	6.9	6.9	6.9	10.1	10.1	12.5
		007	Providence County	12.5	12.5	10.1	10.1	6.9	6.9	6.9	6.9	6.9	10.1	10.1	12.5
		009	Washington County	12.5	12.5	10.1	10.1	6.9	6.9	6.9	6.9	6.9	10.1	10.1	12.5
Oxygen Weight Percent															
		001	Bristol County	1.7110	1.7110	1.6801	1.6801	1.6745	1.6745	1.6745	1.6745	1.6745	1.6801	1.6801	1.7110
		003	Kent County	1.7110	1.7110	1.6801	1.6801	1.6745	1.6745	1.6745	1.6745	1.6745	1.6801	1.6801	1.7110
		005	Newport County	1.7110	1.7110	1.6801	1.6801	1.6745	1.6745	1.6745	1.6745	1.6745	1.6801	1.6801	1.7110
		007	Providence County	1.7110	1.7110	1.6801	1.6801	1.6745	1.6745	1.6745	1.6745	1.6745	1.6801	1.6801	1.7110
		009	Washington County	1.7110	1.7110	1.6801	1.6801	1.6745	1.6745	1.6745	1.6745	1.6745	1.6801	1.6801	1.7110
Gasoline Sulfur, ppm															
		001	Bristol County	193.0	193.0	166.4	166.4	131.0	131.0	131.0	131.0	131.0	166.4	166.4	193.0
		003	Kent County	193.0	193.0	166.4	166.4	131.0	131.0	131.0	131.0	131.0	166.4	166.4	193.0
		005	Newport County	193.0	193.0	166.4	166.4	131.0	131.0	131.0	131.0	131.0	166.4	166.4	193.0
		007	Providence County	193.0	193.0	166.4	166.4	131.0	131.0	131.0	131.0	131.0	166.4	166.4	193.0
		009	Washington County	193.0	193.0	166.4	166.4	131.0	131.0	131.0	131.0	131.0	166.4	166.4	193.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
50	**VERMONT**														
RVP, psi															
		001	Addison County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		003	Bennington County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		005	Caledonia County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		007	Chittenden County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		009	Essex County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		011	Franklin County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		013	Grand Isle County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		015	Lamoille County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		017	Orange County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		019	Orleans County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		021	Rutland County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		023	Washington County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		025	Windham County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		027	Windsor County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
Oxygen Weight Percent															
		001	Addison County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		003	Bennington County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		005	Caledonia County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		007	Chittenden County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		009	Essex County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		011	Franklin County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		013	Grand Isle County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		015	Lamoille County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		017	Orange County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		019	Orleans County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		021	Rutland County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		023	Washington County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		025	Windham County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		027	Windsor County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
Gasoline Sulfur, ppm															
		001	Addison County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		003	Bennington County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		005	Caledonia County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		007	Chittenden County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		009	Essex County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		011	Franklin County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		013	Grand Isle County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		015	Lamoille County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		017	Orange County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		019	Orleans County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		021	Rutland County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		023	Washington County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		025	Windham County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		027	Windsor County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3

APPENDIX 5B

TECHNICAL SUPPORT DOCUMENT FOR FUTURE YEAR MANE-VU SIP MODELING INVENTORIES

(Non-EGU Point, Area, and Non-Road Source Sectors)

Mid-Atlantic Regional Air
Management Association

Development of Emission Projections
For 2009, 2012, and 2018
For NonEGU Point, Area, and Nonroad Source
In the MANE-VU Region

Final Report

February, 2007









About MARAMA

The Mid-Atlantic Regional Air Management Association is an association of ten state and local air pollution control agencies. MARAMA's mission is to strengthen the skills and capabilities of member agencies and to help them work together to prevent and reduce air pollution impacts in the Mid-Atlantic Region.

MARAMA provides cost-effective approaches to regional collaboration by pooling resources to develop and analyze data, share ideas, and train staff to implement common requirements.

The following State and Local governments are MARAMA members: Delaware, the District of Columbia, Maryland, New Jersey, North Carolina, Pennsylvania, Virginia, West Virginia, Philadelphia, and Allegheny County, Pennsylvania.

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About MACTEC Federal Programs, Inc.

MACTEC, Inc. is a leader in the engineering, environmental and remedial construction industries. MACTEC provides premier management, technical, and professional services to help clients successfully manage complex businesses, projects, and facilities. MACTEC Federal Programs, Inc. is a division of MACTEC that provides these same services tailored to meet the unique needs of government agencies, including state/local agencies and federal agencies.

Development of Emission Projections for 2009, 2012, and 2018 for NonEGU Point, Area, and Nonroad Sources in the MANE-VU Region

Final Technical Support Document

Prepared for:

Mid-Atlantic Regional Air Management Association (MARAMA)

Prepared by:

MACTEC Federal Programs, Inc.

February 28, 2007

Edward Sabo	Douglas A. Toothman
Principal Scientist	Principal Engineer

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Acronyms and Abbreviations

Acronym	Description
AEO	Annual Energy Outlook
BOTW	Beyond-on-the-Way emission controls
CAIR	Clean Air Interstate Rule
EGAS 5.0	Economic Growth Analysis System Version 5.0
EGU	Electric Generating Unit
EIA	Energy Information Agency
EPA	U.S. Environmental Protection Agency
IDA	Inventory Data Analyzer (data format used by SMOKE modeling system)
IPM	Integrated Planning Model
MANE-VU	Mid-Atlantic/Northeast Visibility Union
MARAMA	Mid-Atlantic Regional Air Management Association
MOBILE6	U.S. EPA's emission model for onroad sources
NESCAUM	Northeast States for Coordinated Air Use Management
NH3	Ammonia
NIF3.0	National Emission Inventory Input Format Version 3.0
NMIM	National Mobile Inventory Model
NONROAD	U.S. EPA's emission model for certain types of nonroad equipment
NOx	Oxides of nitrogen
OTB/OTW	On-the-Books/On-the-Way
OTC	Ozone Transport Commission
PM10-PRI	Particulate matter less than or equal to 10 microns in diameter that includes both the filterable and condensable components of particulate matter
PM25-PRI	Particulate matter less than or equal to 2.5 microns in diameter that includes both the filterable and condensable components of particulate matter
SIC	Standard Industrial Classification code
SIP	State Implementation Plan
SCC	Source Classification Code
SMOKE	Sparse Matrix Operator Kernel Emissions Modeling System
SO2	Sulfur dioxide
VOC	Volatile organic compounds

1.0 EXECUTIVE SUMMARY

This report was prepared for the Mid-Atlantic Regional Air Management Association (MARAMA) as part of an effort to assist states in developing State Implementation Plans (SIPs) for ozone, fine particles, and regional haze. It describes the data sources, methods, and results for emission forecasts for three years, three emission sectors, two emission control scenarios; seven pollutants, and 11 states plus the District of Columbia. The following is a summary of the future year inventories that were developed:

- The three projection years are 2009, 2012, and 2018.
- The three source sectors are non-Electric Generating Units (non-EGUs), area sources, and nonroad mobile sources. (Note: under separate efforts, MANE-VU prepared EGU projections using the Integrated Planning Model {IPM} and onroad mobile source projections using the SMOKE emission modeling system).
- The two emission control scenarios are: a) a combined "on-the-books/on-the-way" (OTB/W) control strategy accounting for emission control regulations already in place as well as emission control regulations that are not yet finalized but are likely to achieve additional reductions by 2009; and b) a "beyond-on-the-way" (BOTW) scenarios to account for controls from potential new regulations that may be necessary to meet attainment and other regional air quality goals.
- The seven pollutants are sulfur dioxide (SO2), oxides of nitrogen (NOx), volatile organic compounds (VOC), carbon monoxide (CO), particulate matter less than or equal to 10 microns in diameter that includes both the filterable and condensable components of particulate matter (PM10-PRI), particulate matter less than or equal to 2.5 microns in diameter that includes both the filterable and condensable components of particulate matter (PM25-PRI), and ammonia (NH3).
- The states are those that comprise the Mid-Atlantic/Northeast Visibility Union (MANE-VU) region. In addition to the District of Columbia, the 11 MANE-VU states are Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

The results of the emission projections are summarized in Table 1-1 and Figures 1-1 to 1-7.

Section 2 of this report describes how the nonEGU OTB/W emission projections were made. Section 3 describes the methods for the area source emission projections. Section 4 describes the methods for the nonroad section, including sources accounted for by the NONROAD model as well as aircraft, locomotives, and marine vessels. Section 5 describes the development of the BOTW emission projections.

Table 1-1 Summary of MANE-VU Area, NonEGU, and Nonroad Emission Inventory by Pollutant, Sector, and Year Annual Emissions (tons per year)

Pollutant	Sector	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CO	Area	1,326,796	1,283,959	1,283,959	1,260,627	1,260,627	1,211,727	1,211,727
	NonEGU	295,577	328,546	328,546	346,090	346,090	412,723	412,723
	Nonroad	4,553,124	4,969,925	4,969,925	5,099,538	5,099,538	5,401,353	5,401,353
		6,175,497	6,582,430	6,582,430	6,706,255	6,706,255	7,025,803	7,025,803
NH3	Area	249,795	294,934	294,934	312,419	312,419	341,746	341,746
	NonEGU	3,916	4,301	4,301	4,448	4,448	4,986	4,986
	Nonroad	287	317	317	337	337	369	369
		253,998	299,552	299,552	317,204	317,204	347,101	347,101
NOx	Area	265,400	278,038	265,925	281,659	261,057	284,535	263,030
	NonEGU	207,048	210,522	185,658	218,137	184,527	237,802	199,732
	Nonroad	431,631	354,850	354,850	321,935	321,935	271,185	271,185
		904,079	843,410	806,433	821,731	767,519	793,522	733,947
PM10	Area	1,452,309	1,527,586	1,527,586	1,556,316	1,550,400	1,614,476	1,607,602
	NonEGU	51,280	55,869	55,869	57,848	57,624	63,757	63,524
	Nonroad	40,114	34,453	34,453	32,445	32,445	27,059	27,059
		1,543,703	1,617,908	1,617,908	1,646,609	1,640,469	1,705,292	1,698,185
PM2.5	Area	332,521	340,049	340,049	341,875	336,779	345,419	339,461
	NonEGU	33,077	36,497	36,497	37,625	37,444	41,220	41,029
	Nonroad	36,084	30,791	30,791	28,922	28,922	23,938	23,938
		401,682	407,337	407,337	408,422	403,145	410,577	404,428
SO2	Area	286,921	304,018	304,018	305,339	202,058	305,437	190,431
	NonEGU	264,377	249,658	249,658	255,596	253,638	270,433	268,330
	Nonroad	57,257	15,651	15,651	8,731	8,731	8,643	8,643
		608,555	569,327	569,327	569,666	464,427	584,513	467,404
VOC	Area	1,528,269	1,398,982	1,363,278	1,382,803	1,339,851	1,387,882	1,334,039
	NonEGU	91,278	92,279	91,718	96,887	96,260	110,524	109,762
	Nonroad	572,751	460,922	460,922	424,257	424,257	380,080	380,080
		2,192,298	1,952,183	1,915,918	1,903,947	1,860,368	1,878,486	1,823,881

OTB/W – on-the-books/way scenario; BOTW – beyond-on-the-way scenario

Figure 1-1 2002 Base Year, OTB/OTW AND BOTW Annual CO Emissions (tons per year)

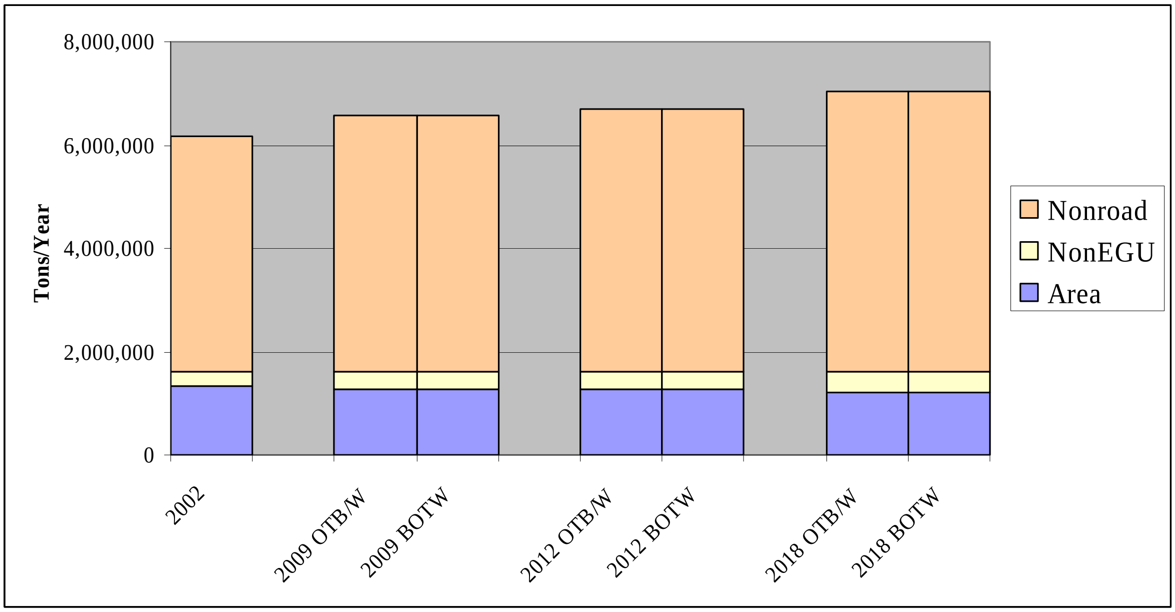


Figure 1-2 2002 Base Year, OTB/OTW AND BOTW Annual NH3 Emissions (tons per year)

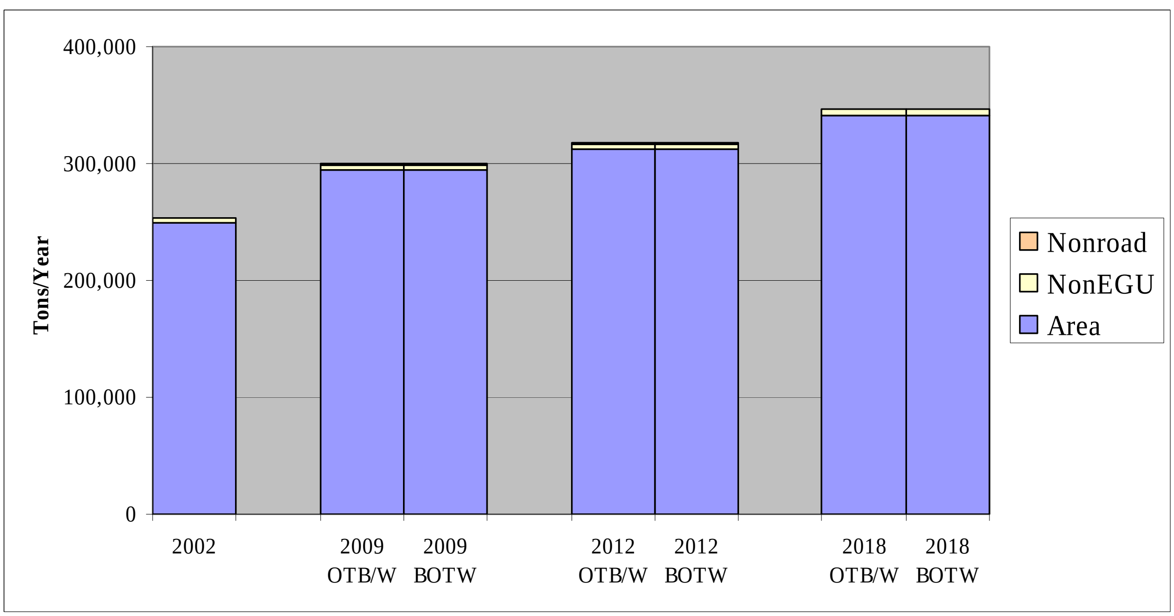


Figure 1-3 2002 Base Year, OTB/OTW AND BOTW Annual NOx Emissions (tons per year)

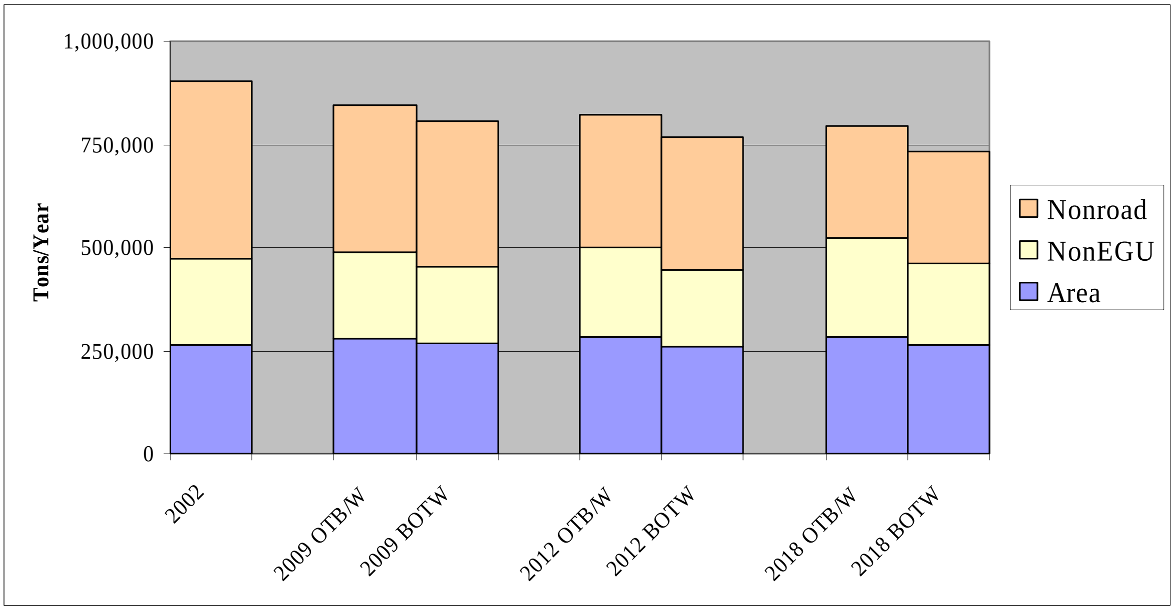


Figure 1-4 2002 Base Year, OTB/OTW AND BOTW Annual SO2 Emissions (tons per year)

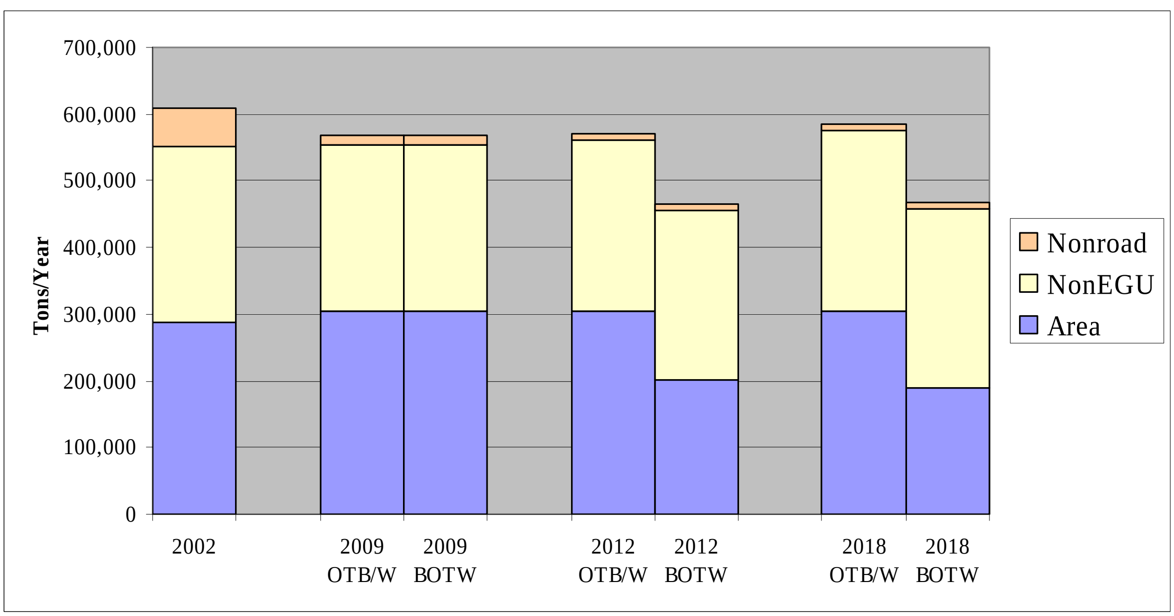


Figure 1-5 2002 Base Year, OTB/OTW AND BOTW Annual PM10 Emissions (tons per year)

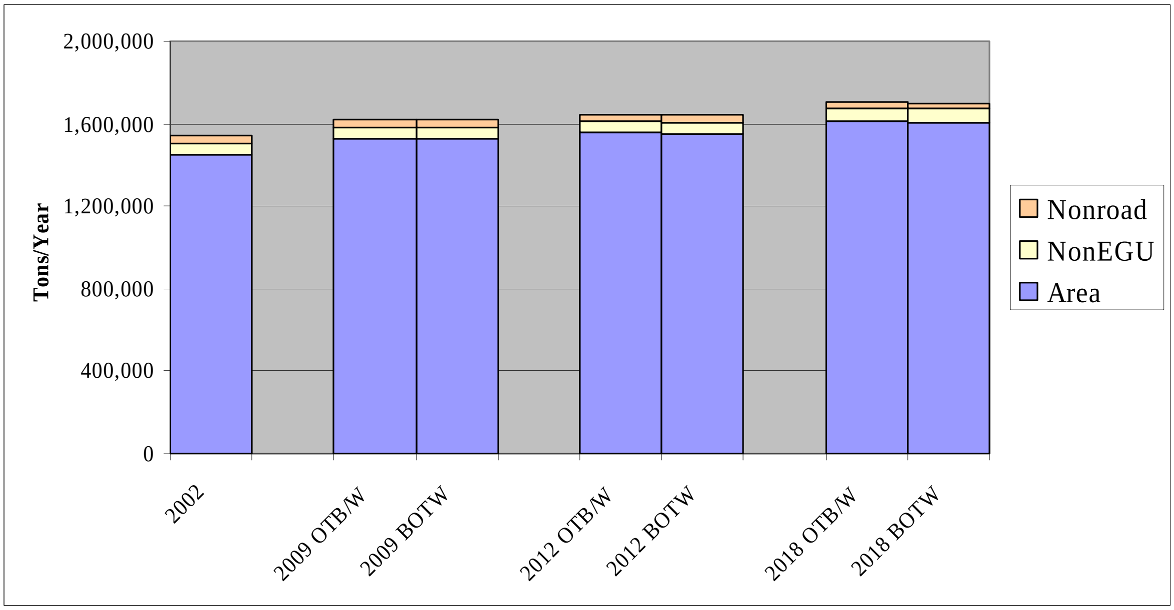


Figure 1-6 2002 Base Year, OTB/OTW AND BOTW Annual PM2.5 Emissions (tons per year)

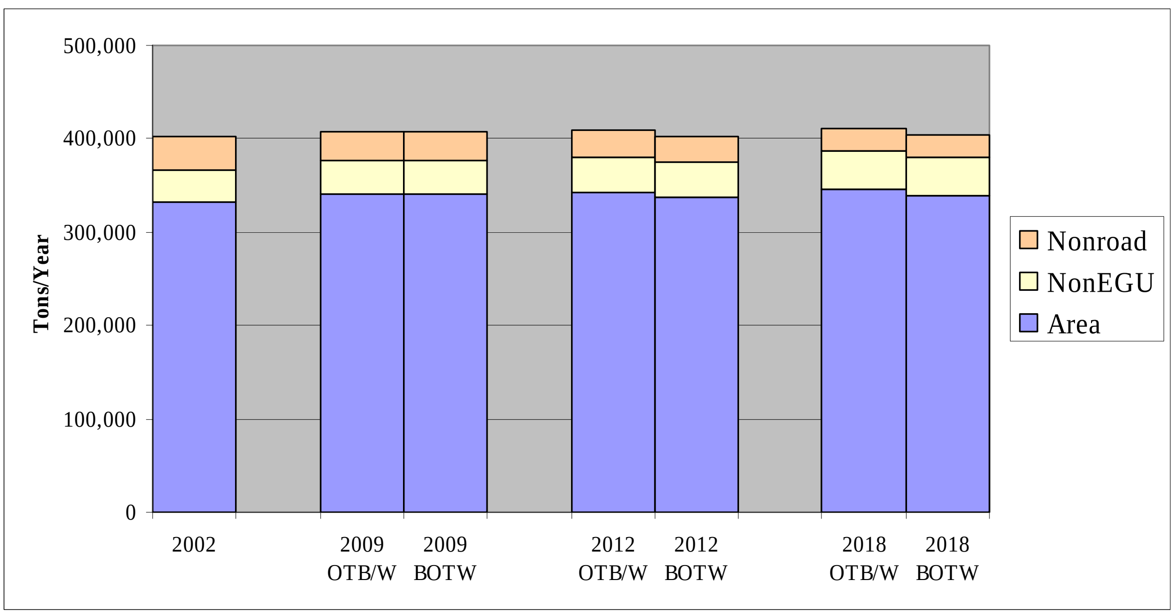
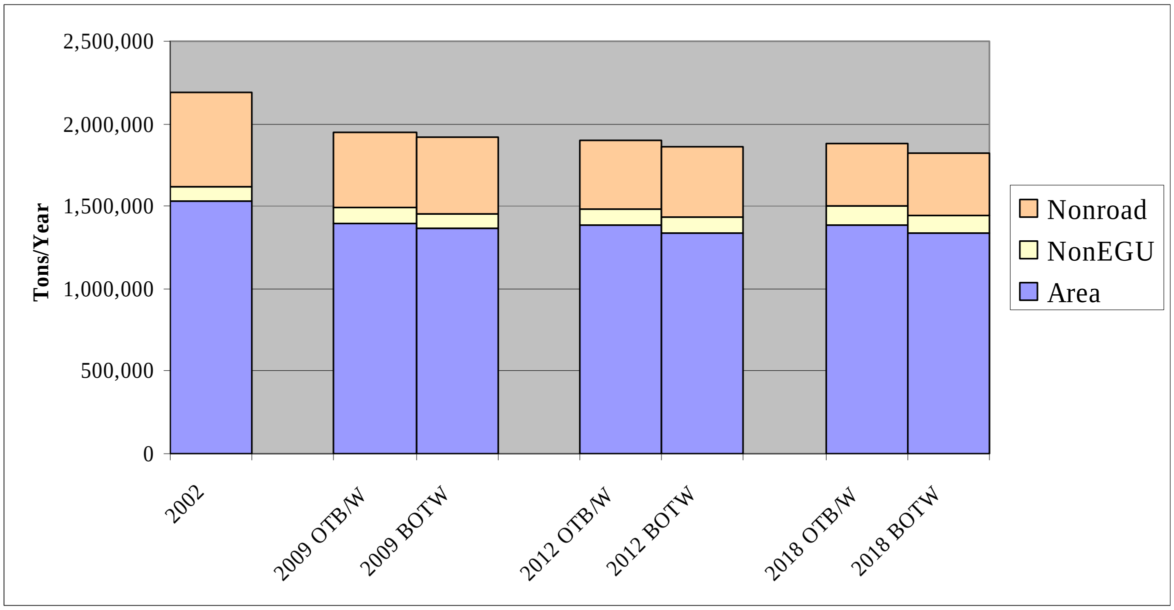


Figure 1-7 2002 Base Year, OTB/OTW AND BOTW Annual VOC Emissions (tons per year)



2.0 NONEGU POINT SOURCES

Under ideal circumstances, all stationary sources would be considered point sources for purposes of emission inventories. In practical applications, however, only sources that emit more than a specified cutoff level of pollutant are considered point sources. In general, the MANE-VU point source inventory includes only major sources (i.e., those required to obtain a Title V operating permit). Some states may include additional stationary sources that emit below the major source thresholds.

For emission projection purposes, the point source inventory is divided into two sub-sectors – the Electric Generating Unit (EGU) sector and the non-EGU sector – because different projections methods are used for these two sectors. For EGUs, MANE-VU used the Integrated Planning Model (IPM) to project future generation as well as to calculate the impact of future control programs on future emission levels.

The procedures for projecting emissions for non-EGUs are described in this section. We started with the MANE-VU 2002 point source emission inventory, which contains data for both EGUs and nonEGUs. We implemented a procedure to split the 2002 point source inventory into two components – and EGU inventory for those units accounted for in IPM, and a nonEGU inventory for those point sources not accounted for in IPM. For the nonEGU sources, we first applied growth factors to account for changes in economic activity. Next, we applied control factors to account for future emission reductions from on-the-books (OTB) control regulations and on-the-way (OTW) control regulations. The OTB control scenario accounts for post-2002 emission reductions from promulgated federal, State, local, and site-specific control programs as of June 15, 2005. The OTW control scenario accounts for proposed (but not final) control programs that are reasonably anticipated to result in post-2002 emission reductions. We then conducted a series of quality assurance steps to ensure the development of complete, accurate, and consistent emission inventories. We provided the inventories in three formats – the National Emission Inventory Input Format (NIF), SMOKE Inventory Data Analyzer (IDA) format, and SMOKE growth/control packets. We also prepared emission summary tables by state and pollutant. Each of these activities is discussed in this section.

2.1 INITIAL 2002 POINT SOURCE EMISSION INVENTORY

The starting point for the nonEGU projections was Version 3 of the MANE-VU 2002 point source emission inventory (MANE-VU_2002_Pt_Version 3_040706.MDB). Since this file contains both EGUs and nonEGU point sources, and EGU emissions are projected using the IPM, it was necessary to split the 2002 point source file into two components.

The first component contains those emission units accounted for in the IPM forecasts. The second component contains all other point sources not accounted for in IPM.

The MANE-VU 2002 point source inventory contains a cross-reference table (xwalk {MANE-VU}) that matches IPM emission unit identifiers (ORISPL plant code and BLRID emission unit code) to MANE-VU NIF emission unit identifiers (FIPSST state code, FIPSCNTY county code, State Plant ID, State Point ID). Initially, we used this cross-reference table to split the point source file into the EGU and nonEGU components. When there was a match between the IPM ORISPL/BLRID and the MANE-VU emission unit ID, the unit was assigned to the EGU inventory; all other emission units were assigned to the nonEGU inventory. The exception to this rule was for the State of New York. The cross-reference table only contained matches at the plant level, not the emission unit level. So for New York EGUs accounted for in IPM, all emission units at a plant were assigned to the MANE-VU EGU file (including ancillary emission units not accounted for in IPM).

After performing this initial splitting of the MANE-VU point source inventory into EGU and nonEGU components, we prepared several ad-hoc QA/QC queries to verify that there was no double-counting of emissions in the EGU and nonEGU inventories:

- We reviewed the IPM parsed files {VISTASII_PC_1f_AllUnits_2009 (To Client).xls and VISTASII_PC_1f_AllUnits_2018 (To Client).xls} to identify EGUs accounted for in IPM. We compared this list of emission units to the nonEGU inventory derived from the MANE-VU cross-reference table to verify that units accounted for in IPM were not double-counted in the nonEGU inventory. As a result of this comparison, we made a few adjustments in the cross-reference table to add emission units for four plants to ensure these units accounted for in IPM were moved to the EGU inventory.

- We reviewed the nonEGU inventory to identify remaining emission units with an Standard Industrial Classification (SIC) code of “4911 Electrical Services” or Source Classification Code of “1-01-xxx-xx External Combustion Boiler, Electric Generation”. We compared the list of sources meeting these selection criteria to the IPM parsed file to ensure that these units were not double-counted.

- We compared the number of records for each NIF table in the original 2002 point source file to the 2002 EGU and 2002 nonEGU files. We determined that the sum of the number of records in the EGU file and the number of records in the nonEGU file equaled the number of records in the original 2002 point source file.

- We compared the emissions by pollutant and state in the original 2002 point source file to the 2002 EGU file and 2002 nonEGU files. We determined that the sum of the emissions in the EGU file and the emissions in the nonEGU file equaled the emissions in the original 2002 point source file.

As a result of this procedure, we created separate sets of NIF tables for 2002 for EGUs (i.e., units accounted for in IPM) and nonEGUs. The nonEGU set of 2002 NIF tables were used in all subsequent projections for 2009/2012/2018.

After release of Version 3 of the MANE-VU 2002 inventory, New Jersey discovered that fugitive emissions from petroleum refineries were missing from Version 3. New Jersey supplied MACTEC with the emission unit identifiers for the fugitive releases, and the appropriate records were added to the 2002 NIF files.. MACTEC used these revised fugitive estimates for projecting emissions to 2009/2012/2018.

2.2 NONEGU POINT SOURCE GROWTH FACTORS

The nonEGU growth factors were developed using three sets of data:

- The U.S. EPA's Economic Growth and Analysis System Version 5.0 (EGAS 5.0) using the default SCC configuration. EGAS 5.0 generates growth factors from REMI's 53 Sector Policy Insight Model Version 5.5, the U.S. Department of Energy (DOE) Annual Energy Outlook 2004 (AEO2004) fuel use projections, and national vehicle mile travel projections from EPA's MOBILE 4.1 Fuel Combustion Model;

- The DOE's Annual Energy Outlook 2005 (AEO2005) fuel consumption forecasts were used to replace the AEO2004 forecasts that are used as the default values in EGAS 5.0; and

- State-supplied population, employment, and other emission projection data.

The priority for applying these growth factors was to first use the state-supplied projection data (if available). If no state-supplied data are available, then we used the AEO2005 projection factors for fuel consumption sources. If data from these two sources were not available, we used the EGAS 5.0 default SCC configuration. Appendix A lists the nonEGU point source growth factors used for this study.

2.2.1 EGAS 5.0 Growth Factors

EGAS is an EPA-developed economic and activity forecast tool that provides credible growth factors for developing emission inventory projections. Growth factors are generated using national- and regional-economic forecasts. For nonEGUs, the primary economic activity data sets in EGAS 5.0 are:

- State-specific growth rates from the Regional Economic Model, Inc. (REMI) Policy Insight® model, version 5.5. The REMI socioeconomic data (output by industry sector, population, farm sector value added, and gasoline and oil expenditures) are available by 4-digit SIC code at the State level.

- Energy consumption data from the DOE's Energy Information Administration's (EIA) *Annual Energy Outlook 2004, with Projections through 2025* for use in generating growth factors for non-EGU fuel combustion sources. These data include regional or national fuel-use forecast data that were mapped to specific SCCs for the non-EGU fuel use sectors (e.g., commercial coal, industrial natural gas). Growth factors are reported at the Census division level. These Census divisions represent a group of States (e.g., the South Atlantic division includes Delaware, the District of Columbia, and Maryland; the Middle Atlantic division includes New Jersey, New York, and Pennsylvania; the New England division includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont). Although one might expect different growth rates in each of these States due to unique demographic and socioeconomic trends, all States within each division received the same growth rate.

EGAS uses these economic activity datasets and a set of cross-reference files to generate growth factors by Standard Industrial Classification (SIC) code, Source Classification Code (SCC), or Maximum Achievable Control Technology (MACT) codes. Growth factors for 2009, 2012, and 2018 were calculated using 2002 as the base year at the State and SCC level. County-specific growth factors are not available in EGAS 5.0.

There were several SCCs in the MANE-VU 2002 inventory that are not included in the EGAS 5.0 files. As a result, EGAS did not generate growth factors for those SCCs. MACTEC assigned growth factors for the missing SCCs by assigning a surrogate SCC that best represented the missing SCC.

2.2.2 AEO2005 Growth Factors

The default version of EGAS 5.0 uses the DOE's AEO2004 forecasts. We replaced these data with the more recent AEO2005 forecasts to improve the emissions growth factors produced. Using ACCESS, we created a copy of the "DOE EGAS 5" dataset. The dataset includes three tables. One table contains the projection data values from 2001-2025. The other two tables are the MACT and SCC crosswalk tables. The crosswalk tables are linked to the projection table via a "model code". Using the copy of AEO2004 data, we updated the corresponding projection tables with data from the AEO2005 located at: http://www.eia.doe.gov/oiaf/aeo/supplement/supref.html . Using the data and descriptions from the new tables, we matched the projection data to the appropriate model codes and then built a table identical to the DOE EGAS 5 dataset with the new 2005 AEO data. The resulting ACCESS dataset contains a projection data table with the exact same structure as the original except with the new data. The SCC and MACT crosswalks did not require any updates since the model code assignments were not changed in the new data table.

2.2.3 State Specific Growth Factors

In addition to the growth data described above, we received growth projections from several MANE-VU states to be used instead of the default EGAS or AEO2005 growth factors. The following paragraphs describe the growth factors used for each state.

2.2.3.1 Connecticut

Connecticut provided state-level employment-based growth factors for various SIC categories derived from CT Department of Labor (CTDOL) projections. For many manufacturing sectors, employment is projected to decline, indicating the likelihood of reduced activity levels and emissions for those sectors. Associated growth factors are less than one. To ensure consistency within a facility, CTDEP indicated that the employment-based growth factors be used wherever possible, as matched by SIC. MACTEC used the growth factors by SIC code for all sources in CT, including those fuel combustion sources that would otherwise have been projected using the AEO2005 forecasts.

2.2.3.2 Delaware

Delaware provided state-level employment data from the Department of Labor by NAICS codes for 2002 and 2012. We used these data to calculate the growth factor from 2002 to 2012 and interpolated these data to derive growth factors for 2009 and 2018. We matched these industry NAICS groupings to SCC codes in order to create SCC specific growth factors for non-EGU point sources.

2.2.3.3 District of Columbia

DC indicated that it preferred to use the EGAS 5.0 growth factors, with the enhancement of using the DOE's 2005 Annual Energy Outlook data for combustion sources.

2.2.3.4 Maine

Maine indicated that it preferred to use the EGAS 5.0 growth factors and the DOE's 2005 Annual Energy Outlook data for combustion sources.

2.2.3.5 Maryland

Maryland provided growth factors by SCC for all counties in the State. These growth factors were derived from a variety source sources, including the MWCOG Cooperative Forecast 7.0, the BMC Round 6A Cooperative Forecast (prepared by the MD Dept. of Planning, May 2004), and EGAS 5.0.

2.2.3.6 Massachusetts

Massachusetts also provided a link to employment projections for 2000-2010 for very narrow occupational categories that are not directly correlated with SIC or SCC codes. Since we could not match the occupational titles in the Massachusetts employment projections with SIC or SCC codes, MACTEC used the EGAS 5.0 growth factors (with the AEO2005 enhancement for combustion sources) for projecting emissions from nonEGU sources.

2.2.3.7 New Hampshire

New Hampshire indicated that it preferred to use the EGAS 5.0 growth factors, with the enhancement of using the DOE's 2005 Annual Energy Outlook data for combustion sources.

2.2.3.8 New Jersey

New Jersey indicated that it preferred to use the EGAS 5.0 growth factors, with the enhancement of using the DOE's 2005 Annual Energy Outlook data for combustion sources.

2.2.3.9 New York

New York provided county-level employment data for 12 counties in the New York City metro area for 2002, 2009, 2012, and 2018. The employment projections are for broad industry categories not directly correlated with SIC or SCC codes. Since we could not match the 12-county employment projections with SIC or SCC codes, MACTEC used the EGAS 5.0 growth factors (with the AEO2005 enhancement for combustion sources) for projecting emissions from nonEGU sources for both the 12-county area and all other counties in the state.

2.2.3.10 Pennsylvania

Pennsylvania provided total employment projections for a subset of counties. These employment projections do not have enough detail regarding specific industrial groupings to be correlated with SIC or SCC codes. MACTEC used the EGAS 5.0 growth factors (with the AEO2005 enhancement for combustion sources) for projecting emissions from nonEGU sources

2.2.3.11 Rhode Island

Rhode Island provided state-level employment data from the Department of Labor and Training by 3-digit NAICS codes for 2002 and 2012. We used these data to calculate the growth factor from 2002 to 2012 and interpolated these data to derive growth factors for 2009 and 2018. We matched these industry NAICS groupings to SCC codes in order to create SCC specific growth factors for non-EGU point sources.

2.2.3.12 Vermont

Vermont indicated that it preferred to use the EGAS 5.0 growth factors, with the enhancement of using the DOE's 2005 Annual Energy Outlook data for combustion sources.

2.3 NONEGU POINT SOURCE CONTROL FACTORS

The following sections document how the OTB/OTW control factors were developed for the MANE-VU future year inventories. We developed control factors to estimate emission reductions that will result from on-the-books regulations that will result in post-2002 emission reductions and proposed regulations or actions that will result in post-2002 emission reductions. Control factors were developed for the following national, regional, or state control measures:

- NOx SIP Call Phase I (NOx Budget Trading Program)
- NOx SIP Call Phase II
- NOx RACT in 1-hour Ozone SIPs
- NOx OTC 2001 Model Rule for ICI Boilers
- 2-, 4-, 7-, and 10-year MACT Standards
- Combustion Turbine and RICE MACT
- Industrial Boiler/Process Heater MACT
- Refinery Enforcement Initiative
- Source Shutdowns

In addition, states provided specific control measure information about specific sources or regulatory programs in their state. We used the state-specific data to the extent it was available.

2.3.1 NOx SIP Call Phase I

Compliance with the NOx SIP Call in the Ozone Transport Commission (OTC) states was scheduled for May 1, 2003. The requirements applied to all MANE-VU states except Maine, New Hampshire, and Vermont. While the program applies primarily to electric generating units (EGUs), the NOx SIP Call applies to non-EGUs such as large industrial boilers and turbines. The NOx SIP Call did not mandate which sources must reduce emissions; rather, it required states to meet an overall emission budget and gave them flexibility to develop control strategies to meet that budget. All states in the MANE-VU region affected by the NOx SIP Call chose to meet their NOx SIP Call requirements by participating in the NOx Budget Trading Program. We reviewed the available state rules and guidance documents to determine the affected nonEGU sources and ozone season NOx allowances for each source. Future year emissions for non-EGU boilers/turbines were capped at the allowance levels. Since the allowances are given in terms of tons per ozone season (5 months May to September), we calculated annual emissions by multiplying the ozone season allowances by a factor of 12 (annual) / 5 (ozone season). Table B-1 identifies those units included in the NOx SIP Call Phase I budget program.

Cement kilns were also included in Phase I of the NO_x SIP call. There is a cement kiln in Maine, but it is not subject to the NOx SIP call. For the cement kilns in Maryland and New York, a default control efficiency value of 25 percent was applied. For the cement kilns in Pennsylvania, the state provided their best estimates of the actual control efficiency expected for each kiln after the NOx SIP Call. Table B-2 identifies the cement kilns affected by the NOx SIP Call.

2.3.2 NOx SIP Call Phase II

The final Phase II NOx SIP Call rule was promulgated on April 21, 2004. States had until April 21, 2005, to submit SIPs meeting the Phase II NOx budget requirements. The Phase II rule applies to large IC engines, which are primarily used in pipeline transmission service at compressor stations. We have identified affected units using the same methodology as was used by EPA in the proposed Phase II rule (i.e., a large IC engine is one that emitted, on average, more than 1 ton per day during 2002). The final rule reflects a control level of 82 percent for natural gas-fired IC engines and 90 percent for diesel or dual fuel categories. Pennsylvania identified large IC engines affected by the rule. Table B-3 identifies those units included in the NOx SIP Call Phase II.

2.3.3 NOx RACT in 1-hour Ozone SIPs

Emission reductions requirements from NOx reasonably available control technology (RACT) requirements in 1-hour Ozone SIP areas were implemented in or prior to 2002.

These reductions should already be accounted for in the MANE-VU 2002 inventory since the 2002 inventory was based on 2002 actual emissions which includes any reductions due to NOx RACT.

2.3.4 NOx OTC 2001 Model Rule for ICI Boilers

The Ozone Transport Commission (OTC) developed control measures for industrial, commercial, and institutional (ICI) boilers in 2001. Information about the proposed OTC NOx emission limits by fuel type and size range was obtained from Table III-1 of *Control Measure Development Support Analysis of Ozone Transport Commission Model Rules* (E.H. Pechan & Associates, Inc., March 31, 2001). Information about the emission limits contained in the existing state rules (prior to adoption of the OTC 2001 model rule) were obtained from Tables III-2 through III-9 of the Pechan document. Information about the emission limits contained in the current state rules (as they existed in June 2006) were obtained from the individual states regulations. The percent reduction for ICI boilers was estimated by state, fuel type, and size range by comparing the current state emission limits (as they existed in June 2006) with the state emission limits as they existed in 2001. Pennsylvania adopted the OTC 2001 model rule in five southeastern counties (Bucks, Chester, Delaware, Montgomery, and Philadelphia) for boilers in the 100 to 250 million Btu/hour range. New Jersey adopted the OTC 2001 model rule for natural gas-fired boilers with a maximum heat rate of at least 100 million Btu/hour. For other states, it did not appear that the emission limits in 2006 had changed from the emission limits in 2001.

2.3.5 2-, 4-, 7-, and 10-year MACT Standards

Maximum achievable control technology (MACT) requirements were also applied, as documented in the report entitled *Control Packet Development and Data Sources*, dated July 14, 2004 (available at http://www.epa.gov/air/interstateairquality/pdfs/Non-EGU_nonpoint_Control_Development.pdf). The point source MACTs and associated emission reductions were designed from Federal Register (FR) notices and discussions with EPA's Emission Standards Division (ESD) staff. These MACT requirements apply only to units located at a major source of hazardous air pollutants (HAP). We did not apply reductions for MACT standards with an initial compliance date of 2002 or earlier, assuming that the effects of these controls are already accounted for in the inventories supplied by the States. Emission reductions were applied only for MACT standards with an initial compliance date of 2003 or greater.

Because the MANE-VU inventory does not identify HAP major sources, the reductions from post-2002 MACT standards were applied on a more general scale to all sources with certain SCCs. Every source with an SCC determined to be affected by a post-2002 MACT standard was assigned an incremental percent reduction for the applicable MACT standard. Table B-4 shows the SCCs affected and the incremental control efficiencies applied for post-2002 MACT standards.

2.3.6 Combustion Turbine and RICE MACT

The MANE-VU projection inventory does not include the NOx co-benefit effects of the MACT regulations for Gas Turbines or stationary Reciprocating Internal Combustion Engines, which EPA estimates to be small compared to the overall inventory.

2.3.7 Industrial Boiler/Process Heater MACT

EPA anticipates ancillary reductions in PM and SO2 as a result of the Industrial Boiler/Process Heater MACT standard. The MACT applies to industrial, commercial, and institutional units firing solid fuel (coal, wood, waste, biomass) which have a design capacity greater than 10 mmBtu/hr and are located at a major source of hazardous air pollutants (HAP). The boiler design capacity field in many cases was missing from the MANE-VU emission inventory. In lieu of boiler design capacity, we identified boilers with the following SCCs that emitted greater than 10 tons/year of either SO2 or PM10

- 1-02-001-xx Industrial, Anthracite Coal
- 1-02-002-xx Industrial, Bituminous/subbituminous Coal
- 1-02-008-xx Industrial, Petroleum Coke
- 1-02-009-xx Industrial, Wood/Bark Waste
- 1-03-001-xx Commercial/Institutional, Anthracite Coal
- 1-03-002-xx Commercial/Institutional, Bituminous/subbituminous Coal
- 1-03-009-xx Commercial/Institutional, Wood/Bark Waste
- 3-90-002-89 In-Process Fuel Use, Bituminous Coal
- 3-90-002-99 In-Process Fuel Use, Bituminous Coal
- 3-90-008-89 In-Process Fuel Use, Coke
- 3-90-008-99 In-Process Fuel Use, Coke
- 3-90-009-99 In-Process Fuel Use, Wood

For these sources, we applied the average MACT control efficiencies of 4% for SO2 and 40% for PM.

2.3.8 Refinery Enforcement Initiative

Both EPA and State/local agencies have negotiated (or are in the process of negotiating) Consent Decrees that will require significant investment in pollution control technology and will result in significant emission reductions in the future. There are eight refineries in the MANE-VU inventory impacted by the settlements. The five major refinery processes that are affected by the judicial settlements are:

- Fluid Catalytic Cracking Units (FCCUs) and Fluid Coking Units (FCUs)
- Process Heaters and Boilers
- Flare Gas Recovery
- Leak Detection and Repair
- Benzene/Wastewater

As part of the development of the *Assessment of Control Technology Options for Petroleum Refineries in the Mid-Atlantic Region* (Draft Final, October 2006), MACTEC coordinated with State and local agencies to develop estimates of future year emissions based upon the settlements and recent permits that implement the provisions of those settlements.

For FCCUs/FCUs, the Consent Decree control requirements generally require the installation of wet gas scrubbers for SO2 control. Some of the units have already been permitted to include the control requirements. In those cases, specific emission limits for SO2 have already been established and were used as the best estimate of emission in 2009. In cases where specific emission limitation have not yet been specified in permits, a 90 percent SO2 control efficiency was assumed as a conservative estimate of the SO2 reductions from the installation of a wet gas scrubber.

For NOx control at FCCUs/FCUs, the Consent Decrees require selective catalytic reduction (SCR), selective non-catalytic reduction (SCNR), or optimization studies to reduce NOx emissions. Some of the units have already been permitted to include the control requirements. In those cases, specific emission limits for NOx have already been established and were used as the best estimate of emission in 2009. In cases where specific emission limitation have not yet been specified in permits, a 90 percent NOx control efficiency was assumed for SCR, and a 60 percent reduction was assumed from the installation of SNCR.

For SO2 emissions from boilers/heaters, the control requirements generally require the elimination of burning solid/liquid fuels. We identified all boilers and heaters at the eight affected refineries that burn solid or liquid fuels. For these units, we set the SO2 emissions to zero in the future year inventories.

For NOx emissions from boilers/heaters, control requirements generally apply to units greater than 40 million British thermal units (MMBtu) per hour capacity or larger. In many cases, the consent decrees establish NO_x emission reduction objectives across a number of refineries that are owned by the same firm. Therefore, the companies have some discretion in deciding which individual boilers/heaters to control as well as the control techniques to apply. Also, the consent decrees have various phase-in dates which make it difficult to determine the exact date when the reductions will be fully realized. As part of the development of the *Assessment of Control Technology Options for Petroleum Refineries in the Mid-Atlantic Region* (Draft Final, October 2006), MACTEC coordinated with State and local agencies to develop estimates of future year emissions based upon the settlements and recent permits that implement the provisions of those settlements. Heater/boiler NOx controls for the units to which they are applied were determined to be equivalent to meeting a 0.04 lbs per million Btu NOx emission rate. Meeting this emission reduction requirement is expected to provide an average NOx emission reduction of 50 percent from 2002 levels in 2009.

The Consent Decrees also included enhanced LDAR programs (e.g., reducing the defined leak concentration, increasing the monitoring frequency, other requirements. Our best estimate is a 50% reduction in VOC emissions as a result of implementing enhanced LDAR programs similar to those required in the recent Consent Decrees. This is based on a study (http://www.rti.org/pubs/ertc_enviro_2002_final1.pdf) that estimated an enhanced LDAR program could result in a 50% reduction in fugitive VOCs.

The settlements are expected to produce additional SO2, NOx, and VOC emission reductions for flare gas recovery and wastewater operations. These emission reductions were not quantified as they are expected to produce less significant changes in the MANE-VU inventory because of the magnitude and uncertainty associated with the emissions from these units in the 2002 MANE-VU inventory.

2.3.9 Source Shutdowns

A few states indicated that significant source shutdowns have occurred since 2002 and that emissions from these sources should not be included in the future year inventories. These sources are identified in Table B-5.

2.3.10 State Specific Control Factors

Delaware provided reductions expected from the Maritrans lightering operation. VOC emissions are projected to be reduced by 34.8% by 2009, 69.3% by 2012, and 79.2% by 2018.

2.4 NONEGU POINT SOURCE QA/QC REVIEW

Throughout the inventory development process, quality assurance steps were performed to ensure that no double counting of emissions occurred, and to ensure that a full and complete inventory was developed. Quality assurance was an important component to the inventory development process and MACTEC performed the following QA steps on the nonEGU point source component of the MANE-VU future year inventories:

1. State agencies reviewed the draft growth and control factors in the summer of 2005. Changes based on these comments were implemented in the files.
2. Compared, at the emission unit-level, emissions from the IPM parsed files and the MANE-VU NIF files to verify that the splitting of the MANE-VU point source inventory into the EGU and nonEGU sectors did not result in any double county of emissions or cause units to be missing from both inventories.
3. SCC level emission summaries were prepared and evaluated to ensure that emissions were consistent and that there were no missing sources. Tier comparisons (by pollutant) were developed between the revised 2002 base year inventory and the 2009/2012/2018 projection inventories.
4. State level emission summaries were prepared and evaluated to ensure that emissions were consistent and reasonable. The summaries included base year 2002 emissions, 2009/2012/2018 projected emissions accounting only for growth, 2009/2012/2018 projected emissions accounting for both growth and emission reductions from OTB and OTW controls.
5. Emission inventory files in NIF format were provided for state agency review and comment. Changes based on these comments were implemented.
6. All final files were run through EPA's Format and Content checking software.
7. Version numbering was used for all inventory files developed. The version numbering process used a decimal system to track major and minor changes. For example, a major change would result in a version going from 1.0 to 2.0 for example. A minor change would cause a version number to go from 1.0 to 1.1. Minor changes resulting from largely editorial changes would result in a change from 1.00 to 1.01 for example.

Final QA checks were run on the revised projection inventory data set to ensure that all corrections provided by the S/L agencies and stakeholders were correctly incorporated into the S/L inventories and that there were no remaining QA issues that could be addressed during the duration of the project. After exporting the inventory to ASCII text files in NIF 3.0, the EPA QA program was run on the ASCII files and the QA output was reviewed to verify that all QA issues that could be addressed were resolved

2.5 NONEGU POINT SOURCE NIF AND SMOKE FILES

The Version 3 file names and descriptions delivered to MARAMA are shown in Table 2-1.

2.6 NONEGU POINT SOURCE EMISSION SUMMARIES

Emission summaries by state, year, and pollutant are presented in Tables 2-2 through 2-8 for CO, NH3, NOx, PM10-PRI, PM25-PRI, SO2, and VOC, respectively.

Table 2-1 NonEGU Point Source NIF, IDA, and Summary File Names

File Name	Date	Description
MANEVU_OTB2009_NonEGU_NIFV3_1.mdb	Dec. 4, 2006	Version 3.1 of 2009 OTB NonEGU source NIF inventory
MANEVU_OTB2012_NonEGU_NIFV3_1.mdb	Dec. 4, 2006	Version 3.1 of 2012 OTB NonEGU source NIF inventory
MANEVU_OTB2018_NonEGU_NIFV3_1.mdb	Dec. 4, 2006	Version 3.1 of 2018 OTB NonEGU source NIF inventory
MANEVU_OTB2009_NonEGU_IDAV3_1.txt	Nov. 22, 2006	Version 3.1 of 2009 OTB NonEGU source inventory in SMOKE IDA format
MANEVU_OTB2012_NonEGU_IDAV3_1.txt	Nov. 22, 2006	Version 3.1 of 2012 OTB NonEGU source inventory in SMOKE IDA format
MANEVU_OTB2018_NonEGU_IDA3V_2.txt	Nov. 22, 2006	Version 3.1 of 2018 OTB NonEGU source inventory in SMOKE IDA format
MANEVU OTB BOTW NonEGU V3_1 State Summary.xls	Nov. 22, 2006	Spreadsheet with state totals by pollutant for all NonEGU sources
MANEVU OTB BOTW NonEGU V3_1 State SCC Summary.xls	Dec. 4, 2006	Spreadsheet with SCC totals by state and pollutant for all NonEGU sources.

Table 2-2 NonEGU Point Sources
OTB/OTW Annual CO Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	2,157	2,251	2,306	2,415
DE	8,812	9,037	8,748	8,651
DC	247	283	299	327
ME	9,043	10,147	10,467	11,433
MD	94,536	104,012	111,174	141,342
MA	10,793	12,027	12,552	13,426
NH	774	858	871	907
NJ	8,209	10,076	10,806	12,244
NY	53,259	61,411	65,541	78,876
PA	105,815	116,430	121,251	140,909
RI	1,712	1,764	1,821	1,927
VT	220	250	254	267
Total	**295,577**	**328,546**	**346,090**	**412,724**

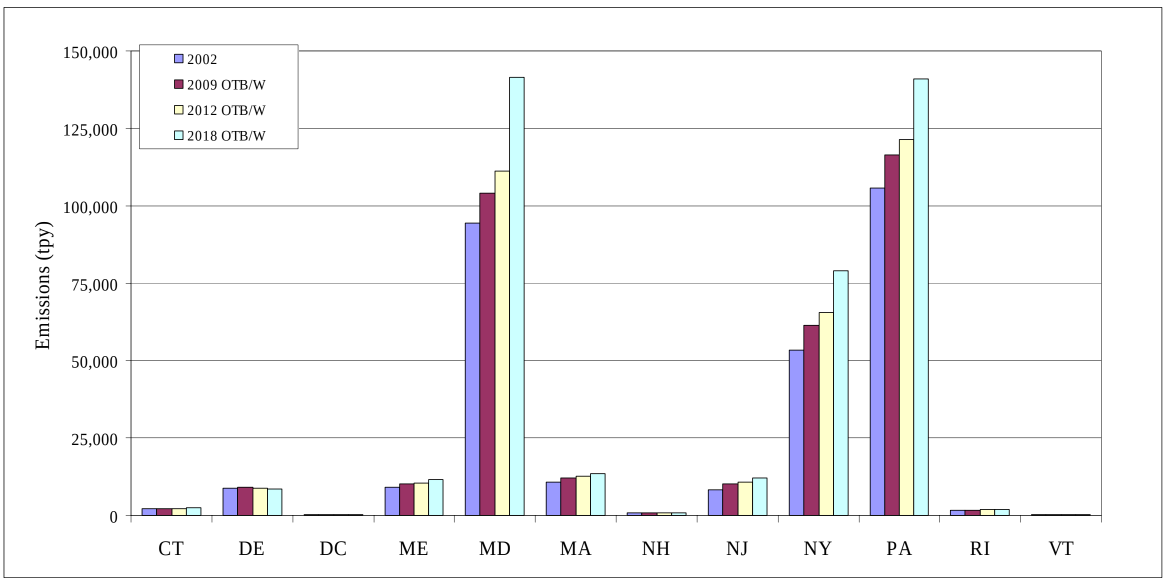


Table 2-3 NonEGU Point Sources
OTB/OTW Annual NH3 Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	0	0	0	0
DE	153	145	138	134
DC	4	5	5	5
ME	700	796	809	859
MD	305	347	366	410
MA	462	510	521	563
NH	37	46	50	60
NJ	0	0	0	0
NY	1,027	1,081	1,128	1,296
PA	1,170	1,307	1,363	1,591
RI	58	64	68	68
VT	0	0	0	0
Total	**3,916**	**4,301**	**4,448**	**4,986**

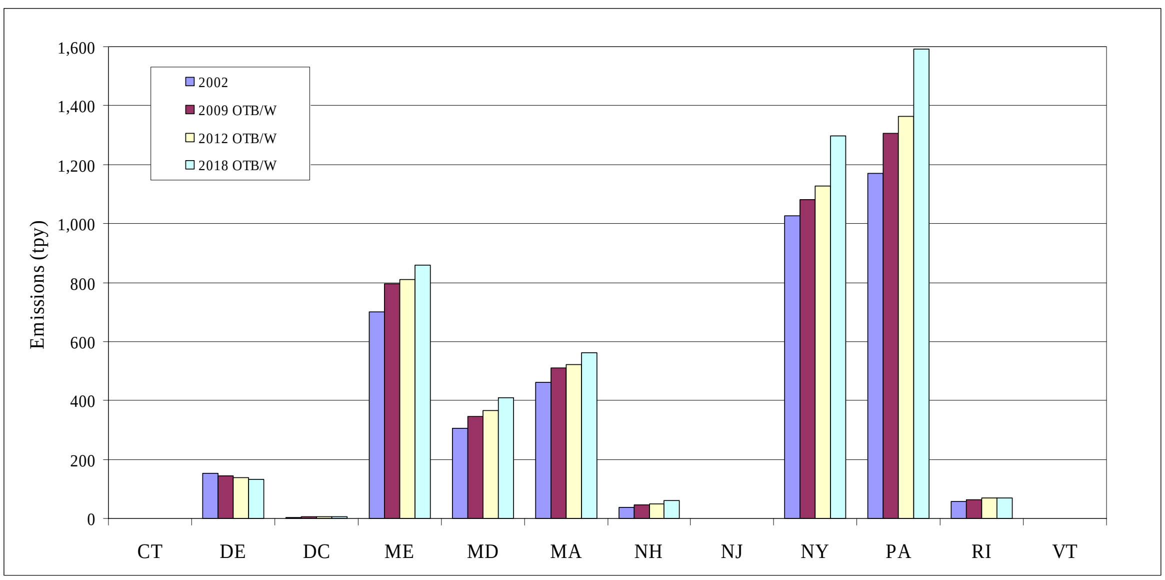


Table 2-4 NonEGU Point Sources
OTB/OTW Annual NOx Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	6,773	7,236	7,465	7,921
DE	4,372	4,076	4,135	4,246
DC	480	548	577	627
ME	12,108	14,285	14,661	15,753
MD	21,940	19,401	20,399	22,797
MA	18,292	20,603	21,372	23,040
NH	1,188	1,384	1,394	1,435
NJ	15,812	16,498	17,091	18,805
NY	34,253	33,648	34,586	37,133
PA	89,136	89,932	93,526	103,137
RI	2,308	2,449	2,471	2,442
VT	386	462	460	466
Total	**207,048**	**210,522**	**218,137**	**237,802**

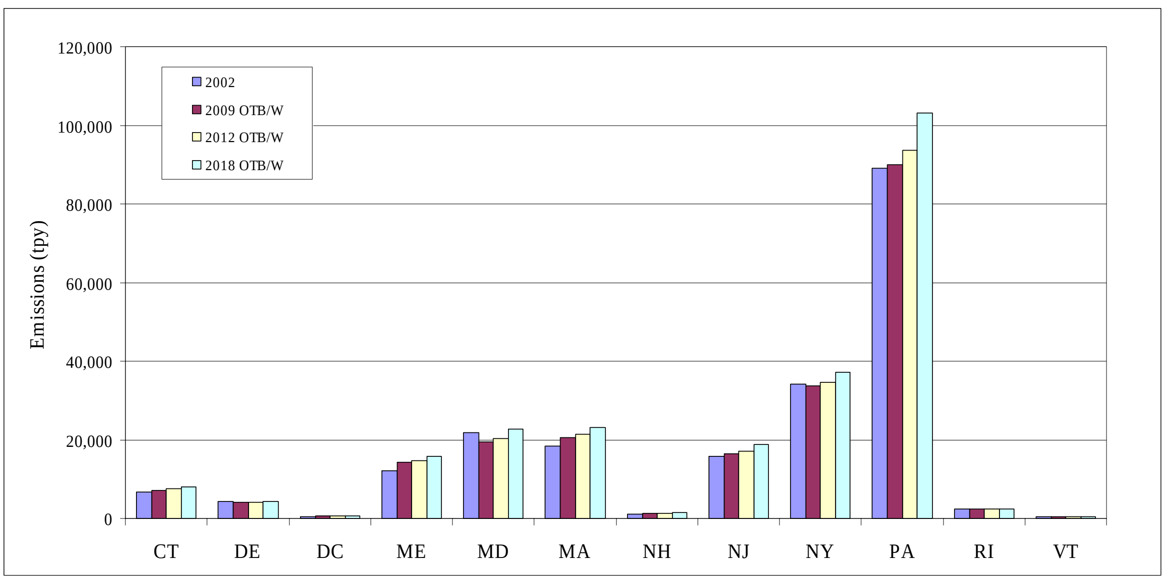


Table 2-5 NonEGU Point Sources
OTB/OTW Annual PM10-PRI Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	990	1,035	1,058	1,106
DE	1,820	1,486	1,475	1,487
DC	157	178	186	198
ME	6,120	7,088	7,133	7,496
MD	4,739	4,797	5,040	5,828
MA	4,212	5,006	5,088	5,314
NH	918	1,084	1,097	1,129
NJ	3,439	4,205	4,417	4,959
NY	5,072	5,221	5,444	6,098
PA	23,282	25,169	26,307	29,516
RI	296	333	331	330
VT	235	267	272	296
Total	**51,280**	**55,869**	**57,848**	**63,757**

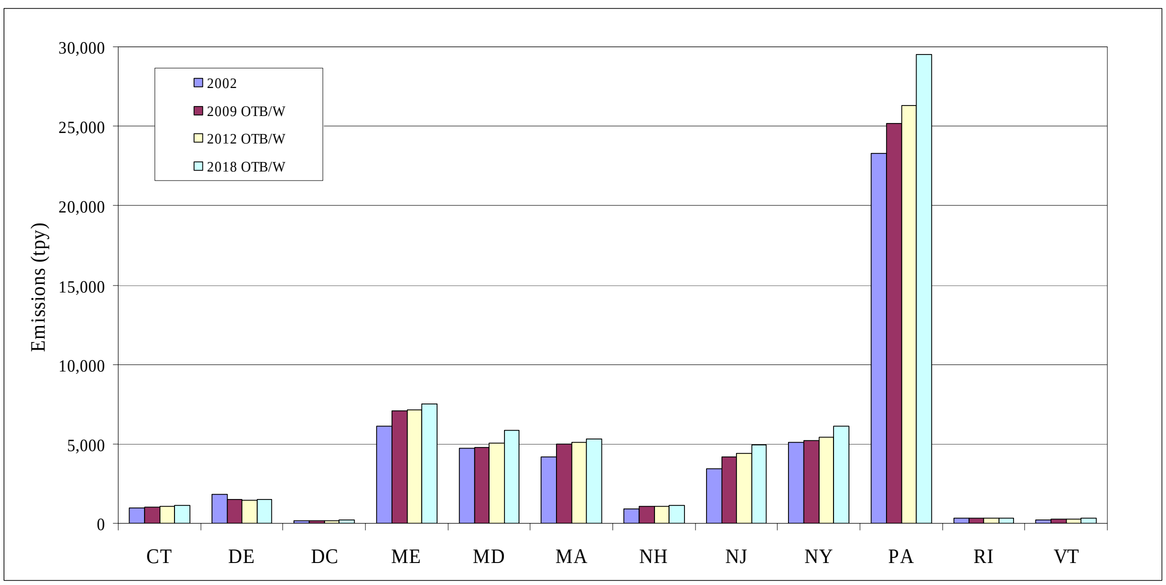


Table 2-6 NonEGU Point Sources
OTB/OTW Annual PM25-PRI Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	822	871	894	939
DE	1,606	1,256	1,245	1,254
DC	128	145	152	164
ME	4,899	5,675	5,690	5,935
MD	2,772	2,861	3,011	3,503
MA	2,953	3,554	3,574	3,660
NH	857	1,008	1,021	1,052
NJ	2,947	3,588	3,764	4,234
NY	3,355	3,535	3,688	4,161
PA	12,360	13,578	14,159	15,878
RI	180	200	198	194
VT	198	226	229	246
Total	**33,077**	**36,497**	**37,625**	**41,220**

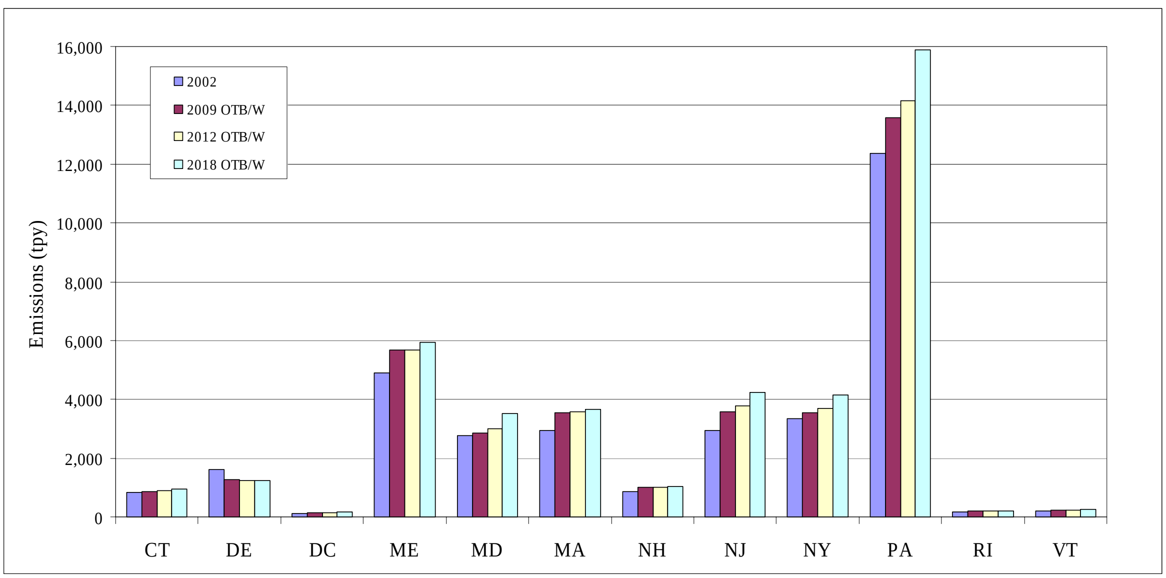


Table 2-7 NonEGU Point Sources
OTB/OTW Annual SO2 Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	2,438	2,528	2,567	2,644
DE	35,706	7,117	7,401	7,610
DC	618	707	735	780
ME	14,412	18,656	18,492	18,794
MD	34,193	34,223	35,373	38,921
MA	14,766	18,185	18,442	18,955
NH	2,436	3,099	3,098	3,114
NJ	9,797	7,141	7,234	7,856
NY	58,227	62,922	64,484	67,545
PA	88,259	90,735	93,441	99,924
RI	2,651	3,163	3,182	3,164
VT	874	1,182	1,147	1,127
Total	**264,377**	**249,658**	**255,596**	**270,434**

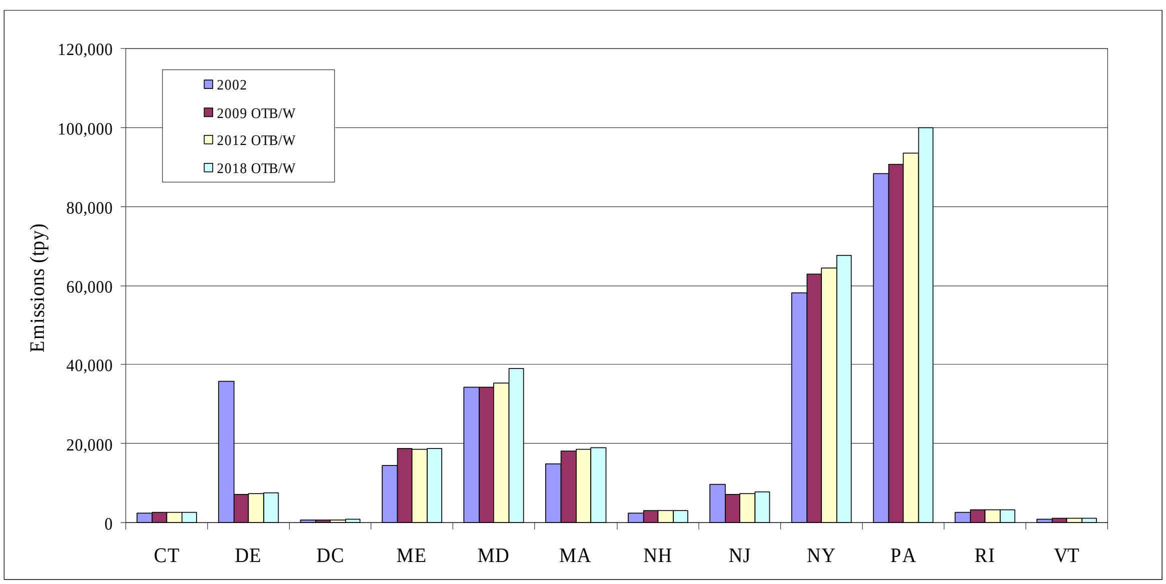
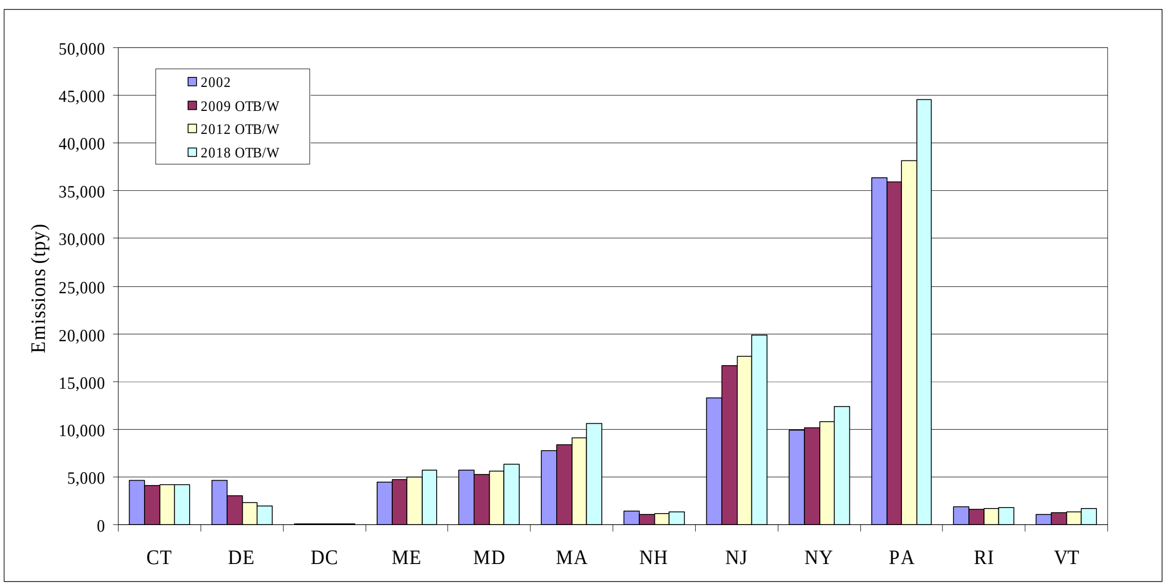


Table 2-8 NonEGU Point Sources
OTB/OTW Annual VOC Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	4,604	4,114	4,152	4,230
DE	4,645	2,987	2,311	1,993
DC	69	72	75	85
ME	4,477	4,740	4,985	5,709
MD	5,676	5,297	5,578	6,301
MA	7,794	8,381	9,061	10,564
NH	1,459	1,060	1,132	1,294
NJ	13,318	16,702	17,621	19,915
NY	9,933	10,157	10,750	12,354
PA	36,326	35,875	38,162	44,537
RI	1,898	1,640	1,695	1,812
VT	1,079	1,254	1,365	1,730
Total	**91,278**	**92,279**	**96,887**	**110,524**



3.0 AREA SOURCES

The area source sector is comprised of stationary sources that are small and numerous, and that have not been inventoried individually as specific point, mobile, or biogenic sources. Individual sources are typically grouped with other like sources into area source categories and the emissions are calculated on a county-by-county basis. Area source categories include residential/commercial/industrial fuel combustion; small industrial processes; solvent utilization (such as architectural coatings and consumer products); petroleum product storage and transport (such as gasoline service stations); waste disposal; and agricultural activities.

The procedures for projecting emissions for area sources are described in this section. We started with the MANE-VU 2002 area source emission inventory. We first applied growth factors to account for changes in population and economic activity. Next, we applied control factors to account for future emission reductions from on-the-books (OTB) control regulations and on-the-way (OTW) control regulations. The OTB control scenario accounts for post-2002 emission reductions from promulgated federal, State, local, and site-specific control programs as of June 15, 2005. The OTW control scenario accounts for proposed (but not final) control programs that are reasonably anticipated to result in post-2002 emission reductions. We then conducted a series of quality assurance steps to ensure the development of complete, accurate, and consistent emission inventories. We provided the inventories in three formats – the National Emission Inventory Input Format (NIF), SMOKE Inventory Data Analyzer (IDA) format, and SMOKE growth/control packets. We also prepared emission summary tables by state and pollutant. Each of these activities is discussed in this section.

3.1 INITIAL 2002 AREA SOURCE EMISSION INVENTORY

The starting point for the area source projections was Version 3 of the MANE-VU 2002 area source emission inventory (MANE-VU_2002_Area_040606.MDB). There were two updates to this version of the 2002 inventory in response to requests from the District of Columbia and Massachusetts. These changes, described in the following paragraphs, were used in preparing the 2009/2012/2018 projections.

After release of Version 3 of the MANE-VU 2002 inventory, the District of Columbia discovered a gross error in the 2002 residential, non-residential and roadway construction. They requested that the following values be used for the 2002 base year and as the basis for the 2009/2012/2018 projections:

SCC	Pollutant Code	2002 Annual Emissions (tpy)
2311010000	PM10-PRI	8.2933
	PM25-PRI	1.6587
2311020000	PM10-PRI	486.1951
	PM25-PRI	97.239
2311030000	PM10-PRI	289.8579
	PM25-PRI	57.9716

After release of Version 3 of the MANE-VU 2002 inventory, Massachusetts revised their inventory of area source heating oil emissions due to two changes: (1) SO2 emission factors were adjusted for the sulfur content from 1.0 to 0.03; and (2) use of the latest DOE-EIA 2002 fuel use data instead of the previous version used 2001. These two changes significantly altered the 2002 SO2 emissions for area source heating oil combustion. Massachusetts provided revised 2002 PE and EM tables, which MACTEC used in preparing the 2009/2012/2018 projection inventories.

3.2 AREA SOURCE GROWTH FACTORS

The area source growth factors were developed using three sets of data:

- The U.S. EPA's Economic Growth and Analysis System Version 5.0 (EGAS 5.0) using the default SCC configuration. EGAS 5.0 generates growth factors from REMI's 53 Sector Policy Insight Model Version 5.5, the U.S. Department of Energy (DOE) Annual Energy Outlook 2004 (AEO2004) fuel use projections, and national vehicle mile travel projections from EPA's MOBILE 4.1 Fuel Combustion Model;
- The DOE's Annual Energy Outlook 2005 (AEO2005) fuel consumption forecasts were used to replace the AEO2004 forecasts that are used as the default values in EGAS 5.0; and
- State-supplied population, employment, and other emission projection data.

The priority for applying these growth factors was to first use the state-supplied projection data (if available). If no state-supplied data are available, then we used the AEO2005 projection factors for fuel consumption sources. If data from these two sources were not available, we used the EGAS 5.0 default SCC configuration. Appendix C lists the area source growth factors used for this study.

3.2.1 EGAS 5.0 Growth Factors

EGAS is an EPA-developed economic and activity forecast tool that provides credible growth factors for developing emission inventory projections. Growth factors are generated using national- and regional-economic forecasts. For nonEGUs, the primary economic activity data sets in EGAS 5.0 are:

- State-specific growth rates from the Regional Economic Model, Inc. (REMI) Policy Insight® model, version 5.5. The REMI socioeconomic data (output by industry sector, population, farm sector value added, and gasoline and oil expenditures) are available by 4-digit SIC code at the State level.

- Energy consumption data from the DOE's Energy Information Administration's (EIA) *Annual Energy Outlook 2004, with Projections through 2025* for use in generating growth factors for non-EGU fuel combustion sources. These data include regional or national fuel-use forecast data that were mapped to specific SCCs for the non-EGU fuel use sectors (e.g., commercial coal, industrial natural gas). Growth factors are reported at the Census division level. These Census divisions represent a group of States (e.g., the South Atlantic division includes Delaware, the District of Columbia, and Maryland; the Middle Atlantic division includes New Jersey, New York, and Pennsylvania; the New England division includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont). Although one might expect different growth rates in each of these States due to unique demographic and socioeconomic trends, all States within each division received the same growth rate.

EGAS uses these economic activity datasets and a set of cross-reference files to generate growth factors by Standard Industrial Classification (SIC) code, Source Classification Code (SCC), or Maximum Achievable Control Technology (MACT) codes. Growth factors for 2009, 2012, and 2018 were calculated using 2002 as the base year at the State and SCC level. County-specific growth factors are not available in EGAS 5.0.

There were several SCCs in the MANE-VU 2002 inventory that are not included in the EGAS 5.0 files. As a result, EGAS did not generate growth factors for those SCCs. MACTEC assigned growth factors for the missing SCCs by assigning a surrogate SCC that best represented the missing SCC.

3.2.2 AEO2005 Growth Factors

The default version of EGAS 5.0 uses the DOE's AEO2004 forecasts. We replaced these data with the more recent AEO2005 forecasts to improve the emissions growth factors produced. Using ACCESS, we created a copy of the "DOE EGAS 5" dataset. The dataset includes three tables. One table contains the projection data values from 2001-2025. The other two tables are the MACT and SCC crosswalk tables. The crosswalk tables are linked to the projection table via a "model code". Using the copy of AEO2004 data, we updated the corresponding projection tables with data from the AEO2005 located at: http://www.eia.doe.gov/oiaf/aeo/supplement/supref.html . Using the data and descriptions from the new tables, we matched the projection data to the appropriate model codes and then built a table identical to the DOE EGAS 5 dataset with the new 2005 AEO data. The resulting ACCESS dataset contains a projection data table with the exact same structure as the original except with the new data. The SCC and MACT crosswalks did not require any updates since the model code assignments were not changed in the new data table.

3.2.3 State Specific Growth Factors

In addition to the growth data described above, we received growth projections from several MANE-VU states to be used instead of the default EGAS or AEO2005 growth factors. The following paragraphs describe the area source growth factors used for each state.

3.2.3.1 Connecticut

Connecticut provided state-level population projections for 2009, 2012, and 2018. We created growth factors for those SCCs that are population based using the state-supplied data. Connecticut also provided state-level employment projections for industry categories analogous to 2-digit SIC codes. Projections were provided for 2009, 2012, and 2018. We matched these industry groupings to SCC codes in order to create SCC specific growth factors for area sources. Emissions from area source fuel combustion were projected using the AEO2005 forecasts.

3.2.3.2 Delaware

Delaware provided county-level population projections (*Delaware Population Consortium Annual Population Projections*, Oct 18, 2001 Version 2001.0) for 2000, 2005, 2010, 2015, and 2020. We interpolated these data to get growth factors for projection from 2002 to 2009, 2012, and 2018 for those SCCs that are population based. Delaware also provided state-level employment data by NAICS codes for 2002 and 2012. We interpolated values for 2009 and 2018. We matched these industry groupings to SCC codes in order to create SCC specific growth factors for selected area sources. Emissions from area source fuel combustion were projected using the AEO2005 forecasts.

3.2.3.3 District of Columbia

DC provided local growth factors for projecting emissions from 2002 to 2009, 2012, and 2018 for all area source SCCs except fuel combustion sources. Emissions from area source fuel combustion were projected using the AEO2005 forecasts.

3.2.3.4 Maine

Maine indicated that it preferred to use the EGAS 5.0 growth factors and the DOE's 2005 Annual Energy Outlook data for combustion sources.

3.2.3.5 Maryland

Maryland provided growth factors by SCC for all counties in the State. These growth factors were derived from a variety source sources, including the MWCOG Cooperative Forecast 7.0, the BMC Round 6A Cooperative Forecast (prepared by the MD Dept. of Planning, May 2004), and EGAS 5.0.

3.2.3.6 Massachusetts

Massachusetts provided county-level population data for the years 2000, 2010, and 2020. We interpolated these data to get growth factors for projection from 2002 to 2009, 2012, and 2018 for those SCCs that are population based. Massachusetts also provided growth factors for several SCCs based on employment data for the years 2000 and 2010. We interpolated these data to get growth factors for projection from 2002 to 2009, 2012, and 2018. Massachusetts agreed on the use of the AEO2005 forecasts for projecting emissions from area source fuel combustion.

3.2.3.7 New Hampshire

New Hampshire agreed to use the EGAS 5.0 growth factors, with the enhancement of using the DOE's 2005 Annual Energy Outlook data for combustion sources.

3.2.3.8 New Jersey

New Jersey provided growth factors for most SCCs for all counties in the State. When state-specific growth factors were not available, we used the AEO2005 forecasts for projecting emissions from area source fuel combustion and EGAS default factors for any remaining categories.

3.2.3.9 New York

New York provided county-level population data for 2002 and projections/growth factors for 2009, 2012, and 2018. We used these growth factors for those SCCs that are population based. We used the AEO2005 forecasts for projecting emissions from area source fuel combustion and EGAS default factors for any remaining categories.

3.2.3.10 Pennsylvania

Pennsylvania provided county-level population data for 2000 and projections for 2010 and 2020. We interpolated these data to get growth factors for projecting from 2002 to 2009, 2012, and 2018 for those SCCs that are population based. Pennsylvania also provided general employment data for 21 counties or area for 2000 and projections for 2010 and 2020. We interpolated these data to get growth factors for projecting from 2002 to 2009, 2012, and 2018 for nine area source categories identified by Pennsylvania. For all other area source categories, we used the AEO2005 forecasts for projecting emissions from area source fuel combustion and EGAS default factors for any remaining categories.

3.2.3.11 Rhode Island

Rhode Island provided county-level population projections for 2000, 2005, 2010, 2015, and 2020. We interpolated these data to get growth factors for projection from 2002 to 2009, 2012, and 2018 for those SCCs that are population based. Rhode Island provided state-level employment data from the Department of Labor and Training by 3-digit NAICS codes for 2002 and 2012. We used these data to calculate the growth factor from 2002 to 2012 and interpolated these data to derive growth factors for 2009 and 2018. We matched these industry NAICS groupings to SCC codes in order to create SCC specific growth factors for area sources. Rhode Island agreed on the use of the AEO2005 forecasts for projecting emissions from area source fuel combustion.

3.2.3.12 Vermont

Vermont agreed to use the EGAS 5.0 growth factors, with the enhancement of using the DOE's 2005 Annual Energy Outlook data for combustion sources.

3.3 AREA SOURCE CONTROL FACTORS

We developed control factors to estimate emission reductions that will result from on-the-books regulations that will result in post-2002 emission reductions and proposed regulations or actions that will result in post-2002 reductions. Control factors were developed for the following national or regional control measures:

- OTC VOC Model Rules
- Federal On-board Vapor Recovery
- New Jersey Post-2002 Area Source Controls
- Residential Woodstove NSPS

3.3.1 OTC 2001 VOC Model Rules

Most of the MANE-VU States have adopted (or will soon adopt) the Ozone Transport Commission (OTC) model rules for five area source VOC categories: consumer products, architectural and industrial maintenance (AIM) coatings, portable fuel containers, mobile equipment repair and refinishing (MERR), and solvent cleaning. Information on the percent reduction anticipated by each model rule was obtained from Table II-6 of *Control Measure Development Support Analysis of Ozone Transport Commission Model Rules* (E.H. Pechan & Associates, Inc., March 31, 2001). This set of model rules will be referred to as the "OTC 2001 model rules" in this document. Information as to whether a particular state has adopted (or will soon adopt) a particular measure was obtained form the Status Report on OTC States' Efforts to Promulgate Regulations Based on OTC Model Rules (As of June 1, 2005, as posted on the OTC web site). For all categories, except portable fuel containers (see discussion below), we assumed that the rules would be fully implemented by all states by 2009. Some states had already adopted some the OTC 2001 Model Rules in 2002 or already had similar rules in place in 2002. The 2002 emission inventory for those states already reflected the emission reductions expected from the OTC 2001 Model Rule level of control. For those states and categories, no incremental reductions were applied for to the future year projections, as indicated Table 3-1.

For consumer products, the 2001 OTC model rule was estimated to provide a 14.2 percent VOC emissions reductions from the Federal Part 59 rule. Most, but not all, states in the OTR have adopted the OTC 2001 model rule for consumer products. For this inventory, it was assumed that all OTC states would adopt the 2001 OTC model rule prior to 2009. Thus, the 14.2 percent control factor was applied uniformly to all states in the 2009, 2012, and 2018 projection inventories.

For AIM coatings, the 2001 OTC model rule was estimated to provide a 31 percent VOC emissions reduction from the Federal Part 59 rule. Most, but not all, states in the OTR have adopted the OTC 2001 model rule for AIM coatings. For this inventory, it was assumed that all OTC states would adopt the 2001 OTC model rule prior to 2009. Thus, this control factor was applied uniformly to all states, with one exception. Maine adopted the OTC model rule with an alternative VOC content limit for varnishes and interior wood clear and semitransparent wood stains. As a result, Maine estimated that reductions from AIM coatings should be modeled using a 29.5 percent control factor instead of the 31 percent estimated for the OTC 2001 model rule.

For portable fuel containers, the 2001 OTC model rule was estimated to provide a 75 percent reduction in VOC emissions at the end of an assumed 10-year phase-in period as

Table 3-1 Adoption Matrix for 2001 OTC Model Rules

State	Consumer Products	AIM Coatings	Portable Fuel Containers	Mobile Equipment Repair and Refinishing	Solvent Cleaning
CT	Yes	Yes	Yes	Yes	Yes
DE	Yes	Yes	Yes	Yes	No
DC	Yes	Yes	Yes	Yes	No
ME	Yes	Yes	Yes	Yes	Yes
MD	Yes	Yes	Yes	No	No
MA	Yes	Yes	Yes	No	* (7%)
NH	Yes	Yes	Yes	Yes	Yes
NJ	Yes	Yes	Yes	Yes	** (17%)
NY	Yes	Yes	Yes	Yes	Yes
PA	Yes	Yes	Yes	No	No
RI	Yes	Yes	Yes	Yes	Yes
VT	Yes	Yes	Yes	Yes	No

Yes – apply incremental reductions in future years
No – OTC Model Rule reductions already accounted for in 2002 inventory; no incremental reductions applied to future years.
* MA is amending its existing Solvent/Degreasing rule and anticipates a 7% reduction from 2002 levels.
** NJ amended its existing Solvent/Degreasing rule and anticipates a 17% reduction from 2002 levels

older non-compliant containers are replaced with new compliant containers. The rule penetration (RP) depends on the assumed PFC estimated useful life and how quickly old non-compliant containers are replaced with new compliant containers. For the 2001 OTC model rule, the turnover from old to new containers is expected to be 10 percent per year. The MANEVU states have adopted the OTC 2001 model rule at different times, so the rule penetration will vary by State depending upon when the rule became effective in a given state. For example, compliant containers were required in Pennsylvania beginning on January 1, 2003. By the 2009 ozone season, there will be a 6.5 year turnover period for compliant PFCs in Pennsylvania. By contrast, compliant containers in New Jersey were not required until January 1, 2005. Thus, by the 2009 ozone season, there will be a 4.5 year turnover period for compliant PFCs. Table 3.2 shows the effective date for compliant containers by state, along with the rule penetration factors and overall control efficiency. There are different rule penetration factors for the three inventory years because of the increased penetration of compliant containers into the marketplace. By 2018, 100 percent compliance is assumed.

Table 3-2 Rule Penetration and Control Efficiency Values for 2001 OTC Model Rule for PFCs

Rule Compliance Date	States with this Compliance Date	Control Efficiency (%)	Rule Penetration (%)	Overall Control Efficiency (%)
Control Factor for 2009 Inventory				
2003	MD, NY, PA	75	65	48.8
2004	CT, DE, DC, ME	75	55	41.3
2005	NJ	75	45	33.8
2006	NH	75	35	26.3
2007*	MA, RI, VT	75	25	18.8
Control Factor for 2012 Inventory				
2003	MD, NY, PA	75	95	71.3
2004	CT, DE, DC, ME	75	85	63.8
2005	NJ	75	75	56.3
2006	NH	75	65	48.8
2007*	MA, RI, VT	75	55	41.3
Control Factor for 2018 Inventory				
2003	MD, NY, PA	75	100	75.0
2004	CT, DE, DC, ME	75	100	75.0
2005	NJ	75	100	75.0
2006	NH	75	100	75.0
2007*	MA, RI, VT	75	100	75.0

* The 2001 OTC model rule is not yet effective. It was assumed to become effective January 1, 2007 for the MANEVU modeling inventory. Massachusetts' rule actually will not become effective until 2009 and is based only on the OTC 2006 model rule; Massachusetts will not adopt the OTC 2001 model rule.

The emission reductions from the 2001 OTC PFC model rule were calculated only for the emissions accounted for in the area source inventory. Additional benefits (not estimated for this report) would be expected from equipment refueling vapor displacement and spillage that is accounted for in the nonroad inventory.

For mobile equipment repair and refinishing, the 2001 OTC model rule was estimated to provide a 38 percent VOC emissions reductions from the Federal Part 59 rule (35% for paint application and 3% for cleaning operations). Most, but not all, states in the OTR have adopted the OTC 2001 model rule for MERR or already had similar rules in effect in

2002. For this inventory, it was assumed that all OTC states would adopt the 2001 OTC model rule prior to 2009 or have similar rules in effect. For those states (MD, MA, PA) that had similar rules in effect in 2002 or earlier, no incremental reductions were applied since it was assumed that the effects of the state rule were already accounted for in the 2002 inventory. New Jersey indicated that a 19 percent control factor should be used for VOC emissions from MERR in New Jersey. For all other states, the OTC 2001 Model Rule control factor of 38 percent was applied.

For solvent cleaning, the 2001 OTC model rule was estimated to provide a 66 percent VOC emissions reductions. Most, but not all, states in the OTR have adopted the OTC 2001 model rule for solvent cleaning or already had similar rules in effect in 2002. For this inventory, it was assumed that all OTC states would adopt the 2001 OTC model rule prior to 2009 or have similar rules in effect. For those states (DE, DC, MD, PA, VT) that had similar rules in effect in 2002 or earlier, no incremental reductions were applied since it was assumed that the effects of the state rule were already accounted for in the 2002 inventory. Massachusetts indicated that some portion of the reductions resulting from the OTC 2001 model rule were already accounted for in their 2002 emissions, but that the state anticipated an additional 7 percent reduction from anticipated amendments. New Jersey indicated that a 17 percent control factor should be used for VOC emissions from solvent cleaning in New Jersey. For all other states (CT, ME, NH, NY, RI), the OTC 2001 Model Rule control factor of 66 percent was applied.

Table D-1 in Appendix D shows the anticipated percent reductions by state, SCC, and year from implementation of the OTC 2001 VOC Model Rules.

3.3.2 On-Board Vapor Recovery

The U.S. EPA issued regulations requiring onboard vapor recovery (ORVR) standards for the control of vehicle refueling emissions in 1994. ORVR works by routing refueling vapors to a carbon canister on the vehicle and are expected to achieve from 95-98 percent reduction in VOC emissions for those vehicles equipped with ORVR. ORVR is required to be installed on some new light-duty gasoline vehicles in 1998, and all new light-and medium-duty automobiles and trucks will be required to have ORVR installed by 2006.

For the Lake Michigan Air Directors Consortium, E.H. Pechan made estimates of emission reductions as they grow over time due to increased rule penetration. The following discussion describes how the on-board vapor recovery control factors were developed (email from Maureen Mullen, E.H. Pechan):

"Onroad refueling control factors were calculated based on the percentage difference between the projection year (2007, 2008, 2009, 2012, and 2018) MOBILE6 refueling emission factors and the 2002 MOBILE6 refueling emission factors.

MOBILE6 emission factors were calculated at January and July temperature and fuel conditions. July emission factors were used as the surrogate for the five-month ozone season (May through September) and the January emission factors were used as the surrogates for the remaining seven months. Temperatures modeled were the January and July average daily monthly maximum and minimum temperatures for each State, based on 30-year average temperature data, as used in EPA's second Section 812 Prospective analysis. Within a State, MOBILE6 input files were created for each unique combination of: January and July RVP, RFG, oxygenated fuel, and Stage II control programs. Fuel data was based on 2002 data, also as used in the Section 812 analysis. Information on Stage II control programs and control efficiencies were provided by EPA, as included in the draft 2002 NEI. Using these same temperature inputs, fuel inputs, and Stage II control inputs (where applicable), Pechan calculated MOBILE6 emission factors for calendar years 2002, 2007, 2008, 2009, 2012, and 2018.

The resulting MOBILE6 emission factors were first weighted according to the default MOBILE6 VMT mix to determine the weighted average refueling emission factor for all gasoline vehicle types. The resulting January and July emission factors were weighted together according to the number of days in the seven-month season (212 days) and the five-month ozone season (153). After this was done for all of the modeled years and State or sub-State areas, the overall control efficiency for refueling, due to fleet turnover, was calculated based on the percentage difference between the 2002 and corresponding projection year emission factors. These control efficiencies were then assigned to individual counties, based on the mapping of fuel and Stage II control parameters to those modeled in the MOBILE6 files."

These projections were made on a county-by-county basis. Table D-2 shows the anticipated percent reductions by county, SCC, and year.

3.3.3 Post-2002 Area Source Controls in New Jersey

New Jersey made gasoline transfer provision amendments at N.J.A.C. 7:27-16.3. The Stage I portion of the amendments are expected to result in emissions reductions of 23.2 percent from the 2002 baseline. This is based on a control efficiency of 29 percent and a rule effectiveness of 80 percent. The State II portion of the amendments are already incorporated into the inventory through the MOBILE6 inputs.

New Jersey also made amendments to ICI boiler provisions at N.J.A.C. The amendments require any ICI boiler has a maximum gross heat input rate of at least 5 mmBTU/hour, whether or not it is located at a major NO_x facility, to conduct annual tune-ups. In the support documentation for this rule amendment, New Jersey estimated that the tune-ups would result in a 25 percent reduction in NOx emissions.

3.3.4 Residential Wood Combustion

Control factors were evaluated to account for the replacement of retired woodstoves that emit at pre-new source performance standard (NSPS) levels. We used EPA's latest methodology provided by Marc Houyoux of EPA/OAQPS. This methodology uses a combination growth and control factor and is based on activity not pollutant. The growth and control are accounted for in a single factor the SCCs split out the controlled and uncontrolled equipment. The control is indirectly incorporated based on which stove is used. The combined growth and control rates are as follows:

- Fireplaces increase 1%/yr
- Old woodstoves (non-EPA certified) decrease 2%/yr
- New woodstoves (EPA certified) increase 2%/yr

The data to support these rates were collected as part of the woodstove change-out program development in OAQPS. Table D-3 shows the anticipated percent changes by SCC and year.

3.4 AREA SOURCE QA/QC REVIEW

Throughout the inventory development process, quality assurance steps were performed to ensure that no double counting of emissions occurred, to ensure that a full and complete inventory was developed for MANE-VU, and to make sure that projection calculations were working correctly. Quality assurance was an important component to the inventory development process and MACTEC performed the following QA steps on the area source components of the 2009/2012/2018 projection inventories:

1. State agencies reviewed the draft growth and control factors in the summer of 2005. Changes based on these comments were implemented in the files.
2. SCC level emission summaries were prepared and evaluated to ensure that emissions were consistent and that there were no missing sources. Tier comparisons (by pollutant) were developed between the revised 2002 base year inventory and the 2009/2012/2018 projection inventories.
3. Emission inventory files in NIF format were provided for state agency review and comment. Changes based on these comments were implemented.
4. All final files were run through EPA's Format and Content checking software.

3.5 AREA SOURCE NIF, SMOKE AND SUMMARY FILES

The Version 3 file names and descriptions delivered to MARAMA are shown in Table 3-3.

3.6 AREA SOURCE EMISSION SUMMARIES

Emission summaries by state, year, and pollutant are presented in Tables 3-4 through 3-10 for CO, NH3, NOx, PM10-PRI, PM25-PRI, SO2, and VOC, respectively.

Table 3-3 Area Source NIF, IDA, and Summary File Names

File Name	Date	Description
MANEVU_OTB2009_Area_NIFV3_2.mdb	Nov. 9, 2006	Version 3.2 of 2009 OTB area source NIF inventory
MANEVU_OTB2012_Area_NIFV3_2.mdb	Nov. 9, 2006	Version 3.2 of 2012 OTB area source NIF inventory
MANEVU_OTB2018_Area_NIFV3_2.mdb	Nov. 9, 2006	Version 3.2 of 2018 OTB area source NIF inventory
MANEVU_OTB2009_Area_IDAV3_2.txt	Nov. 20, 2006	Version 3.2 of 2009 OTB area source inventory in SMOKE IDA format
MANEVU_OTB2012_Area_IDAV3_2.txt	Nov. 20, 2006	Version 3.2 of 2012 OTB area source inventory in SMOKE IDA format
MANEVU_OTB2018_Area_IDA3V_2.txt	Nov. 20, 2006	Version 3.2 of 2018 OTB area source inventory in SMOKE IDA format
MANEVU OTB BOTW Area V3_2 State Summary.xls	Nov. 8, 2006	Spreadsheet with state totals by pollutant for all area sources
MANEVU OTB BOTW Area V3_2 State SCC Summary.xls	Nov. 8, 2006	Spreadsheet with SCC totals by state and pollutant for all area sources.

Table 3-4 Area Sources
OTB/OTW Annual CO Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	70,198	65,865	63,874	59,797
DE	14,052	15,395	15,233	14,864
DC	2,300	2,417	2,460	2,512
ME	109,223	102,743	99,877	94,181
MD	141,178	143,653	144,233	144,649
MA	137,496	132,797	130,255	125,205
NH	79,647	76,504	75,319	73,038
NJ	97,657	90,432	88,048	83,119
NY	356,254	336,576	327,118	307,659
PA	266,935	266,887	264,012	257,396
RI	8,007	8,007	8,026	8,024
VT	43,849	42,683	42,172	41,283
Total	**1,326,796**	**1,283,959**	**1,260,627**	**1,211,727**

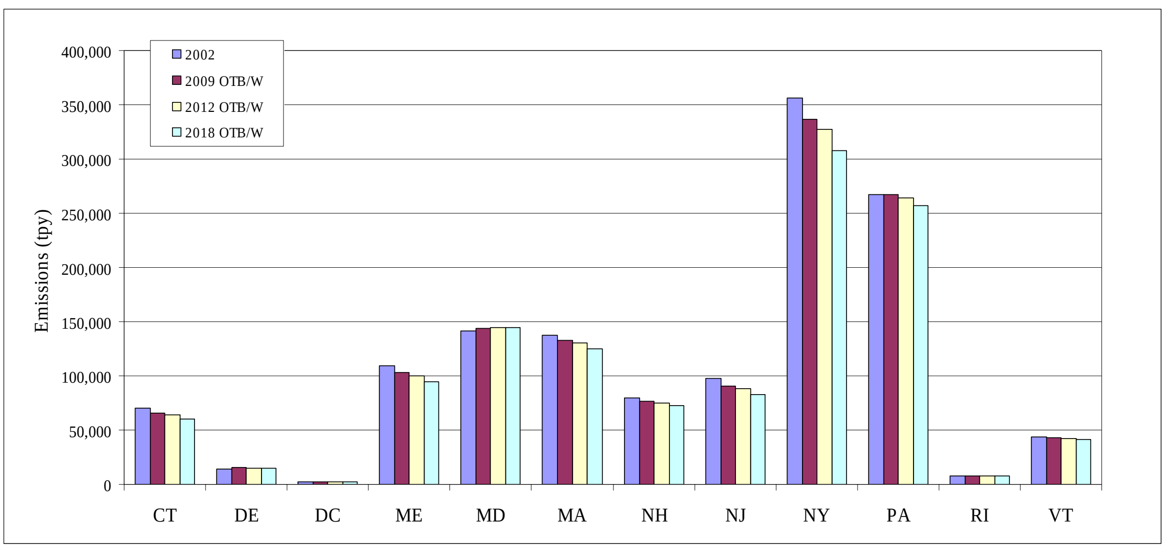


Table 3-5 Area Sources
OTB/OTW Annual NH3 Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	5,318	5,208	5,156	5,061
DE	13,279	13,316	13,328	13,342
DC	14	16	16	17
ME	8,747	10,453	11,116	12,312
MD	25,834	31,879	34,222	38,155
MA	18,809	19,131	19,275	19,552
NH	2,158	2,466	2,584	2,789
NJ	17,572	19,457	20,154	21,435
NY	67,422	81,626	87,116	96,078
PA	79,911	98,281	105,418	117,400
RI	883	945	972	1,025
VT	9,848	12,156	13,062	14,580
Total	**249,795**	**294,934**	**312,419**	**341,746**

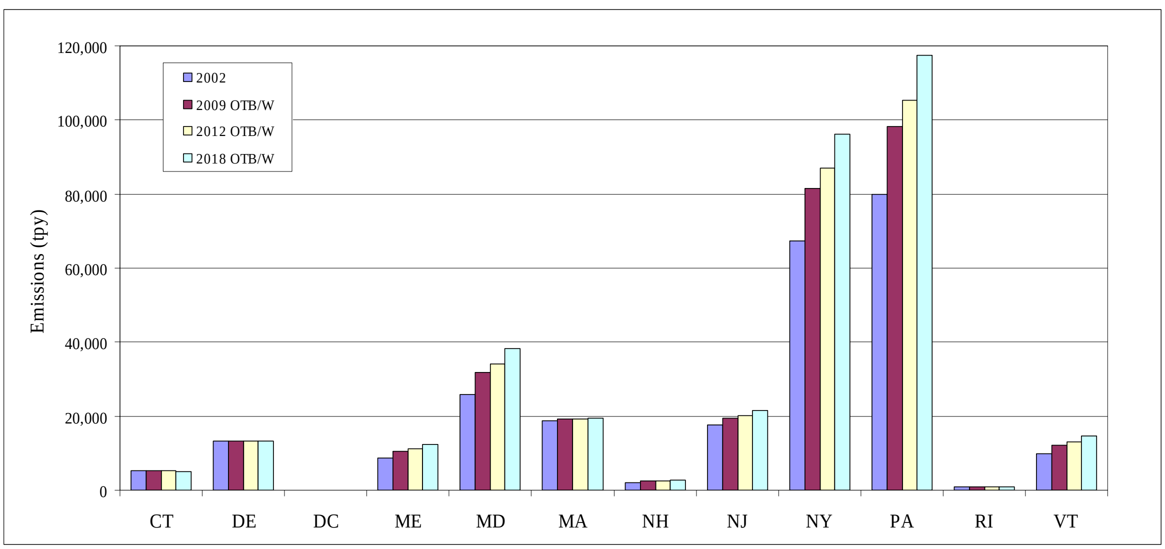


Table 3-6 Area Sources
OTB/OTW Annual NOx Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	12,689	13,173	13,342	13,388
DE	2,608	2,821	2,913	3,014
DC	1,644	1,961	2,081	2,259
ME	7,360	7,477	7,486	7,424
MD	15,678	16,858	17,315	18,073
MA	34,281	35,732	36,331	37,187
NH	10,960	11,879	12,055	12,430
NJ	26,692	24,032	23,981	23,660
NY	98,803	106,375	107,673	108,444
PA	47,591	50,162	50,793	50,829
RI	3,886	4,149	4,260	4,397
VT	3,208	3,419	3,429	3,430
Total	**265,400**	**278,038**	**281,659**	**284,535**

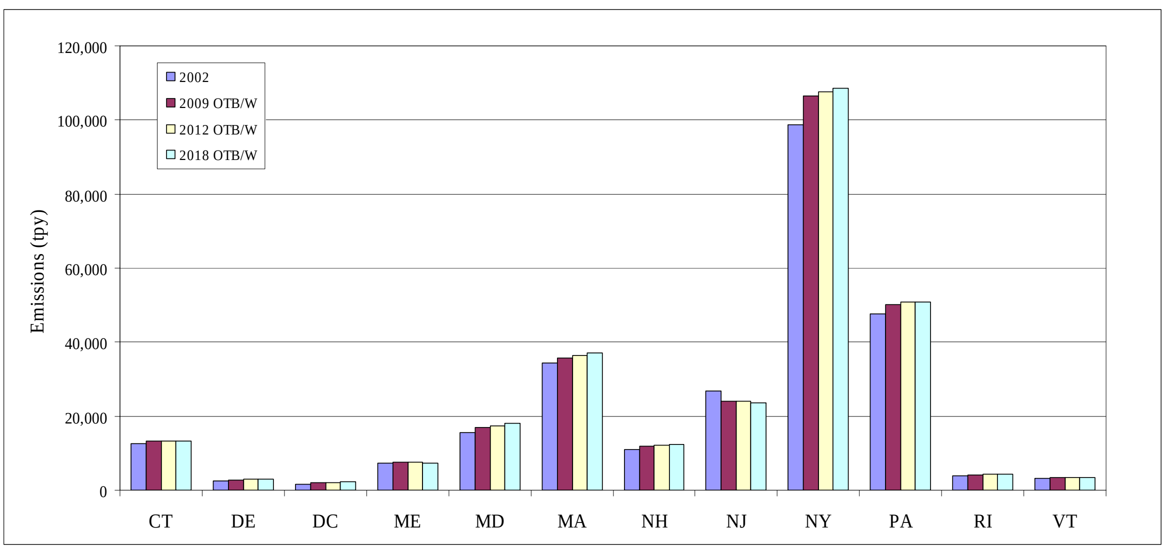


Table 3-7 Area Sources
OTB/OTW Annual PM10-PRI Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	48,281	48,970	49,004	49,479
DE	13,039	13,928	14,236	14,844
DC	3,269	3,511	3,605	3,825
ME	168,953	175,979	179,689	189,619
MD	95,060	105,944	110,141	117,396
MA	192,860	198,668	200,692	204,922
NH	43,328	46,060	47,187	49,801
NJ	61,601	61,684	61,284	60,880
NY	369,595	382,124	385,925	392,027
PA	391,897	421,235	432,844	454,970
RI	8,295	8,962	9,244	9,797
VT	56,131	60,521	62,465	66,916
Total	**1,452,309**	**1,527,586**	**1,556,316**	**1,614,476**

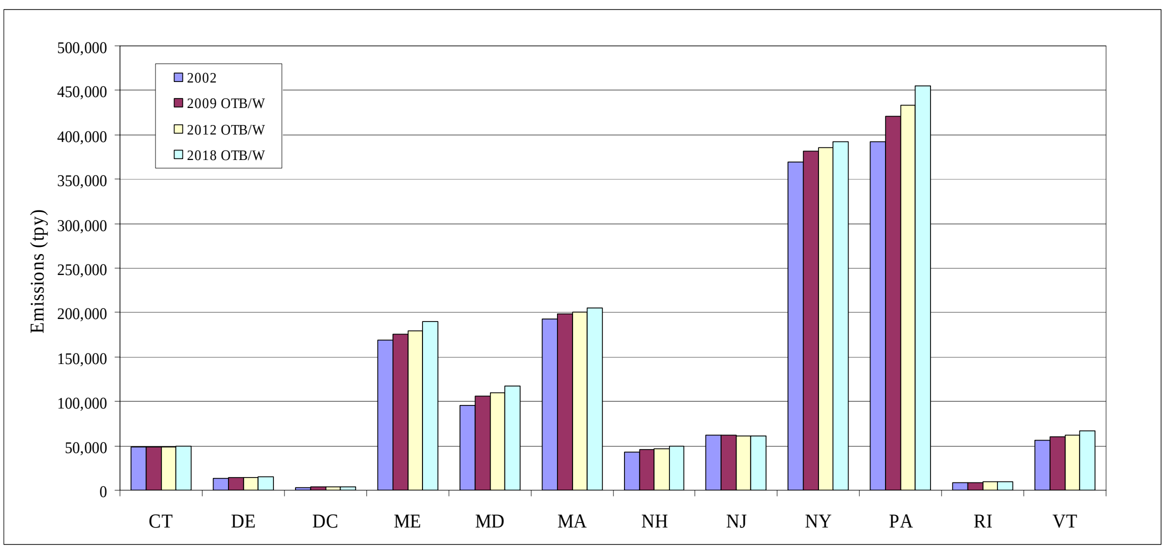


Table 3-8 Area Sources
OTB/OTW Annual PM25-PRI Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	14,247	13,766	13,517	13,033
DE	3,204	3,387	3,403	3,426
DC	805	860	879	917
ME	32,774	33,026	33,189	33,820
MD	27,318	28,923	29,508	30,449
MA	42,083	43,121	43,186	43,438
NH	17,532	17,965	18,050	18,316
NJ	19,350	18,590	18,271	17,653
NY	87,154	87,576	87,260	86,422
PA	74,925	79,169	80,728	83,570
RI	2,064	2,184	2,232	2,316
VT	11,065	11,482	11,652	12,059
Total	**332,521**	**340,049**	**341,875**	**345,419**

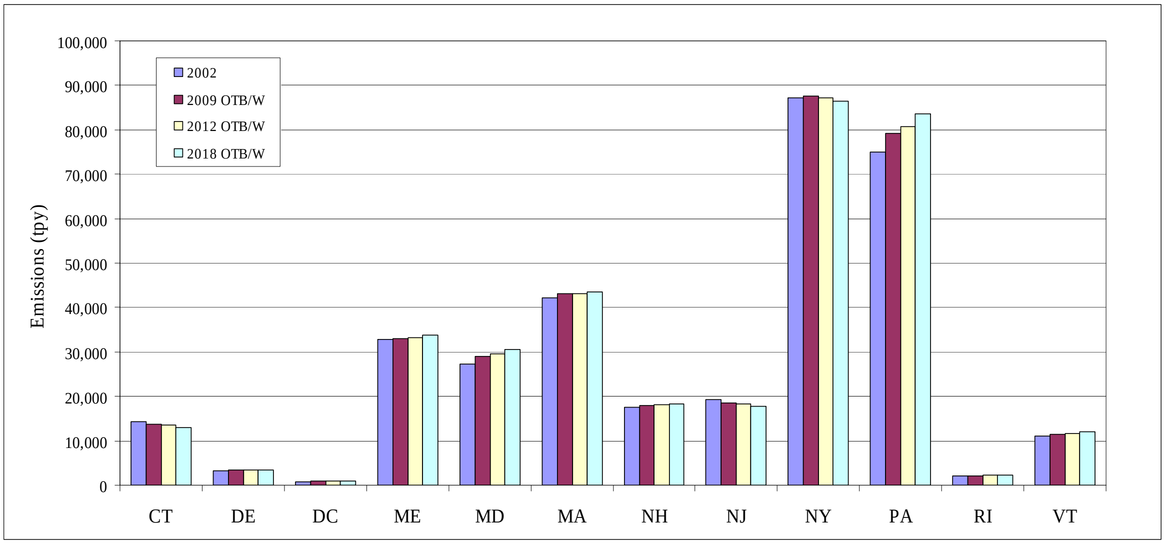


Table 3-9 Area Sources
OTB/OTW Annual SO2 Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	12,418	12,581	12,604	12,184
DE	1,588	1,599	1,602	1,545
DC	1,337	1,487	1,541	1,632
ME	13,149	13,776	13,846	13,901
MD	12,393	13,685	14,074	14,741
MA	25,488	25,961	26,029	25,570
NH	7,072	7,463	7,470	7,421
NJ	10,744	10,672	10,697	10,510
NY	130,409	139,589	140,154	141,408
PA	63,679	67,535	67,446	66,363
RI	4,557	5,024	5,189	5,398
VT	4,087	4,646	4,687	4,764
Total	**286,921**	**304,018**	**305,339**	**305,437**

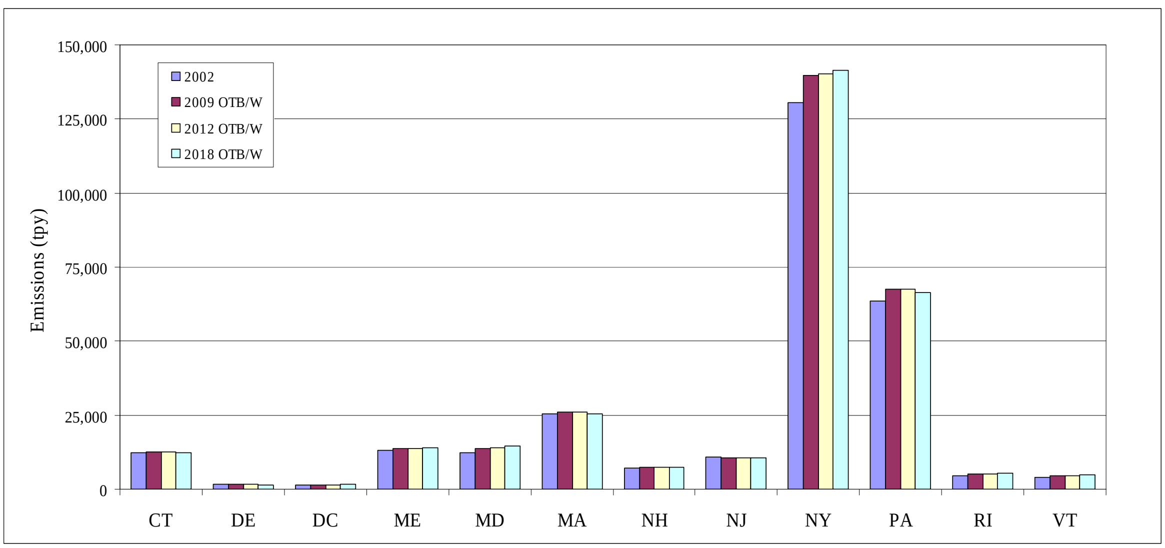
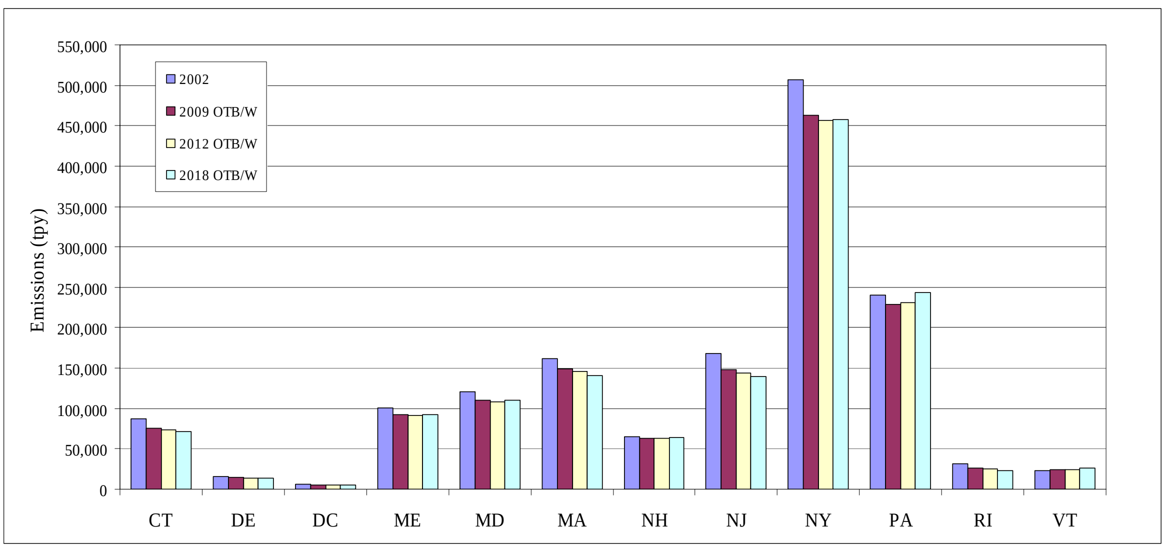


Table 3-10 Area Sources
OTB/OTW Annual VOC Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	87,302	75,693	73,560	71,274
DE	15,519	14,245	13,943	13,744
DC	6,432	5,420	5,352	5,255
ME	100,621	91,910	91,667	92,410
MD	120,254	110,385	108,067	110,046
MA	162,145	148,625	145,674	140,558
NH	65,370	63,069	63,356	64,368
NJ	167,882	147,617	143,752	139,626
NY	507,292	462,811	456,856	457,421
PA	240,785	228,444	230,393	243,421
RI	31,402	26,695	25,548	23,561
VT	23,265	24,068	24,635	26,198
Total	**1,528,269**	**1,398,982**	**1,382,803**	**1,387,882**



4.0 NONROAD SOURCES

The nonroad source sector is comprised of nonroad engines included in EPA's NONROAD model, as well as other nonroad engines not accounted for in the NONROAD model, including aircraft, commercial marine vessels, and locomotive engines. The sections that follow describe the projection process used to develop 2009/2012/2018 nonroad projection estimates for sources found in the NONROAD model and those sources estimated outside of the model (locomotives, airplanes and commercial marine vessels).

4.1 NONROAD MODEL SOURCES

NONROAD model source categories include equipment such as recreational boats and watercraft; recreational vehicles; farm, industrial, mining, and construction machinery; and lawn and garden equipment. Also included are aircraft ground support equipment and rail maintenance equipment. These equipment types are powered by engines using diesel, gasoline, compressed natural gas (CNG), and liquefied petroleum gas (LPG).

EPA released a revised version of NONROAD during December 2005 called NONROAD 2005. EPA's National Mobile Inventory Model (NMIM) is a consolidated modeling system that incorporates the NONROAD and MOBILE models, along with a county database of inputs. EPA also released an updated version of NMIM called NMIM2005, which incorporates the NONROAD2005 model.

MACTEC utilized the NMIM2005 model to develop projections for nonroad engines included in the NONROAD2005 model. Projected emission estimates were calculated using NMIM default data. Prior to starting the NMIM2005 runs, MACTEC confirmed with U.S. EPA's Office of Transportation and Air Quality (OTAQ) that the database used for fuel sulfur content, gas Reid Vapor Pressure (RVP) values and reformulated fuel programs was current and up to date for the MANE-VU region. The information received from OTAQ indicated that these values were the most current.

NMIM2005 runs were then developed for each projection year. These included 2009, 2012 and 2018. Emission calculations were made at the monthly level and consolidated to provide annual values. This enabled monthly temperatures and changes in reformulated gas to be captured by the program.

The NMIM/NONROAD2005 results in NIF 3.0, and ran EPA's QA checker program to verify that the NIF 3.0 files were properly constructed.

4.2 AIRCRAFT, COMMERCIAL MARINE, AND LOCOMOTIVES

Since aircraft, commercial marine vessels, and locomotives are not included in the NONROAD model, emission projections for these sources were developed separately. The starting point for the emission projections was Version 3 of the MANE-VU 2002 Nonroad emission inventory (*Documentation of the MANE-VU 2002 Nonroad Sector Emission Inventory, Version 3, Draft Technical Memorandum*, March 2006).

MACTEC's approach to developing emission projections for these sources was to use combined growth and control factors developed from emission projections for U.S. EPA's Clean Air Interstate Rule (CAIR) development effort. MACTEC obtained emission projections developed for the CAIR rule. We then calculated the combined growth and control factors by determining the ratio of emissions between 2002 and each of the MANE-VU projection years (2009, 2012, and 2018). The CAIR emissions were available for 2001, 2010, 2015 and 2020. Thus, we developed intermediate year estimates using linear interpolation between the actual CAIR years and the MANE-VU years.

Using this approach we developed State/county/SCC/pollutant growth/control factors for use in projecting the MANE-VU base year data to the year of interest. These values were then used to multiply times the base year value to obtain the projected values. Since the development of the CAIR factors included both growth and controls, no separate control factors were developed for these sources except where exceptions to this method were used for States that requested alternative growth/control methods (see below).

Once the CAIR factors were developed, MACTEC compared the SCCs contained in the CAIR inventory with those used in MANE-VU. In some cases there were differences. In cases where a similar SCC in the CAIR inventory could be assigned to the SCC in the MANE-VU inventory the State/County/SCC/pollutant growth and control factor for the substitute was assigned to the MANE-VU SCC. If no corresponding county SCC substitution could be found, a State or MANE-VU regional average value for the substitute SCC was developed and assigned for use in projecting emissions. The substitution scheme was to use State values first, then MANE-VU regional values if the State value couldn't be used.

This projection method was used with three exceptions. These exceptions were: 1) Maryland sources, 2) DC locomotive growth and controls and 3) Logan (Boston) airport. Each of these sources used alternative growth and/or controls provided by the States or developed from current Federal rules for these sources (applies to controls only). Each of these is discussed below.

4.2.1 Maryland Non-NONROAD Source Emissions

Maryland indicated that they would prefer to use EGAS growth factors coupled with Federal controls to determine projected emissions for these source categories. Maryland provided EGAS growth factors for use with these categories. Control values were developed based on Federal rules that were on the books.

For CMV, controls were developed based on data contained in Table 1.1-2 of the document "Final Regulatory Support Document: Control of Emissions from New Marine Compression-Ignition Engines at or Above 30 Liters per Cylinder," EPA420-R-03-004, January 2003. Values in that table were interpolated to develop emission estimates with and without controls for the MANE-VU years (and base year) and then control factors were calculated for those values. Only Category 3 marine engines were identified in the Maryland inventory and thus only NOx controls for those engines were developed.

For locomotives, control factors for different types of locomotives were developed using Tables 6-2 through 6-5 of the document "Locomotive Emission Standards: Regulatory Support Document," United States Environmental Protection Agency, Office of Mobile Sources, April 1998. Since these tables only showed PM controls, we assumed the same level of control for both PM-10 and PM-2.5. Controls for VOC, NOx and PM were developed using these tables.

In addition to engine specification controls for both CMV and locomotives, we also developed control factors resulting from changes to diesel fuel sulfur contents. The diesel fuel sulfur regulations were utilized to develop controls for SO2 and PM due solely to changing fuel sulfur requirements. Data from Tables 3.1-6a and 3.4-8a of the document "Final Regulatory Analysis: Control of Emissions from Nonroad Diesel Engines," EPA420-R-04-007, May 2004 were used to develop control levels created due to changes in fuel sulfur content. In cases where there were controls due to both engine technology and fuel sulfur reduction, we added the control efficiencies together to create a combined control efficiency. All control values are considered to be "additive". In other words, the controls applied are above those found in the base year. Thus the controls were used on the base year emission values without back-calculation to determine uncontrolled levels since the controls are in addition to those controls.

The control values were then applied along with the growth factors to the base year emissions for Maryland to produce the required emission projections.

4.2.2 DC Locomotive Emissions

The District of Columbia emission contact provided MACTEC with alternative growth factors for locomotive emissions. The growth factors provided were:

2002-2009	6.9%
2002-2012	9.9%
2002-2018	13.7%

Since the CAIR factors were combined growth and controls, the control factors developed for locomotives for Maryland (based on Federal control programs) were used to apply controls to the DC locomotive emissions. As was the case for Maryland, the control factors were "additive" and were used on the base year emission without back-calculating uncontrolled emissions since the control levels were relative to controls in place for 2002.

4.2.3 Logan (Boston) Airport Emissions

Massachusetts supplied historic and future year projections of operations at Logan Airport. The data covered the period 2000-2010. Since only one year of the period required for MANE-VU projections was included in that interval (2009), MACTEC developed estimates for 2012 and 2018 from those data by linear interpolation. Two linear interpolations were developed. The first used the entire data set (2000-2010) to develop a linear projection for 2012 and 2018 and a second using just the 2002-2010 data. For the final growth factors, MACTEC used the average of the two. These growth factors were then applied to commercial aircraft operations for Suffolk County (FIPS = 25025). The growth factors developed were:

2002-2009	1.184
2002-2012	1.22
2002-2018	1.33

No controls that would come on board for aircraft for the projection years were identified from a review of Federal programs.

4.3 NONROAD QA/QC REVIEW

Throughout the inventory development process, quality assurance steps were performed to ensure that no double counting of emissions occurred, to ensure that a full and complete inventory was developed for MANE-VU, and to make sure that projection calculations were working correctly. MACTEC performed the following QA steps on nonroad source projection inventories: (1) All final files (NONROAD only) were run through EPA's Format and Content checking software; SCC level emission summaries were prepared and evaluated to ensure that emissions were consistent with the 2002 projections and that there were no missing source categories or geographical areas.

4.4 NONROAD NIF, SMOKE, AND SUMMARY FILES

The Version 3.1 files delivered to MARAMA are shown in Table 4-1.

4.5 NONROAD EMISSION SUMMARIES

Table 4-2a shows the CO emissions by state and year for the entire nonroad sector. Table 4-2b presents the CO emission results for NONROAD model equipment only. Table 4-2c presents the CO emission results for only the aircraft, commercial marine vessel, and locomotive categories. Tables 4-3 to 4-8 present the emission results for the other criteria pollutants of interest.

Table 4-1 Nonroad Source NIF, IDA, and Summary File Names

File Name	Date	Description
MANEVU_OTB2009_NR_NIFV3_1.mdb	Oct. 23, 2006	Version 3.1 of 2009 nonroad source NIF inventory
MANEVU_OTB2012_NR_NIFV3_1.mdb	Oct. 23, 2006	Version 3.1 of 2012 nonroad source NIF inventory
MANEVU_OTB2018_NR_NIFV3_1.mdb	Oct. 23, 2006	Version 3.1 of 2018 nonroad source NIF inventory
MANEVU_OTB2009_NR_IDAV3_1.txt	Oct. 26, 2006	Version 3.1 of 2009 nonroad source inventory in SMOKE IDA format
MANEVU_OTB2012_NR_IDAV3_1.txt	Oct. 26, 2006	Version 3.1 of 2012 nonroad source inventory in SMOKE IDA format
MANEVU_OTB2018_NR_IDA3V_1.txt	Oct. 26, 2006	Version 3.1 of 2018 nonroad source inventory in SMOKE IDA format
MANEVU OTB Nonroad V3_1 State Summary.xls	Oct. 23, 2006	Spreadsheet with state totals by pollutant for all nonroad sources, NONROAD model sources, and aircraft, locomotives, and commercial marine vessels
MANEVU OTB Nonroad V3_1 State SCC Summary.xls	Oct. 23, 2006	Spreadsheet with SCC totals by state and pollutant for all nonroad sources, NONROAD model sources

Table 4-2a All Nonroad Sources
OTB/OTW Annual CO Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	276,773	282,788	288,061	303,764
DE	68,782	74,856	76,491	80,646
DC	18,845	20,746	21,306	22,429
ME	153,424	163,782	165,273	166,679
MD	437,400	497,276	513,737	550,795
MA	461,514	504,400	516,019	546,373
NH	130,782	142,318	143,804	147,544
NJ	704,396	753,916	777,069	831,880
NY	1,233,968	1,349,439	1,388,406	1,474,727
PA	931,978	1,031,816	1,058,256	1,119,247
RI	73,013	80,228	82,113	87,195
VT	62,248	68,360	69,003	70,074
Total	**4,553,124**	**4,969,925**	**5,099,538**	**5,401,353**

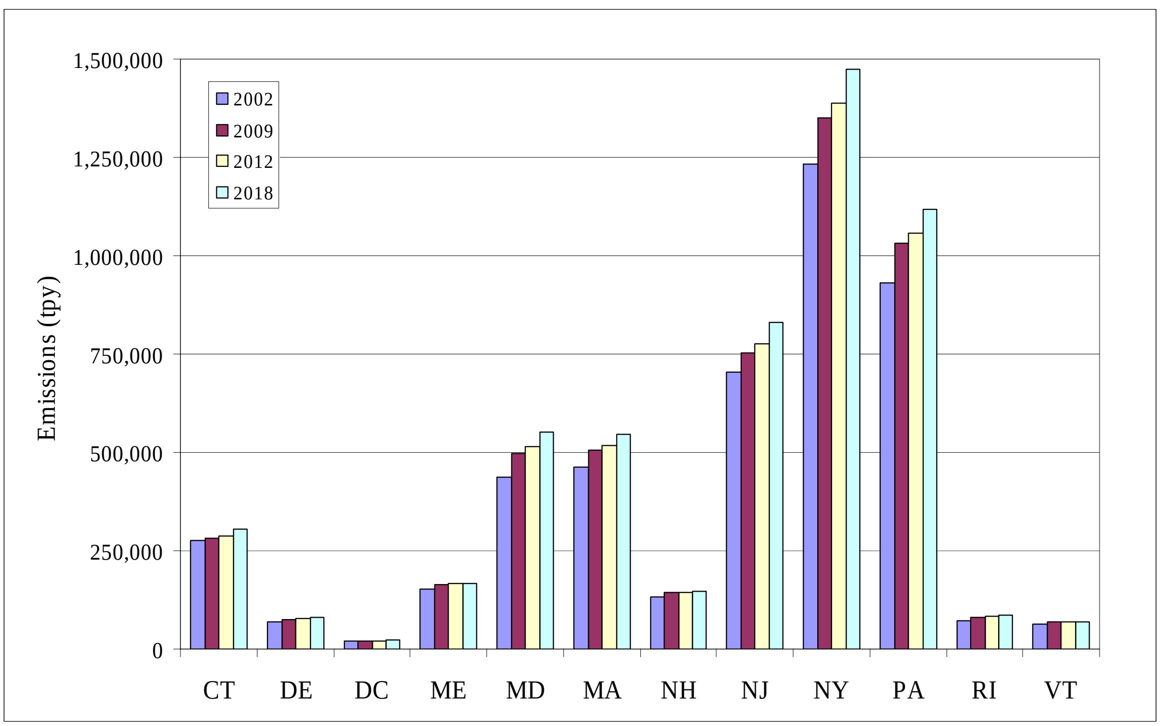


Table 4-2b NONROAD Model Sources
OTB/OTW Annual CO Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	274,388	280,253	285,415	300,931
DE	65,954	71,877	73,397	77,356
DC	18,775	20,671	21,229	22,350
ME	148,555	158,715	160,043	161,215
MD	424,777	482,312	497,806	532,970
MA	448,399	490,895	501,684	530,686
NH	128,572	139,288	140,655	144,191
NJ	692,548	741,792	764,424	818,519
NY	1,219,309	1,333,923	1,372,164	1,457,277
PA	903,168	1,003,480	1,029,045	1,088,614
RI	71,573	78,764	80,607	85,618
VT	61,732	67,802	68,421	69,456
Total	**4,457,748**	**4,869,771**	**4,994,890**	**5,289,186**

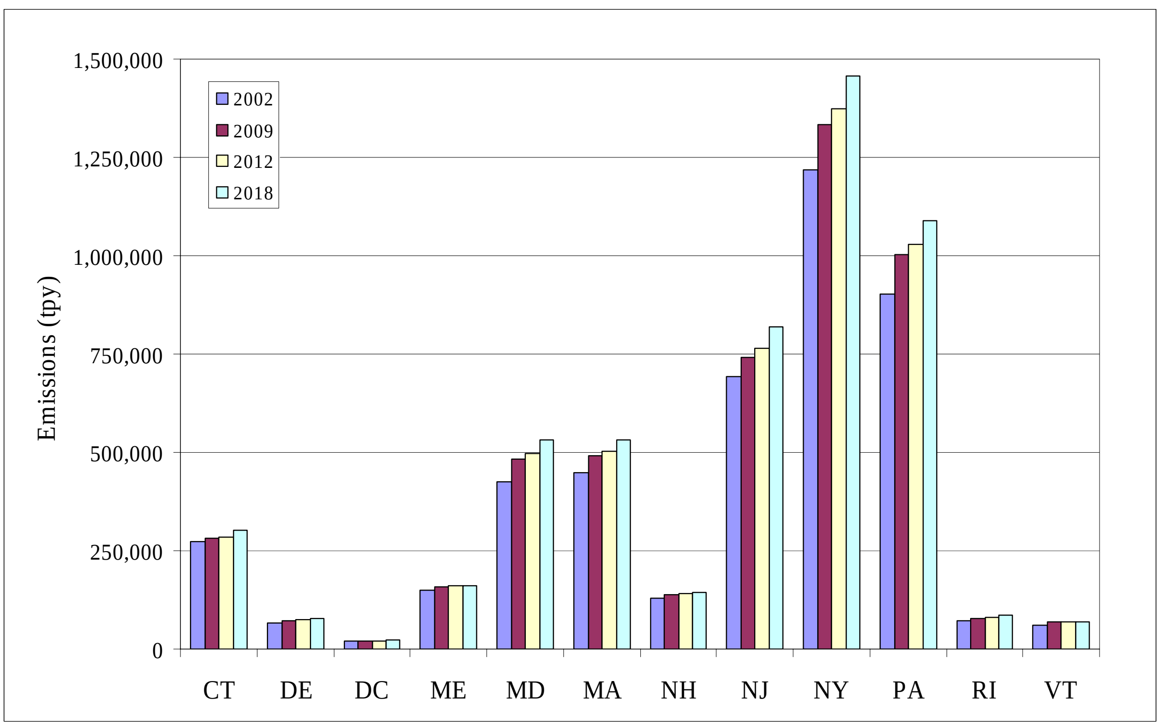


**Table 4-2c Aircraft, Locomotive, and Commercial Marine Sources
OTB/OTW Annual CO Emission Projections
(tons per year)**

State	2002	2009	2012	2018
CT	2,385	2,535	2,646	2,833
DE	2,828	2,979	3,094	3,290
DC	70	75	77	79
ME	4,868	5,067	5,230	5,464
MD	12,624	14,964	15,931	17,825
MA	13,116	13,505	14,335	15,687
NH	2,211	3,030	3,149	3,353
NJ	11,849	12,124	12,645	13,361
NY	14,660	15,516	16,242	17,450
PA	28,810	28,336	29,211	30,633
RI	1,440	1,464	1,506	1,577
VT	516	558	582	618
Total	**95,375**	**100,154**	**104,648**	**112,167**

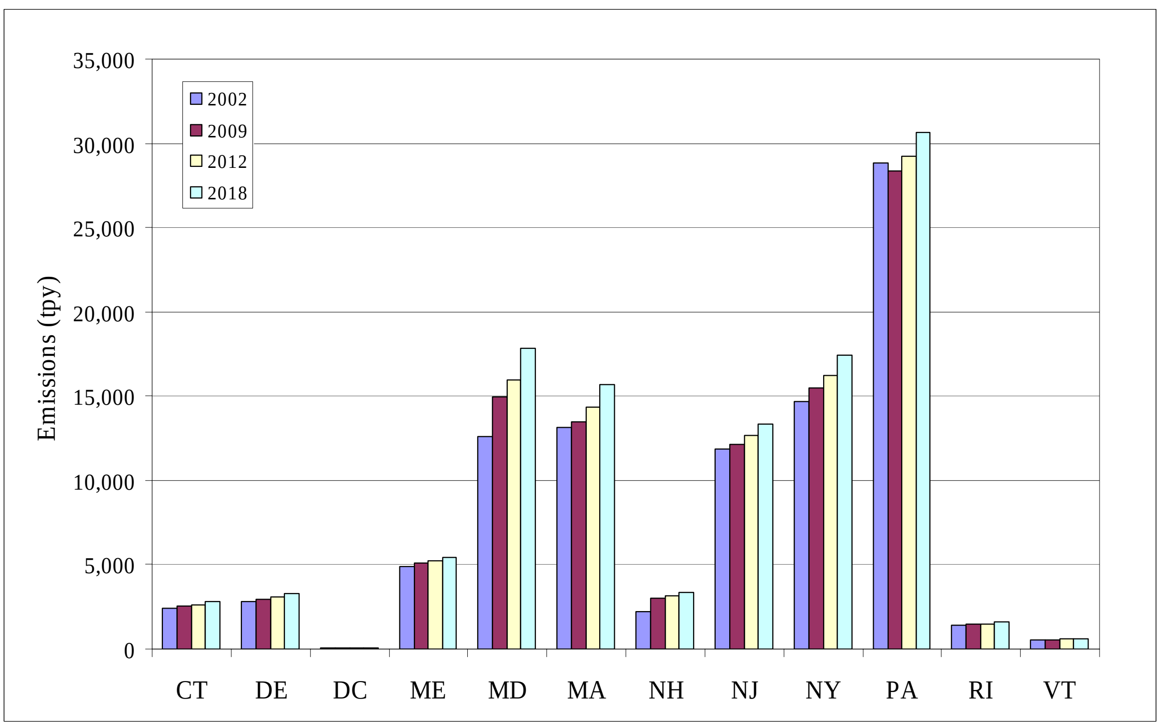


Table 4-3a All Nonroad Sources
OTB/OTW Annual NH3 Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	17	18	19	21
DE	5	6	6	7
DC	2	3	3	3
ME	11	13	14	15
MD	28	31	33	36
MA	28	31	33	36
NH	9	10	11	12
NJ	43	45	47	52
NY	79	89	94	103
PA	55	62	66	73
RI	4	4	5	5
VT	5	5	6	6
Total	**287**	**317**	**337**	**369**

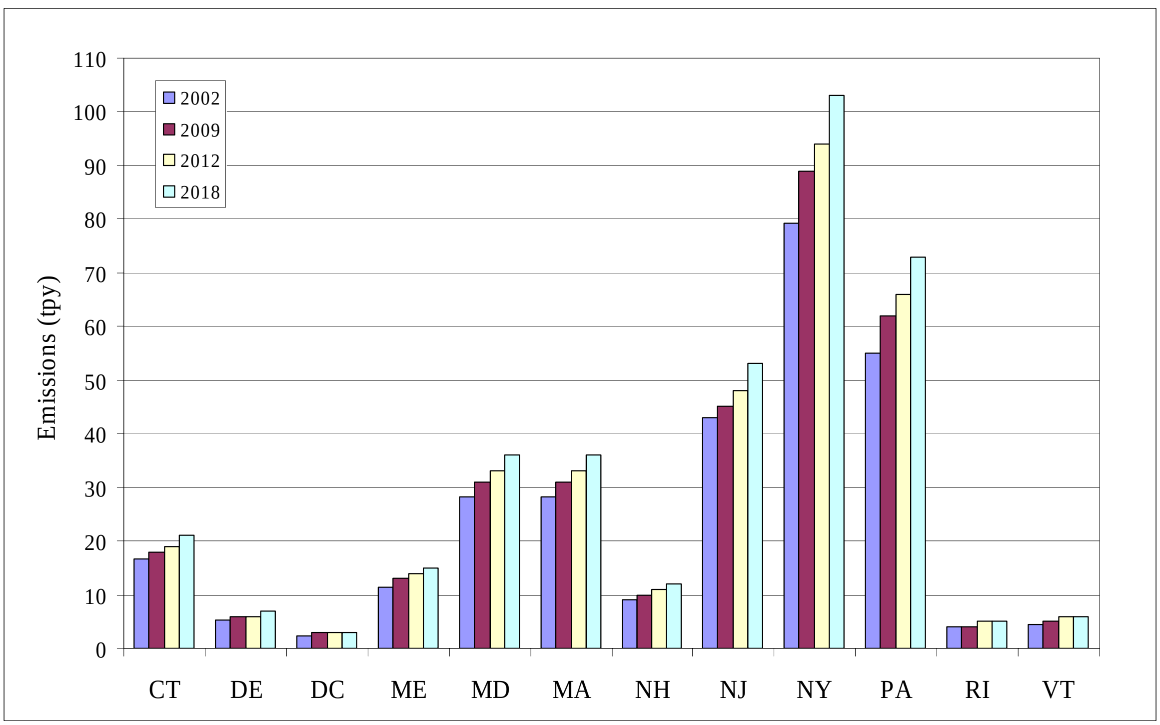


**Table 4-3b NONROAD Model Sources
OTB/OTW Annual NH3 Emission Projections
(tons per year)**

State	2002	2009	2012	2018
CT	17	18	19	21
DE	5	6	6	6
DC	2	3	3	3
ME	11	13	14	15
MD	28	31	33	36
MA	28	31	33	36
NH	9	10	11	12
NJ	43	45	47	52
NY	79	89	94	103
PA	55	62	66	73
RI	4	4	5	5
VT	5	5	6	6
Total	**287**	**318**	**335**	**369**

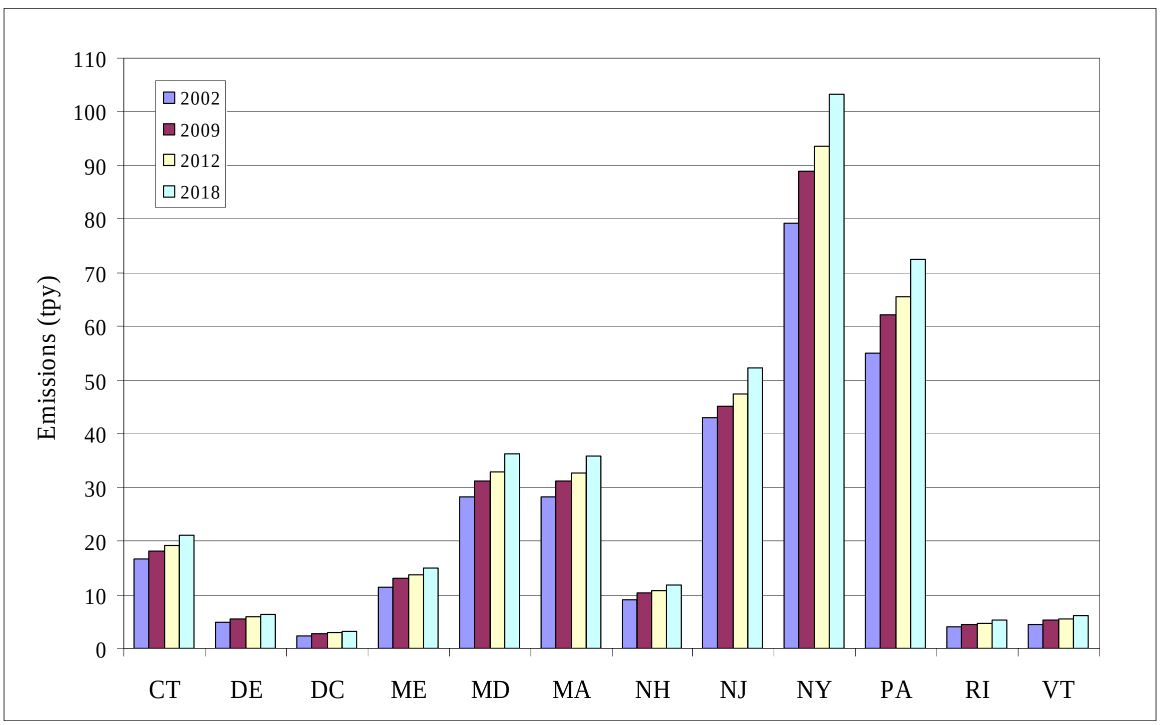


Table 4-3c Aircraft, Locomotive, and Commercial Marine Sources OTB/OTW Annual NH3 Emission Projections (tons per year)

State	2002	2009	2012	2018
CT	0	0	0	0
DE	0	0	0	0
DC	0	0	0	0
ME	0	0	0	0
MD	0	0	0	0
MA	0	0	0	0
NH	0	0	0	0
NJ	0	0	0	0
NY	0	0	0	0
PA	0	0	0	0
RI	0	0	0	0
VT	0	0	0	0
Total	**<1**	**<1**	**<1**	**<1**

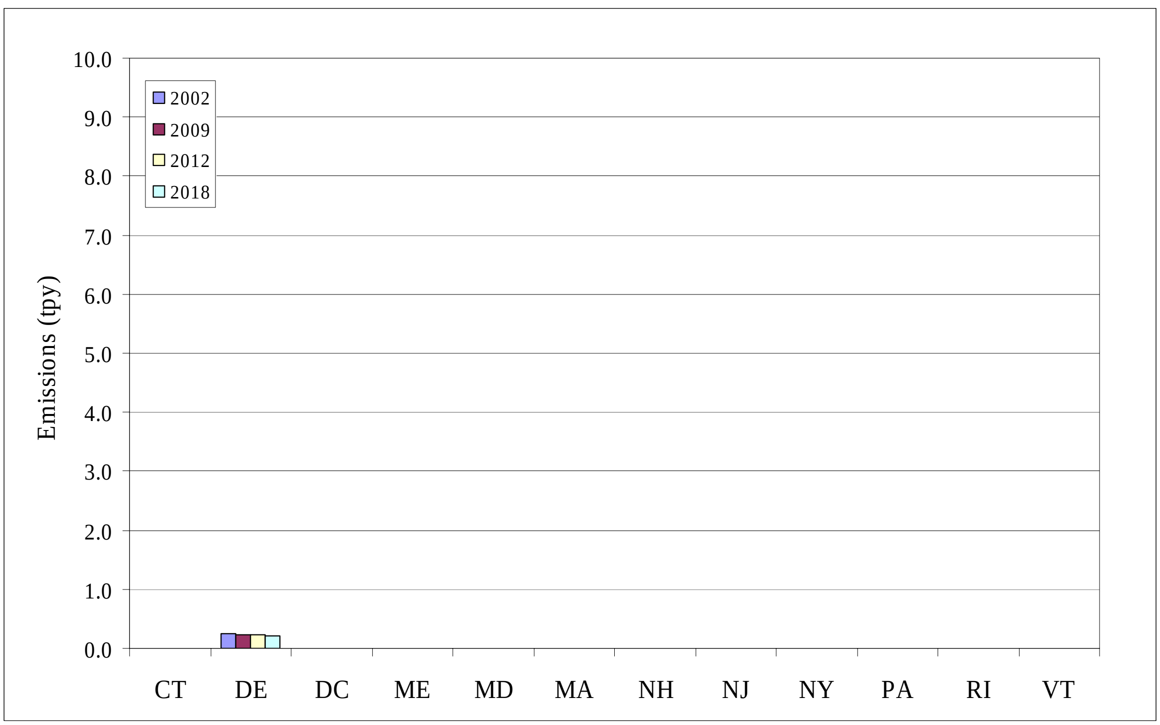


Table 4-4a All Nonroad Sources
OTB/OTW Annual NOx Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	25,460	21,512	19,316	16,233
DE	16,227	15,439	15,081	14,631
DC	3,571	2,981	2,620	1,815
ME	9,820	8,500	7,752	6,543
MD	37,472	31,762	29,058	24,257
MA	42,769	35,703	32,118	27,040
NH	9,912	8,485	7,624	6,344
NJ	63,479	52,703	48,234	41,166
NY	109,878	94,186	85,852	72,400
PA	103,824	76,105	67,818	55,771
RI	5,002	4,022	3,470	2,723
VT	4,217	3,452	2,992	2,262
Total	**431,631**	**354,850**	**321,935**	**271,185**

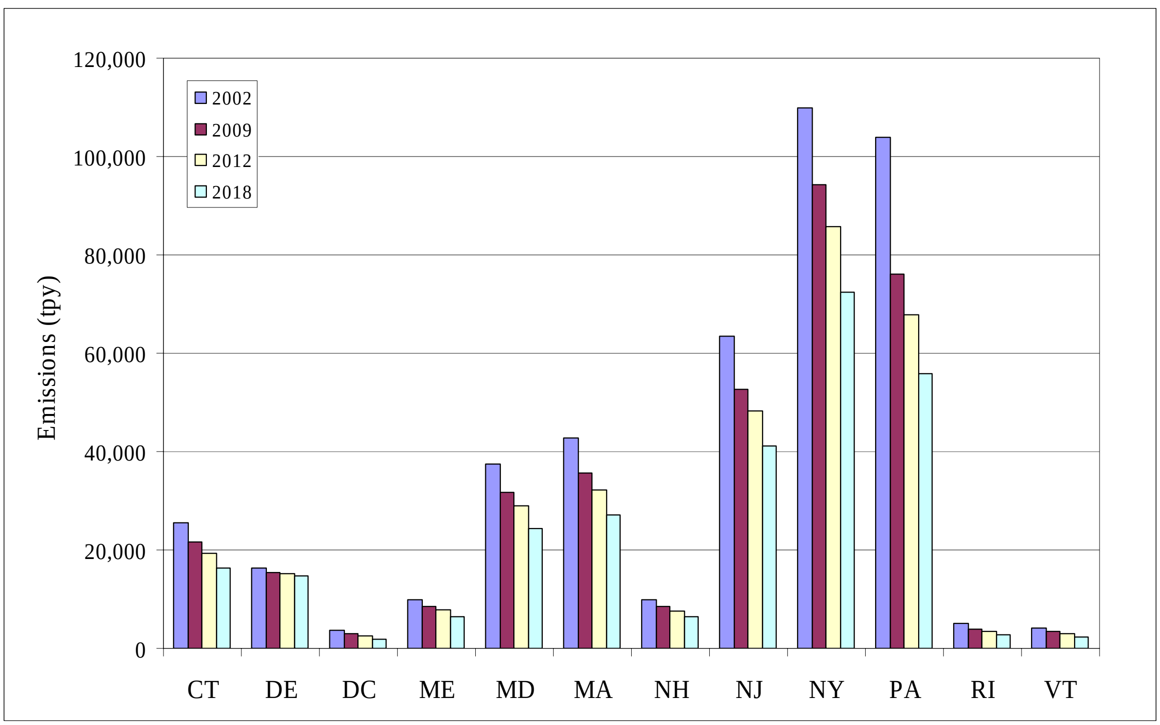


Table 4-4b NONROAD Model Sources
OTB/OTW Annual NOx Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	17,897	14,849	12,811	9,784
DE	5,798	4,755	4,108	2,966
DC	3,066	2,561	2,221	1,444
ME	8,229	6,957	6,211	4,970
MD	27,789	23,431	20,839	15,745
MA	30,047	24,606	21,274	16,096
NH	8,150	6,749	5,893	4,583
NJ	43,515	34,447	30,416	23,594
NY	78,648	66,645	58,900	45,400
PA	62,265	49,982	42,571	30,797
RI	4,564	3,624	3,066	2,294
VT	4,170	3,403	2,941	2,205
Total	**294,138**	**242,009**	**211,252**	**159,877**

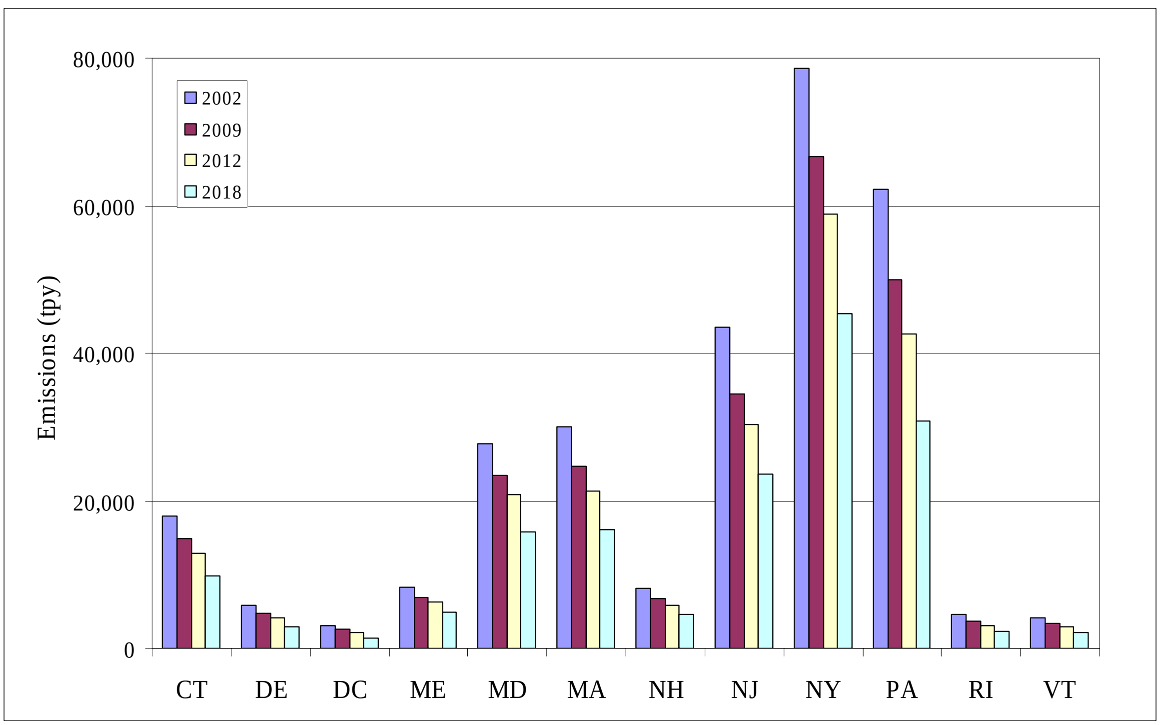


Table 4-4c Aircraft, Locomotive, and Commercial Marine Sources OTB/OTW Annual NOx Emission Projections (tons per year)

State	2002	2009	2012	2018
CT	7,563	6,663	6,505	6,449
DE	10,428	10,684	10,973	11,665
DC	505	420	399	371
ME	1,592	1,543	1,541	1,573
MD	9,683	8,331	8,219	8,512
MA	12,722	11,097	10,844	10,944
NH	1,763	1,736	1,731	1,761
NJ	19,964	18,256	17,818	17,572
NY	31,230	27,541	26,952	27,000
PA	41,559	26,123	25,247	24,974
RI	438	398	404	429
VT	47	49	51	57
Total	**137,493**	**112,841**	**110,683**	**111,308**

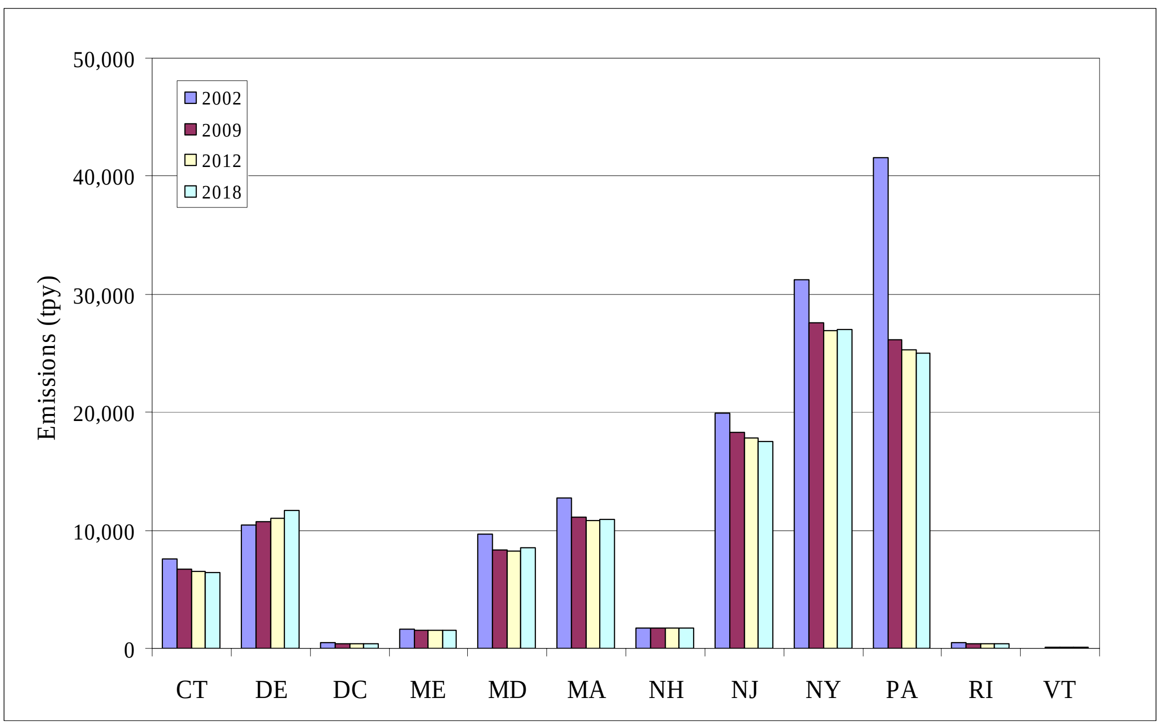


Table 4-5a All Nonroad Sources
OTB/OTW Annual PM10-PRI Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	1,952	1,642	1,532	1,236
DE	1,021	947	940	897
DC	310	235	209	135
ME	1,437	1,367	1,301	1,086
MD	4,936	4,353	4,191	3,814
MA	3,531	2,964	2,768	2,246
NH	1,058	944	881	698
NJ	5,495	4,539	4,233	3,489
NY	9,605	8,050	7,425	5,830
PA	9,738	8,501	8,112	6,949
RI	500	435	414	348
VT	530	476	439	331
Total	**40,114**	**34,453**	**32,445**	**27,059**

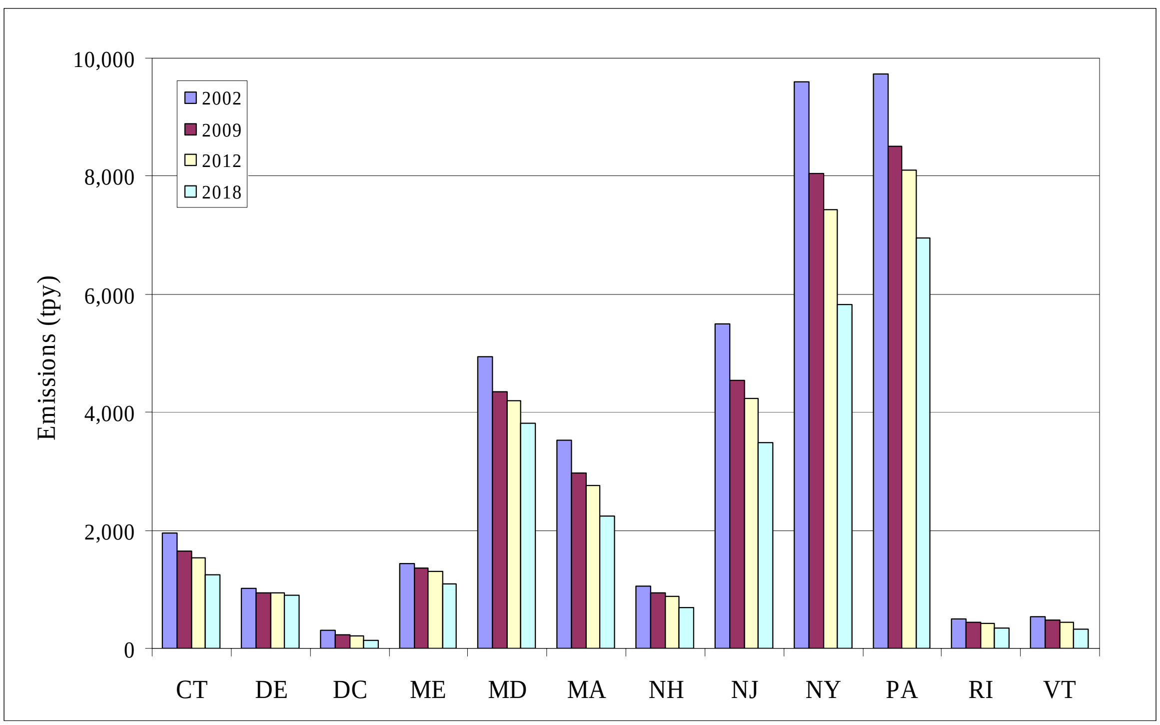


Table 4-5b NONROAD Model Sources
OTB/OTW Annual PM10-PRI Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	1,713	1,407	1,295	987
DE	570	456	414	301
DC	298	226	200	127
ME	1,204	1,119	1,039	797
MD	3,119	2,534	2,321	1,782
MA	2,887	2,370	2,176	1,640
NH	947	834	769	581
NJ	4,285	3,424	3,143	2,411
NY	8,339	6,871	6,248	4,624
PA	6,282	5,282	4,839	3,574
RI	403	337	314	244
VT	518	462	425	316
Total	**30,565**	**25,321**	**23,182**	**17,385**

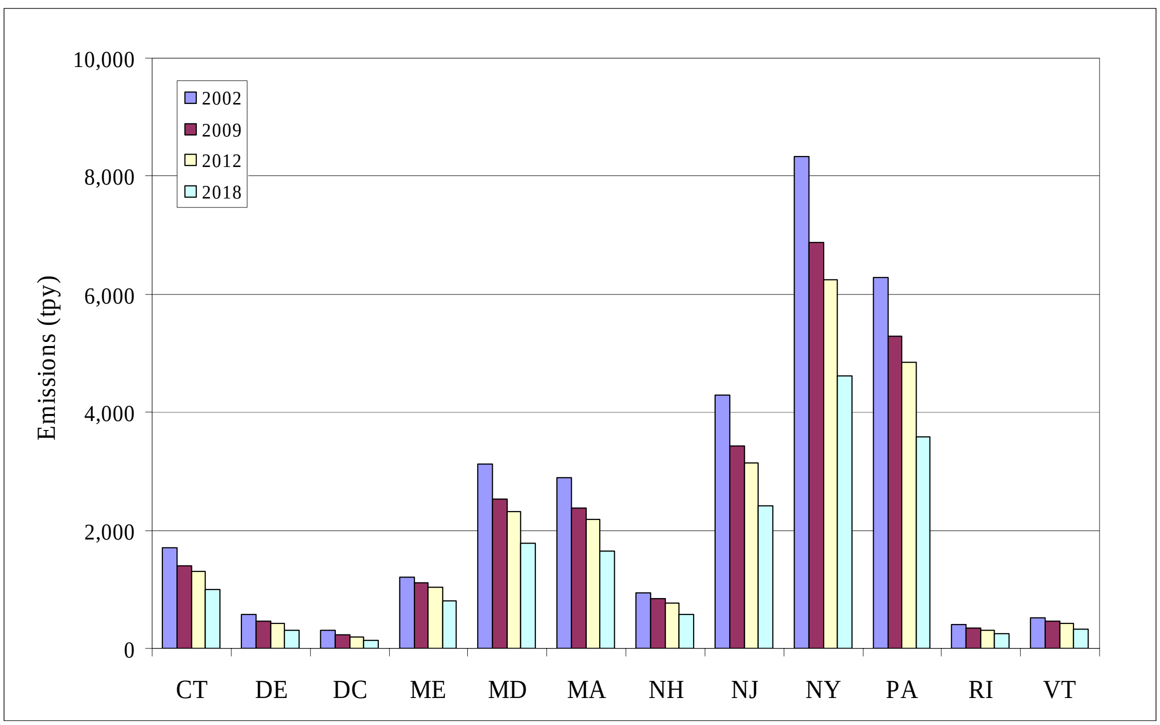


Table 4-5c Aircraft, Locomotive, and Commercial Marine Sources OTB/OTW Annual PM10-PRI Emission Projections (tons per year)

State	2002	2009	2012	2018
CT	239	235	237	249
DE	451	491	526	596
DC	12	9	9	8
ME	233	248	262	289
MD	1,817	1,819	1,870	2,032
MA	644	594	592	606
NH	111	110	112	117
NJ	1,210	1,115	1,090	1,078
NY	1,266	1,179	1,177	1,206
PA	3,456	3,219	3,273	3,375
RI	97	98	100	104
VT	12	14	14	15
Total	**9,549**	**9,132**	**9,263**	**9,674**

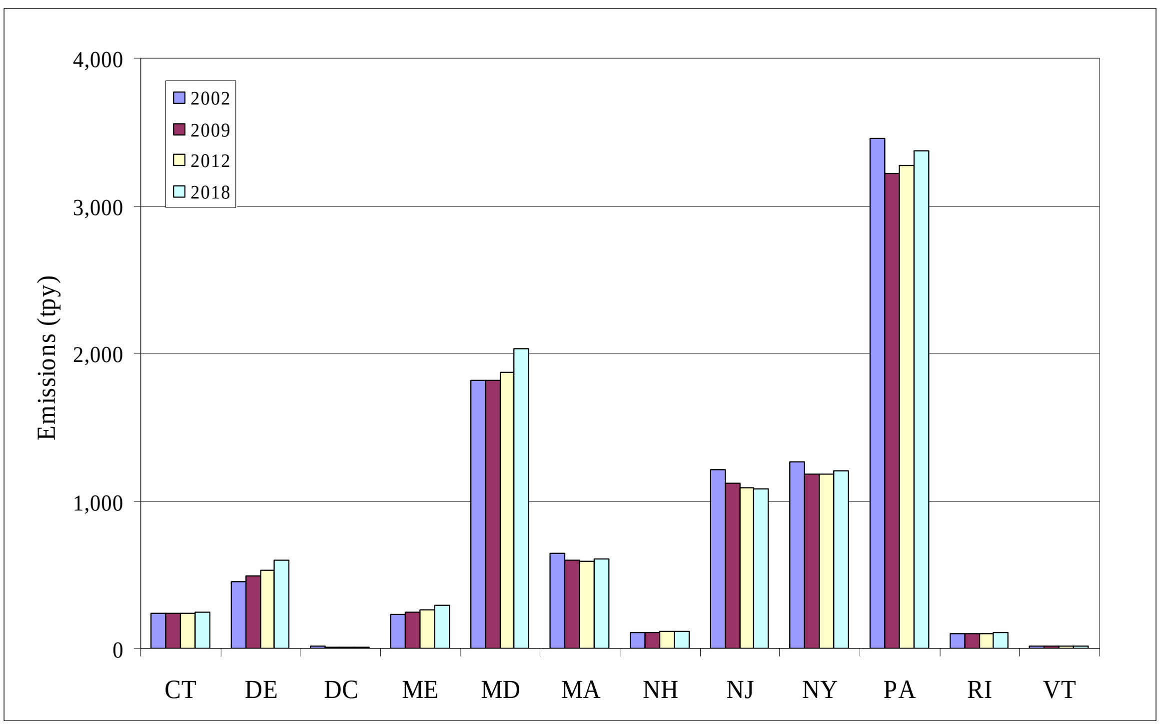


Table 4-6a All Nonroad Sources
OTB/OTW Annual PM25-PRI Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	1,794	1,508	1,408	1,135
DE	926	856	849	808
DC	299	216	192	124
ME	1,329	1,238	1,177	978
MD	4,357	3,806	3,653	3,301
MA	3,226	2,710	2,531	2,052
NH	965	861	802	634
NJ	4,997	4,113	3,829	3,143
NY	8,821	7,390	6,815	5,349
PA	8,440	7,274	6,900	5,808
RI	443	383	364	303
VT	486	436	402	303
Total	**36,084**	**30,791**	**28,922**	**23,938**

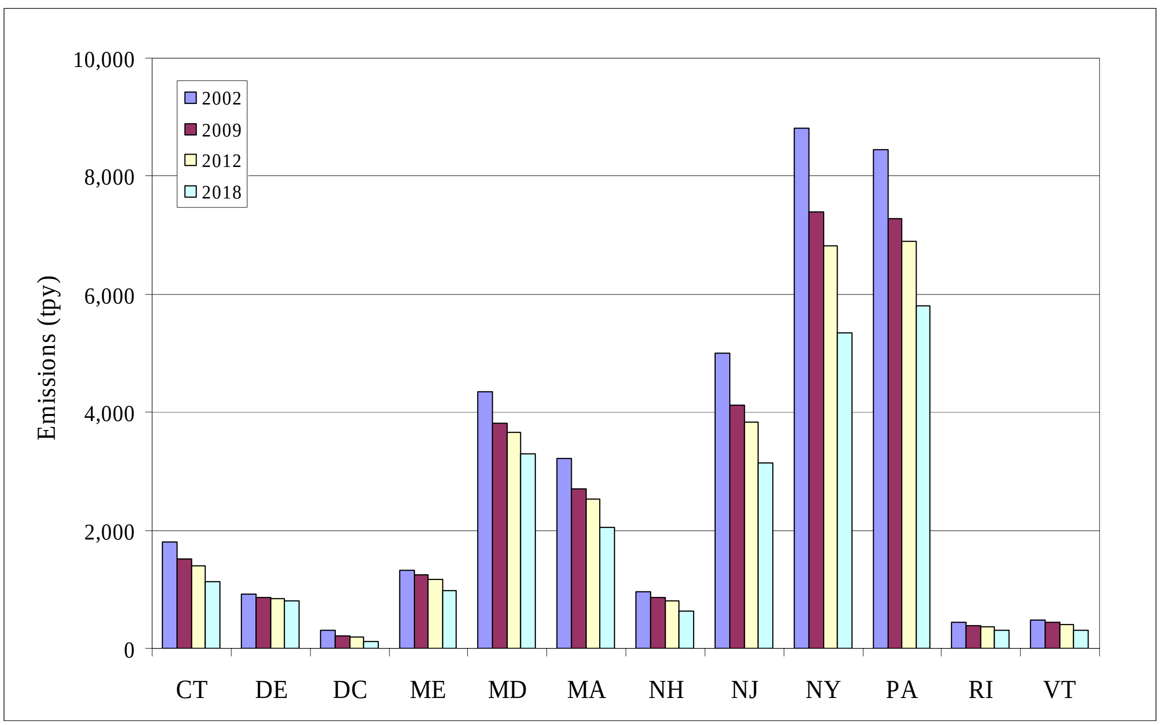


Table 4-6b NONROAD Model Sources
OTB/OTW Annual PM25-PRI Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	1,578	1,296	1,193	911
DE	525	420	381	277
DC	288	208	184	117
ME	1,135	1,030	956	734
MD	2,870	2,333	2,137	1,641
MA	2,659	2,184	2,005	1,512
NH	872	768	708	536
NJ	3,951	3,154	2,896	2,223
NY	7,677	6,327	5,755	4,262
PA	5,784	4,866	4,459	3,296
RI	371	311	290	226
VT	477	426	391	292
Total	**28,186**	**23,321**	**21,356**	**16,027**

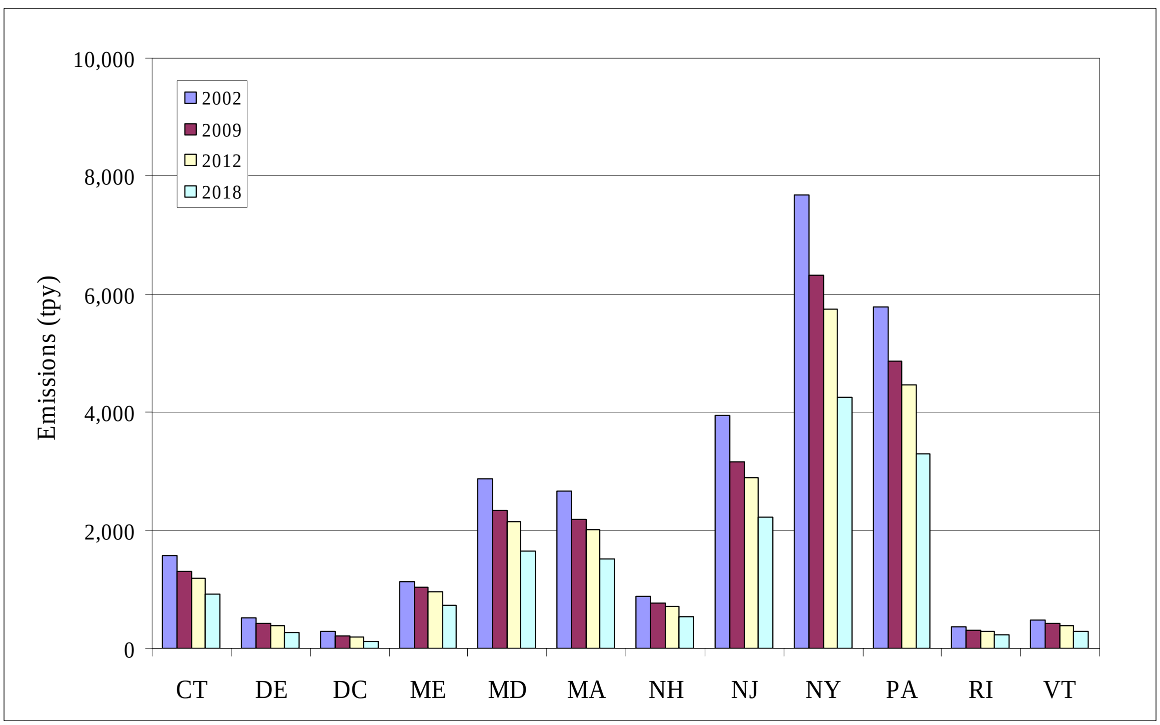


Table 4-6c Aircraft, Locomotive, and Commercial Marine Sources OTB/OTW Annual PM25-PRI Emission Projections (tons per year)

State	2002	2009	2012	2018
CT	216	212	215	224
DE	401	436	468	531
DC	11	8	8	7
ME	194	208	221	244
MD	1,487	1,473	1,516	1,660
MA	568	526	526	540
NH	94	93	94	98
NJ	1,047	959	933	920
NY	1,144	1,063	1,060	1,087
PA	2,656	2,408	2,441	2,512
RI	72	72	74	77
VT	9	10	11	11
Total	**7,898**	**7,470**	**7,566**	**7,911**

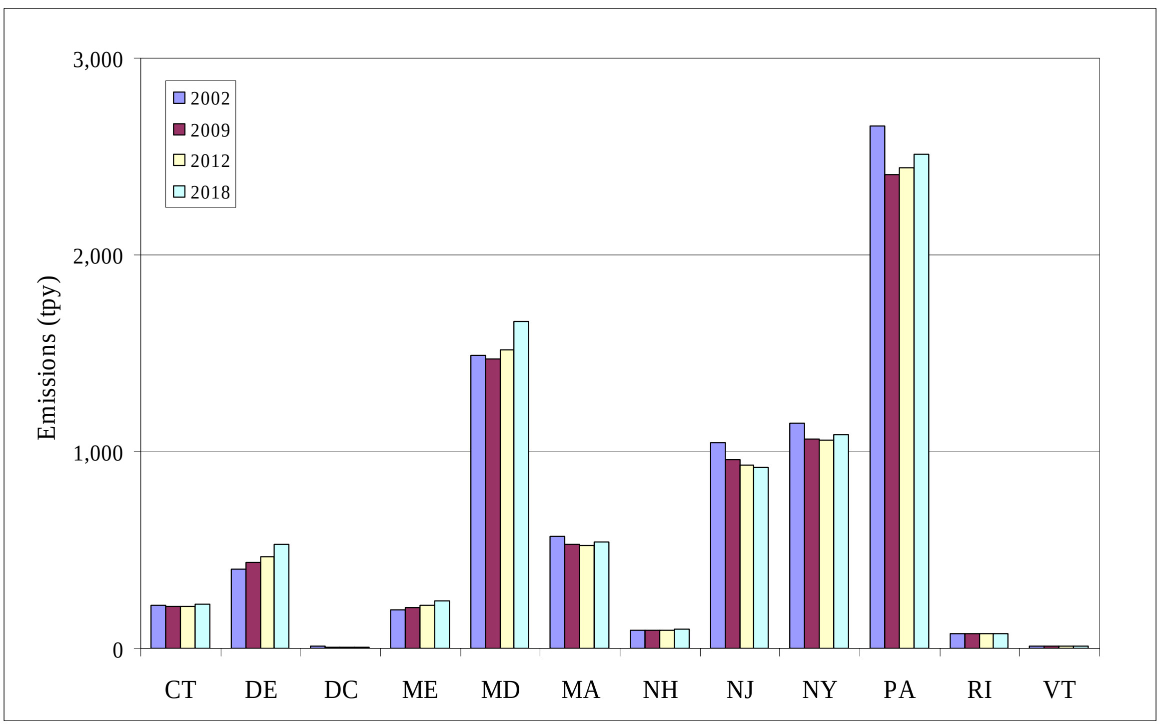


Table 4-7a All Nonroad Sources
OTB/OTW Annual SO2 Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	2,087	887	711	815
DE	3,983	2,851	2,834	3,296
DC	375	66	9	5
ME	917	201	82	82
MD	7,942	1,638	706	577
MA	3,791	983	470	442
NH	891	310	218	246
NJ	15,686	3,508	1,253	832
NY	12,920	3,387	1,724	1,686
PA	7,915	1,659	667	607
RI	377	93	42	42
VT	372	68	15	13
Total	**57,257**	**15,651**	**8,731**	**8,643**

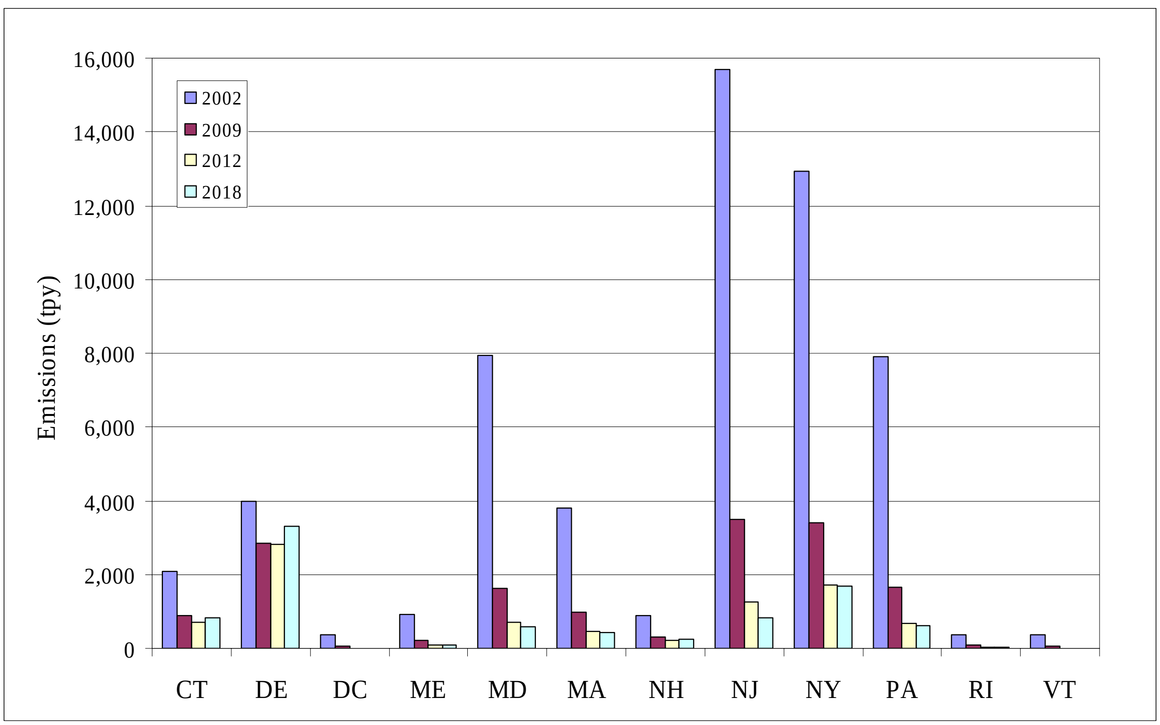


Table 4-7b NONROAD Model Sources
OTB/OTW Annual SO2 Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	1,377	249	39	28
DE	513	90	12	8
DC	341	59	6	3
ME	772	132	24	19
MD	2,569	452	63	42
MA	2,428	429	66	47
NH	673	119	20	16
NJ	3,525	607	93	67
NY	6,966	1,208	182	130
PA	5,292	917	135	92
RI	336	60	10	7
VT	368	64	10	8
Total	**25,159**	**4,387**	**661**	**467**

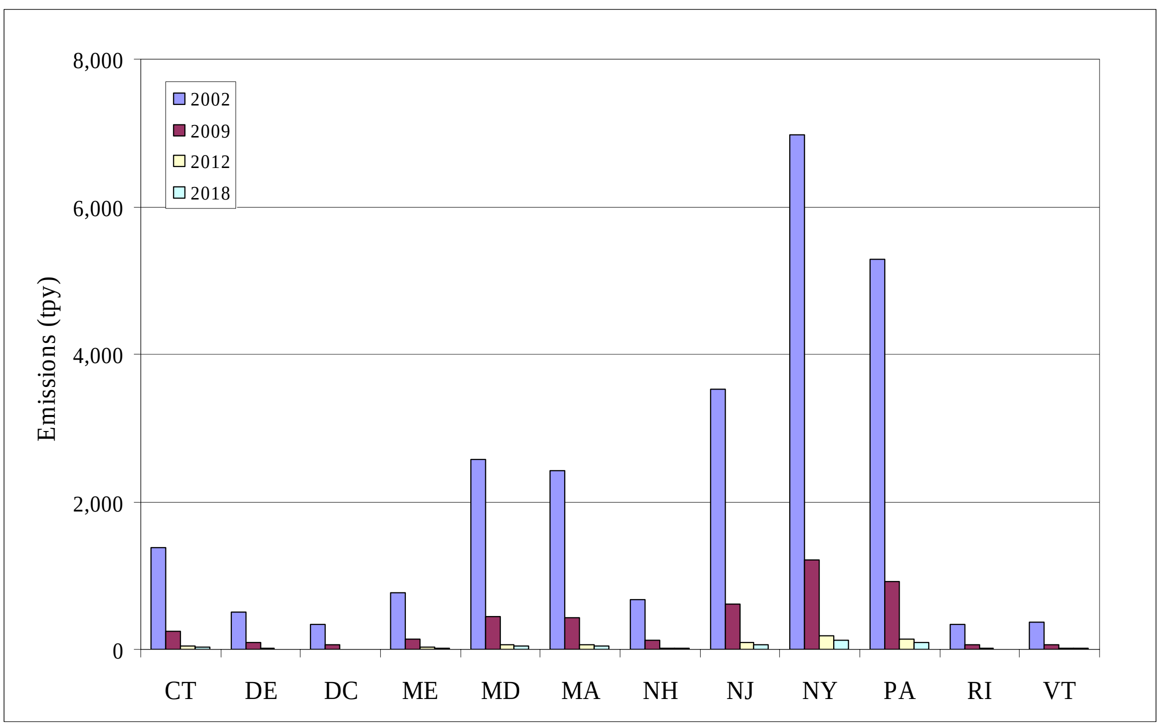


Table 4-7c Aircraft, Locomotive, and Commercial Marine Sources
OTB/OTW Annual SO2 Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	711	638	672	787
DE	3,470	2,761	2,822	3,288
DC	34	7	3	2
ME	145	69	58	63
MD	5,372	1,186	643	535
MA	1,363	554	404	395
NH	218	191	198	230
NJ	12,161	2,901	1,160	765
NY	5,953	2,179	1,542	1,556
PA	2,623	742	532	515
RI	42	33	32	35
VT	5	4	5	5
Total	**32,097**	**11,264**	**8,070**	**8,176**

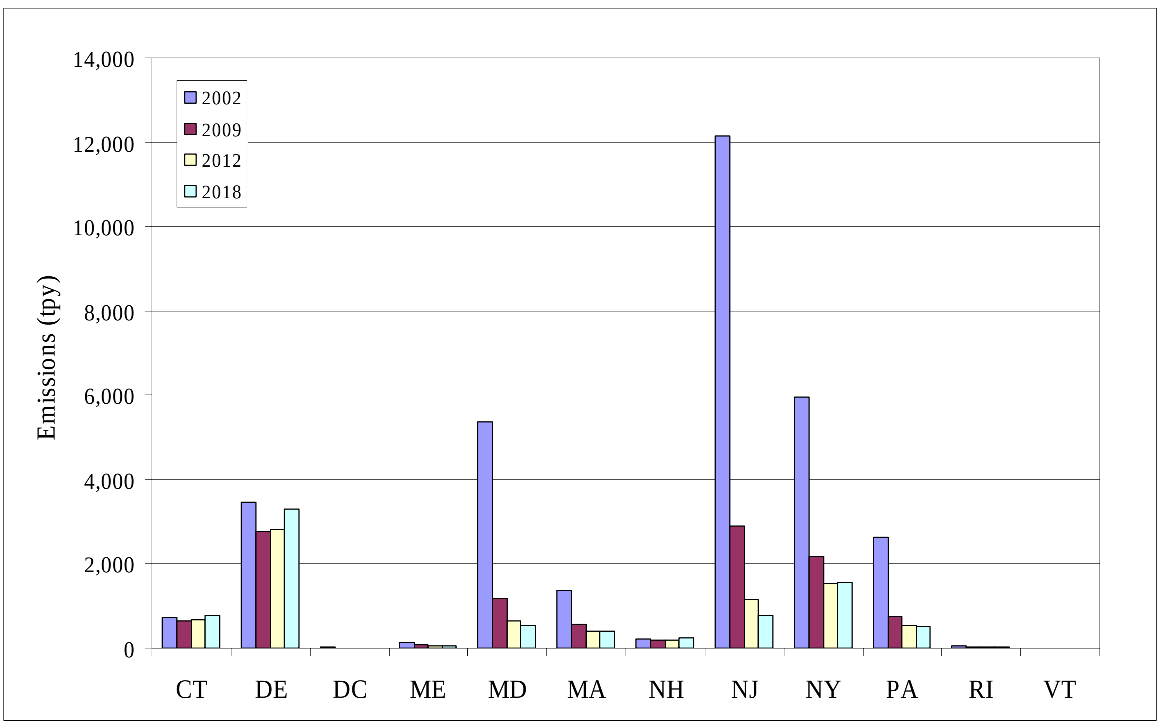


Table 4-8a All Nonroad Sources
OTB/OTW Annual VOC Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	33,880	24,910	22,657	20,694
DE	8,010	6,440	6,044	5,653
DC	2,073	1,559	1,438	1,369
ME	31,144	29,445	27,093	21,988
MD	56,330	43,260	40,266	37,969
MA	56,749	43,429	39,713	36,306
NH	22,377	19,651	17,933	15,003
NJ	83,919	62,920	57,769	53,625
NY	157,612	128,421	117,770	104,562
PA	102,331	84,744	78,630	69,956
RI	7,780	6,038	5,640	5,389
VT	10,548	10,105	9,304	7,566
Total	**572,751**	**460,922**	**424,257**	**380,080**

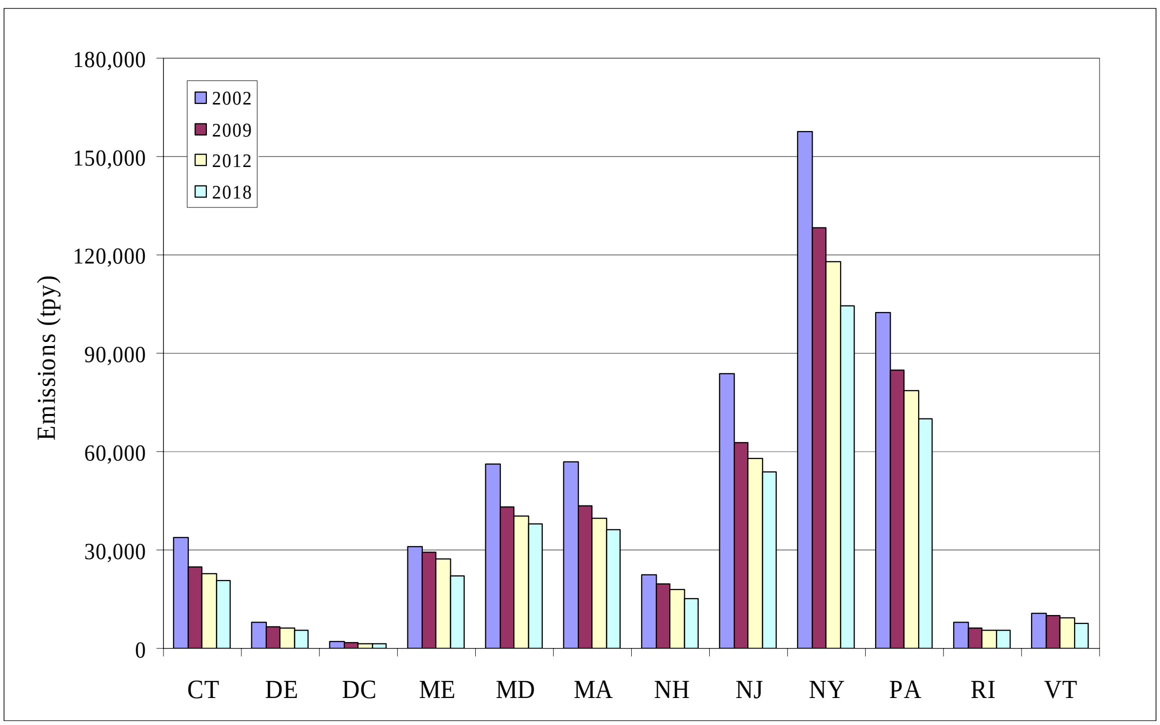


Table 4-8b NONROAD Model Sources
OTB/OTW Annual VOC Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	33,519	24,546	22,286	20,308
DE	7,531	5,943	5,533	5,115
DC	2,053	1,540	1,419	1,351
ME	30,741	29,030	26,669	21,547
MD	53,035	39,731	36,638	34,106
MA	54,836	41,473	37,706	34,185
NH	22,238	19,476	17,752	14,810
NJ	81,900	60,878	55,682	51,451
NY	155,475	126,265	115,553	102,224
PA	99,241	82,094	75,941	67,186
RI	7,699	5,956	5,556	5,302
VT	10,520	10,076	9,273	7,533
Total	**558,788**	**447,006**	**410,009**	**365,117**

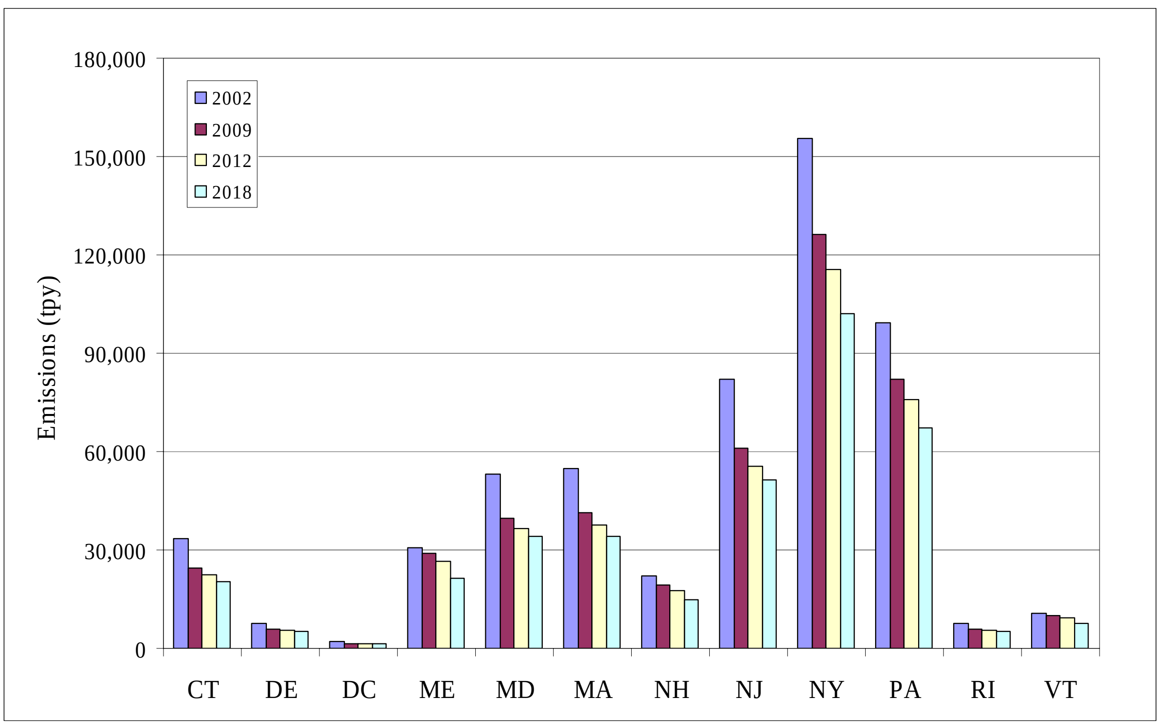
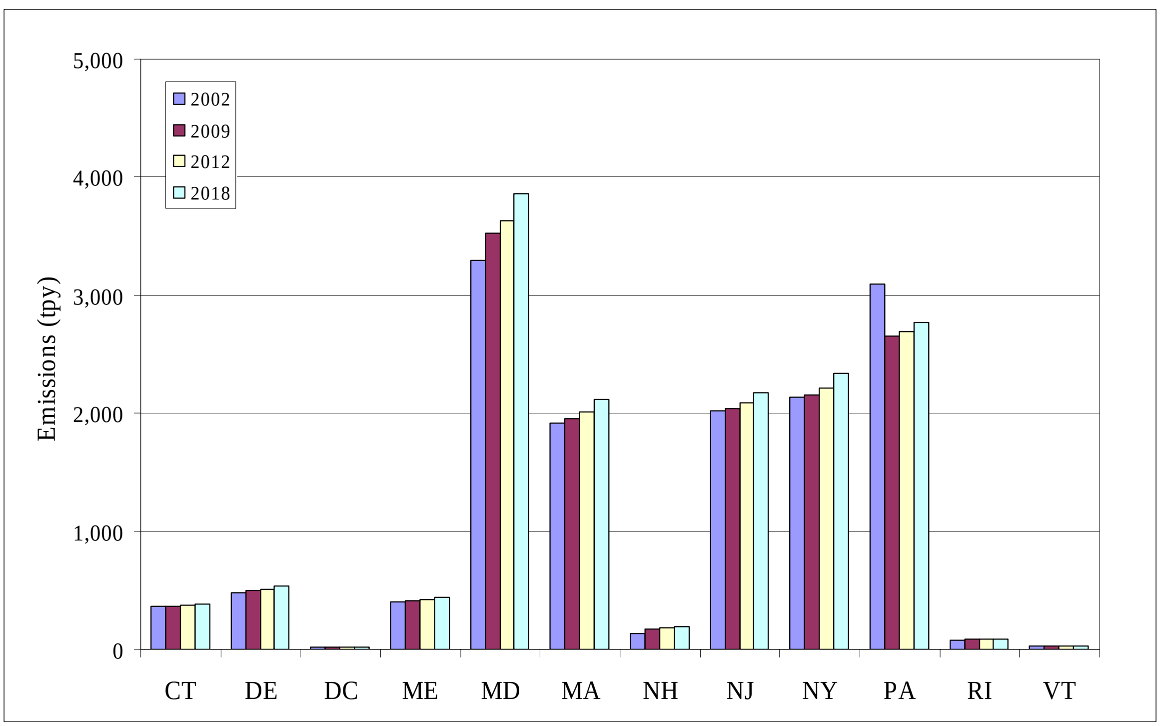


Table 4-8c Aircraft, Locomotive, and Commercial Marine Sources OTB/OTW Annual VOC Emission Projections (tons per year)

State	2002	2009	2012	2018
CT	361	364	371	386
DE	480	497	511	538
DC	20	19	19	18
ME	403	415	424	441
MD	3,295	3,529	3,628	3,863
MA	1,913	1,956	2,007	2,121
NH	139	175	181	193
NJ	2,019	2,042	2,087	2,174
NY	2,137	2,156	2,217	2,338
PA	3,090	2,650	2,689	2,770
RI	81	82	84	87
VT	27	29	31	33
Total	**13,964**	**13,916**	**14,248**	**14,963**



5.0 BEYOND-ON-THE-WAY EMISSION INVENTORY

The States are considering additional control measures as part of their planning to achieve regional haze goals and to attain the ozone and PM2.5 National Ambient Air Quality Standards (NAAQS). To accomplish this, many of the states will need to implement additional measures to reduce emissions. As such, the Ozone Transport Commission (OTC) undertook an exercise to identify a suite of additional control measures that could be used by the states in the Ozone Transport Region (OTR) in attaining their air quality goals.

Based on the analyses conducted by various OTC Workgroups, the OTC Commissioners made several recommendations at the Commissioner's meeting in Boston on June 7, 2006:

- *Memorandum of Understanding Among the States of the Ozone Transport Commission on a Regional Strategy Concerning the Integrated Control of Ozone Precursors from Various Sources*
- *Resolution 06-02 of the Ozone Transport Commission Concerning Coordination and Implementation of Regional Ozone Control Strategies for Certain Source Categories*
- *Statement of the Ozone Transport Commission Concerning Multi-Pollutant Emission Control of Electric Generating Units*
- *Resolution 06-03 of the Ozone Transport Commission Concerning Federal Guidance and Rulemaking for Nationally-Relevant Ozone Control Measures*

The Commissioners recommended that States consider emission reductions from the following source categories:

- Consumer Products
- Portable Fuel Containers
- Adhesives and Sealants Application
- Diesel Engine Chip Reflash
- Cutback and Emulsified Asphalt Paving
- Asphalt Production Plants
- Cement Kilns
- Glass Furnaces
- Industrial, Commercial, and Institutional (ICI) Boilers
- Regional Fuels
- Electric Generating Units (EGUs)

This suite of controls for the above source categories constitutes a "beyond-on-the-way" (BOTW) scenario to be used in modeling ozone, fine particles, and regional haze in the OTR and MANE-VU regions.

For the MANE-VU modeling inventory, each state was asked to complete a matrix to identify which of the above source category control measures to include and in which years the control measure should be applied. This section documents the emission reductions anticipated to result from the implementation of the above control measures based on the state recommendations for measures to include for each state, source category, and projection year. There are five subsections discussing the control measure and emission reductions for the five source category sectors: nonEGU point sources, area sources, EGUs, onroad mobile sources, and nonroad mobile sources.

5.1 NONEGU POINT SOURCES

This Section describes the analysis of the control measures to reduce emissions from non-EGU point sources. The control measures included in this analysis reduce emissions for the following pollutants and nonEGU point source categories:

- NOx measures: asphalt production plants; cement kilns; glass and fiberglass furnaces; low sulfur heating oil for commercial and institutional units; and ICI boilers (natural gas, #2 fuel oil, #4/#6 fuel oil, and coal);
- Primary PM10 and PM2.5 measure: commercial heating oil;
- SO2 measures: commercial heating oil and ICI boilers (#2 fuel oil, #4/#6 fuel oil, and coal); and
- VOC measure: adhesives and sealants application;

For the MANE-VU modeling inventory, each state was asked to complete a matrix to identify which nonEGU control measures to include and in which years the control measure should be applied. Table 5.1 summarizes the staff recommendations for NOx control measures to include in the BOTW regional modeling inventory for non-EGU source categories (except ICI boilers). Table 5.2 summarizes the staff recommendations for NOx emission reductions for ICI boilers. Tables 5.3 and 5.4 summarize the staff recommendations for control measures to include in the BOTW regional modeling inventory for SO2 and VOC emissions, respectively. The following subsections describe the emission reductions anticipated for each of the control measures.

Table 5.1 State Staff Recommendations for Control Measures to Include in BOTW Regional Modeling – NOx Emissions from NonEGU Point Sources

	Asphalt Production Plants			Cement Kilns			Glass and Fiberglass Furnaces			Commercial & Institutional Heating Oil		
State	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**
CT	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	No	No	Yes
DE	No	No	No	N/A	N/A	N/A	N/A	N/A	N/A	No	No	No
DC	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	No	Yes	Yes
ME	No	No	No	Yes	Yes	Yes	N/A	N/A	N/A	No	Yes	Yes
MD	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
MA	No	No	No	N/A	N/A	N/A	Yes	Yes	Yes	No	Yes	Yes
NH	No	No	No	N/A	N/A	N/A	N/A	N/A	N/A	No	No	Yes
NJ	No	Yes	Yes	N/A	N/A	N/A	No	Yes[2]	Yes[2]	No	Yes	Yes
NY	Yes	Yes	Yes	Yes[1]	Yes[1]	Yes[1]	Yes[2]	Yes[3]	Yes[3]	No	Yes	Yes
PA	No	No	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
RI	No	No	No	N/A	N/A	N/A	No	No	No	No	Yes	Yes
VT	No	No	No	N/A	N/A	N/A	N/A	N/A	N/A	No	No	No

Yes - Include emission reductions from control measure in modeling inventory
No - Do not include emission reduction from control measure in modeling inventory
N/A – No facilities of this type located in the state

1) New York specified that a 40 percent NOx reduction from cement kilns should be used.
2) New Jersey specified a 20 percent NOx reduction from glass furnaces in 2012 and a 35 percent reduction in 2018.
3) New York specified a 70 percent NOx reduction from glass furnaces beginning in 2009.

Table 5.2 State Staff Recommendations for Control Measures to Include in BOTW Regional Modeling – NOx Emissions from ICI Boilers

	ICI Boilers < 25 mmBTU/hour			ICI Boilers 25-50 mmBtu/hour			ICI Boilers 50-100 mmBtu/hour			ICI Boilers 100-250 mmBtu/hour			ICI Boilers >250 mmBtu/hour (see note 7)		
State	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**
CT	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	No	No	No
DE	No	No	No	No	No	No	No	No	No	Yes[4]	Yes[4]	Yes[4]	No	No	No
DC	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
ME	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
MD	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes	No	No	No
MA	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
NH	No	No	No	Yes[5]	Yes[5]	Yes[5]	Yes	Yes	Yes	Yes[5]	Yes[5]	Yes[5]	No	No	No
NJ	Yes[2]	Yes[2]	Yes[2]	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	No
NY	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
PA	No[3]	No[3]	No[3]	No[3]	No[3]	No[3]	No[3]	No[3]	No[3]	No[6]	No[6]	No[6]	No	No	No
RI	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
VT	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

Yes - Include emission reductions from control measure in modeling inventory
No - Do not include emission reduction from control measure in modeling inventory
N/A – No facilities of this type located in the state
1) Connecticut is now pursuing adoption of model rule for boilers of all sizes at major and non-major sources
2) New Jersey specified a 5 percent reduction in 2009, 10 percent in 2012, and 10 percent in 2018
3) Pennsylvania specified no reductions since sources already covered by statewide NOx RACT regulation
4) Delaware is developing regulation for ICI boilers greater than 200 mmBtu/hour – no plans for regulating smaller units
5) New Hampshire specified a 40 percent reduction for 25-50 mmBtu/hour boilers, and a 10 percent reduction for natural gas-fired 100-250 mmBtu/hour boilers
6) Pennsylvania specified no reductions since sources in the 5-county Philadelphia area are already covered by the Small Sources of NOx regulation and do not plan on expanding the regulation outside of the corridor at this time
7) Resolution 06-02 specified the reduction for > 250mmBtu/hour boilers to be the "same as EGUs of similar size." The OTC Commissioners have not yet recommended an emission rate or percent reduction for EGUs. As a result, no reductions for ICI boilers > 250 mmBtu/hour were included in the BOTW inventory.

Table 5.3 State Staff Recommendations for Control Measures to Include in BOTW Regional Modeling – SO2 Emissions from NonEGU Point Sources

	Commercial & Institutional Heating Oil			ICI Boilers (low sulfur fuel)		
State	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**
CT	No	No	Yes	No	No	No
DE	No	No	No	No	No	No
DC	No	Yes	Yes	No	No	No
ME	No	Yes	Yes	No	No	No
MD	No	Yes	Yes	No	No	No
MA	No	Yes	Yes	No	No	No
NH	No	No	Yes	No	No	No
NJ	No	Yes	Yes	No	No	No
NY	No	Yes	Yes	No	No	No
PA	No	Yes	Yes	No	No	No
RI	No	Yes	Yes	No	No	No
VT	No	No	No	No	No	No

Yes - Include emission reductions from control measure in modeling inventory
No - Do not include emission reduction from control measure in modeling inventory

Table 5.4 State Staff Recommendations for Control Measures to Include in BOTW Regional Modeling – VOC Emissions from NonEGU Point Sources

	Adhesives and Sealants Application		
State	**2009**	**2012**	**2018**
CT	Yes	Yes	Yes
DE	Yes	Yes	Yes
DC	Yes	Yes	Yes
ME	Yes	Yes	Yes
MD	Yes	Yes	Yes
MA	Yes	Yes	Yes
NH	No	Yes	Yes
NJ	No[1]	No[1]	No[1]
NY	Yes	Yes	Yes
PA	Yes	Yes	Yes
RI	Yes	Yes	Yes
VT	No	No	No

Yes - Include emission reductions from control measure in modeling inventory
No - Do not include emission reduction from control measure in modeling inventory
1) New Jersey indicated that the reductions from the adhesives and sealants application control measure should only apply to area source - no reductions for point sources (SCC 4-02-007-xx) were included due to inventory double-counting issues, not due to rule change issues.

5.1.1 Adhesives and Sealants Application

The OTC 2006 model rule for adhesives and sealants is based on the reasonably available control technology (RACT) and best available retrofit control technology (BARCT) determination by the California Air Resources Board (CARB) developed in 1998. Adhesive and sealant emission sources are classified as both point sources and area sources. About 96 percent of adhesive and sealant VOC emissions in the OTC states fall into the area source category. The remaining four percent of the VOC emissions are included in the point source inventory.

The emission reduction benefit estimation methodology is based on information developed and used by CARB for their RACT/BARCT determination in 1998. For point sources, we first identified those sources that were applying adhesives and sealants (using the source classification code of 4-02-007-xx, adhesives application). Next, we reviewed the MANEVU inventory to determine whether these sources had existing capture and control systems. Most of the sources did not have control information in the NIF database. However, several sources reported capture and destruction efficiencies in the 70 to 99 percent range, with a few sources reporting capture and destruction efficiencies of 99+ percent. Sources with existing control systems that exceeded an 85 percent overall capture and destruction efficiency would comply with the OTC 2006 model rule provision for add-on air pollution control equipment; therefore, no additional reductions were calculated for these sources. For point sources without add-on control equipment, we used the 64.4 percent reduction based on the CARB determination.

5.1.2 Asphalt Production Plants

In Resolution 06-02, the OTC Commissioners recommended that OTC member states pursue as necessary and appropriate state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies that would result in about a 35 percent reduction in NOx emissions. The reductions estimated for this category only include emissions included in the MANE-VU point source emission inventory. Only emissions from major point sources are typically included in the MANE-VU point source database. Emissions from non-major sources are not explicitly contained in the area source inventory; rather, the emissions from non-major asphalt plants are likely lumped together in the general area source industrial and commercial fuel use category. Therefore, there is some uncertainty regarding the actual reductions that will occur as since minor sources are not specifically identified in the MANE-VU inventory.

5.1.3 Cement Kilns

In Resolution 06-02, the OTC Commissioners recommended that OTC member states pursue as necessary and appropriate state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies that would result in about a 60 percent reduction in NOx emissions from uncontrolled levels. Cement kilns were already included in Phase I of the NO_x SIP call. Emission reductions resulting from the NOx SIP call were accounted for in the 2009 OTB inventory. For the cement kilns in Maryland and New York, a default control efficiency value of 25 percent was applied to account for the reductions expected from the NOx SIP call. For the cement kilns in Pennsylvania, the state provided their best estimates of the actual control efficiency expected for each kiln after the NOx SIP Call. There is a cement kiln in Maine, but it is not subject to the NOx SIP call. To calculate the additional reductions from the OTC 2006 Control Measure, MACTEC back calculated uncontrolled emissions from the 2009 base year inventory based on the controls applied to account for the NOx SIP Call. Once the uncontrolled emissions were calculated, MACTEC applied the 60 percent emission reduction guideline recommended by the OTC Commissioners, except for the kilns in New York. Staff from New York indicated that a 40 percent emission reduction should be used for modeling purposes.

5.1.4 Glass and Fiberglass Furnaces

In Resolution 06-02, the OTC Commissioners recommended that OTC member states pursue as necessary and appropriate state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies that would result in about an 85 percent reduction in NOx emissions from uncontrolled levels. The NOx emission reduction benefit was calculated by applying an 85 percent reduction to the projected 2009 base inventory, except in New Jersey and New York. New Jersey specified a 20 percent NOx reduction from glass furnaces in 2012 and a 35 percent reduction in 2018. New York specified a 70 percent NOx reduction from glass furnaces beginning in 2009. The estimated 85% reductions does not take into account existing controls at the facilities. The OTC states are currently working with the glass industry to obtain additional data to better identify the controls already in place. This will allow for a better calculation of the emission reduction benefits.

5.1.5 Industrial, Commercial, and Institutional Boilers

In Resolution 06-02, the OTC Commissioners recommended that OTC member states pursue as necessary and appropriate state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies for ICI boilers based on guidelines that varied by boiler size and fuel type. Specifically, the following guidelines were provided:

	NOx Reduction from 2009 Base Emissions by Fuel Type			
Boiler Size (mmBtu/hour)	**Natural Gas**	**#2 Fuel Oil**	**#4/#6 Fuel Oil**	**Coal**
< 25	10	10	10	10
25 to 50	50	50	50	50*
50 to 100	10	10	10	10*
100 to 250	75	40	40	40*
>250	**	**	**	**

* Resolution 06-02 did not specify a percent reduction for coal; for modeling purposes, the same percent reduction specified for #4/#6 fuel oil was used for coal

** Resolution 06-02 specified the reduction for > 250mmBtu/hour boilers to be the “same as EGUs of similar size.” The OTC Commissioners have not yet recommended an emission rate or percent reduction for EGUs. As a result, no reductions for ICI boilers > 250 mmBtu/hour were included in the BOTW inventory.

Since the above guidelines vary by boiler size and fuel type, the specific percent reduction applied to an individual source depends on the SCC and design capacity of the source. The SCC identifies the fuel type, while the design capacity identifies the boiler size. In many cases, the design capacities in the MANE-VU NIF database were missing. MACTEC used the following hierarchy in filling in gaps where design capacities were missing.

- Use the design capacity field from the NIF EU table, if available;
- Use the design capacities provided by State/local agencies to fill in the data gaps (Allegheny County, District of Columbia, Maryland, New Jersey, Philadephia County);
- Use design capacity as reported either the Unit Description field in the NIF EU table or the Process Description field from the NIF EP table, if available;
- Use design capacity from the source’s Title V permit, if the Title V permit was on-line;
- Use the SCC description to determine the design capacity (for example, SCC 1-02-006-01 describes a >100 mmBtu/hr natural gas-fired boiler, SCC 1-02-006-02 describes a 10-100 mmBtu/hr natural gas-fired boiler)

After performing this gap-filling exercise, MACTEC was able to assign over 97 percent of the NOx emissions to a specific boiler size range. For the remaining sources where MACTEC could not determine the boiler size (which accounted for only 3 percent of the NOx emissions), MACTEC assumed that these boilers were < 25 mmBtu/hr.

5.1.6 Commercial and Institutional Heating Oil

The BOTW control measure for heating oil is based on NESCAUM's report entitled "Low Sulfur Heating Oil in the Northeast States: An Overview of Benefits, Costs and Implementation Issues." NESCAUM estimates that reducing the sulfur content of heating oil from 2,500 ppm to 500 ppm lowers SO2 emissions by 75 percent, PM emissions by 80 percent, NOx emissions by 10 percent. The 500 ppm sulfur heating oil is not expected to available on a widespread basis until 2012 at the earliest. These percent reductions were applied to commercial distillate oil category (SCC 1-03-005-xx and 1-05-002-05). These percent reductions were applied based on the state's recommendations in the matrix which identifies control measures to include and in which years the control measure should be accounted for in the modeling inventory.

5.1.7 BOTW NonEGU Point Source NIF, SMOKE, and Summary Files

The Version 3.1 file names and descriptions delivered to MARAMA are shown in Table 5-5.

Table E-1 shows the anticipated percent reductions by SCC and year for the nonEGU point source BOTW control measures.

5.1.8 BOTW NonEGU Point Source Emission Summaries

Emission summaries by state, year, and pollutant are presented in Tables 5-6 through 5-12 for CO, NH3, NOx, PM10-PRI, PM25-PRI, SO2, and VOC, respectively.

Table 5-5 BOTW NonEGU Point Source NIF, IDA, and Summary File Names

File Name	Date	Description
MANEVU_BOTW2009_NonEGU_NIFV3_1.mdb	Dec. 4, 2006	Version 3.1 of 2009 BOTW nonEGU source NIF inventory
MANEVU_BOTW2012_NonEGU_NIFV3_1.mdb	Dec. 4, 2006	Version 3.1 of 2012 BOTW nonEGU source NIF inventory
MANEVU_BOTW2018_NonEGU_NIFV3_1.mdb	Dec. 4, 2006	Version 3.1 of 2018 BOTW nonEGU source NIF inventory
MANEVU_BOTW2009_NonEGU_IDAV3_1.txt	Nov. 22, 2006	Version 3.1 of 2009 BOTW nonEGU source inventory in SMOKE IDA format
MANEVU_BOTW2012_NonEGU_IDAV3_1.txt	Nov. 22, 2006	Version 3.1 of 2012 BOTW nonEGU source inventory in SMOKE IDA format
MANEVU_BOTW2018_NonEGU_IDA3V_1.txt	Nov. 22, 2006	Version 3.1 of 2018 BOTW nonEGU source inventory in SMOKE IDA format
MANEVU OTB BOTW NonEGU V3_1 State Summary.xls	Nov. 22, 2006	Spreadsheet with state totals by pollutant for all nonEGU sources
MANEVU OTB BOTW NonEGU V3_1 State SCC Summary.xls	Dec. 4, 2006	Spreadsheet with SCC totals by state and pollutant for all nonEGU sources.

Table 5-6 NonEGU Point Sources
OTB/OTW and BOTW Annual CO Emission Projections
(tons per year)

	2002	**2009 OTB/W**	**2009 BOTW**	**2012 OTB/W**	**2012 BOTW**	**2018 OTB/W**	**2018 BOTW**
CT	2,157	2,251	2,251	2,306	2,306	2,415	2,415
DE	8,812	9,037	9,037	8,748	8,748	8,651	8,651
DC	247	283	283	299	299	327	327
ME	9,043	10,147	10,147	10,467	10,467	11,433	11,433
MD	94,536	104,012	104,012	111,174	111,174	141,342	141,342
MA	10,793	12,027	12,027	12,552	12,552	13,426	13,426
NH	774	858	858	871	871	907	907
NJ	8,209	10,076	10,076	10,806	10,806	12,244	12,244
NY	53,259	61,411	61,411	65,541	65,541	78,876	78,876
PA	105,815	116,430	116,430	121,251	121,251	140,908	140,908
RI	1,712	1,764	1,764	1,821	1,821	1,927	1,927
VT	220	250	250	254	254	267	267
Total	**295,577**	**328,546**	**328,546**	**346,090**	**346,090**	**412,723**	**412,723**

No BOTW controls were considered for CO.

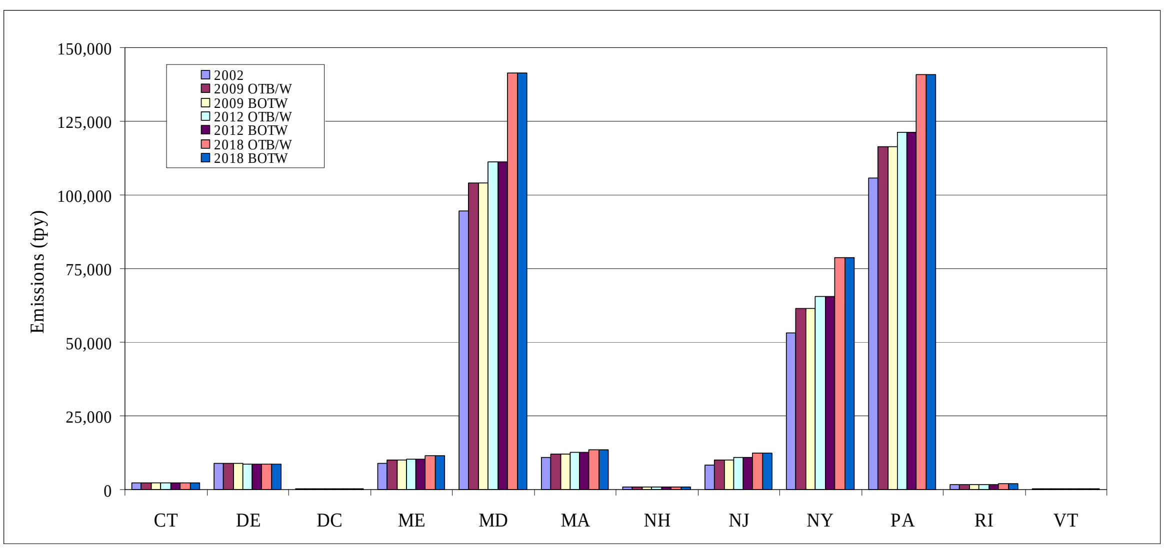


Table 5-7 NonEGU Point Sources
OTB/OTW and BOTW Annual NH3 Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	0	0	0	0	0	0	0
DE	153	145	145	138	138	134	134
DC	4	5	5	5	5	5	5
ME	700	796	796	809	809	859	859
MD	305	347	347	366	366	410	410
MA	462	510	510	521	521	563	563
NH	37	46	46	50	50	60	60
NJ	0	0	0	0	0	0	0
NY	1,027	1,081	1,081	1,128	1,128	1,296	1,296
PA	1,170	1,307	1,307	1,363	1,363	1,591	1,591
RI	58	64	64	68	68	68	68
VT	0	0	0	0	0	0	0
Total	**3,916**	**4,301**	**4,301**	**4,448**	**4,448**	**4,986**	**4,986**

No BOTW controls were considered for NH3.

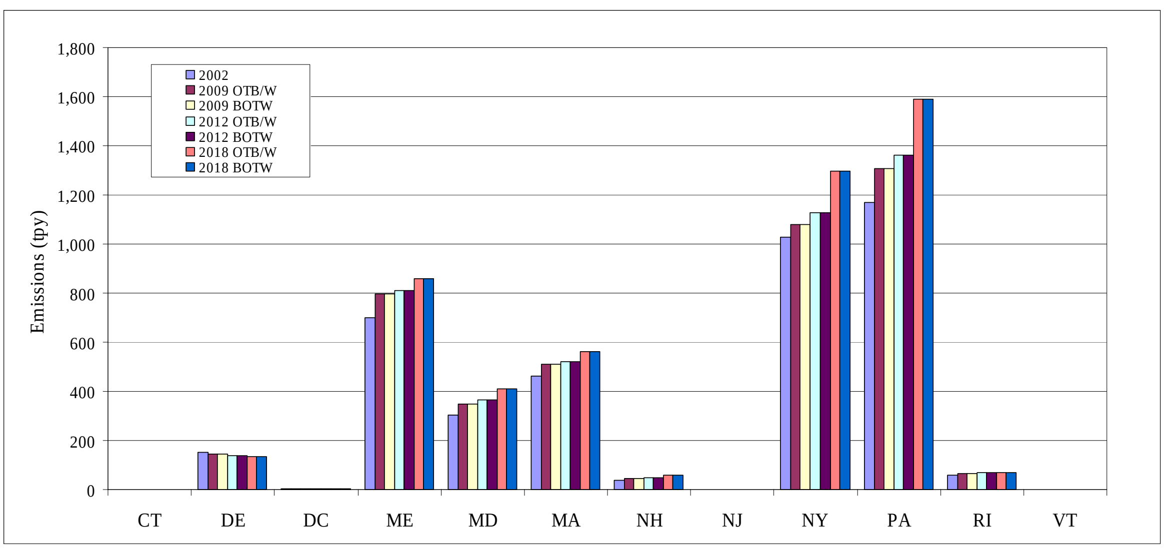


Table 5-8 NonEGU Point Sources
OTB/OTW and BOTW Annual NOx Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	6,773	7,236	6,820	7,465	7,047	7,921	7,501
DE	4,372	4,076	4,076	4,135	4,135	4,246	4,246
DC	480	548	548	577	577	627	627
ME	12,108	14,285	12,914	14,661	13,183	15,753	14,137
MD	21,940	19,401	16,015	20,399	16,819	22,797	18,888
MA	18,292	20,603	20,047	21,372	20,768	23,040	22,301
NH	1,188	1,384	1,120	1,394	1,131	1,435	1,169
NJ	15,812	16,498	16,463	17,091	15,901	18,805	17,464
NY	34,253	33,648	28,529	34,586	29,256	37,133	31,305
PA	89,136	89,932	76,215	93,526	72,779	103,137	79,186
RI	2,308	2,449	2,449	2,471	2,471	2,442	2,442
VT	386	462	462	460	460	466	466
Total	**207,048**	**210,522**	**185,658**	**218,137**	**184,527**	**237,802**	**199,732**

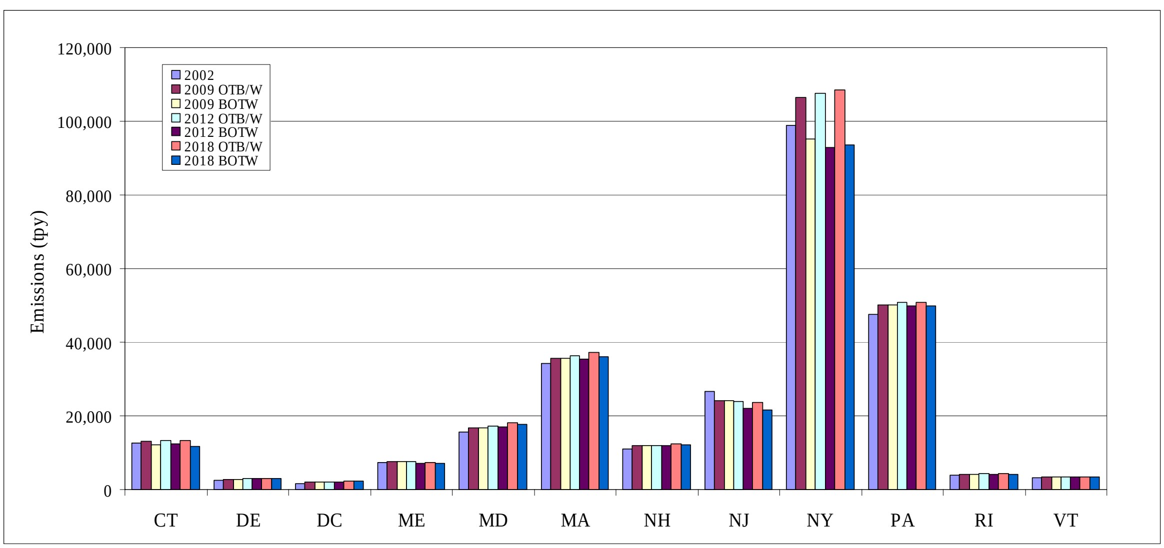


Table 5-9 NonEGU Point Sources
OTB/OTW and BOTW Annual PM10-PRI Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	990	1,035	1,035	1,058	1,058	1,106	1,104
DE	1,820	1,486	1,486	1,475	1,475	1,487	1,487
DC	157	178	178	186	182	198	194
ME	6,120	7,088	7,088	7,133	7,114	7,496	7,477
MD	4,739	4,797	4,797	5,040	5,039	5,828	5,827
MA	4,212	5,006	5,006	5,088	5,004	5,314	5,227
NH	918	1,084	1,084	1,097	1,097	1,129	1,129
NJ	3,439	4,205	4,205	4,417	4,412	4,959	4,953
NY	5,072	5,221	5,221	5,444	5,395	6,098	6,048
PA	23,282	25,169	25,169	26,307	26,258	29,516	29,466
RI	296	333	333	331	318	330	316
VT	235	267	267	272	272	296	296
Total	**51,280**	**55,869**	**55,869**	**57,848**	**57,624**	**63,757**	**63,524**

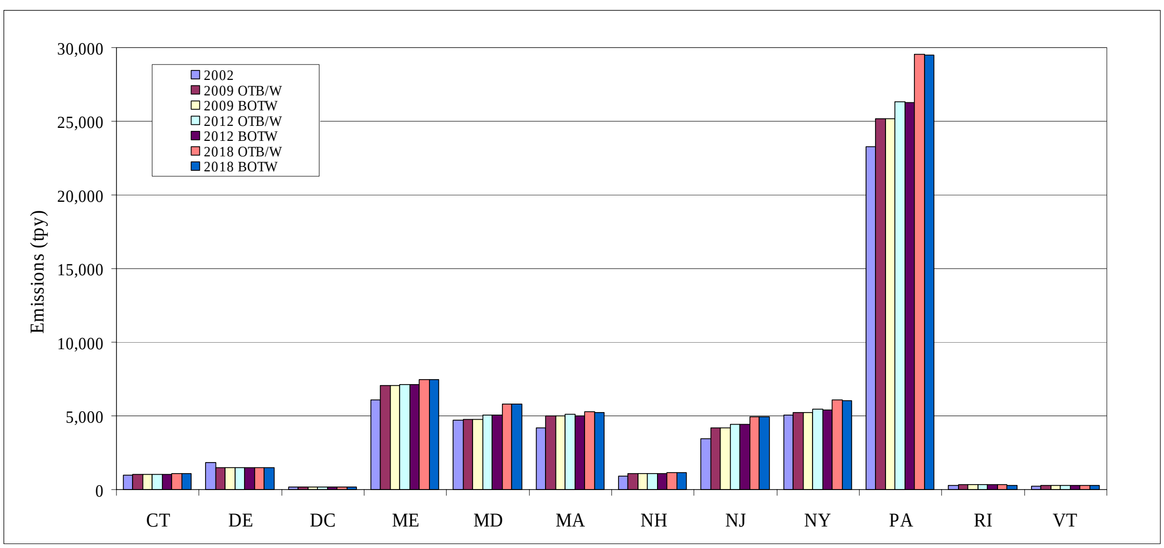


Table 5-10 NonEGU Point Sources
OTB/OTW and BOTW Annual PM25-PRI Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	822	871	871	894	894	939	937
DE	1,606	1,256	1,256	1,245	1,245	1,254	1,254
DC	128	145	145	152	149	164	161
ME	4,899	5,675	5,675	5,690	5,678	5,935	5,922
MD	2,772	2,861	2,861	3,011	3,010	3,503	3,501
MA	2,953	3,554	3,554	3,574	3,510	3,660	3,594
NH	857	1,008	1,008	1,021	1,021	1,052	1,052
NJ	2,947	3,588	3,588	3,764	3,760	4,234	4,230
NY	3,355	3,535	3,535	3,688	3,646	4,161	4,117
PA	12,360	13,578	13,578	14,159	14,114	15,878	15,831
RI	180	200	200	198	188	194	184
VT	198	226	226	229	229	246	246
Total	**33,077**	**36,497**	**36,497**	**37,625**	**37,444**	**41,220**	**41,029**

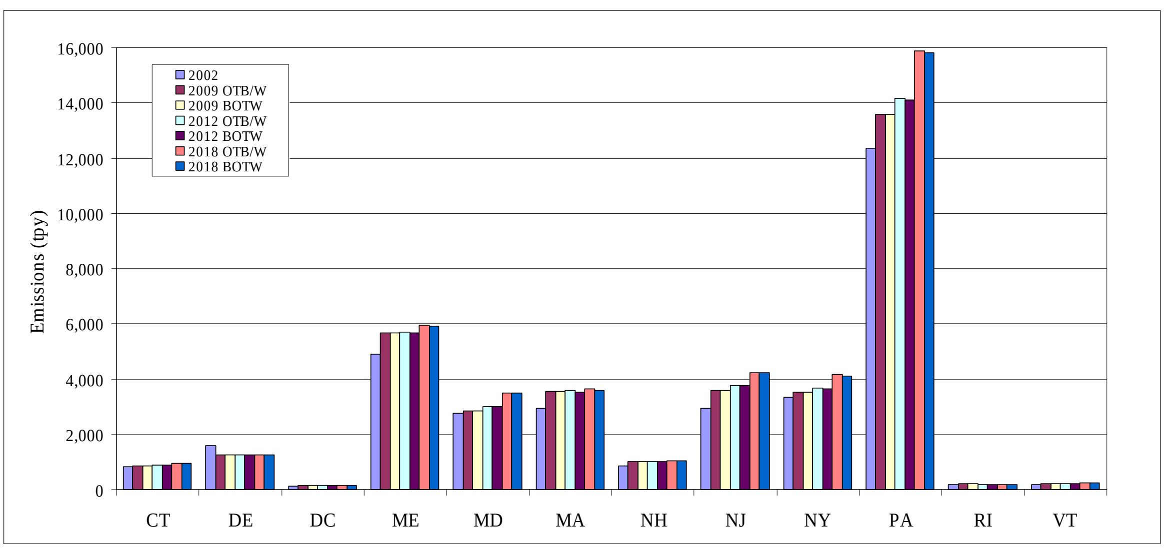


Table 5-11 NonEGU Point Sources OTB/OTW and BOTW Annual SO2 Emission Projections (tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	2,438	2,528	2,528	2,567	2,567	2,644	2,596
DE	35,706	7,117	7,117	7,401	7,401	7,610	7,610
DC	618	707	707	735	533	780	554
ME	14,412	18,656	18,656	18,492	18,393	18,794	18,692
MD	34,193	34,223	34,223	35,373	35,342	38,921	38,886
MA	14,766	18,185	18,185	18,442	17,305	18,955	17,778
NH	2,436	3,099	3,099	3,098	3,098	3,114	3,099
NJ	9,797	7,141	7,141	7,234	7,196	7,855	7,816
NY	58,227	62,922	62,922	64,484	64,432	67,545	67,491
PA	88,259	90,735	90,735	93,441	93,206	99,924	99,681
RI	2,651	3,163	3,163	3,182	3,018	3,164	3,000
VT	874	1,182	1,182	1,147	1,147	1,127	1,127
Total	**264,377**	**249,658**	**249,658**	**255,596**	**253,638**	**270,433**	**268,330**

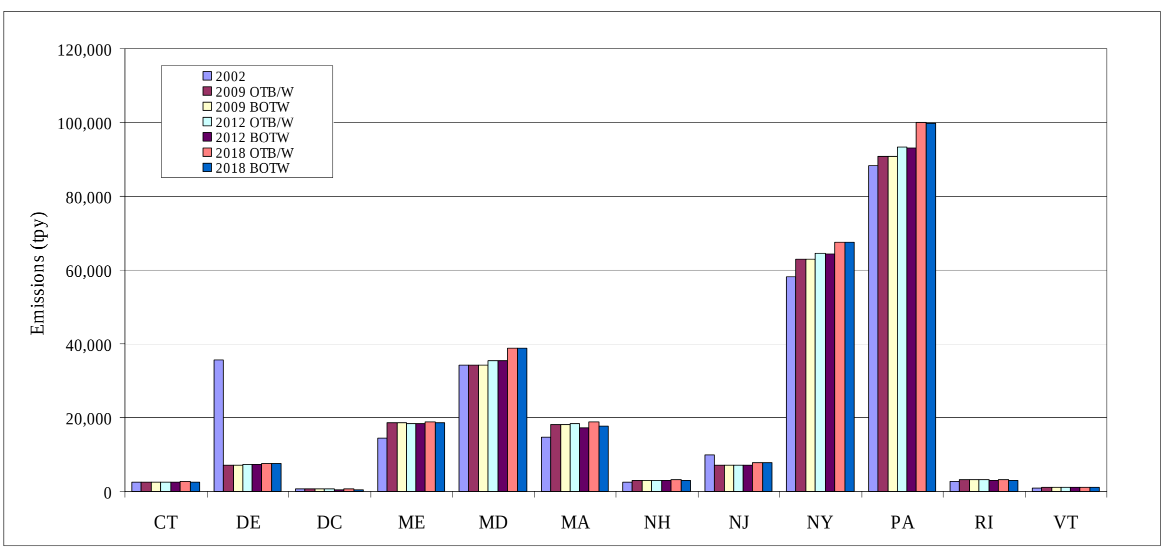
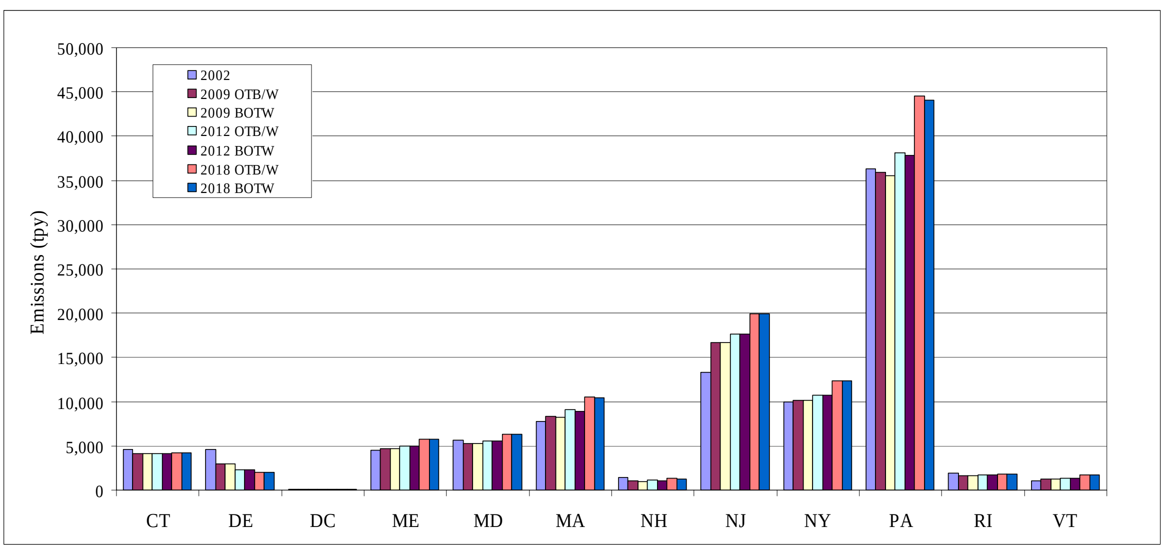


**Table 5-12 NonEGU Point Sources
OTB/OTW and BOTW Annual VOC Emission Projections
(tons per year)**

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	4,604	4,114	4,111	4,152	4,149	4,230	4,227
DE	4,645	2,987	2,981	2,311	2,305	1,993	1,987
DC	69	72	72	75	75	85	85
ME	4,477	4,740	4,740	4,985	4,985	5,709	5,708
MD	5,676	5,297	5,279	5,578	5,559	6,301	6,279
MA	7,794	8,381	8,273	9,061	8,940	10,564	10,418
NH	1,459	1,060	1,005	1,132	1,069	1,294	1,219
NJ	13,318	16,702	16,702	17,621	17,621	19,915	19,915
NY	9,933	10,157	10,141	10,750	10,732	12,354	12,333
PA	36,326	35,875	35,548	38,162	37,795	44,537	44,085
RI	1,898	1,640	1,628	1,695	1,683	1,812	1,799
VT	1,079	1,254	1,238	1,365	1,347	1,730	1,707
Total	**91,278**	**92,279**	**91,718**	**96,887**	**96,260**	**110,524**	**109,762**



5.2 AREA SOURCES

This Section describes the analysis of the OTC and MANE-VU control measures to reduce emissions from area sources. The control measures included in this analysis reduce emissions for the following pollutants and area source categories:

- NOx measures: ICI boilers (natural gas, #2 fuel oil, #4/#6 fuel oil, and coal) and residential and commercial home heating oil;
- Primary PM10 and PM2.5 measures: residential and commercial home heating oil;
- SO2 measures: residential and commercial home heating oil, and ICI boilers (distillate oil).
- VOC measures: adhesives and sealants, emulsified and cutback asphalt paving, consumer products, and portable fuel containers;

For the MANE-VU modeling inventory, each state was asked to complete a matrix identify which control measures to include and in which years the control measure should be applied. Tables 5.13, 5.14, and 5.15 summarize the staff recommendations for control measures to include in the BOTW regional modeling inventory for NOx, SO2, and VOC respectively. The following subsections describe the emission reductions anticipated for each of the area source control measures.

5.2.1 Adhesives and Sealants

The OTC 2006 model rule for adhesives and sealants is based on the reasonably available control technology (RACT) and best available retrofit control technology (BARCT) determination by the California Air Resources Board (CARB) developed in 1998. Adhesive and sealant emission sources are classified as both point sources and area sources. About 96 percent of adhesive and sealant VOC emissions in the OTC states fall into the area source category. The remaining four percent of the VOC emissions are included in the point source inventory.

The emission reduction benefit estimation methodology for area sources is based on information developed and used by CARB for their RACT/BARCT determination in 1998. CARB estimates that the total industrial adhesive and sealant emissions in California to be about 45 tons per day (tpd). Solvent-based adhesive and sealant emissions are estimated to be about 35 tpd of VOC and water-based adhesive and sealant emissions are about 10 tpd of VOC.

Table 5.13 State Staff Recommendations for Control Measures to Include in BOTW Regional Modeling – NOx Area Sources

	ICI Boilers < 25 mmBTU/hour			ICI Boilers 25-50 mmBtu/hour			ICI Boilers 50-100 mmBtu/hour			Residential and Commercial Home Heating Oil		
State	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**
CT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
DE	No	No	No	No	No	No	No	No	No	No	No	No
DC	No	No	No	No	No	No	No	No	No	No	Yes	Yes
ME	No	No	No	No	No	No	No	No	No	No	Yes	Yes
MD	No	No	No	No	No	No	No	No	No	No	Yes	Yes
MA	No	No	No	No	No	No	No	No	No	No	Yes	Yes
NH	No	No	No	No	No	No	No	No	No	No	No	Yes
NJ	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
NY	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
PA	No	No	No	No	No	No	No	No	No	No	Yes	Yes
RI	No	No	No	No	No	No	No	No	No	No	Yes	Yes
VT[1]	No	No	No	No	No	No	No	No	No	No	No	No

Yes - Include emission reductions from OTC 2006 control measure in modeling inventory
No - Do not include emission reduction from OTC 2006 control measure in modeling inventory

Table 5.14 State Staff Recommendations for Control Measures to Include in BOTW Regional Modeling – SO2 Area Sources

	ICI Boilers < 25 mmBTU/hour			ICI Boilers 25-50 mmBtu/hour			ICI Boilers 50-100 mmBtu/hour			Residential Home Heating Oil		
State	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**
CT	No	No	No	No	No	No	No	No	No	No	No	Yes
DE	No	No	No	No	No	No	No	No	No	No	No	No
DC	No	No	No	No	No	No	No	No	No	No	Yes	Yes
ME	No	No	No	No	No	No	No	No	No	No	Yes	Yes
MD	No	No	No	No	No	No	No	No	No	No	Yes	Yes
MA	No	No	No	No	No	No	No	No	No	No	Yes	Yes
NH	No	No	No	No	No	No	No	No	No	No	No	Yes
NJ	No	No	No	No	No	No	No	No	No	No	Yes	Yes
NY	No	No	No	No	No	No	No	No	No	No	Yes	Yes
PA	No	No	No	No	No	No	No	No	No	No	Yes	Yes
RI	No	No	No	No	No	No	No	No	No	No	Yes	Yes
VT[1]	No	No	No	No	No	No	No	No	No	No	No	No

Yes - Include emission reductions from OTC 2006 control measure in modeling inventory
No - Do not include emission reduction from OTC 2006 control measure in modeling inventory

Table 5.15 State Staff Recommendations for Control Measures to Include in BOTW Regional Modeling – VOC Area Sources

	Adhesives and Sealants			Emulsified and Cutback Asphalt Paving			Consumer Products			Portable Fuel Containers		
State	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**
CT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DE	Yes	Yes	Yes	No[2]	No[2]	No[2]	Yes	Yes	Yes	Yes	Yes	Yes
DC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ME	Yes	Yes	Yes	No[3]	No[3]	No[3]	Yes	Yes	Yes	Yes	Yes	Yes
MD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
NH	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NJ	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NY	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PA	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RI	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
VT[1]	No	No	No	No	No	No	No	No	No	No	No	No

Yes - Include emission reductions from OTC 2006 control measure in modeling inventory
No - Do not include emission reduction from OTC 2006 control measure in modeling inventory

1) Vermont indicated that the modeling inventory should not reflect anything beyond the 2002 OTC control level for these source categories in Vermont.
2) Delaware's existing asphalt paving regulations are more stringent than the OTC 2006 control measure.
3) Maine has not yet determined whether to include emission reductions from the OTC 2006 control measure for asphalt paving. Maine's inventory includes emissions only from cutback asphalt; no emissions are reported for emulsified asphalt.

CARB estimated that emission reductions achieved by statewide compliance with the VOC limits in the RACT/BARCT determination will range from approximately 29 to 35 tpd (CARB 1998, pg. 18). These emission reductions correspond to a 64.4 to 77.8 percent reduction from uncontrolled levels. For OTC modeling purposes, we used the lower end of this range (i.e., 64.4 percent reduction) to estimate the emission benefit for area sources due to the OTC 2006 model rule.

5.2.2 Asphalt Paving

The OTC current guideline for asphalt paving calls for a complete ban on the use of cutback asphalt during the ozone season and limits the VOC content of emulsified asphalt to two percent or less. The proposal is still under evaluation. A 20 percent reduction in emissions from emulsified asphalt was assumed for the modeling inventory.

The current regulations in all MANE-VU states generally ban the use of cutback asphalt during the ozone season. In some states, there are a few exemptions from the ban that allow for the use of cutback during the ozone season. It has not yet been determined whether states will modify their cutback asphalt rules to eliminate the exemptions. Since the VOC emissions from the use of cutback asphalt during the ozone season are generally very small, MACTEC assumed that there will be no additional emission reductions from the use of cutback asphalt during the ozone season.

The emission reductions resulting from the two percent VOC content limit on emulsified asphalt depend on the baseline VOC content of emulsified asphalt. The baseline VOC content may range from 0 to 12 percent. New Jersey used a VOC content of 8 percent in their baseline emission calculations (based on the 8 percent limit in their current rule). Reducing the VOC content to 2 percent in New Jersey will result in a 75 percent reduction. Delaware already bans the use of emulsified asphalt that contains any VOC, so there is no reduction in Delaware. Several other states used an average VOC content of 2.5 percent when developing their emission inventory. Thus, reducing the average VOC content from 2.5 percent to 2.0 percent results in a 20 percent reduction in VOC emissions. For States that did not supply a baseline VOC content for asphalt paving, we used the 20 percent reduction in VOC emissions from emulsified asphalt paving during the ozone season.

5.2.3 Consumer Products

The OTC 2006 model rule will modify the OTC 2001 model rule based on amendments adopted by CARB in July 2005. The emission reduction benefit estimation methodology is based on information developed by CARB. CARB estimates 6.05 tons per day of VOC reduced from their July 2005 amendments (CARB 2004, pg. 8), excluding the benefits from the two products (anti-static products and shaving gels) with compliance dates in 2008 or 2009. This equates to about 2,208 tons per year. The population of California as of July 1, 2005 is 36,132,147 (Census 2006). On a per capita basis, the emission reduction from the CARB July 2005 amendments equals 0.122 lbs/capita.

Since the OTC's 2006 control measure is very similar to the CARB July 2005 amendments (with the exclusion of the anti-static products and shaving gel 2008/2009 limits), the per capita emission reductions are expected to be the same in the OTR. The per capita factor after the implementation of the OTC 2001 model rule is 6.06 lbs/capita (Pechan 2001, pg. 8). The percentage reduction from the OTC's 2006 control measure was computed as shown below:

Current OTC Emission Factor	=	6.06 lbs/capita
Benefit from CARB 2005 amendments	=	0.122 lbs/capita
Percent Reduction	=	100%*(1 - (6.06 – 0.122)/6.06)
	=	2.0%

The 2.0% reduction will be applied to all states except Vermont, which indicated that they do not want the modeling inventory to reflect anything beyond the 2002 OTC control level for consumer products in Vermont.

5.2.4 Portable Fuel Containers

The OTC 2006 model rule will modify the OTC 2001 model rule based on amendments adopted by CARB in 2006. Estimated emission reductions were based on information compiled by CARB to support their recent amendments. CARB estimated that PFC emissions in 2015 will be 31.9 tpd in California with no additional controls or amendments to the 2000 PFC rules. CARB further estimates that the 2006 amendment will reduce emission from PFCs by 18.4 tpd in 2015 in California compared to the 2000 PFC regulations. Thus, at full implementation, the expected incremental reduction is approximately 58 percent, after an estimated 75 percent reduction from the original 2000 rule (CARB later adjusted the reduction to 65 percent due to unanticipated problems with spillage from the new cans).

The OTC calculations assume that States will adopt the rule by July 2007 and will provide manufacturers one year from the date of the rule to comply. Thus, new compliant PFCs will not be on the market until July 2008. Assuming a 10-year turnover to compliant cans, only 10 percent of the existing inventory of PFCs will comply with the new requirements in the summer of 2009. Therefore, only 10 percent of the full emission benefit estimated by CARB will occur by 2009 – the incremental reduction will be about 5.8 percent in

2009. In 2012, there will be a 40 percent turnover to compliant cans, resulting in an incremental reductions of about 23.2 percent. By 2018, the will be 100 percent penetration to compliant PFCs, resulting in an incremental reduction of 58 percent in 2018.

The emission reductions from the 2006 OTC PFC model rule were calculated only for the emissions accounted for in the area source inventory. Additional benefits (not estimated for this report) would be expected from equipment refueling vapor displacement and spillage that is accounted for in the nonroad inventory.

5.2.5 Industrial/Commercial/Institutional Boilers

In Resolution 06-02, the OTC Commissioners recommended that OTC member states pursue as necessary and appropriate state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies for ICI boilers based on guidelines that varied by boiler size and fuel type. Specifically, the following guidelines were provided:

	NOx Reduction from 2009 Base Emissions by Fuel Type			
Boiler Size (mmBtu/hour)	**Natural Gas**	**#2 Fuel Oil**	**#4/#6 Fuel Oil**	**Coal**
< 25	10	10	10	10
25 to 50	50	50	50	50*
50 to 100	10	10	10	10*
100 to 250	75	40	40	40*
>250	**	**	**	**

* Resolution 06-02 did not specify a percent reduction for coal; for modeling purposes, the same percent reduction specified for #4/#6 fuel oil was used for coal

** Resolution 06-02 specified the reduction for > 250mmBtu/hour boilers to be the "same as EGUs of similar size." The OTC Commissioners have not yet recommended an emission rate or percent reduction for EGUs. As a result, no reductions for ICI boilers > 250 mmBtu/hour were included in the BOTW inventory.

Since the above guidelines vary by boiler size and fuel type, the specific percent reduction applied to an area source category depends on the SCC and design capacity of the source. The SCC identifies the fuel type (for example, SCC 21-02-004-xxx describes distillate oil-fired industrial boilers, SCC 21-02-006-xxx describes natural gas-fired industrial boilers). The area source inventory does not contain any information on the sizes of the units included in the inventories. To apportion area source emissions to the boiler size ranges listed above, MACTEC used data from the *Characterization of the U.S. Industrial/Commercial Boiler Population* (May 2005, Oak Ridge National Laboratory). We used the national estimates of boiler capacity by size from Table ES-1 of the Oak

Ridge report to calculate the percentage of total boiler capacity in each size range. Since the Oak Ridge report distinguished between industrial boilers and commercial/institutional boilers, we developed separate profiles for industrial boilers and for commercial/institutional boilers. We used these boiler size profiles to calculate weighted average percent reductions industrial boilers by fuel type and commercial/institutional boilers by fuel type.

5.2.6 Residential and Commercial Heating Oil

The BOTW control measure for heating oil is based on NESCAUM's report entitled "Low Sulfur Heating Oil in the Northeast States: An Overview of Benefits, Costs and Implementation Issues." NESCAUM estimates that reducing the sulfur content of heating oil from 2,000 ppm to 500 ppm lowers SO2 emissions by 75 percent, PM emissions by 80 percent, NOx emissions by 10 percent. The 500 ppm sulfur heating oil is not expected to available on a widespread basis until 2012 at the earliest. These percent reductions were applied to residential distillate oil category (SCC 21-04-004-xxx) and commercial distillate oil category (SCC 21-03-004-xxx). These percent reductions were applied based on the state's recommendations in the matrix which identifies control measures to include and in which years the control measure should be accounted for in the modeling inventory.

5.2.7 BOTW Area Source NIF, SMOKE, and Summary Files

The Version 3 file names and descriptions delivered to MARAMA are shown in Table 5-16.

Table E-1 shows the anticipated percent reductions by SCC and year for the nonEGU point source BOTW control measures.

5.2.8 BOTW Area Source Emission Summaries

Emission summaries by state, year, and pollutant are presented in Tables 5-17 through 5-23 for CO, NH3, NOx, PM10-PRI, PM25-PRI, SO2, and VOC, respectively.

Table 5-16 BOTW Area Source NIF, IDA, and Summary File Names

File Name	Date	Description
MANEVU_BOTW2009_Area_NIFV3_2.mdb	Nov. 9, 2006	Version 3.2 of 2009 BOTW area source NIF inventory
MANEVU_BOTW2012_Area_NIFV3_2.mdb	Nov. 9, 2006	Version 3.2 of 2012 BOTW area source NIF inventory
MANEVU_BOTW2018_Area_NIFV3_2.mdb	Nov. 9, 2006	Version 3.2 of 2018 BOTW area source NIF inventory
MANEVU_BOTW2009_Area_IDAV3_2.txt	Nov. 20, 2006	Version 3.2 of 2009 BOTW area source inventory in SMOKE IDA format
MANEVU_BOTW2012_Area_IDAV3_2.txt	Nov. 20, 2006	Version 3.2 of 2012 BOTW area source inventory in SMOKE IDA format
MANEVU_BOTW2018_Area_IDA3V_2.txt	Nov. 20, 2006	Version 3.2 of 2018 BOTW area source inventory in SMOKE IDA format
MANEVU OTB BOTW Area V3_2 State Summary.xls	Nov. 8, 2006	Spreadsheet with state totals by pollutant for all area sources
MANEVU OTB BOTW Area V3_2 State SCC Summary.xls	Nov. 8, 2006	Spreadsheet with SCC totals by state and pollutant for all area sources.

Table 5-17 Area Sources
OTB/OTW and BOTW Annual CO Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	70,198	65,865	65,865	63,874	63,874	59,797	59,797
DE	14,052	15,395	15,395	15,233	15,233	14,864	14,864
DC	2,300	2,417	2,417	2,460	2,460	2,512	2,512
ME	109,223	102,743	102,743	99,877	99,877	94,181	94,181
MD	141,178	143,653	143,653	144,233	144,233	144,649	144,649
MA	137,496	132,797	132,797	130,255	130,255	125,205	125,205
NH	79,647	76,504	76,504	75,319	75,319	73,038	73,038
NJ	97,657	90,432	90,432	88,048	88,048	83,119	83,119
NY	356,254	336,576	336,576	327,118	327,118	307,659	307,659
PA	266,935	266,887	266,887	264,012	264,012	257,396	257,396
RI	8,007	8,007	8,007	8,026	8,026	8,024	8,024
VT	43,849	42,683	42,683	42,172	42,172	41,283	41,283
Total	**1,326,796**	**1,283,959**	**1,283,959**	**1,260,627**	**1,260,627**	**1,211,727**	**1,211,727**

No BOTW controls were considered for CO.

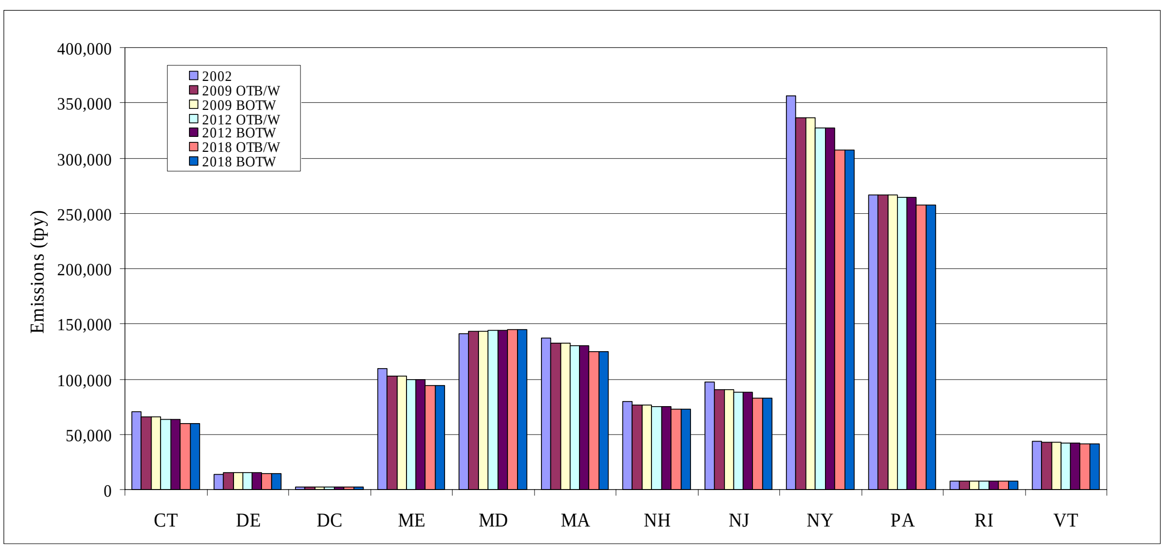


Table 5-18 Area Sources
OTB/OTW and BOTW Annual NH3 Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	5,318	5,208	5,208	5,156	5,156	5,061	5,061
DE	13,279	13,316	13,316	13,328	13,328	13,342	13,342
DC	14	16	16	16	16	17	17
ME	8,747	10,453	10,453	11,116	11,116	12,312	12,312
MD	25,834	31,879	31,879	34,222	34,222	38,155	38,155
MA	18,809	19,131	19,131	19,275	19,275	19,552	19,552
NH	2,158	2,466	2,466	2,584	2,584	2,789	2,789
NJ	17,572	19,457	19,457	20,154	20,154	21,435	21,435
NY	67,422	81,626	81,626	87,116	87,116	96,078	96,078
PA	79,911	98,281	98,281	105,418	105,418	117,400	117,400
RI	883	945	945	972	972	1,025	1,025
VT	9,848	12,156	12,156	13,062	13,062	14,580	14,580
Total	**249,795**	**294,934**	**294,934**	**312,419**	**312,419**	**341,746**	**341,746**

No BOTW controls were considered for NH3.

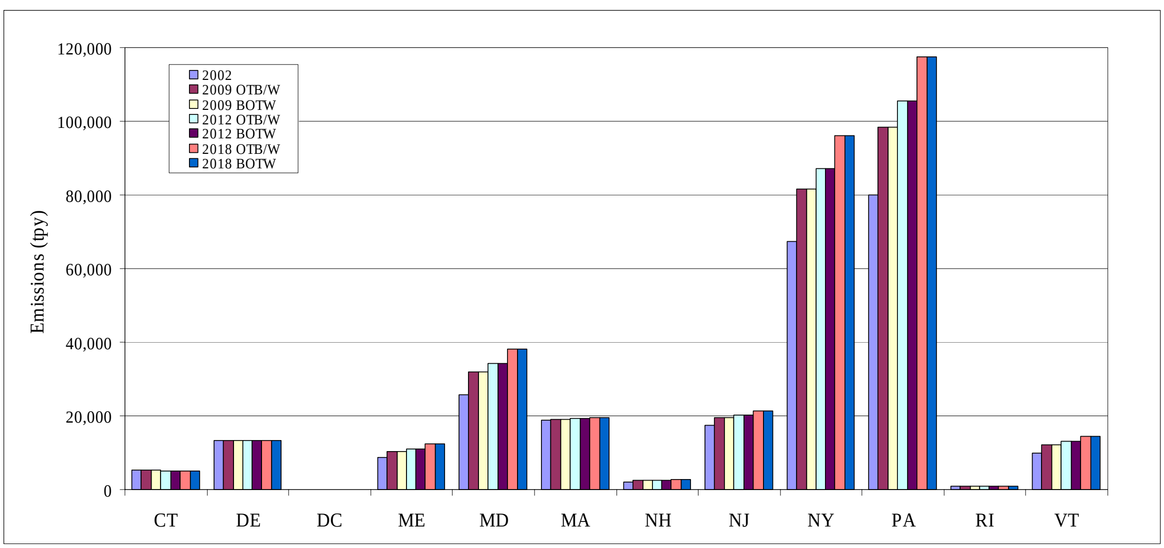


Table 5-19 Area Sources
OTB/OTW and BOTW Annual NOx Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	12,689	13,173	12,245	13,342	12,389	13,388	11,795
DE	2,608	2,821	2,821	2,913	2,913	3,014	3,014
DC	1,644	1,961	1,961	2,081	2,052	2,259	2,229
ME	7,360	7,477	7,477	7,486	7,095	7,424	7,036
MD	15,678	16,858	16,858	17,315	17,007	18,073	17,746
MA	34,281	35,732	35,732	36,331	35,321	37,187	36,199
NH	10,960	11,879	11,879	12,055	12,055	12,430	12,180
NJ	26,692	24,032	24,032	23,981	21,976	23,660	21,684
NY	98,803	106,375	95,190	107,673	92,935	108,444	93,639
PA	47,591	50,162	50,162	50,793	49,773	50,829	49,829
RI	3,886	4,149	4,149	4,260	4,112	4,397	4,249
VT	3,208	3,419	3,419	3,429	3,429	3,430	3,430
Total	**265,400**	**278,038**	**265,925**	**281,659**	**261,057**	**284,535**	**263,030**

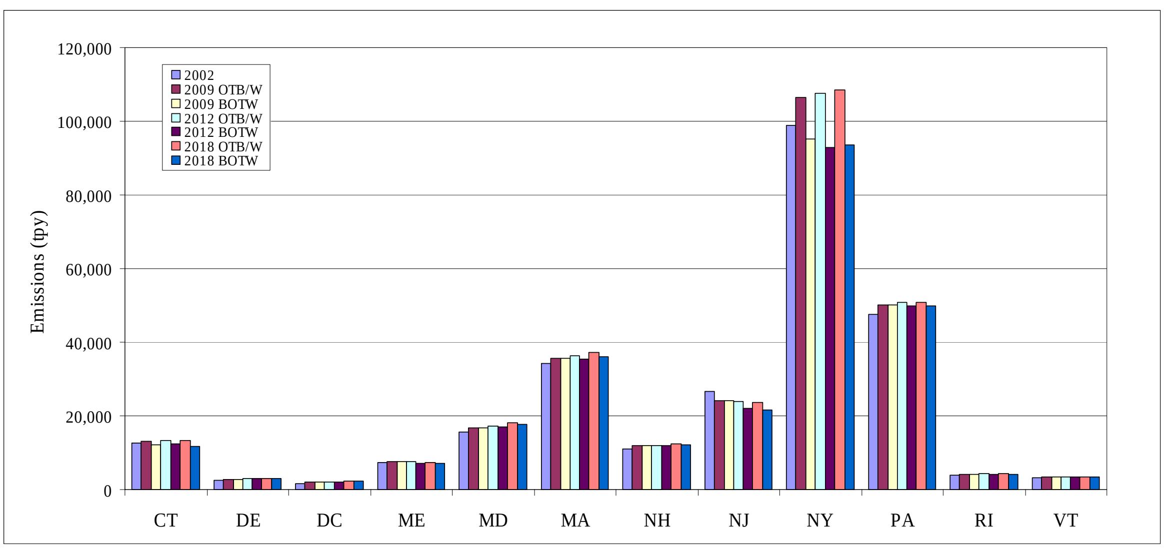


**Table 5-20 Area Sources
OTB/OTW and BOTW Annual PM10-PRI Emission Projections
(tons per year)**

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	48,281	48,970	48,970	49,004	49,004	49,479	48,734
DE	13,039	13,928	13,928	14,236	14,236	14,844	14,844
DC	3,269	3,511	3,511	3,605	3,547	3,825	3,762
ME	168,953	175,979	175,979	179,689	179,004	189,619	188,928
MD	95,060	105,944	105,944	110,141	109,829	117,396	117,066
MA	192,860	198,668	198,668	200,692	200,215	204,922	204,456
NH	43,328	46,060	46,060	47,187	47,187	49,801	49,544
NJ	61,601	61,684	61,684	61,284	60,916	60,880	60,519
NY	369,595	382,124	382,124	385,925	383,234	392,027	389,385
PA	391,897	421,235	421,235	432,844	431,787	454,970	453,934
RI	8,295	8,962	8,962	9,244	8,976	9,797	9,514
VT	56,131	60,521	60,521	62,465	62,465	66,916	66,916
Total	**1,452,309**	**1,527,586**	**1,527,586**	**1,556,316**	**1,550,400**	**1,614,476**	**1,607,602**

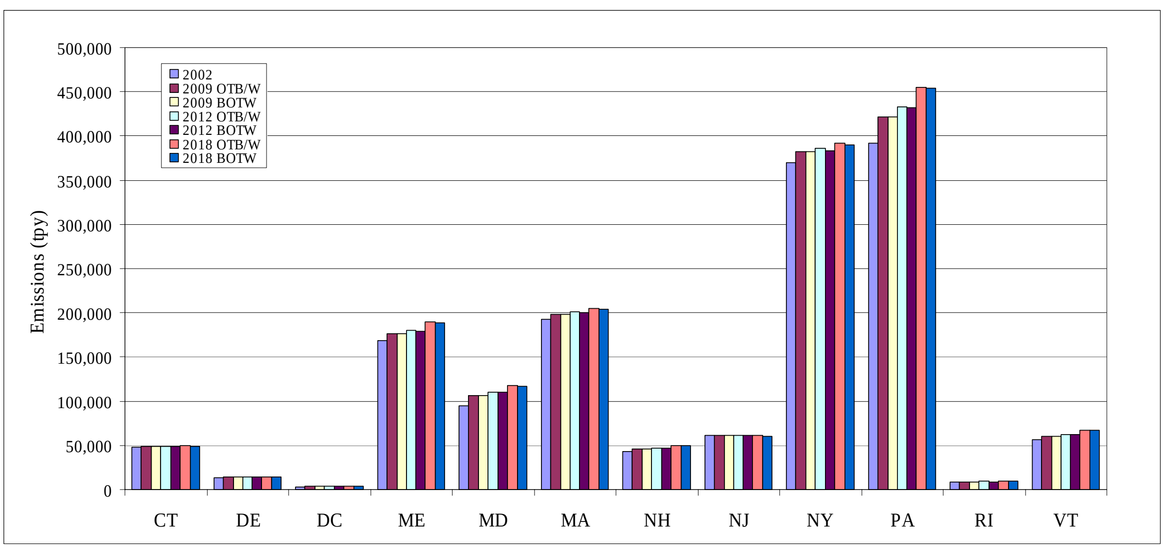


Table 5-21 Area Sources
OTB/OTW and BOTW Annual PM25-PRI Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	14,247	13,766	13,766	13,517	13,517	13,033	12,366
DE	3,204	3,387	3,387	3,403	3,403	3,426	3,426
DC	805	860	860	879	827	917	860
ME	32,774	33,026	33,026	33,189	32,576	33,820	33,201
MD	27,318	28,923	28,923	29,508	29,228	30,449	30,153
MA	42,083	43,121	43,121	43,186	42,820	43,438	43,080
NH	17,532	17,965	17,965	18,050	18,050	18,316	18,087
NJ	19,350	18,590	18,590	18,271	17,924	17,653	17,313
NY	87,154	87,576	87,576	87,260	85,011	86,422	84,211
PA	74,925	79,169	79,169	80,728	79,775	83,570	82,637
RI	2,064	2,184	2,184	2,232	1,996	2,316	2,068
VT	11,065	11,482	11,482	11,652	11,652	12,059	12,059
Total	**332,521**	**340,049**	**340,049**	**341,875**	**336,779**	**345,419**	**339,461**

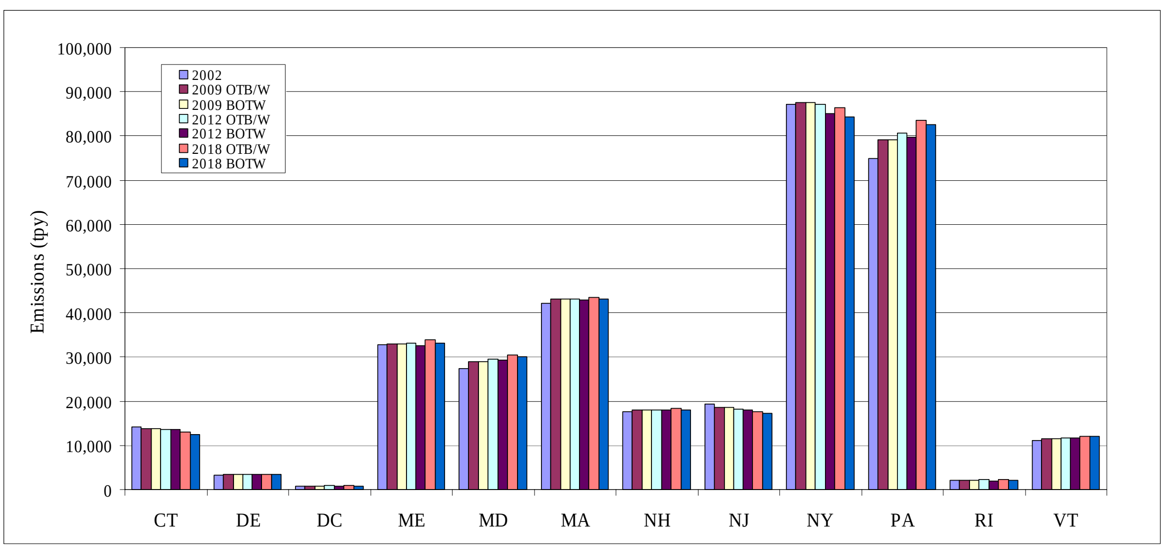


Table 5-22 Area Sources
OTB/OTW and BOTW Annual SO2 Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	12,418	12,581	12,581	12,604	12,604	12,184	3,398
DE	1,588	1,599	1,599	1,602	1,602	1,545	1,545
DC	1,337	1,487	1,487	1,541	499	1,632	522
ME	13,149	13,776	13,776	13,846	4,897	13,901	4,940
MD	12,393	13,685	13,685	14,074	8,762	14,741	9,118
MA	25,488	25,961	25,961	26,029	8,414	25,570	8,357
NH	7,072	7,463	7,463	7,470	7,470	7,421	3,118
NJ	10,744	10,672	10,672	10,697	4,435	10,510	4,374
NY	130,409	139,589	139,589	140,154	98,160	141,408	100,452
PA	63,679	67,535	67,535	67,446	49,212	66,363	48,475
RI	4,557	5,024	5,024	5,189	1,316	5,398	1,368
VT	4,087	4,646	4,646	4,687	4,687	4,764	4,764
Total	**286,921**	**304,018**	**304,018**	**305,339**	**202,058**	**305,437**	**190,431**

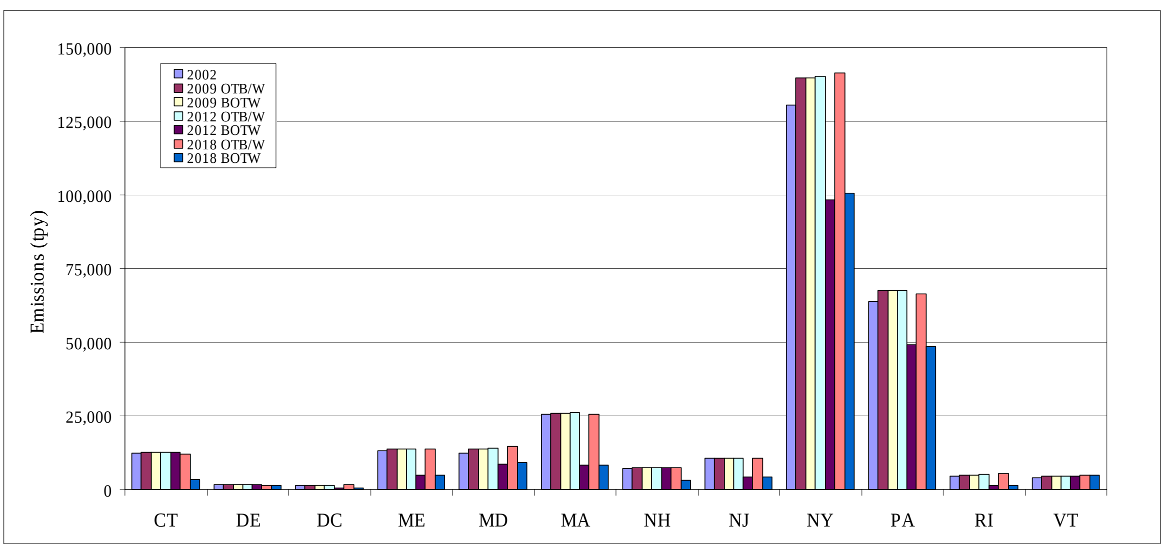
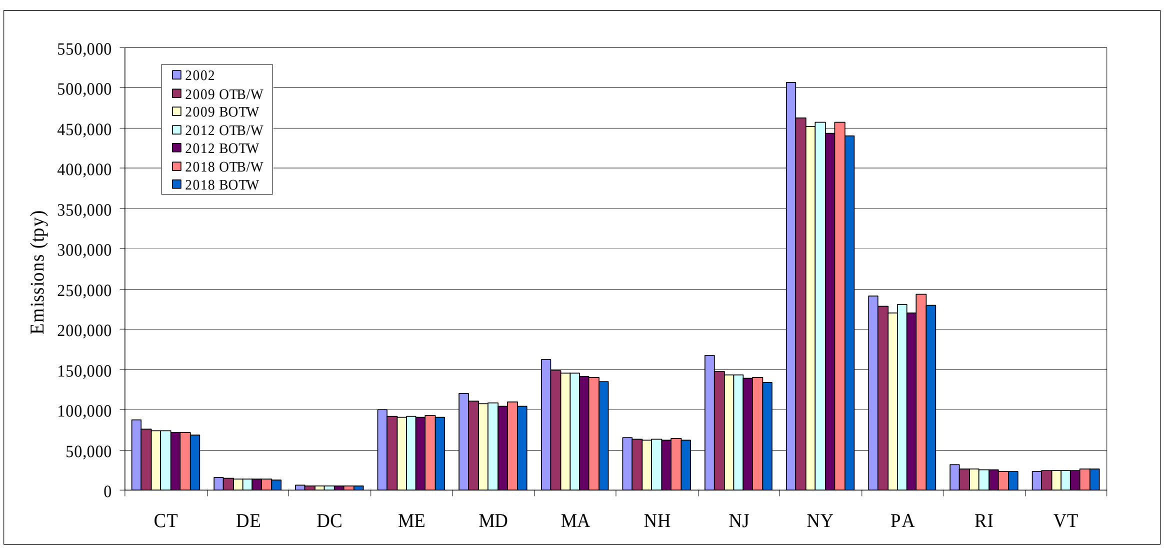


Table 5-23 Area Sources
OTB/OTW and BOTW Annual VOC Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	87,302	75,693	73,738	73,560	71,249	71,274	68,395
DE	15,519	14,245	13,794	13,943	13,408	13,744	13,066
DC	6,432	5,420	5,300	5,352	5,144	5,255	4,991
ME	100,621	91,910	90,869	91,667	90,457	92,410	90,866
MD	120,254	110,385	107,527	108,067	104,400	110,046	104,615
MA	162,145	148,625	145,059	145,674	140,848	140,558	134,963
NH	65,370	63,069	61,860	63,356	61,913	64,368	62,649
NJ	167,882	147,617	143,089	143,752	138,646	139,626	134,089
NY	507,292	462,811	451,669	456,856	443,940	457,421	440,892
PA	240,785	228,444	219,733	230,393	219,897	243,421	230,011
RI	31,402	26,695	26,572	25,548	25,315	23,561	23,305
VT	23,265	24,068	24,068	24,635	24,634	26,198	26,197
Total	**1,528,269**	**1,398,982**	**1,363,278**	**1,382,803**	**1,339,851**	**1,387,882**	**1,334,039**



5.3 Nonroad Mobile Sources

In the June 2007 MOU, the OTC Commissioners recommended that states pursue state-specific rulemakings for one nonroad source categories – portable fuel containers. The OTC 2006 control measure for portable fuel containers will result in addition VOC emission reduction from the refueling of nonroad equipment. However, these reductions could not be estimated due to resource and time constraints.

5.4 Electric Generating Units

In the June 2008 Statement on EGUs, the OTC Commissioners directed OTC staff to complete an evaluation and recommendations for a program beyond CAIR that includes strategies to address the base, intermediate and peak load emissions. No specific emission reduction targets were identified. States specified that no additional reductions from EGUs be included in the BOTW inventory.

5.5 Onroad Mobile Sources

In Resolution 06-02, the OTC Commissioners recommended that the OTC member states pursue a region fuel program consistent with the Energy Act of 2005. No specific emission reduction targets were identified. States specified that no additional reductions from onroad mobile sources be included in the BOTW inventory.

In the June 2007 MOU, the OTC Commissioners recommended that states pursue state-specific rulemakings to implement a mandatory diesel engine chip reflash program. It is our understanding that the emission reductions from the diesel engine chip reflash program are already accounted for in MANE-VU's OTB emission inventory.

Appendix A – NonEGU Point Source Growth Factors

Table A-1 Connecticut Growth Factors by SIC Code

SIC	GF_02_09	GF_02_12	GF_02_18	CTDOL_CAT
0181	1.0019	1.0027	1.0042	Agricultural, Crop Production
1422	0.9400	0.9143	0.8629	Mining
1429	0.9400	0.9143	0.8629	Mining
2051	0.9355	0.9079	0.8526	Manufacturing, Food
2096	0.9355	0.9079	0.8526	Manufacturing, Food
2261	0.9254	0.8934	0.8295	Manufacturing, Textile Product Mills
2262	0.9254	0.8934	0.8295	Manufacturing, Textile Product Mills
2284	0.9254	0.8934	0.8295	Manufacturing, Textile Product Mills
2298	0.9254	0.8934	0.8295	Manufacturing, Textile Product Mills
2434	1.0679	1.0969	1.1551	Manufacturing, Wood Products
2522	1.0435	1.0621	1.0994	Manufacturing, Furniture & Related
2541	1.0679	1.0969	1.1551	Manufacturing, Wood Products
2621	0.8706	0.8152	0.7043	Manufacturing, Paper
2631	0.8706	0.8152	0.7043	Manufacturing, Paper
2652	0.8706	0.8152	0.7043	Manufacturing, Paper
2653	0.8706	0.8152	0.7043	Manufacturing, Paper
2672	0.8706	0.8152	0.7043	Manufacturing, Paper
2673	0.8706	0.8152	0.7043	Manufacturing, Paper
2711	0.8386	0.7695	0.6312	Manufacturing, Printing & Related Activ
2752	0.8386	0.7695	0.6312	Manufacturing, Printing & Related Activ
2754	0.8386	0.7695	0.6312	Manufacturing, Printing & Related Activ
2759	0.8386	0.7695	0.6312	Manufacturing, Printing & Related Activ
2821	1.1024	1.1464	1.2342	Manufacturing, Chemical
2833	1.1024	1.1464	1.2342	Manufacturing, Chemical
2869	1.1024	1.1464	1.2342	Manufacturing, Chemical
2875	1.1024	1.1464	1.2342	Manufacturing, Chemical
3052	0.9591	0.9416	0.9066	Manufacturing, Plastic & Rubber Product
3069	0.9591	0.9416	0.9066	Manufacturing, Plastic & Rubber Product
3081	0.9591	0.9416	0.9066	Manufacturing, Plastic & Rubber Product
3086	0.9591	0.9416	0.9066	Manufacturing, Plastic & Rubber Product
3087	0.9591	0.9416	0.9066	Manufacturing, Plastic & Rubber Product
3272	0.9841	0.9772	0.9636	Manufacturing, Miscellaneous
3312	0.8713	0.8162	0.7059	Manufacturing, Primary Metal
3351	0.8713	0.8162	0.7059	Manufacturing, Primary Metal
3357	0.8713	0.8162	0.7059	Manufacturing, Primary Metal
3423	0.9150	0.8786	0.8057	Manufacturing, Fabricated Metal
3429	0.9150	0.8786	0.8057	Manufacturing, Fabricated Metal
3444	0.9150	0.8786	0.8057	Manufacturing, Fabricated Metal
3469	0.9150	0.8786	0.8057	Manufacturing, Fabricated Metal
3471	0.9150	0.8786	0.8057	Manufacturing, Fabricated Metal
3479	0.9150	0.8786	0.8057	Manufacturing, Fabricated Metal
3497	0.9150	0.8786	0.8057	Manufacturing, Fabricated Metal
3562	0.8778	0.8254	0.7206	Manufacturing, Machinery

SIC	GF_02_09	GF_02_12	GF_02_18	CTDOL_CAT
3569	0.8778	0.8254	0.7206	Manufacturing, Machinery
3579	0.8452	0.7788	0.6461	Manufacturing, Computer & Electronic Eq
3634	0.9149	0.8784	0.8054	Manufacturing, Electrical Equipment, Ap
3675	0.9149	0.8784	0.8054	Manufacturing, Electrical Equipment, Ap
3714	0.9705	0.9578	0.9326	Manufacturing, Transportation Equipment
3721	0.9705	0.9578	0.9326	Manufacturing, Transportation Equipment
3724	0.9705	0.9578	0.9326	Manufacturing, Transportation Equipment
3728	0.9705	0.9578	0.9326	Manufacturing, Transportation Equipment
3731	0.9705	0.9578	0.9326	Manufacturing, Transportation Equipment
3827	0.9841	0.9772	0.9636	Manufacturing, Miscellaneous
3949	0.9841	0.9772	0.9636	Manufacturing, Miscellaneous
3951	0.9841	0.9772	0.9636	Manufacturing, Miscellaneous
4226	1.0921	1.1316	1.2106	Transportation & Warehousing, Warehousi
4911	0.9550	0.9358	0.8972	Utilities
4922	0.9550	0.9358	0.8972	Utilities
4924	0.9550	0.9358	0.8972	Utilities
4931	1.1439	1.2056	1.3290	Waste Management & Remediation Services
4952	1.1439	1.2056	1.3290	Waste Management & Remediation Services
4953	1.1439	1.2056	1.3290	Waste Management & Remediation Services
4961	0.9550	0.9358	0.8972	Utilities
5171	1.0605	1.0864	1.1382	Wholesale Trade, Nondurable Goods
6036	1.0569	1.0814	1.1302	Finance & Insurance
6512	1.0197	1.0282	1.0451	Real Estate & Rental & Leasing
6513	1.0197	1.0282	1.0451	Real Estate & Rental & Leasing
7389	1.0569	1.0814	1.1302	Finance & Insurance
8051	1.0824	1.1177	1.1883	Health Care & Social Assistance, Nursin
8062	1.0583	1.0833	1.1334	Health Care & Social Assistance, Hospit
8063	1.0583	1.0833	1.1334	Health Care & Social Assistance, Hospit
8211	1.0642	1.0918	1.1468	Educational Services
8221	1.0642	1.0918	1.1468	Educational Services
8631	1.0642	1.0918	1.1468	Educational Services
8734	1.1189	1.1699	1.2718	Professional, Scientific, and Technical
9223	1.0185	1.0264	1.0423	Government
9511	1.0185	1.0264	1.0423	Government
9621	1.0185	1.0264	1.0423	Government
9711	1.0185	1.0264	1.0423	Government
3900	0.9841	0.9772	0.9636	Manufacturing, Miscellaneous
5093	1.0527	1.0754	1.1206	Wholesale Trade, Durable Goods
4200	0.9871	0.9815	0.9705	Transportation & Warehousing, Truck Tra

Table A-2 Non-EGU Point Source Growth Factors by SCC Code

See Electronic File: MANE-VU_NonEGU_gf_scc.xls

This table contains 12,791 records with NonEGU point source growth factors by county and SCC. The format for the tables is as follows:

Column A – County FIPS code

Column B – Source Classification Code (SCC)

Column C – EGAS_02_09 this is the EGAS 5.0 factor for projecting from 2002 to 2009

Column D – AEO5_02_09 this is the DOE AEO 2005 factor for projecting from 2002 to 2009

Column E – ST_02_09 this is the state-supplied factor for projecting from 2002 to 2009

Column F – GF_02_09 this is the final factor actually used for projecting from 2002 to 2009 (it is the state-supplied factor, if available; if no state-supplied factor, then it is the AEO2005 factor; if no AEO2005 factor, then it is the default EGAS 5.0 factor)

Column G – EGAS_02_12 this is the EGAS 5.0 factor for projecting from 2002 to 2012

Column H – AEO5_02_12 this is the DOE AEO 2005 factor for projecting from 2002 to 2012

Column I – ST_02_12 this is the state-supplied factor for projecting from 2002 to 2012

Column J – GF_02_09 this is the final factor actually used for projecting from 2002 to 2012 (it is the state-supplied factor, if available; if no state-supplied factor, then it is the AEO2005 factor; if no AEO2005 factor, then it is the default EGAS 5.0 factor)

Column K – EGAS_02_18 this is the EGAS 5.0 factor for projecting from 2002 to 2018

Column J – AEO5_02_18 this is the DOE AEO 2005 factor for projecting from 2002 to 2018

Column M– ST_02_18 this is the state-supplied factor for projecting from 2002 to 2018

Column N – GF_02_09 this is the final factor actually used for projecting from 2002 to 2012 (it is the state-supplied factor, if available; if no state-supplied factor, then it is the AEO2005 factor; if no AEO2005 factor, then it is the default EGAS 5.0 factor)

Column O – SCC description

Appendix B – NonEGU Point Source Control Factors

Table B-1 NonEGU Emission Units Affected by the NOx SIP Call Phase I

FIPS	SITE ID	Facility Name	EU ID	Ozone Season Allowance (tpy)	Prorated Annual Emissions (tpy)	Unit Description
09003	1509	PRATT & WHITNEY DIV UTC	P0049	11	26	FT-8 COGENERATION GAS TURBINE
09011	0604	PFIZER INC	P0001	33	79	BLR B&W FM140-97 #8
09011	0604	PFIZER INC	R0012	31	74	BLR CE #5 (101-4)
09011	3102	SPRAGUE PAPERBOARD INC	R0003	75	180	BLR B&W PFI-22-0 #1
24001	001-0011	WESTVACO FINE PAPERS	1	500	1200	001-0011-3-0018
24001	001-0011	WESTVACO FINE PAPERS	2	440	1056	001-0011-3-0019
25009	1190138	GENERAL ELECTRIC AIRCRAFT	03	29	68	BOILER #3-BABCOCK+WILCOX PPL-2897 DUAL FUEL EV99-3
25009	1190138	GENERAL ELECTRIC AIRCRAFT	05	24	58	TURBINE #1-GE G5301 DUAL FUEL BLDG 99-8
25017	1191844	MIT	02	132	317	TURBINE #1-ABB GT10 DUEL FUEL(EXHAUST TO HRSG)
25025	1190507	TRIGEN BOSTON ENERGY	01	47	113	BOILER #1-BABCOCK+WILCOX HSB8477A DUAL FUEL
25025	1190507	TRIGEN BOSTON ENERGY	02	47	113	BOILER #2-BABCOCK+WILCOX JSB8477B DUAL FUEL
25025	1190507	TRIGEN BOSTON ENERGY	03	47	113	BOILER #3-FOSTER+WHEELER SC DUAL FUEL
25025	1190507	TRIGEN BOSTON ENERGY	04	47	113	BOILER #4-BABCOCK+WILCOX HSB8608A DUAL FUEL
36031	5154800008	INTERNATIONAL PAPER TICONDEROG	POWERH	227	545	EMISSION UNIT
36055	8261400205	KODAK PARK DIVISION	U00015	1721	4130	EMISSION UNIT
36091	5412600007	INTERNATIONAL PAPER HUDSON RIV	UBOILR	124	298	EMISSION UNIT
42003	4200300022	SHENANGO INC.	005	13	31	BOILER #9, NATURAL GAS
42017	420170306	EXELON GENERATION CO/FAIRLESS	043	2	5	POWER HOUSE BOILER NO. 3

FIPS	SITE ID	Facility Name	EU ID	Ozone Season Allowance (tpy)	Prorated Annual Emissions (tpy)	Unit Description
42017	420170306	EXELON GENERATION CO/FAIRLESS	044	73	175	POWER HOUSE BOILER NO. 4
42017	420170306	EXELON GENERATION CO/FAIRLESS	045	61	146	POWER HOUSE BOILER NO. 5
42045	420450016	KIMBERLY CLARK PA LLC/CHESTER	034	2	5	
42045	420450220	FPL ENERGY MH50 LP/MARCUS HOOK	031	82	197	COGENERATION UNIT - ABB TYPE B
42047	420470005	WEYERHAEUSER/JOHNSONBURG MILL	040	85	204	BOILER #81
42047	420470005	WEYERHAEUSER/JOHNSONBURG MILL	041	86	206	BOILER #82
42091	420910028	MERCK & CO/WEST POINT	039	101	242	COGEN II GAS TURBINE
42101	4210101551	SUNOCO CHEMICALS (FORMER ALLIE	052	86	206	BL-703: BOILER #3
42131	421310009	PROCTER & GAMBLE PAPER PROD CO	035	203	482	WESTINGHOUSE 251B12
42133	421330016	PH GLATFELTER CO/SPRING GROVE	034	146	350	#4 POWER BOILER

Table B-2 Cement Kilns Affected by the NOx SIP Call Phase I

FIPS	SITE ID	Facility Name	EU ID	Control Factor	Unit Description
24013	013-0012	LEHIGH PORTLAND CEMENT	39	25.00	013-0012-6-0256 013-0012-6-0256
24021	021-0013	ESSROC CEMENT	21	25.00	021-0013-6-0465 021-0013-6-0465
24021	021-0013	ESSROC CEMENT	22	25.00	021-0013-6-0466 021-0013-6-0466
24043	043-0008	INDEPENDENT CEMENT/ST. LAWEREN	24	25.00	043-0008-6-0495 043-0008-6-0495
36001	4012400001	LAFARGE BUILDING MATERIALS INC	041000	25.00	EMISSION UNIT
36039	4192600021	ST LAWRENCE CEMENT CORP-CATSKI	U00K18	25.00	EMISSION UNIT
36113	5520500013	GLENS FALLS LEHIGH CEMENT	0UKILN	25.00	EMISSION UNIT
42011	420110039	LEHIGH CEMENT CO /EVANSVILLE	121	70.00	PORTLAND CEMENT KILN #1
42011	420110039	LEHIGH CEMENT CO /EVANSVILLE	122	70.00	PORTLAND CEMENT KILN #2
42019	420190024	ARMSTRONG CEMENT & SUPPLY	101	16.00	NO.1 KILN
42019	420190024	ARMSTRONG CEMENT & SUPPLY	121	16.00	NO.2 KILN
42073	420730024	CEMEX INC/WAMPUM CEMENT PLT	226	12.50	
42073	420730024	CEMEX INC/WAMPUM CEMENT PLT	227	0.00	
42073	420730024	CEMEX INC/WAMPUM CEMENT PLT	228	12.70	
42073	420730026	ESSROC/BESSEMER	501	8.00	
42073	420730026	ESSROC/BESSEMER	502	8.00	
42077	420770019	LAFARGE CORP/WHITEHALL PLT	101	12.28	K-2 KILN
42077	420770019	LAFARGE CORP/WHITEHALL PLT	114	100.00	K-3 KILN
42095	420950006	HERCULES CEMENT CO LP/STOCKERT	102	6.88	NO. 1 CEMENT KILN
42095	420950006	HERCULES CEMENT CO LP/STOCKERT	122	6.88	NO. 3 CEMENT KILN
42095	420950012	KEYSTONE PORTLAND CEMENT/EAST	101	27.00	CEMENT KILN NO. 1
42095	420950012	KEYSTONE PORTLAND CEMENT/EAST	102	27.00	CEMENT KILN NO. 2
42095	420950045	ESSROC/NAZARETH LOWER CEMENT	142	41.00	
42095	420950045	ESSROC/NAZARETH LOWER CEMENT	143	41.00	
42095	420950127	ESSROC/NAZARETH CEMENT PLT 3	101	41.00	
42095	420950127	ESSROC/NAZARETH CEMENT PLT 3	102	41.00	
42095	420950127	ESSROC/NAZARETH CEMENT PLT 3	103	41.00	
42095	420950127	ESSROC/NAZARETH CEMENT PLT 3	104	41.00	
42133	421330060	LEHIGH CEMENT CO/YORK OPERATION	200	27.00	

Table B-3 Large IC Engines Affected by the NOx SIP Call Phase II

FIPS	SITE ID	Facility Name	EU ID	Control Factor	Unit Description
24027	027-0223	TRANSCONTINENTAL GAS PIPE LINE	1	80.00	027-0223-5-0054 boiler
42005	420050015	DOMINION TRANS INC/SOUTH BEND	101	80.00	ENGINE #1 (2000 BHP)
42005	420050015	DOMINION TRANS INC/SOUTH BEND	102	80.00	ENGINE #2 (2000 BHP)
42005	420050015	DOMINION TRANS INC/SOUTH BEND	103	80.00	ENGINE #3 (2000 BHP)
42005	420050015	DOMINION TRANS INC/SOUTH BEND	104	80.00	ENGINE #4 (2000 BHP)
42005	420050015	DOMINION TRANS INC/SOUTH BEND	105	80.00	ENGINE #5 (2000 BHP)
42005	420050015	DOMINION TRANS INC/SOUTH BEND	106	80.00	ENGINE #6 (2000 BHP)
42029	420290047	TRANSCONTINENTAL GAS/FRAZER ST	741	80.00	#11 I-C GAS COMPRESSOR ENGINE
42029	420290047	TRANSCONTINENTAL GAS/FRAZER ST	742	80.00	#12 I-C GAS COMPRESSOR ENGINE
42029	420290047	TRANSCONTINENTAL GAS/FRAZER ST	743	80.00	#13 I-C GAS COMPRESSOR ENGINE
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	101	90.00	COOPER-BESSEMER ENGINE #1
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	101	90.00	COOPER-BESSEMER ENGINE #1
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	101	90.00	COOPER-BESSEMER ENGINE #1
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	101	90.00	COOPER-BESSEMER ENGINE #1
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	102	90.00	COOPER-BESSEMER ENGINE #2
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	102	90.00	COOPER-BESSEMER ENGINE #2
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	102	90.00	COOPER-BESSEMER ENGINE #2
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	102	90.00	COOPER-BESSEMER ENGINE #2
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	103	90.00	COOPER-BESSEMER ENGINE #3
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	103	90.00	COOPER-BESSEMER ENGINE #3
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	103	90.00	COOPER-BESSEMER ENGINE #3
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	103	90.00	COOPER-BESSEMER ENGINE #3
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	104	90.00	COOPER-BESSEMER ENGINE #4
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	104	90.00	COOPER-BESSEMER ENGINE #4
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	104	90.00	COOPER-BESSEMER ENGINE #4
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	104	90.00	COOPER-BESSEMER ENGINE #4
42105	421050005	TENNESSEE GAS PIPELINE CO/313	P111	80.00	3,000HP KVT-512 ENGINE
42105	421050005	TENNESSEE GAS PIPELINE CO/313	P112	80.00	2,000HP GMVH-10C ENGINE
42133	421330053	TRANSCONTINENTAL GAS/STATION 1	036	80.00	COOPER-BESSEMER ENGINE #4
42133	421330053	TRANSCONTINENTAL GAS/STATION 1	037	80.00	COOPER-BESSEMER ENGINE #5

B-4 NonEGU Control Factors for Post-2002 MACT Categories

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
20100102	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20100202	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20100702	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20100802	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20100902	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200102	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200104	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200202	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200204	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200301	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200501	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200702	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200706	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200902	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20201001	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20201002	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20201012	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20201014	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20201602	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20201702	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20300101	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20300301	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
30400101	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400102	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400103	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400104	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400105	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400106	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400107	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400108	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400109	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400110	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400111	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400112	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400113	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400114	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400115	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400116	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400117	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400118	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400120	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400121	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400130	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400131	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400132	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400133	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400150	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400160	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400199	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30500301	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30500302	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500303	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500304	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500305	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500306	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500307	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500308	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500309	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500310	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500311	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500312	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500313	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500314	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500315	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500316	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500317	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500318	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500319	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500321	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500322	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500330	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500331	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500332	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500333	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500334	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500335	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500340	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500342	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500350	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500351	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500355	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500360	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500361	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500370	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500397	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500398	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500399	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30501601	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501602	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501603	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501604	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501605	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501606	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501607	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501608	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501609	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501610	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501611	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501612	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501613	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501614	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501615	PM10-PRI	28.000	AAAAA	Lime Manufacturing

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30501616	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501617	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501618	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501619	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501620	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501621	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501622	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501623	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501624	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501625	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501626	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501627	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501628	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501629	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501630	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501631	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501632	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501633	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501640	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501650	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501660	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501699	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30400101	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400102	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400103	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400104	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400105	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400106	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400107	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400108	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400109	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400110	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400111	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400112	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400113	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400114	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400115	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400116	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400117	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400118	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400120	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400121	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400130	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400131	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400132	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400133	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400150	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400160	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400199	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30500301	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500302	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500303	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30500304	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500305	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500306	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500307	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500308	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500309	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500310	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500311	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500312	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500313	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500314	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500315	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500316	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500317	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500318	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500319	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500321	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500322	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500330	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500331	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500332	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500333	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500334	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500335	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500340	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500342	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500350	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500351	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500355	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500360	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500361	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500370	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500397	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500398	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500399	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30501601	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501602	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501603	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501604	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501605	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501606	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501607	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501608	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501609	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501610	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501611	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501612	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501613	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501614	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501615	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501616	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501617	PM25-PRI	28.000	AAAAA	Lime Manufacturing

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30501618	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501619	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501620	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501621	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501622	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501623	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501624	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501625	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501626	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501627	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501628	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501629	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501630	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501631	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501632	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501633	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501640	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501650	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501660	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501699	PM25-PRI	28.000	AAAAA	Lime Manufacturing
20100101	VOC	0.250	YYYY	Stationary Combustion Turbines
20100102	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20100201	VOC	0.250	YYYY	Stationary Combustion Turbines
20100202	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20100702	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20100802	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20100902	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200101	VOC	0.250	YYYY	Stationary Combustion Turbines
20200102	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200103	VOC	0.250	YYYY	Stationary Combustion Turbines
20200104	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200201	VOC	0.250	YYYY	Stationary Combustion Turbines
20200202	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200203	VOC	0.250	YYYY	Stationary Combustion Turbines
20200204	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200209	VOC	0.250	YYYY	Stationary Combustion Turbines
20200301	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200501	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200702	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200706	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200902	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20201001	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20201002	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20201012	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20201014	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20201602	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20201702	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20300101	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20300102	VOC	0.250	YYYY	Stationary Combustion Turbines
20300109	VOC	0.250	YYYY	Stationary Combustion Turbines
20300202	VOC	0.250	YYYY	Stationary Combustion Turbines
20300203	VOC	0.250	YYYY	Stationary Combustion Turbines

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
20300209	VOC	0.250	YYYY	Stationary Combustion Turbines
20300301	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20300701	VOC	0.250	YYYY	Stationary Combustion Turbines
30100501	VOC	26.100	YY	Generic MACT (Carbon Black)
30100502	VOC	26.100	YY	Generic MACT (Carbon Black)
30100503	VOC	26.100	YY	Generic MACT (Carbon Black)
30100504	VOC	26.100	YY	Generic MACT (Carbon Black)
30100506	VOC	26.100	YY	Generic MACT (Carbon Black)
30100507	VOC	26.100	YY	Generic MACT (Carbon Black)
30100508	VOC	26.100	YY	Generic MACT (Carbon Black)
30100509	VOC	26.100	YY	Generic MACT (Carbon Black)
30100510	VOC	26.100	YY	Generic MACT (Carbon Black)
30100599	VOC	26.100	YY	Generic MACT (Carbon Black)
30101005	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101012	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101013	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101014	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101015	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101021	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101022	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101023	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101025	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101026	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101027	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101028	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101033	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101034	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101035	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101036	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101037	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101040	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101045	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101046	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101047	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101050	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101051	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101052	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101053	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101054	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101055	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101061	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101062	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101063	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101064	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101073	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101074	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101075	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101076	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101077	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30101080	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101085	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101086	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101087	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101099	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101827	VOC	55.700	OOO	Polymers and Resins III
30101837	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101880	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101881	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101882	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101883	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101884	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101885	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101890	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101891	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101892	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101893	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101894	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101899	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30103201	VOC	87.400	UUU	Petroleum Refineries
30103202	VOC	87.400	UUU	Petroleum Refineries
30103203	VOC	87.400	UUU	Petroleum Refineries
30103204	VOC	87.400	UUU	Petroleum Refineries
30103205	VOC	87.400	UUU	Petroleum Refineries
30103299	VOC	87.400	UUU	Petroleum Refineries
30103301	VOC	64.820	MMM	Pesticide Active Ingredient
30103311	VOC	64.820	MMM	Pesticide Active Ingredient
30103312	VOC	64.820	MMM	Pesticide Active Ingredient
30103399	VOC	64.820	MMM	Pesticide Active Ingredient
30103901	VOC	44.500	YY	Generic MACT (Cyanide)
30103902	VOC	44.500	YY	Generic MACT (Cyanide)
30103903	VOC	44.500	YY	Generic MACT (Cyanide)
30105001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105101	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105105	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105108	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105110	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105112	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105114	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105116	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105118	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105120	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105122	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105124	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105130	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30110002	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30110003	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30110004	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30110005	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30110080	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30110099	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30111103	VOC	43.900	QQQQQ	Friction Products Manufacturing

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30111199	VOC	43.900	QQQQQ	Friction Products Manufacturing
30113001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30113003	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30113004	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30113005	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30113006	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30113007	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30201901	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201902	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201903	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201904	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201905	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201906	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201907	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201908	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201909	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201911	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201912	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201913	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201914	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201915	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201916	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201917	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201918	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201919	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201920	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201921	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201923	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201925	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201926	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201927	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201930	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201931	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201932	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201933	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201935	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201939	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201941	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201942	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201945	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201949	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201950	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201960	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201997	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201998	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201999	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30203404	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203405	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203406	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203407	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203410	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203415	VOC	12.500	CCCC	Manufacturing Nutritional Yeast

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30203420	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203421	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203422	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203423	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203424	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203504	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203505	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203506	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203507	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203510	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203530	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203531	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203532	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203533	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203534	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203535	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203536	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203540	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30300303	VOC	50.000	CCCCC	Coke Ovens: Pushing, Quenching, Battery St
30300304	VOC	50.000	CCCCC	Coke Ovens: Pushing, Quenching, Battery St
30400301	VOC	40.000	EEEEE	Iron and Steel Foundries
30400302	VOC	40.000	EEEEE	Iron and Steel Foundries
30400303	VOC	40.000	EEEEE	Iron and Steel Foundries
30400304	VOC	40.000	EEEEE	Iron and Steel Foundries
30400305	VOC	40.000	EEEEE	Iron and Steel Foundries
30400310	VOC	40.000	EEEEE	Iron and Steel Foundries
30400314	VOC	40.000	EEEEE	Iron and Steel Foundries
30400315	VOC	40.000	EEEEE	Iron and Steel Foundries
30400316	VOC	40.000	EEEEE	Iron and Steel Foundries
30400317	VOC	40.000	EEEEE	Iron and Steel Foundries
30400318	VOC	40.000	EEEEE	Iron and Steel Foundries
30400319	VOC	40.000	EEEEE	Iron and Steel Foundries
30400320	VOC	40.000	EEEEE	Iron and Steel Foundries
30400321	VOC	40.000	EEEEE	Iron and Steel Foundries
30400322	VOC	40.000	EEEEE	Iron and Steel Foundries
30400325	VOC	40.000	EEEEE	Iron and Steel Foundries
30400330	VOC	40.000	EEEEE	Iron and Steel Foundries
30400331	VOC	40.000	EEEEE	Iron and Steel Foundries
30400332	VOC	40.000	EEEEE	Iron and Steel Foundries
30400333	VOC	40.000	EEEEE	Iron and Steel Foundries
30400340	VOC	40.000	EEEEE	Iron and Steel Foundries
30400341	VOC	40.000	EEEEE	Iron and Steel Foundries
30400342	VOC	40.000	EEEEE	Iron and Steel Foundries
30400350	VOC	40.000	EEEEE	Iron and Steel Foundries
30400351	VOC	40.000	EEEEE	Iron and Steel Foundries
30400352	VOC	40.000	EEEEE	Iron and Steel Foundries
30400353	VOC	40.000	EEEEE	Iron and Steel Foundries
30400354	VOC	40.000	EEEEE	Iron and Steel Foundries
30400355	VOC	40.000	EEEEE	Iron and Steel Foundries
30400356	VOC	40.000	EEEEE	Iron and Steel Foundries
30400357	VOC	40.000	EEEEE	Iron and Steel Foundries
30400358	VOC	40.000	EEEEE	Iron and Steel Foundries

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30400360	VOC	40.000	EEEEE	Iron and Steel Foundries
30400370	VOC	40.000	EEEEE	Iron and Steel Foundries
30400371	VOC	40.000	EEEEE	Iron and Steel Foundries
30400398	VOC	40.000	EEEEE	Iron and Steel Foundries
30400399	VOC	40.000	EEEEE	Iron and Steel Foundries
30500101	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500102	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500103	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500104	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500105	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500106	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500107	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500108	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500110	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500111	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500112	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500113	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500114	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500115	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500116	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500117	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500118	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500119	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500120	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500121	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500130	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500131	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500132	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500133	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500134	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500135	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500140	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500141	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500142	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500143	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500144	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500145	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500146	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500147	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500150	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500151	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500152	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500153	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500154	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500198	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500199	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30501201	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501202	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501203	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501204	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501205	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501206	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30501207	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501208	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501209	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501211	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501212	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501213	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501214	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501215	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501221	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501222	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501223	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501224	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501299	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30600201	VOC	87.400	UUU	Petroleum Refineries (FCC)
30600202	VOC	87.400	UUU	Petroleum Refineries (FCC)
30600301	VOC	87.400	UUU	Petroleum Refineries (FCC)
30600402	VOC	87.400	UUU	Petroleum Refineries (FCC)
30600901	VOC	65.630	UUU	Petroleum Refineries
30600902	VOC	65.630	UUU	Petroleum Refineries
30600903	VOC	65.630	UUU	Petroleum Refineries
30600904	VOC	65.630	UUU	Petroleum Refineries
30600905	VOC	65.630	UUU	Petroleum Refineries
30600906	VOC	65.630	UUU	Petroleum Refineries
30600999	VOC	65.630	UUU	Petroleum Refineries
30601001	VOC	65.630	UUU	Petroleum Refineries
30601101	VOC	65.630	UUU	Petroleum Refineries
30601201	VOC	65.630	UUU	Petroleum Refineries
30601301	VOC	65.630	UUU	Petroleum Refineries
30601401	VOC	65.630	UUU	Petroleum Refineries
30609901	VOC	65.630	UUU	Petroleum Refineries
30609902	VOC	65.630	UUU	Petroleum Refineries
30609903	VOC	65.630	UUU	Petroleum Refineries
30609904	VOC	65.630	UUU	Petroleum Refineries
30609905	VOC	65.630	UUU	Petroleum Refineries
30610001	VOC	65.630	UUU	Petroleum Refineries
30688801	VOC	87.400	UUU	Petroleum Refineries
30688802	VOC	87.400	UUU	Petroleum Refineries
30688803	VOC	87.400	UUU	Petroleum Refineries
30688804	VOC	87.400	UUU	Petroleum Refineries
30688805	VOC	87.400	UUU	Petroleum Refineries
30700103	VOC	7.020	MM	Comustion Sources at Kraft, Soda, and Sulf
30700104	VOC	7.020	MM	Comustion Sources at Kraft, Soda, and Sulf
30700106	VOC	7.020	MM	Comustion Sources at Kraft, Soda, and Sulf
30700110	VOC	7.020	MM	Comustion Sources at Kraft, Soda, and Sulf
30700602	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700604	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700606	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700607	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700608	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700610	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700611	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700621	VOC	41.200	DDDD	Plywood and Composite Wood Products

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30700625	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700626	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700628	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700629	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700630	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700631	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700632	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700635	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700640	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700651	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700655	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700661	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700701	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700702	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700703	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700704	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700705	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700706	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700707	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700708	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700709	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700710	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700711	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700712	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700713	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700714	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700715	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700716	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700717	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700718	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700720	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700725	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700727	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700730	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700734	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700735	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700736	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700737	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700740	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700744	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700746	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700747	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700750	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700752	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700753	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700756	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700757	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700760	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700762	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700763	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700766	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700767	VOC	41.200	DDDD	Plywood and Composite Wood Products

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30700769	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700770	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700771	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700780	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700781	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700783	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700785	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700788	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700789	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700790	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700791	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700792	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700793	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700798	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700799	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700921	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700923	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700925	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700927	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700931	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700932	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700933	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700934	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700935	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700936	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700937	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700939	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700940	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700950	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700960	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700971	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700980	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700981	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700982	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700983	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700984	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701001	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701008	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701009	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701010	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701015	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701020	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701030	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701040	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701053	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701054	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701055	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701057	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701199	VOC	82.050	JJJJ	Paper and Other Web Coating
30800101	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800102	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800103	VOC	47.600	XXXX	Rubber Tire Manufacturing

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30800104	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800105	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800106	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800107	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800108	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800109	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800110	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800111	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800112	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800113	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800114	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800115	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800116	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800117	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800120	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800121	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800122	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800123	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800124	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800125	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800126	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800127	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800128	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800129	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800130	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800131	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800132	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800133	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800197	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800198	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800199	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800701	VOC	70.000	WWWW	Reinforced Plastics
30800702	VOC	70.000	WWWW	Reinforced Plastics
30800703	VOC	70.000	WWWW	Reinforced Plastics
30800704	VOC	70.000	WWWW	Reinforced Plastics
30800705	VOC	70.000	WWWW	Reinforced Plastics
30800720	VOC	70.000	WWWW	Reinforced Plastics
30800721	VOC	70.000	WWWW	Reinforced Plastics
30800722	VOC	70.000	WWWW	Reinforced Plastics
30800723	VOC	70.000	WWWW	Reinforced Plastics
30800724	VOC	70.000	WWWW	Reinforced Plastics
30800799	VOC	70.000	WWWW	Reinforced Plastics
30801001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
31401001	VOC	43.900	QQQQQ	Friction Products Manufacturing
31401002	VOC	43.900	QQQQQ	Friction Products Manufacturing
31401501	VOC	35.790	VVVV	Boat Manufacturing
31401503	VOC	35.790	VVVV	Boat Manufacturing
31401504	VOC	35.790	VVVV	Boat Manufacturing
31401510	VOC	35.790	VVVV	Boat Manufacturing
31401511	VOC	35.790	VVVV	Boat Manufacturing
31401512	VOC	35.790	VVVV	Boat Manufacturing
31401513	VOC	35.790	VVVV	Boat Manufacturing

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
31401514	VOC	35.790	VVVV	Boat Manufacturing
31401515	VOC	35.790	VVVV	Boat Manufacturing
31401516	VOC	35.790	VVVV	Boat Manufacturing
31401517	VOC	35.790	VVVV	Boat Manufacturing
31401518	VOC	35.790	VVVV	Boat Manufacturing
31401525	VOC	35.790	VVVV	Boat Manufacturing
31401530	VOC	35.790	VVVV	Boat Manufacturing
31401531	VOC	35.790	VVVV	Boat Manufacturing
31401540	VOC	35.790	VVVV	Boat Manufacturing
31401541	VOC	35.790	VVVV	Boat Manufacturing
31401550	VOC	35.790	VVVV	Boat Manufacturing
31401551	VOC	35.790	VVVV	Boat Manufacturing
31401552	VOC	35.790	VVVV	Boat Manufacturing
31401553	VOC	35.790	VVVV	Boat Manufacturing
31401560	VOC	35.790	VVVV	Boat Manufacturing
31401561	VOC	35.790	VVVV	Boat Manufacturing
31401562	VOC	35.790	VVVV	Boat Manufacturing
31401563	VOC	35.790	VVVV	Boat Manufacturing
31401570	VOC	35.790	VVVV	Boat Manufacturing
31401571	VOC	35.790	VVVV	Boat Manufacturing
31604001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
31604002	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
31604003	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
32099997	VOC	38.900	TTTT	Leather Finishing Operations
32099998	VOC	38.900	TTTT	Leather Finishing Operations
32099999	VOC	38.900	TTTT	Leather Finishing Operations
40201101	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201103	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201104	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201105	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201111	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201112	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201113	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201114	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201115	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201116	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201121	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201122	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201197	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201198	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201199	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201201	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201210	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201301	VOC	82.050	JJJJ	Paper and Other Web Coating
40201303	VOC	82.050	JJJJ	Paper and Other Web Coating
40201304	VOC	82.050	JJJJ	Paper and Other Web Coating
40201305	VOC	82.050	JJJJ	Paper and Other Web Coating
40201310	VOC	82.050	JJJJ	Paper and Other Web Coating
40201320	VOC	82.050	JJJJ	Paper and Other Web Coating
40201330	VOC	82.050	JJJJ	Paper and Other Web Coating
40201399	VOC	82.050	JJJJ	Paper and Other Web Coating
40201601	VOC	66.730	IIII	Auto and Light Trucks Surface Coating

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
40201602	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201603	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201604	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201605	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201606	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201607	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201608	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201609	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201619	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201620	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201621	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201622	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201623	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201624	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201625	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201626	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201627	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201628	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201629	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201630	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201631	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201632	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201699	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201702	VOC	70.830	KKKK	Metal Can
40201703	VOC	70.830	KKKK	Metal Can
40201704	VOC	70.830	KKKK	Metal Can
40201705	VOC	70.830	KKKK	Metal Can
40201706	VOC	70.830	KKKK	Metal Can
40201721	VOC	70.830	KKKK	Metal Can
40201722	VOC	70.830	KKKK	Metal Can
40201723	VOC	70.830	KKKK	Metal Can
40201724	VOC	70.830	KKKK	Metal Can
40201725	VOC	70.830	KKKK	Metal Can
40201726	VOC	70.830	KKKK	Metal Can
40201727	VOC	70.830	KKKK	Metal Can
40201728	VOC	70.830	KKKK	Metal Can
40201729	VOC	70.830	KKKK	Metal Can
40201731	VOC	70.830	KKKK	Metal Can
40201732	VOC	70.830	KKKK	Metal Can
40201733	VOC	70.830	KKKK	Metal Can
40201734	VOC	70.830	KKKK	Metal Can
40201735	VOC	70.830	KKKK	Metal Can
40201736	VOC	70.830	KKKK	Metal Can
40201737	VOC	70.830	KKKK	Metal Can
40201738	VOC	70.830	KKKK	Metal Can
40201739	VOC	70.830	KKKK	Metal Can
40201799	VOC	70.830	KKKK	Metal Can
40201801	VOC	53.060	SSSS	Metal Coil
40201802	VOC	53.060	SSSS	Metal Coil
40201803	VOC	53.060	SSSS	Metal Coil
40201804	VOC	53.060	SSSS	Metal Coil
40201805	VOC	53.060	SSSS	Metal Coil

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
40201806	VOC	53.060	SSSS	Metal Coil
40201807	VOC	53.060	SSSS	Metal Coil
40201899	VOC	53.060	SSSS	Metal Coil
40202001	VOC	73.070	RRRR	Metal Furniture
40202002	VOC	73.070	RRRR	Metal Furniture
40202003	VOC	73.070	RRRR	Metal Furniture
40202004	VOC	73.070	RRRR	Metal Furniture
40202005	VOC	73.070	RRRR	Metal Furniture
40202010	VOC	73.070	RRRR	Metal Furniture
40202011	VOC	73.070	RRRR	Metal Furniture
40202012	VOC	73.070	RRRR	Metal Furniture
40202013	VOC	73.070	RRRR	Metal Furniture
40202014	VOC	73.070	RRRR	Metal Furniture
40202015	VOC	73.070	RRRR	Metal Furniture
40202020	VOC	73.070	RRRR	Metal Furniture
40202021	VOC	73.070	RRRR	Metal Furniture
40202022	VOC	73.070	RRRR	Metal Furniture
40202023	VOC	73.070	RRRR	Metal Furniture
40202024	VOC	73.070	RRRR	Metal Furniture
40202025	VOC	73.070	RRRR	Metal Furniture
40202031	VOC	73.070	RRRR	Metal Furniture
40202032	VOC	73.070	RRRR	Metal Furniture
40202033	VOC	73.070	RRRR	Metal Furniture
40202034	VOC	73.070	RRRR	Metal Furniture
40202035	VOC	73.070	RRRR	Metal Furniture
40202036	VOC	73.070	RRRR	Metal Furniture
40202037	VOC	73.070	RRRR	Metal Furniture
40202038	VOC	73.070	RRRR	Metal Furniture
40202039	VOC	73.070	RRRR	Metal Furniture
40202099	VOC	73.070	RRRR	Metal Furniture
40202101	VOC	74.000	QQQQ	Wood Building Products
40202103	VOC	74.000	QQQQ	Wood Building Products
40202104	VOC	74.000	QQQQ	Wood Building Products
40202105	VOC	74.000	QQQQ	Wood Building Products
40202106	VOC	74.000	QQQQ	Wood Building Products
40202107	VOC	74.000	QQQQ	Wood Building Products
40202108	VOC	74.000	QQQQ	Wood Building Products
40202109	VOC	74.000	QQQQ	Wood Building Products
40202110	VOC	74.000	QQQQ	Wood Building Products
40202111	VOC	74.000	QQQQ	Wood Building Products
40202117	VOC	74.000	QQQQ	Wood Building Products
40202118	VOC	74.000	QQQQ	Wood Building Products
40202131	VOC	74.000	QQQQ	Wood Building Products
40202132	VOC	74.000	QQQQ	Wood Building Products
40202133	VOC	74.000	QQQQ	Wood Building Products
40202140	VOC	74.000	QQQQ	Wood Building Products
40202199	VOC	74.000	QQQQ	Wood Building Products
40202201	VOC	77.000	PPPP	Plastic Parts Coating
40202202	VOC	77.000	PPPP	Plastic Parts Coating
40202203	VOC	77.000	PPPP	Plastic Parts Coating
40202204	VOC	77.000	PPPP	Plastic Parts Coating
40202205	VOC	77.000	PPPP	Plastic Parts Coating

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
40202206	VOC	77.000	PPPP	Plastic Parts Coating
40202207	VOC	77.000	PPPP	Plastic Parts Coating
40202208	VOC	77.000	PPPP	Plastic Parts Coating
40202209	VOC	77.000	PPPP	Plastic Parts Coating
40202210	VOC	77.000	PPPP	Plastic Parts Coating
40202211	VOC	77.000	PPPP	Plastic Parts Coating
40202212	VOC	77.000	PPPP	Plastic Parts Coating
40202213	VOC	77.000	PPPP	Plastic Parts Coating
40202214	VOC	77.000	PPPP	Plastic Parts Coating
40202215	VOC	77.000	PPPP	Plastic Parts Coating
40202220	VOC	77.000	PPPP	Plastic Parts Coating
40202229	VOC	77.000	PPPP	Plastic Parts Coating
40202230	VOC	77.000	PPPP	Plastic Parts Coating
40202239	VOC	77.000	PPPP	Plastic Parts Coating
40202240	VOC	77.000	PPPP	Plastic Parts Coating
40202249	VOC	77.000	PPPP	Plastic Parts Coating
40202250	VOC	77.000	PPPP	Plastic Parts Coating
40202259	VOC	77.000	PPPP	Plastic Parts Coating
40202270	VOC	77.000	PPPP	Plastic Parts Coating
40202280	VOC	77.000	PPPP	Plastic Parts Coating
40202299	VOC	77.000	PPPP	Plastic Parts Coating
40202501	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202502	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202503	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202504	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202505	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202510	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202511	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202512	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202515	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202520	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202521	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202522	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202523	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202524	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202525	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202531	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202532	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202533	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202534	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202535	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202536	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202537	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202542	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202543	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202544	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202545	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202546	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202599	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202601	VOC	66.200	HHHHH	Misc. Coating Manufacturing
40202602	VOC	66.200	HHHHH	Misc. Coating Manufacturing
40202603	VOC	66.200	HHHHH	Misc. Coating Manufacturing

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
40202604	VOC	66.200	HHHHH	Misc. Coating Manufacturing
40202605	VOC	66.200	HHHHH	Misc. Coating Manufacturing
40202606	VOC	66.200	HHHHH	Misc. Coating Manufacturing
40202607	VOC	66.200	HHHHH	Misc. Coating Manufacturing
40202699	VOC	66.200	HHHHH	Misc. Coating Manufacturing
40388801	VOC	65.630	UUU	Petroleum Refineries
40388802	VOC	65.630	UUU	Petroleum Refineries
40388803	VOC	65.630	UUU	Petroleum Refineries
40388804	VOC	65.630	UUU	Petroleum Refineries
40388805	VOC	65.630	UUU	Petroleum Refineries
40399999	VOC	65.630	UUU	Petroleum Refineries
50400101	VOC	50.080	GGGGG	Site Remediation
50400102	VOC	50.080	GGGGG	Site Remediation
50400103	VOC	50.080	GGGGG	Site Remediation
50400104	VOC	50.080	GGGGG	Site Remediation
50400150	VOC	50.080	GGGGG	Site Remediation
50400151	VOC	50.080	GGGGG	Site Remediation
50400201	VOC	50.080	GGGGG	Site Remediation
50400202	VOC	50.080	GGGGG	Site Remediation
50410001	VOC	50.080	GGGGG	Site Remediation
50410002	VOC	50.080	GGGGG	Site Remediation
50410003	VOC	50.080	GGGGG	Site Remediation
50410004	VOC	50.080	GGGGG	Site Remediation
50410005	VOC	50.080	GGGGG	Site Remediation
50410010	VOC	50.080	GGGGG	Site Remediation
50410020	VOC	50.080	GGGGG	Site Remediation
50410021	VOC	50.080	GGGGG	Site Remediation
50410022	VOC	50.080	GGGGG	Site Remediation
50410030	VOC	50.080	GGGGG	Site Remediation
50410040	VOC	50.080	GGGGG	Site Remediation
50410101	VOC	50.080	GGGGG	Site Remediation
50410110	VOC	50.080	GGGGG	Site Remediation
50410111	VOC	50.080	GGGGG	Site Remediation
50410112	VOC	50.080	GGGGG	Site Remediation
50410120	VOC	50.080	GGGGG	Site Remediation
50410121	VOC	50.080	GGGGG	Site Remediation
50410122	VOC	50.080	GGGGG	Site Remediation
50410123	VOC	50.080	GGGGG	Site Remediation
50410124	VOC	50.080	GGGGG	Site Remediation
50410210	VOC	50.080	GGGGG	Site Remediation
50410211	VOC	50.080	GGGGG	Site Remediation
50410212	VOC	50.080	GGGGG	Site Remediation
50410213	VOC	50.080	GGGGG	Site Remediation
50410214	VOC	50.080	GGGGG	Site Remediation
50410215	VOC	50.080	GGGGG	Site Remediation
50410216	VOC	50.080	GGGGG	Site Remediation
50410310	VOC	50.080	GGGGG	Site Remediation
50410311	VOC	50.080	GGGGG	Site Remediation
50410312	VOC	50.080	GGGGG	Site Remediation
50410313	VOC	50.080	GGGGG	Site Remediation
50410314	VOC	50.080	GGGGG	Site Remediation
50410321	VOC	50.080	GGGGG	Site Remediation

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
50410322	VOC	50.080	GGGGG	Site Remediation
50410405	VOC	50.080	GGGGG	Site Remediation
50410406	VOC	50.080	GGGGG	Site Remediation
50410407	VOC	50.080	GGGGG	Site Remediation
50410408	VOC	50.080	GGGGG	Site Remediation
50410409	VOC	50.080	GGGGG	Site Remediation
50410420	VOC	50.080	GGGGG	Site Remediation
50410510	VOC	50.080	GGGGG	Site Remediation
50410511	VOC	50.080	GGGGG	Site Remediation
50410512	VOC	50.080	GGGGG	Site Remediation
50410513	VOC	50.080	GGGGG	Site Remediation
50410514	VOC	50.080	GGGGG	Site Remediation
50410520	VOC	50.080	GGGGG	Site Remediation
50410521	VOC	50.080	GGGGG	Site Remediation
50410522	VOC	50.080	GGGGG	Site Remediation
50410523	VOC	50.080	GGGGG	Site Remediation
50410524	VOC	50.080	GGGGG	Site Remediation
50410525	VOC	50.080	GGGGG	Site Remediation
50410530	VOC	50.080	GGGGG	Site Remediation
50410531	VOC	50.080	GGGGG	Site Remediation
50410532	VOC	50.080	GGGGG	Site Remediation
50410533	VOC	50.080	GGGGG	Site Remediation
50410534	VOC	50.080	GGGGG	Site Remediation
50410535	VOC	50.080	GGGGG	Site Remediation
50410536	VOC	50.080	GGGGG	Site Remediation
50410537	VOC	50.080	GGGGG	Site Remediation
50410538	VOC	50.080	GGGGG	Site Remediation
50410539	VOC	50.080	GGGGG	Site Remediation
50410540	VOC	50.080	GGGGG	Site Remediation
50410541	VOC	50.080	GGGGG	Site Remediation
50410542	VOC	50.080	GGGGG	Site Remediation
50410543	VOC	50.080	GGGGG	Site Remediation
50410560	VOC	50.080	GGGGG	Site Remediation
50410561	VOC	50.080	GGGGG	Site Remediation
50410562	VOC	50.080	GGGGG	Site Remediation
50410563	VOC	50.080	GGGGG	Site Remediation
50410564	VOC	50.080	GGGGG	Site Remediation
50410565	VOC	50.080	GGGGG	Site Remediation
50410610	VOC	50.080	GGGGG	Site Remediation
50410620	VOC	50.080	GGGGG	Site Remediation
50410621	VOC	50.080	GGGGG	Site Remediation
50410622	VOC	50.080	GGGGG	Site Remediation
50410623	VOC	50.080	GGGGG	Site Remediation
50410640	VOC	50.080	GGGGG	Site Remediation
50410641	VOC	50.080	GGGGG	Site Remediation
50410642	VOC	50.080	GGGGG	Site Remediation
50410643	VOC	50.080	GGGGG	Site Remediation
50410644	VOC	50.080	GGGGG	Site Remediation
50410645	VOC	50.080	GGGGG	Site Remediation
50410710	VOC	50.080	GGGGG	Site Remediation
50410711	VOC	50.080	GGGGG	Site Remediation
50410712	VOC	50.080	GGGGG	Site Remediation

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
50410720	VOC	50.080	GGGGG	Site Remediation
50410721	VOC	50.080	GGGGG	Site Remediation
50410722	VOC	50.080	GGGGG	Site Remediation
50410723	VOC	50.080	GGGGG	Site Remediation
50410724	VOC	50.080	GGGGG	Site Remediation
50410725	VOC	50.080	GGGGG	Site Remediation
50410726	VOC	50.080	GGGGG	Site Remediation
50410740	VOC	50.080	GGGGG	Site Remediation
50410760	VOC	50.080	GGGGG	Site Remediation
50410761	VOC	50.080	GGGGG	Site Remediation
50410762	VOC	50.080	GGGGG	Site Remediation
50410763	VOC	50.080	GGGGG	Site Remediation
50410764	VOC	50.080	GGGGG	Site Remediation
50410765	VOC	50.080	GGGGG	Site Remediation
50410766	VOC	50.080	GGGGG	Site Remediation
50410780	VOC	50.080	GGGGG	Site Remediation
50480001	VOC	50.080	GGGGG	Site Remediation
50482001	VOC	50.080	GGGGG	Site Remediation
50482002	VOC	50.080	GGGGG	Site Remediation
50482599	VOC	50.080	GGGGG	Site Remediation
50490004	VOC	50.080	GGGGG	Site Remediation
62540001	VOC	62.900	UUUU	Cellulose Products
62540010	VOC	62.900	UUUU	Cellulose Products
62540020	VOC	62.900	UUUU	Cellulose Products
62540021	VOC	62.900	UUUU	Cellulose Products
62540022	VOC	62.900	UUUU	Cellulose Products
62540023	VOC	62.900	UUUU	Cellulose Products
62540024	VOC	62.900	UUUU	Cellulose Products
62540025	VOC	62.900	UUUU	Cellulose Products
62540030	VOC	62.900	UUUU	Cellulose Products
62540040	VOC	62.900	UUUU	Cellulose Products
62540041	VOC	62.900	UUUU	Cellulose Products
62540042	VOC	62.900	UUUU	Cellulose Products
62540050	VOC	62.900	UUUU	Cellulose Products
62580001	VOC	62.900	UUUU	Cellulose Products
62582001	VOC	62.900	UUUU	Cellulose Products
62582002	VOC	62.900	UUUU	Cellulose Products
62582501	VOC	62.900	UUUU	Cellulose Products
62582502	VOC	62.900	UUUU	Cellulose Products
62582503	VOC	62.900	UUUU	Cellulose Products
62582599	VOC	62.900	UUUU	Cellulose Products
64130001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130025	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130101	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130110	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130111	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130112	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130125	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130201	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130210	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
64130211	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130225	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64131001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64131010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64131011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64131015	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64131020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64131025	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64131030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64132001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64132010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64132011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64132020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64132025	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64132030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64133001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64133010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64133011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64133020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64133025	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64133030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64180001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64182001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64182002	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64182599	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64420001	VOC	62.900	UUUU	Cellulose Products
64420010	VOC	62.900	UUUU	Cellulose Products
64420011	VOC	62.900	UUUU	Cellulose Products
64420012	VOC	62.900	UUUU	Cellulose Products
64420013	VOC	62.900	UUUU	Cellulose Products
64420014	VOC	62.900	UUUU	Cellulose Products
64420015	VOC	62.900	UUUU	Cellulose Products
64420016	VOC	62.900	UUUU	Cellulose Products
64420020	VOC	62.900	UUUU	Cellulose Products
64420021	VOC	62.900	UUUU	Cellulose Products
64420022	VOC	62.900	UUUU	Cellulose Products
64420030	VOC	62.900	UUUU	Cellulose Products
64420031	VOC	62.900	UUUU	Cellulose Products
64420032	VOC	62.900	UUUU	Cellulose Products
64420033	VOC	62.900	UUUU	Cellulose Products
64420034	VOC	62.900	UUUU	Cellulose Products
64420040	VOC	62.900	UUUU	Cellulose Products
64420041	VOC	62.900	UUUU	Cellulose Products
64420042	VOC	62.900	UUUU	Cellulose Products
64430001	VOC	62.900	UUUU	Cellulose Products
64430010	VOC	62.900	UUUU	Cellulose Products
64430011	VOC	62.900	UUUU	Cellulose Products
64430012	VOC	62.900	UUUU	Cellulose Products
64430013	VOC	62.900	UUUU	Cellulose Products
64430014	VOC	62.900	UUUU	Cellulose Products
64430015	VOC	62.900	UUUU	Cellulose Products
64430016	VOC	62.900	UUUU	Cellulose Products

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
64430017	VOC	62.900	UUUU	Cellulose Products
64430030	VOC	62.900	UUUU	Cellulose Products
64431001	VOC	62.900	UUUU	Cellulose Products
64431010	VOC	62.900	UUUU	Cellulose Products
64431011	VOC	62.900	UUUU	Cellulose Products
64431012	VOC	62.900	UUUU	Cellulose Products
64431013	VOC	62.900	UUUU	Cellulose Products
64431014	VOC	62.900	UUUU	Cellulose Products
64431015	VOC	62.900	UUUU	Cellulose Products
64431016	VOC	62.900	UUUU	Cellulose Products
64431017	VOC	62.900	UUUU	Cellulose Products
64431030	VOC	62.900	UUUU	Cellulose Products
64450001	VOC	62.900	UUUU	Cellulose Products
64450010	VOC	62.900	UUUU	Cellulose Products
64450011	VOC	62.900	UUUU	Cellulose Products
64450012	VOC	62.900	UUUU	Cellulose Products
64450013	VOC	62.900	UUUU	Cellulose Products
64450014	VOC	62.900	UUUU	Cellulose Products
64450020	VOC	62.900	UUUU	Cellulose Products
64450021	VOC	62.900	UUUU	Cellulose Products
64450022	VOC	62.900	UUUU	Cellulose Products
64450030	VOC	62.900	UUUU	Cellulose Products
64450031	VOC	62.900	UUUU	Cellulose Products
64450032	VOC	62.900	UUUU	Cellulose Products
64450033	VOC	62.900	UUUU	Cellulose Products
64450034	VOC	62.900	UUUU	Cellulose Products
64450035	VOC	62.900	UUUU	Cellulose Products
64450036	VOC	62.900	UUUU	Cellulose Products
64450040	VOC	62.900	UUUU	Cellulose Products
64450041	VOC	62.900	UUUU	Cellulose Products
64450042	VOC	62.900	UUUU	Cellulose Products
64450050	VOC	62.900	UUUU	Cellulose Products
64450051	VOC	62.900	UUUU	Cellulose Products
64450052	VOC	62.900	UUUU	Cellulose Products
64450053	VOC	62.900	UUUU	Cellulose Products
64450060	VOC	62.900	UUUU	Cellulose Products
64450061	VOC	62.900	UUUU	Cellulose Products
64450062	VOC	62.900	UUUU	Cellulose Products
64520001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520021	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520022	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520023	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520031	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520032	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520040	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520041	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64521001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64521010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
64521011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64521020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64521021	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64521022	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64521023	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64521040	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64521041	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610012	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610021	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610022	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610031	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610032	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610040	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610041	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610050	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610101	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610110	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610111	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610112	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610120	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610121	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610122	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610130	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610131	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610132	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610140	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610141	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610142	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610143	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610150	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610201	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610210	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610211	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610212	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610220	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610221	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610222	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610230	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610231	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610232	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610240	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610241	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610242	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610250	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610301	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610310	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610311	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
64610312	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610320	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610321	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610322	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610330	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610331	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610332	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610340	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610350	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615012	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615021	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615022	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615023	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620012	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620013	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620015	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620016	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620017	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620018	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620021	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620022	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620025	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620026	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620027	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620031	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620032	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620033	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620034	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620035	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620036	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620037	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620038	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630012	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630015	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630016	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630025	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630026	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630035	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630040	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
64630041	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630042	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630050	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630051	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630052	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630053	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630080	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630081	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630082	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630083	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631012	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631015	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631016	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631025	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631026	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631040	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631050	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631051	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631052	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631053	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631080	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631081	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631082	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631083	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632015	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632016	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632040	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632041	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632042	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632050	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632051	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632052	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632053	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632080	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632081	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632082	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632083	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64680001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64682001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64682002	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64682501	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64682502	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64682599	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
64820010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64821001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64821010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64822001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64822010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64823001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64823010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64824001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64824010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64880001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64882001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64882002	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64882599	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64920001	VOC	62.900	UUUU	Cellulose Products
64920010	VOC	62.900	UUUU	Cellulose Products
64920011	VOC	62.900	UUUU	Cellulose Products
64920012	VOC	62.900	UUUU	Cellulose Products
64920013	VOC	62.900	UUUU	Cellulose Products
64920020	VOC	62.900	UUUU	Cellulose Products
64920021	VOC	62.900	UUUU	Cellulose Products
64920022	VOC	62.900	UUUU	Cellulose Products
64920030	VOC	62.900	UUUU	Cellulose Products
64920031	VOC	62.900	UUUU	Cellulose Products
64920032	VOC	62.900	UUUU	Cellulose Products
64920033	VOC	62.900	UUUU	Cellulose Products
64920034	VOC	62.900	UUUU	Cellulose Products
64930001	VOC	62.900	UUUU	Cellulose Products
64930010	VOC	62.900	UUUU	Cellulose Products
64930011	VOC	62.900	UUUU	Cellulose Products
64930012	VOC	62.900	UUUU	Cellulose Products
64930020	VOC	62.900	UUUU	Cellulose Products
64930021	VOC	62.900	UUUU	Cellulose Products
64930030	VOC	62.900	UUUU	Cellulose Products
64930031	VOC	62.900	UUUU	Cellulose Products
64930035	VOC	62.900	UUUU	Cellulose Products
64930040	VOC	62.900	UUUU	Cellulose Products
64930041	VOC	62.900	UUUU	Cellulose Products
64930045	VOC	62.900	UUUU	Cellulose Products
64930050	VOC	62.900	UUUU	Cellulose Products
64931001	VOC	62.900	UUUU	Cellulose Products
64931010	VOC	62.900	UUUU	Cellulose Products
64931011	VOC	62.900	UUUU	Cellulose Products
64931012	VOC	62.900	UUUU	Cellulose Products
64931020	VOC	62.900	UUUU	Cellulose Products
64931021	VOC	62.900	UUUU	Cellulose Products
64931022	VOC	62.900	UUUU	Cellulose Products
64931030	VOC	62.900	UUUU	Cellulose Products
64931031	VOC	62.900	UUUU	Cellulose Products
64931032	VOC	62.900	UUUU	Cellulose Products
64931040	VOC	62.900	UUUU	Cellulose Products
64931041	VOC	62.900	UUUU	Cellulose Products
64931050	VOC	62.900	UUUU	Cellulose Products

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
64980001	VOC	62.900	UUUU	Cellulose Products
64982001	VOC	62.900	UUUU	Cellulose Products
64982002	VOC	62.900	UUUU	Cellulose Products
64982599	VOC	62.900	UUUU	Cellulose Products
65135001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
65140001	VOC	44.500	YY	Generic MACT (Cyanide)
65140010	VOC	44.500	YY	Generic MACT (Cyanide)
65140011	VOC	44.500	YY	Generic MACT (Cyanide)
65140012	VOC	44.500	YY	Generic MACT (Cyanide)
65140013	VOC	44.500	YY	Generic MACT (Cyanide)
65140014	VOC	44.500	YY	Generic MACT (Cyanide)
65140015	VOC	44.500	YY	Generic MACT (Cyanide)
65140016	VOC	44.500	YY	Generic MACT (Cyanide)
65140017	VOC	44.500	YY	Generic MACT (Cyanide)
65140018	VOC	44.500	YY	Generic MACT (Cyanide)
65140030	VOC	44.500	YY	Generic MACT (Cyanide)
68430001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68430010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68430011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68430020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68430030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68430031	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68430032	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68445001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68445010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68445013	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68445020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68445022	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68445101	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68445201	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68510001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68510010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68510011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68580001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68582001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68582002	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68582599	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc

Table B-5 NonEGU Source Shutdowns

FIPS	SITE ID	FACILTY NAME	EU ID	UNIT DESCRIPTION
10003	1000300021	SUNCO INC R M	001	BOILER #1
10003	1000300021	SUNCO INC R M	002	BOILER #2
10003	1000300021	SUNCO INC R M	003	BOILER #3
10003	1000300016	MOTIVA ENTERPRISES LLC	072	METHANOL PLT HTR 41-H-1
10003	1000300004	WILMINGTON PIECE DYE CO	ALL	ALL
10003	1000300032	GENERAL CHEMICAL CORPORATION	ALL	ALL
10003	1000300074	METACHEM PRODUCTS LLC	ALL	ALL
10003	1000300127	VPI FILM LLC	ALL	ALL
10003	1000300129	LAFARGE NORTH AMERICA INC	ALL	ALL
10003	1000300350	KANEKA DELAWARE CORPORATION	ALL	ALL
25001	1200202	PARTYLITE WORLDWIDE	ALL	ALL
25001	1200614	BOURNE LANDFILL	ALL	ALL
25003	1170002	ADVANCED INFORMATION	ALL	ALL
25003	1170005	CATAMOUNT PELLET FUE	ALL	ALL
25003	1170048	SPRAGUE NORTH ADAMS	ALL	ALL
25003	1170056	BERKSHIRE GAS STOCKB	ALL	ALL
25003	1170078	MACDERMID GRAPHIC AR	ALL	ALL
25003	1170091	LANE CONSTRUCTION CO	ALL	ALL
25005	1200009	TEXAS INSTRUMENTS	ALL	ALL
25005	1200031	CONDEA VISTA CO	ALL	ALL
25005	1200036	ELKAY REVERE CORP	ALL	ALL
25005	1200037	AEROVOX INCORPORATED	ALL	ALL
25005	1200065	ROSEMAR SILVER COMPA	ALL	ALL
25005	1200080	ATTLEBORO REFINING C	ALL	ALL
25005	1200116	STEDRO TEXTILES	ALL	ALL
25005	1200138	CLIFTEX CORPORATION	ALL	ALL
25005	1200169	PAUL DEVER STATE SCH	ALL	ALL
25005	1200209	PHARMACY SERVICE COR	ALL	ALL
25005	1200216	BRISTOL COUNTY JAIL	ALL	ALL
25005	1200235	SEA WATCH INTERNATIO	ALL	ALL
25005	1200393	OLSONS GREENHOUSES	ALL	ALL
25005	1200468	AA WILL MATERIALS-FR	ALL	ALL
25005	1200498	CRAPO HILL LANDFILL	ALL	ALL
25005	1200510	KREW INCORPORATED	ALL	ALL
25005	1200513	AEROVOX INCORPORATED	ALL	ALL
25005	1200542	LALLY COLUMN CORP	ALL	ALL
25005	1200673	HOMELAND BUILDERS	ALL	ALL
25005	1200824	JUSTIN CLOTHING CO	ALL	ALL
25005	1200880	VELVET DRIVE TRANSMI	ALL	ALL

FIPS	SITE ID	FACILTY NAME	EU ID	UNIT DESCRIPTION
25005	1192308	INTERSTATE MAT & RUB	ALL	ALL
25009	1210057	COASTAL METAL FINISH	ALL	ALL
25009	1210058	AMESBURY CHAIR	ALL	ALL
25009	1210075	HAMPSHIRE FABRICS	ALL	ALL
25009	1210099	WASTE MANAGEMENT HUN	ALL	ALL
25009	1210110	CUSTOM INDUSTRIES IN	ALL	ALL
25009	1210114	SAGAMORE INDUSTRIAL	ALL	ALL
25009	1210143	LABELS INC	ALL	ALL
25009	1210154	NEWARK ATLANTIC PAPE	ALL	ALL
25009	1210208	TEK COATING COMPANY	ALL	ALL
25009	1210209	NATIONAL NORTHEAST	ALL	ALL
25009	1210223	STARENSIER INC	ALL	ALL
25009	1210400	SANMINA CORPORATION	ALL	ALL
25009	1210401	COVANTA HAVERHILL IN	ALL	ALL
25009	1210404	TEKE FURNITURE RESTO	ALL	ALL
25009	1190756	PERMAIR LEATHERS INC	ALL	ALL
25009	1190842	SLB SNACKS INC	ALL	ALL
25009	1190983	SALEM OIL & GREASE C	ALL	ALL
25009	1191036	JCR ELECTRONICS	ALL	ALL
25009	1195900	LEPAGES INC	ALL	ALL
25013	0420008	DELUXE FINANCIAL	ALL	ALL
25013	0420010	FRYE COPYSYSTEMS INC	ALL	ALL
25013	0420013	JAHN FOUNDRY CORPORA	ALL	ALL
25013	0420052	APW/WRIGHT LINE	ALL	ALL
25013	0420130	KODAK POLYCHROME GRA	ALL	ALL
25013	0420175	FIBERMARK DSI	ALL	ALL
25013	0420218	SPRINGFIELD PRINTING	ALL	ALL
25013	0420252	KODAK POLYCHROME GRA	ALL	ALL
25013	0420528	NATIONAL METAL INDUS	ALL	ALL
25015	0420060	BERKSHIRE GAS HATFIE	ALL	ALL
25015	0420105	INDUSTRIAL POWER SER	ALL	ALL
25015	0420170	TECHALLOY COMPANY IN	ALL	ALL
25015	0420424	MAGNAT MACHINETECH I	ALL	ALL
25015	0420463	INDUSTRIAL PROP OF E	ALL	ALL
25015	0420540	GENERAL CABLE CORP	ALL	ALL
25015	0420614	REXAM IMAGE PRODUCTS	ALL	ALL
25017	1210013	MERRIMACK MAGNETICS	ALL	ALL
25017	1210050	MAJILITE MFG INC	ALL	ALL
25017	1210064	FINISH UNLIMITED INC	ALL	ALL
25017	1190080	MASS BROKEN STONE CO	ALL	ALL
25017	1210127	USM CORPORATION	ALL	ALL

FIPS	SITE ID	FACILTY NAME	EU ID	UNIT DESCRIPTION
25017	1210147	UMASS LOWELL-RESIDEN	ALL	ALL
25017	1210182	JOAN FABRICS CORP	ALL	ALL
25017	1190203	SC WAKEFIELD 200	ALL	ALL
25017	1190212	OLYMPUS SPECIALTY HO	ALL	ALL
25017	1190258	ROYAL INSTITUTIONAL	ALL	ALL
25017	1210334	T&T INDUSTRIAL	ALL	ALL
25017	1190465	PRINTED CIRCUIT CORP	ALL	ALL
25017	1190611	GEORGE MEADE FOUNDRY	ALL	ALL
25017	1190734	NEW ENGLAND CONFECTI	ALL	ALL
25017	1180794	SCHOTT CML FIBEROPTI	ALL	ALL
25017	1190984	SUNGARD AVAILABILITY	ALL	ALL
25017	1191008	RAYTHEON SYSTEMS CO	ALL	ALL
25017	1191217	BOSTON SCIENTIFIC CO	ALL	ALL
25017	1191267	AGFA DIVISION OF BAY	ALL	ALL
25017	1191351	MIT EDUCATIONAL FACI	ALL	ALL
25017	1191389	LONGVIEW FIBRE COMPA	ALL	ALL
25017	1191534	SWISSTRONICS INCORPO	ALL	ALL
25017	1191653	FOCAL INCORPORATED	ALL	ALL
25017	1191668	LEE PRODUCTS COMPANY	ALL	ALL
25017	1191735	TYCO ELECTRONICS COR	ALL	ALL
25017	1191897	GENZYME CORPORATION	ALL	ALL
25017	1194001	WF WOOD INC	ALL	ALL
25017	1194010	RR DONNELLEY & SONS	ALL	ALL
25017	1214012	PERFORMANCE CORRUGAT	ALL	ALL
25021	1190246	SOUTHWOOD COMMUNITY	ALL	ALL
25021	1190313	INNOVATIVE MEMBRANE	ALL	ALL
25021	1180359	BEVILACQUA PAVING CO	ALL	ALL
25021	1200515	FOXBOROUGH REALTY AS	ALL	ALL
25021	1200616	PLAINVILLE GENERATIN	ALL	ALL
25021	1190670	RAYTHEON ELECTRONIC	ALL	ALL
25021	1190714	TEVA PHARMACEUTICAL	ALL	ALL
25021	1190962	NIDEC AMERICA CORPOR	ALL	ALL
25021	1191562	BARCLAY HOUSE THE	ALL	ALL
25021	1191726	MWRA QUINCY PS	ALL	ALL
25021	1192130	CURRY WOODWORKING IN	ALL	ALL
25021	1199000	MEDFIELD STATE HOSPI	ALL	ALL
25023	1200637	FRANKLIN FIXTURES IN	ALL	ALL
25023	1200698	CRANBERRY GRAPHICS I	ALL	ALL
25023	1192101	GTR FINISHING CORPOR	ALL	ALL
25023	1192109	ALGER CORPORATION TH	ALL	ALL
25023	1192210	IMPERIA CORPORATION	ALL	ALL

FIPS	SITE ID	FACILTY NAME	EU ID	UNIT DESCRIPTION
25023	1199994	TEST-RADIUS-FITZGERA	ALL	ALL
25025	1190035	BOSTON WATER & SEWER	ALL	ALL
25025	1190057	NEPONSET RIVER VALLE	ALL	ALL
25025	1190101	UNIFIRST CORP	ALL	ALL
25025	1190357	DAMRELL EWER PARTNER	ALL	ALL
25025	1190478	WINTHROP COMMUNITY H	ALL	ALL
25025	1190649	ZAPCO READVILLE COGE	ALL	ALL
25025	1190808	PUBLIC HEALTH COMMUN	ALL	ALL
25025	1191551	BEACON CAPITAL PARTN	ALL	ALL
25025	1191566	NEW ENGLAND TRAWLER	ALL	ALL
25025	1191621	FEDERAL MOGUL FRICTI	ALL	ALL
25025	1191662	EQUITY OFFICE	ALL	ALL
25025	1191956	CHANNEL CENTER:PARCE	ALL	ALL
25025	1195596	SYNTHON IND INCORPOR	ALL	ALL
25027	1180010	CANTERBURY TOWERS	ALL	ALL
25027	1180014	ER BUCK CHAIR COMPAN	ALL	ALL
25027	1180029	GENERAL ELECTRIC FIT	ALL	ALL
25027	1180091	ANGLO FABRICS COMPAN	ALL	ALL
25027	1180100	ZAPCO ENERGY TACTICS	ALL	ALL
25027	1180111	CINCINATTI MILACRON	ALL	ALL
25027	1180114	NEW ENGLAND PLATING	ALL	ALL
25027	1180129	GF WRIGHT STEEL & WI	ALL	ALL
25027	1180132	STANDARDFOUNDRY	ALL	ALL
25027	1180174	WORCESTER TOOL & STA	ALL	ALL
25027	1180203	WORCESTER COUNTY HOS	ALL	ALL
25027	1180244	HI TECH METALS & FIN	ALL	ALL
25027	1180340	GHM INDUSTRIES INC	ALL	ALL
25027	1180353	ADVANCED MICROSENSOR	ALL	ALL
25027	1180355	NEWARK AMERICA	ALL	ALL
25027	1180373	ZYGO TERAOPTIX	ALL	ALL
25027	1180389	ETHAN ALLEN-DUDLEY	ALL	ALL
25027	1180439	INLAND PAPERBOARD &	ALL	ALL
25027	1180484	NELMOR COMPANY	ALL	ALL
25027	1180518	JAMESBURY INCORPORAT	ALL	ALL
25027	1180556	M&H TIRE CO INC	ALL	ALL
25027	1180568	CROFT CORPORATION	ALL	ALL
25027	1180796	LINCOLN PLAZA CENTER	ALL	ALL
25027	1180994	COZ PLASTICS INC	ALL	ALL
25027	1181045	WORCESTER TAPER PIN	ALL	ALL
33011	3301100093	BATESVILLE MANUFACTURING	ALL	ALL
33015	3301500058	VENTURE SEABROOK	ALL	ALL

Appendix C – Area Source Growth Factors

Table C-1 Area Source Growth Factors by SCC Code

See Electronic File: MANE-VU_Area_gf_scc.xls

This table contains records with area source growth factors by county and SCC. The format for the tables is as follows:

Column A – County FIPS code

Column B – Source Classification Code (SCC)

Column C – EGAS_02_09 this is the EGAS 5.0 factor for projecting from 2002 to 2009

Column D – AEO5_02_09 this is the DOE AEO 2005 factor for projecting from 2002 to 2009

Column E – ST_02_09 this is the state-supplied factor for projecting from 2002 to 2009

Column F – GF_02_09 this is the final factor actually used for projecting from 2002 to 2009 (it is the state-supplied factor, if available; if no state-supplied factor, then it is the AEO2005 factor; if no AEO2005 factor, then it is the default EGAS 5.0 factor)

Column G – EGAS_02_12 this is the EGAS 5.0 factor for projecting from 2002 to 2012

Column H – AEO5_02_12 this is the DOE AEO 2005 factor for projecting from 2002 to 2012

Column I – ST_02_12 this is the state-supplied factor for projecting from 2002 to 2012

Column J – GF_02_09 this is the final factor actually used for projecting from 2002 to 2012 (it is the state-supplied factor, if available; if no state-supplied factor, then it is the AEO2005 factor; if no AEO2005 factor, then it is the default EGAS 5.0 factor)

Column K – EGAS_02_18 this is the EGAS 5.0 factor for projecting from 2002 to 2018

Column J – AEO5_02_18 this is the DOE AEO 2005 factor for projecting from 2002 to 2018

Column M– ST_02_18 this is the state-supplied factor for projecting from 2002 to 2018

Column N – GF_02_09 this is the final factor actually used for projecting from 2002 to 2012 (it is the state-supplied factor, if available; if no state-supplied factor, then it is the AEO2005 factor; if no AEO2005 factor, then it is the default EGAS 5.0 factor)

Column O – SCC description

Appendix D – Area Source Control Factors

Table D-1 Area Source Control Factors for 2001 OTC VOC Model Rules

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
AIM Coatings						
09	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
09	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
10	2401002000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings - Solvent-based;Surface Coating
10	2401003000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings - Water-based;Surface Coating
10	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
10	2401102000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings- Solve;Surface Coating
10	2401103000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings- Water;Surface Coating
11	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
11	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
11	2401100000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings;Surface Coating
11	2401200000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Other Special Purpose Coatings;Surface Coating
23	2401001000	VOC	29.50	29.50	29.50	Total: All Solvent Types;Architectural Coatings;Surface Coating
23	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
23	2401100000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings;Surface Coating
23	2401200000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Other Special Purpose Coatings;Surface Coating
24	2401002000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings - Solvent-based;Surface Coating
24	2401003000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings - Water-based;Surface Coating
24	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
24	2401008999	VOC	31.00	31.00	31.00	Solvents: NEC;Traffic Markings;Surface Coating
24	2401100000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings;Surface Coating
24	2401200000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Other Special Purpose Coatings;Surface Coating
25	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
25	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
25	2401100000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings;Surface Coating

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
25	2401200000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Other Special Purpose Coatings;Surface Coating
33	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
33	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
33	2401100000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings;Surface Coating
33	2401200000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Other Special Purpose Coatings;Surface Coating
34	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
34	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
34	2401100000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings;Surface Coating
34	2401200000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Other Special Purpose Coatings;Surface Coating
36	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
36	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
42	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
42	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
42	2401100000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings;Surface Coating
42	2401200000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Other Special Purpose Coatings;Surface Coating
44	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
44	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
50	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
50	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
50	2401100000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings;Surface Coating
50	2401200000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Other Special Purpose Coatings;Surface Coating
Consumer Products						
09	2465000000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Products/Processes;Miscellaneous Non-industrial: Consumer
10	2460100000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Personal Care Products;Miscellaneous Non-industrial: Consumer and Commerc
10	2460200000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Household Products;Miscellaneous Non-industrial: Consumer and Commerc

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
10	2460400000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Automotive Aftermarket Products;Miscellaneous Non-industrial: Consumer and Commerc
10	2460500000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Coatings and Related Products;Miscellaneous Non-industrial: Consumer and Commerc
10	2460600000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Adhesives and Sealants;Miscellaneous Non-industrial: Consumer and Commerc
10	2460800000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All FIFRA Related Products;Miscellaneous Non-industrial: Consumer and Commerc
10	2460900000	VOC	14.20	14.20	14.20	Total: All Solvent Types;Miscellaneous Products (Not Otherwise Covered);Miscellaneous Non-industrial: Consumer and Commerc
11	2460100000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Personal Care Products;Miscellaneous Non-industrial: Consumer and Commerc
11	2460200000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Household Products;Miscellaneous Non-industrial: Consumer and Commerc
11	2460400000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Automotive Aftermarket Products;Miscellaneous Non-industrial: Consumer and Commerc
11	2460500000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Coatings and Related Products;Miscellaneous Non-industrial: Consumer and Commerc
11	2460600000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Adhesives and Sealants;Miscellaneous Non-industrial: Consumer and Commerc
11	2460800000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All FIFRA Related Products;Miscellaneous Non-industrial: Consumer and Commerc
11	2460900000	VOC	14.20	14.20	14.20	Total: All Solvent Types;Miscellaneous Products (Not Otherwise Covered);Miscellaneous Non-industrial: Consumer and Commerc
23	2460100000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Personal Care Products;Miscellaneous Non-industrial: Consumer and Commerc
23	2460200000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Household Products;Miscellaneous Non-industrial: Consumer and Commerc
23	2460400000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Automotive Aftermarket Products;Miscellaneous Non-industrial: Consumer and Commerc
23	2460500000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Coatings and Related Products;Miscellaneous Non-industrial: Consumer and Commerc
23	2460600000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Adhesives and Sealants;Miscellaneous Non-industrial: Consumer and Commerc

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
23	2460800000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All FIFRA Related Products;Miscellaneous Non-industrial: Consumer and Commerc
23	2460900000	VOC	14.20	14.20	14.20	Total: All Solvent Types;Miscellaneous Products (Not Otherwise Covered);Miscellaneous Non-industrial: Consumer and Commerc
24	2465000000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Products/Processes;Miscellaneous Non-industrial: Consumer
25	2460000000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Processes;Miscellaneous Non-industrial: Consumer and Commerc
33	2460000000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Processes;Miscellaneous Non-industrial: Consumer and Commerc
34	2460100000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Personal Care Products;Miscellaneous Non-industrial: Consumer and Commerc
34	2460200000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Household Products;Miscellaneous Non-industrial: Consumer and Commerc
34	2460400000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Automotive Aftermarket Products;Miscellaneous Non-industrial: Consumer and Commerc
34	2460500000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Coatings and Related Products;Miscellaneous Non-industrial: Consumer and Commerc
34	2460600000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Adhesives and Sealants;Miscellaneous Non-industrial: Consumer and Commerc
34	2460800000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All FIFRA Related Products;Miscellaneous Non-industrial: Consumer and Commerc
34	2460900000	VOC	14.20	14.20	14.20	Total: All Solvent Types;Miscellaneous Products (Not Otherwise Covered);Miscellaneous Non-industrial: Consumer and Commerc
34	2465000000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Products/Processes;Miscellaneous Non-industrial: Consumer
36	2460000000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Processes;Miscellaneous Non-industrial: Consumer and Commerc
42	2465000000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Products/Processes;Miscellaneous Non-industrial: Consumer
44	2460100000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Personal Care Products;Miscellaneous Non-industrial: Consumer and Commerc
44	2460200000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Household Products;Miscellaneous Non-industrial: Consumer and Commerc
44	2460400000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Automotive Aftermarket Products;Miscellaneous Non-industrial: Consumer and Commerc

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
44	2460500000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Coatings and Related Products;Miscellaneous Non-industrial: Consumer and Commerc
44	2460600000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Adhesives and Sealants;Miscellaneous Non-industrial: Consumer and Commerc
44	2460800000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All FIFRA Related Products;Miscellaneous Non-industrial: Consumer and Commerc
44	2460900000	VOC	14.20	14.20	14.20	Total: All Solvent Types;Miscellaneous Products (Not Otherwise Covered);Miscellaneous Non-industrial: Consumer and Commerc
50	2460100000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Personal Care Products;Miscellaneous Non-industrial: Consumer and Commerc
50	2460200000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Household Products;Miscellaneous Non-industrial: Consumer and Commerc
50	2460400000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Automotive Aftermarket Products;Miscellaneous Non-industrial: Consumer and Commerc
50	2460500000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Coatings and Related Products;Miscellaneous Non-industrial: Consumer and Commerc
50	2460600000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Adhesives and Sealants;Miscellaneous Non-industrial: Consumer and Commerc
50	2460800000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All FIFRA Related Products;Miscellaneous Non-industrial: Consumer and Commerc
50	2460900000	VOC	14.20	14.20	14.20	Total: All Solvent Types;Miscellaneous Products (Not Otherwise Covered);Miscellaneous Non-industrial: Consumer and Commerc
Mobile Equipment Repair and Refinishing						
09	2401005000	VOC	38.00	38.00	38.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
10	2401005500	VOC	38.00	38.00	38.00	Surface Preparation Solvents;Auto Refinishing: SIC 7532;Surface Coating
10	2401005600	VOC	38.00	38.00	38.00	Primers;Auto Refinishing: SIC 7532;Surface Coating
10	2401005700	VOC	38.00	38.00	38.00	Top Coats;Auto Refinishing: SIC 7532;Surface Coating
10	2401005800	VOC	38.00	38.00	38.00	Clean-up Solvents;Auto Refinishing: SIC 7532;Surface Coating
11	2401005000	VOC	38.00	38.00	38.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
23	2401005000	VOC	38.00	38.00	38.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
24	2401005000	VOC	0.00	0.00	0.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
25	2401005000	VOC	0.00	0.00	0.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
33	2401005000	VOC	38.00	38.00	38.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
34	2401005000	VOC	19.00	19.00	19.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
36	2401005000	VOC	38.00	38.00	38.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
42	2401005000	VOC	0.00	0.00	0.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
44	2401005000	VOC	38.00	38.00	38.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
50	2401005000	VOC	38.00	38.00	38.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
Solvent Cleaning Operations						
09	2415000000	VOC	66.00	66.00	66.00	Total: All Solvent Types;All Processes/All Industries;Degreasing
23	2415000000	VOC	66.00	66.00	66.00	Total: All Solvent Types;All Processes/All Industries;Degreasing
23	2415030000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Electronic and Other Elec. (SIC 36): All Processes;Degreasing
23	2415045000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Miscellaneous Manufacturing (SIC 39): All Processe;Degreasing
23	2415065000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Auto Repair Services (SIC 75): All Processes;Degreasing
23	2415300000	VOC	66.00	66.00	66.00	Total: All Solvent Types;All Industries: Cold Cleaning;Degreasing
25	2415000000	VOC	7.00	7.00	7.00	Total: All Solvent Types;All Industries: Cold Cleaning;Degreasing
33	2415000000	VOC	66.00	66.00	66.00	Total: All Solvent Types;All Industries: Cold Cleaning;Degreasing
34	2415000000	VOC	17.00	17.00	17.00	Total: All Solvent Types;All Processes/All Industries;Degreasing
36	2415020000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Fabricated Metal Products (SIC 34): All Processes;Degreasing
36	2415025000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Industrial Machinery and Equipment (SIC 35): All P;Degreasing
36	2415035000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Transportation Equipment (SIC 37): All Processes;Degreasing
36	2415045000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Miscellaneous Manufacturing (SIC 39): All Processe;Degreasing
36	2415055000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Automotive Dealers (SIC 55): All Processes;Degreasing
36	2415060000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Miscellaneous Repair Services (SIC 76): All Proces;Degreasing
44	2415000000	VOC	66.00	66.00	66.00	Total: All Solvent Types;All Processes/All Industries;Degreasing

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
Portable Fuel Containers						
09	2501060300	VOC	41.3	63.8	75.0	Total;Portable Containers: Residential & Com;Petroleum and Petroleum Product Storage
10	2501011010	VOC	41.3	63.8	75.0	Vapor Losses;Portable Containers: Residential;Petroleum and Petroleum Product Storage
10	2501011011	VOC	41.3	63.8	75.0	Permeation;Portable Containers: Residential;Petroleum and Petroleum Product Storage
10	2501011012	VOC	41.3	63.8	75.0	Diurnal;Portable Containers: Residential;Petroleum and Petroleum Product Storage
10	2501011015	VOC	41.3	63.8	75.0	Spillage;Portable Containers: Residential;Petroleum and Petroleum Product Storage
10	2501011016	VOC	41.3	63.8	75.0	Transport;Portable Containers: Residential;Petroleum and Petroleum Product Storage
10	2501012010	VOC	41.3	63.8	75.0	Vapor Losses;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
10	2501012011	VOC	41.3	63.8	75.0	Permeation;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
10	2501012012	VOC	41.3	63.8	75.0	Diurnal;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
10	2501012015	VOC	41.3	63.8	75.0	Spillage;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
10	2501012016	VOC	41.3	63.8	75.0	Transport;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
11	2501011011	VOC	41.3	63.8	75.0	Permeation;Portable Containers: Residential;Petroleum and Petroleum Product Storage
11	2501011012	VOC	41.3	63.8	75.0	Diurnal;Portable Containers: Residential;Petroleum and Petroleum Product Storage
11	2501011016	VOC	41.3	63.8	75.0	Transport;Portable Containers: Residential;Petroleum and Petroleum Product Storage
11	2501012011	VOC	41.3	63.8	75.0	Permeation;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
11	2501012012	VOC	41.3	63.8	75.0	Diurnal;Portable Containers: Commercial;Petroleum and Petroleum Product

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
						Storage
11	2501012016	VOC	41.3	63.8	75.0	Transport;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
23	2501060300	VOC	41.3	63.8	75.0	Total;Portable Containers: Residential & Com;Petroleum and Petroleum Product Storage
24	2501011011	VOC	48.8	71.3	75.0	Permeation;Portable Containers: Residential;Petroleum and Petroleum Product Storage
24	2501011012	VOC	48.8	71.3	75.0	Diurnal;Portable Containers: Residential;Petroleum and Petroleum Product Storage
24	2501011016	VOC	48.8	71.3	75.0	Transport;Portable Containers: Residential;Petroleum and Petroleum Product Storage
24	2501012011	VOC	48.8	71.3	75.0	Permeation;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
24	2501012012	VOC	48.8	71.3	75.0	Diurnal;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
24	2501012016	VOC	48.8	71.3	75.0	Transport;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
25	2501011000	VOC	18.8	41.3	75.0	;;
25	2501012000	VOC	18.8	41.3	75.0	;;
33	2501060300	VOC	26.3	48.8	75.0	Total;Portable Containers: Residential & Com;Petroleum and Petroleum Product Storage
34	2501000120	VOC	33.8	56.3	75.0	Gasoline;All Storage Types: Breathing Loss;Petroleum and Petroleum Product Storage
36	2501011011	VOC	48.8	71.3	75.0	Permeation;Portable Containers: Residential;Petroleum and Petroleum Product Storage
36	2501011012	VOC	48.8	71.3	75.0	Diurnal;Portable Containers: Residential;Petroleum and Petroleum Product Storage
36	2501011016	VOC	48.8	71.3	75.0	Transport;Portable Containers: Residential;Petroleum and Petroleum Product Storage
36	2501012011	VOC	48.8	71.3	75.0	Permeation;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
36	2501012012	VOC	48.8	71.3	75.0	Diurnal;Portable Containers: Commercial;Petroleum and Petroleum Product Storage

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
36	2501012016	VOC	48.8	71.3	75.0	Transport;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
42	2501060300	VOC	48.8	71.3	75.0	Total;Portable Containers: Residential & Com;Petroleum and Petroleum Product Storage
44	2501060300	VOC	18.8	41.3	75.0	Total;Portable Containers: Residential & Com;Petroleum and Petroleum Product Storage
50	2501060300	VOC	18.8	41.3	75.0	Total;Portable Containers: Residential & Com;Petroleum and Petroleum Product Storage

Table D-2 Area Source Control Factors for On-Board Vapor Recovery

FIPS	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
09001	2501060101	VOC	23.81	28.57	38.10	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
09001	2501060102	VOC	23.81	28.57	38.10	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
09003	2501060101	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
09003	2501060102	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
09005	2501060101	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
09005	2501060102	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
09007	2501060101	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
09007	2501060102	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
09009	2501060101	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
09009	2501060102	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
09011	2501060101	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
09011	2501060102	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
09013	2501060101	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
09013	2501060102	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
09015	2501060101	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
09015	2501060102	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
10001	2501060100	VOC	40.54	48.65	56.76	Stage 2: Total;Gasoline Service Stations
10003	2501060100	VOC	40.54	48.65	56.76	Stage 2: Total;Gasoline Service Stations
10005	2501060100	VOC	40.54	48.65	56.76	Stage 2: Total;Gasoline Service Stations
11001	2501060100	VOC	40.54	48.65	56.76	Stage 2: Total;Gasoline Service Stations
23001	2501060100	VOC	53.68	67.65	79.41	Stage 2: Total;Gasoline Service Stations
23003	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23005	2501060100	VOC	28.57	33.33	42.86	Stage 2: Total;Gasoline Service Stations
23007	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23009	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23011	2501060100	VOC	53.68	67.65	79.41	Stage 2: Total;Gasoline Service Stations
23013	2501060100	VOC	53.68	67.65	79.41	Stage 2: Total;Gasoline Service Stations
23015	2501060100	VOC	53.68	67.65	79.41	Stage 2: Total;Gasoline Service Stations
23017	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23019	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23021	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23023	2501060100	VOC	28.57	33.33	42.86	Stage 2: Total;Gasoline Service Stations
23025	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23027	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23029	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23031	2501060100	VOC	28.57	33.33	42.86	Stage 2: Total;Gasoline Service Stations
24001	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations

FIPS	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
24003	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24005	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24009	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24011	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24013	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24015	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24017	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24019	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24021	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24023	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24025	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24027	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24029	2501060100	VOC	53.53	68.24	80.00	Stage 2: Total;Gasoline Service Stations
24031	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24033	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24035	2501060100	VOC	53.53	68.24	80.00	Stage 2: Total;Gasoline Service Stations
24037	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24039	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24041	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24043	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24045	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24047	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24510	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
25001	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25003	2501060102	VOC	38.24	50.00	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25005	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25007	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25009	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25011	2501060102	VOC	38.24	50.00	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25013	2501060102	VOC	38.24	50.00	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25015	2501060102	VOC	38.24	50.00	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25017	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25019	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25021	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25023	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25025	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25027	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
33001	2501060100	VOC	53.75	68.13	80.00	Stage 2: Total;Gasoline Service Stations
33003	2501060100	VOC	53.75	68.13	80.00	Stage 2: Total;Gasoline Service Stations
33005	2501060100	VOC	53.75	68.13	80.00	Stage 2: Total;Gasoline Service Stations
33007	2501060100	VOC	53.75	68.13	80.00	Stage 2: Total;Gasoline Service Stations

FIPS	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
33009	2501060100	VOC	53.75	68.13	80.00	Stage 2: Total;Gasoline Service Stations
33011	2501060100	VOC	38.24	50.00	55.88	Stage 2: Total;Gasoline Service Stations
33013	2501060100	VOC	38.24	50.00	55.88	Stage 2: Total;Gasoline Service Stations
33015	2501060100	VOC	38.24	50.00	55.88	Stage 2: Total;Gasoline Service Stations
33017	2501060100	VOC	38.24	50.00	55.88	Stage 2: Total;Gasoline Service Stations
33019	2501060100	VOC	53.75	68.13	80.00	Stage 2: Total;Gasoline Service Stations
34001	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34003	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34005	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34007	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34009	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34011	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34013	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34015	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34017	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34019	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34021	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34023	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34025	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34027	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34029	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34031	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34033	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34035	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34037	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34039	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34041	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
36001	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36003	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36005	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36007	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36009	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36011	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36013	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36015	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36017	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36019	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36021	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36023	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36025	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36027	2501060100	VOC	53.80	67.72	79.75	Stage 2: Total;Gasoline Service Stations
36029	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36031	2501060100	VOC	53.57	67.86	79.76	Stage 2: Total;Gasoline Service Stations
36033	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36035	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36037	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36039	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36041	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36043	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36045	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations

FIPS	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
36047	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36049	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36051	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36053	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36055	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36057	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36059	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36061	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36063	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36065	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36067	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36069	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36071	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36073	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36075	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36077	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36079	2501060100	VOC	53.80	67.72	79.75	Stage 2: Total;Gasoline Service Stations
36081	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36083	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36085	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36087	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36089	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36091	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36093	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36095	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36097	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36099	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36101	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36103	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36105	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36107	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36109	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36111	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36113	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36115	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36117	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36119	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36121	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36123	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
42001	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42003	2501060102	VOC	26.09	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42005	2501060102	VOC	26.09	34.78	39.13	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42007	2501060102	VOC	26.09	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42009	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42011	2501060101	VOC	26.09	34.78	39.13	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42013	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service

FIPS	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
						Stations
42015	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42017	2501060102	VOC	30.43	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42019	2501060102	VOC	26.09	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42021	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42023	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42025	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42027	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42029	2501060102	VOC	30.43	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42031	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42033	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42035	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42037	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42039	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42041	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42043	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42045	2501060102	VOC	30.43	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42047	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42049	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42051	2501060102	VOC	26.09	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42053	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42055	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42057	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42059	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42061	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42063	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42065	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42067	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42069	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42071	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42073	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service

FIPS	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
						Stations
42075	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42077	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42079	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42081	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42083	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42085	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42087	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42089	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42091	2501060102	VOC	30.43	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42093	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42095	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42097	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42099	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42101	2501060102	VOC	30.43	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42103	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42105	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42107	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42109	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42111	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42113	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42115	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42117	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42119	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42121	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42123	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42125	2501060102	VOC	26.09	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42127	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42129	2501060102	VOC	26.09	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42131	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42133	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service

FIPS	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
						Stations
44001	2501060000	VOC	38.24	50.00	55.88	Total: All Gasoline/All Processes;Gasoline Service Stations
44003	2501060000	VOC	38.24	50.00	55.88	Total: All Gasoline/All Processes;Gasoline Service Stations
44005	2501060000	VOC	38.24	50.00	55.88	Total: All Gasoline/All Processes;Gasoline Service Stations
44007	2501060000	VOC	38.24	50.00	55.88	Total: All Gasoline/All Processes;Gasoline Service Stations
44009	2501060000	VOC	38.24	50.00	55.88	Total: All Gasoline/All Processes;Gasoline Service Stations
50001	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50001	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50001	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50003	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50003	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50003	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50005	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50005	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50005	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50007	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50007	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50007	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50009	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50009	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50009	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50011	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50011	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50011	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50013	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50013	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50013	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50015	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50015	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50015	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50017	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50017	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50017	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50019	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50019	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50019	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50021	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service

FIPS	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
						Stations
50021	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50021	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50023	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50023	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50023	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50025	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50025	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50025	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50027	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50027	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50027	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations

Table D-3 Area Source Growth/Control Factors for Residential Wood Combustion

SCC	SCC Description	Assumptions	Growth and Control Factor		
			2002-2009	**2002-2012**	**2002-2018**
2104008000	Total: Woodstoves and Fireplaces	1 - 0.01056*(Year-2002) (Assumes 19.4% fireplaces 71.6%old woodstoves 9.1%new woodstoves)	0.926	0.894	0.831
2104008001	Fireplaces: General	Increase 1%/yr: 1 + 0.01*(Year-2002)	1.070	1.100	1.160
2104008002	Fireplaces: Insert; non-EPA certified	Decrease 2%/yr: 1 - 0.02*(Year-2002)	0.860	0.800	0.680
2104008003	Fireplaces: Insert; EPA certified; non-catalytic	Increase 2%/yr: 1 + 0.02*(Year-2002)	1.140	1.200	1.320
2104008004	Fireplaces: Insert; EPA certified; catalytic	Increase 2%/yr (same as 2104008003)	1.140	1.200	1.320
2104008010	Woodstoves: General	Decrease 2%/yr (same as 2104008002)	0.860	0.800	0.680
2104008030	Catalytic Woodstoves: General	Increase 2%/yr (same as 2104008003)	1.140	1.200	1.320
2104008050	Non-catalytic Woodstoves: EPA certified	Increase 2%/yr (same as 2104008003)	1.140	1.200	1.320
2104008051	Non-catalytic Woodstoves: Non-EPA certified	Decrease 2%/yr (same as 2104008002)	0.860	0.800	0.680
2104008052	Non-catalytic Woodstoves: Low Emitting	Increase 2%/yr (same as 2104008003)	1.140	1.200	1.320
2104008053	Non-catalytic Woodstoves: Pellet Fired	Increase 2%/yr (same as 2104008003)	1.140	1.200	1.320

Table E-1 NonEGU BOTW Control Factors for Adhesives and Sealants Application, Asphalt Production Plants, Cement Kilns, and Glass/Fiberglass Furnaces

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
Control Measure: Adhesives and Sealants Application								
09003	6484	R0131	01	40200701	VOC	64.40	64.40	64.40
09003	6484	R0132	01	40200701	VOC	64.40	64.40	64.40
09015	0647	P0085	01	40200701	VOC	64.40	64.40	64.40
10001	1000100004	003	2	40200701	VOC	64.40	64.40	64.40
10001	1000100004	005	2	40200701	VOC	64.40	64.40	64.40
10001	1000100004	005	3	40200701	VOC	64.40	64.40	64.40
10001	1000100004	005	4	40200701	VOC	64.40	64.40	64.40
10001	1000100004	005	5	40200701	VOC	64.40	64.40	64.40
10003	1000300365	002	2	40200706	VOC	64.40	64.40	64.40
10003	1000300365	002	1	40200710	VOC	64.40	64.40	64.40
23001	2300100076	003	2	40200701	VOC	64.40	64.40	64.40
24003	003-0250	232	01F232	40200701	VOC	64.40	64.40	64.40
24003	003-0250	232	01S232	40200701	VOC	64.40	64.40	64.40
24005	005-2407	17	01F17	40200701	VOC	64.40	64.40	64.40
24005	005-2407	17	01S17	40200701	VOC	64.40	64.40	64.40
24025	025-0006	45	01F45	40200710	VOC	64.40	64.40	64.40
24025	025-0006	45	01S45	40200710	VOC	64.40	64.40	64.40
24025	025-0423	5	01F5	40200701	VOC	64.40	64.40	64.40
24025	025-0423	5	01S5	40200701	VOC	64.40	64.40	64.40
24025	025-0423	6	01F6	40200701	VOC	64.40	64.40	64.40
24025	025-0423	6	01S6	40200701	VOC	64.40	64.40	64.40
24025	025-0423	7	01F7	40200701	VOC	64.40	64.40	64.40
24025	025-0423	7	01S7	40200701	VOC	64.40	64.40	64.40
24045	045-0082	12	01F12	40200710	VOC	64.40	64.40	64.40
24045	045-0082	12	01S12	40200710	VOC	64.40	64.40	64.40
25005	1200077	12	0108	40200701	VOC	64.40	64.40	64.40
25005	1200100	23	0111	40200701	VOC	64.40	64.40	64.40
25005	1200100	26	0114	40200701	VOC	64.40	64.40	64.40
25005	1200100	28	0116	40200701	VOC	64.40	64.40	64.40
25005	1200101	08	0107	40200701	VOC	64.40	64.40	64.40
25005	1200101	09	0108	40200706	VOC	64.40	64.40	64.40
25005	1200101	10	0109	40200701	VOC	64.40	64.40	64.40
25005	1200101	11	0110	40200701	VOC	64.40	64.40	64.40
25005	1200101	12	0111	40200701	VOC	64.40	64.40	64.40
25005	1200183	07	0203	40200701	VOC	64.40	64.40	64.40
25005	1200388	04	0104	40200701	VOC	64.40	64.40	64.40
25005	1200388	05	0105	40200701	VOC	64.40	64.40	64.40
25005	1200388	05	0205	40200701	VOC	64.40	64.40	64.40
25005	1200509	04	0104	40200701	VOC	64.40	64.40	64.40
25005	1200585	02	0102	40200710	VOC	64.40	64.40	64.40
25005	1200673	07	0107	40200710	VOC	64.40	64.40	64.40

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
25005	1200707	08	0106	40200710	VOC	64.40	64.40	64.40
25005	1200851	11	0110	40200710	VOC	64.40	64.40	64.40
25009	1190683	03	0103	40200706	VOC	64.40	64.40	64.40
25009	1190690	09	0108	40200710	VOC	64.40	64.40	64.40
25009	1210026	15	0115	40200710	VOC	64.40	64.40	64.40
25009	1210046	01	0101	40200706	VOC	64.40	64.40	64.40
25009	1210083	05	0104	40200710	VOC	64.40	64.40	64.40
25009	1210093	09	0209	40200701	VOC	64.40	64.40	64.40
25009	1210110	01	0101	40200701	VOC	64.40	64.40	64.40
25009	1210212	30	0321	40200706	VOC	64.40	64.40	64.40
25009	1210212	30	0721	40200706	VOC	64.40	64.40	64.40
25009	1210212	32	0322	40200706	VOC	64.40	64.40	64.40
25009	1210212	32	0622	40200706	VOC	64.40	64.40	64.40
25009	1210212	32	0922	40200706	VOC	64.40	64.40	64.40
25009	1210276	03	0102	40200701	VOC	64.40	64.40	64.40
25009	1210332	01	0101	40200701	VOC	64.40	64.40	64.40
25009	1210332	02	0102	40200701	VOC	64.40	64.40	64.40
25009	1210332	03	0103	40200701	VOC	64.40	64.40	64.40
25009	1210341	10	0110	40200710	VOC	64.40	64.40	64.40
25009	1211013	07	0105	40200710	VOC	64.40	64.40	64.40
25009	1211013	08	0306	40200710	VOC	64.40	64.40	64.40
25009	1211013	33	0331	40200701	VOC	64.40	64.40	64.40
25009	1211013	72	0259	40200710	VOC	64.40	64.40	64.40
25009	1211013	89	0253	40200710	VOC	64.40	64.40	64.40
25013	0420145	16	0112	40200710	VOC	64.40	64.40	64.40
25013	0420213	01	0201	40200701	VOC	64.40	64.40	64.40
25013	0420260	02	0102	40200710	VOC	64.40	64.40	64.40
25013	0420265	06	0105	40200701	VOC	64.40	64.40	64.40
25013	0420561	01	0101	40200701	VOC	64.40	64.40	64.40
25013	0420798	05	0105	40200710	VOC	64.40	64.40	64.40
25013	0420821	10	0106	40200701	VOC	64.40	64.40	64.40
25015	0420558	01	0101	40200710	VOC	64.40	64.40	64.40
25017	1180795	02	0102	40200706	VOC	64.40	64.40	64.40
25017	1180795	03	0103	40200706	VOC	64.40	64.40	64.40
25017	1180795	04	0104	40200706	VOC	64.40	64.40	64.40
25017	1180795	05	0105	40200706	VOC	64.40	64.40	64.40
25017	1180795	06	0106	40200706	VOC	64.40	64.40	64.40
25017	1180795	07	0107	40200701	VOC	64.40	64.40	64.40
25017	1180795	08	0108	40200701	VOC	64.40	64.40	64.40
25017	1180795	09	0109	40200701	VOC	64.40	64.40	64.40
25017	1190355	05	0101	40200706	VOC	64.40	64.40	64.40
25017	1190424	04	0104	40200701	VOC	64.40	64.40	64.40
25017	1190424	08	0106	40200701	VOC	64.40	64.40	64.40
25017	1190424	11	0107	40200701	VOC	64.40	64.40	64.40
25017	1190424	20	0110	40200701	VOC	64.40	64.40	64.40
25017	1190424	24	0111	40200701	VOC	64.40	64.40	64.40
25017	1190424	28	0112	40200701	VOC	64.40	64.40	64.40

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
25017	1190424	32	0213	40200701	VOC	64.40	64.40	64.40
25017	1190424	37	0117	40200701	VOC	64.40	64.40	64.40
25017	1190429	06	0106	40200710	VOC	64.40	64.40	64.40
25017	1190560	02	0101	40200710	VOC	64.40	64.40	64.40
25017	1190560	23	0106	40200710	VOC	64.40	64.40	64.40
25017	1190585	08	0104	40200706	VOC	64.40	64.40	64.40
25017	1190585	17	0106	40200710	VOC	64.40	64.40	64.40
25017	1190692	09	0107	40200701	VOC	64.40	64.40	64.40
25017	1190692	10	0108	40200701	VOC	64.40	64.40	64.40
25017	1190692	11	0108	40200701	VOC	64.40	64.40	64.40
25017	1190953	04	0104	40200710	VOC	64.40	64.40	64.40
25017	1190999	11	0111	40200710	VOC	64.40	64.40	64.40
25017	1190999	11	0211	40200710	VOC	64.40	64.40	64.40
25017	1190999	13	0313	40200710	VOC	64.40	64.40	64.40
25017	1191104	03	0103	40200710	VOC	64.40	64.40	64.40
25017	1191192	05	0104	40200701	VOC	64.40	64.40	64.40
25017	1191296	26	0116	40200701	VOC	64.40	64.40	64.40
25017	1191296	27	0117	40200701	VOC	64.40	64.40	64.40
25017	1191471	04	0103	40200710	VOC	64.40	64.40	64.40
25017	1191564	08	0108	40200710	VOC	64.40	64.40	64.40
25017	1191844	53	0135	40200710	VOC	64.40	64.40	64.40
25017	1191844	53	0335	40200710	VOC	64.40	64.40	64.40
25017	1192051	12	0107	40200710	VOC	64.40	64.40	64.40
25017	1192051	26	0115	40200710	VOC	64.40	64.40	64.40
25017	1210036	03	0103	40200701	VOC	64.40	64.40	64.40
25017	1210036	05	0104	40200710	VOC	64.40	64.40	64.40
25017	1210036	07	0105	40200701	VOC	64.40	64.40	64.40
25017	1210373	01	0101	40200701	VOC	64.40	64.40	64.40
25017	1210373	02	0102	40200701	VOC	64.40	64.40	64.40
25017	1210373	03	0103	40200701	VOC	64.40	64.40	64.40
25017	1210373	04	0104	40200701	VOC	64.40	64.40	64.40
25017	1210373	04	0204	40200701	VOC	64.40	64.40	64.40
25017	1210373	05	0105	40200701	VOC	64.40	64.40	64.40
25017	1210373	05	0205	40200701	VOC	64.40	64.40	64.40
25017	1210373	06	0106	40200701	VOC	64.40	64.40	64.40
25017	1210373	06	0206	40200701	VOC	64.40	64.40	64.40
25017	1210373	09	0109	40200701	VOC	64.40	64.40	64.40
25017	1210373	10	0110	40200701	VOC	64.40	64.40	64.40
25017	1210912	02	0202	40200710	VOC	64.40	64.40	64.40
25021	1190319	04	0103	40200710	VOC	64.40	64.40	64.40
25021	1190319	11	0111	40200710	VOC	64.40	64.40	64.40
25021	1190569	23	0215	40200710	VOC	64.40	64.40	64.40
25021	1192106	03	0103	40200710	VOC	64.40	64.40	64.40
25021	1192121	07	0107	40200701	VOC	64.40	64.40	64.40
25021	1192131	03	0103	40200710	VOC	64.40	64.40	64.40
25021	1192491	07	0107	40200701	VOC	64.40	64.40	64.40
25021	1192491	08	0108	40200701	VOC	64.40	64.40	64.40

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
25021	1200125	55	0146	40200710	VOC	64.40	64.40	64.40
25021	1200125	56	0147	40200710	VOC	64.40	64.40	64.40
25021	1200127	10	0209	40200710	VOC	64.40	64.40	64.40
25021	1200228	04	0203	40200710	VOC	64.40	64.40	64.40
25021	1200452	04	0102	40200701	VOC	64.40	64.40	64.40
25023	1192198	11	0107	40200710	VOC	64.40	64.40	64.40
25023	1192198	12	0108	40200710	VOC	64.40	64.40	64.40
25023	1192198	19	0109	40200710	VOC	64.40	64.40	64.40
25023	1192198	23	0109	40200710	VOC	64.40	64.40	64.40
25023	1192198	25	0109	40200710	VOC	64.40	64.40	64.40
25023	1192198	26	0109	40200710	VOC	64.40	64.40	64.40
25023	1192203	01	0101	40200710	VOC	64.40	64.40	64.40
25023	1192237	08	0102	40200710	VOC	64.40	64.40	64.40
25023	1192436	09	0105	40200701	VOC	64.40	64.40	64.40
25023	1200177	05	0105	40200701	VOC	64.40	64.40	64.40
25023	1200637	04	0104	40200710	VOC	64.40	64.40	64.40
25023	1200637	07	0105	40200707	VOC	64.40	64.40	64.40
25025	1191397	05	0106	40200701	VOC	64.40	64.40	64.40
25025	1191397	06	0107	40200701	VOC	64.40	64.40	64.40
25027	1180025	01	0301	40200710	VOC	64.40	64.40	64.40
25027	1180115	17	0209	40200701	VOC	64.40	64.40	64.40
25027	1180115	25	0311	40200710	VOC	64.40	64.40	64.40
25027	1180115	36	0117	40200710	VOC	64.40	64.40	64.40
25027	1180115	39	0118	40200701	VOC	64.40	64.40	64.40
25027	1180115	77	0251	40200710	VOC	64.40	64.40	64.40
25027	1180225	04	0104	40200710	VOC	64.40	64.40	64.40
25027	1180265	05	0205	40200701	VOC	64.40	64.40	64.40
25027	1180310	03	0203	40200701	VOC	64.40	64.40	64.40
25027	1180310	03	0303	40200701	VOC	64.40	64.40	64.40
25027	1180505	07	0107	40200701	VOC	64.40	64.40	64.40
25027	1180505	23	0123	40200710	VOC	64.40	64.40	64.40
25027	1180998	27	0111	40200710	VOC	64.40	64.40	64.40
25027	1180998	30	0113	40200701	VOC	64.40	64.40	64.40
25027	1200856	12	0110	40200701	VOC	64.40	64.40	64.40
25027	1200856	13	0111	40200701	VOC	64.40	64.40	64.40
33011	3301100076	004	1	40200701	VOC	64.40	64.40	64.40
33011	3301100076	005	1	40200701	VOC	64.40	64.40	64.40
33011	3301100076	009	1	40200701	VOC	64.40	64.40	64.40
33017	3301700010	001	1	40200701	VOC	64.40	64.40	64.40
33017	3301700010	002	1	40200701	VOC	64.40	64.40	64.40
36063	9290900018	ADHES1	HM1FP	40200701	VOC	64.40	64.40	64.40
36069	8329900028	000005	WABFP	40200701	VOC	64.40	64.40	64.40
36103	1473000001	EI0001	E10EI	40200701	VOC	64.40	64.40	64.40
36103	1473000001	U00002	103FP	40200706	VOC	64.40	64.40	64.40
36115	5533000016	U00011	SL2FP	40200710	VOC	64.40	64.40	64.40
36117	8543600007	1MLDRB	SC3FP	40200701	VOC	64.40	64.40	64.40
36117	8543600007	2KLZRS	SC2FP	40200701	VOC	64.40	64.40	64.40

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
42001	420010009	103	1	40200706	VOC	64.40	64.40	64.40
42013	420130480	101	2	40200701	VOC	64.40	64.40	64.40
42017	420171041	101	1	40200701	VOC	64.40	64.40	64.40
42019	420190029	104	1	40200701	VOC	64.40	64.40	64.40
42019	420190029	105	1	40200701	VOC	64.40	64.40	64.40
42019	420190090	102	1	40200701	VOC	64.40	64.40	64.40
42019	420190090	102	2	40200701	VOC	64.40	64.40	64.40
42019	420190090	102	3	40200701	VOC	64.40	64.40	64.40
42019	420190090	102	4	40200701	VOC	64.40	64.40	64.40
42019	420190090	102	5	40200701	VOC	64.40	64.40	64.40
42019	420190090	102	6	40200701	VOC	64.40	64.40	64.40
42035	420350429	P105	1	40200710	VOC	64.40	64.40	64.40
42035	420350429	P106	1	40200710	VOC	64.40	64.40	64.40
42039	420390013	106	1	40200707	VOC	64.40	64.40	64.40
42039	420390014	102	1	40200701	VOC	64.40	64.40	64.40
42039	420390014	103	1	40200701	VOC	64.40	64.40	64.40
42039	420390014	104	1	40200701	VOC	64.40	64.40	64.40
42039	420390014	105	1	40200701	VOC	64.40	64.40	64.40
42045	420450954	121	1	40200701	VOC	64.40	64.40	64.40
42055	420550022	100	1	40200706	VOC	64.40	64.40	64.40
42055	420550022	101	1	40200706	VOC	64.40	64.40	64.40
42061	420610016	104	1	40200701	VOC	64.40	64.40	64.40
42061	420610016	105	1	40200701	VOC	64.40	64.40	64.40
42061	420610032	101	2	40200701	VOC	64.40	64.40	64.40
42061	420610032	101	4	40200701	VOC	64.40	64.40	64.40
42061	420610032	101	6	40200701	VOC	64.40	64.40	64.40
42061	420610032	102	2	40200701	VOC	64.40	64.40	64.40
42061	420610032	102	4	40200701	VOC	64.40	64.40	64.40
42061	420610032	102	6	40200701	VOC	64.40	64.40	64.40
42061	420610032	103	2	40200701	VOC	64.40	64.40	64.40
42061	420610032	103	4	40200701	VOC	64.40	64.40	64.40
42069	420690023	107	1	40200701	VOC	64.40	64.40	64.40
42069	420690023	108	1	40200701	VOC	64.40	64.40	64.40
42071	420710802	102	1	40200710	VOC	64.40	64.40	64.40
42071	420710804	102	1	40200710	VOC	64.40	64.40	64.40
42077	420770071	101	1	40200710	VOC	64.40	64.40	64.40
42077	420770071	101	2	40200710	VOC	64.40	64.40	64.40
42077	420770071	102	1	40200710	VOC	64.40	64.40	64.40
42077	420770071	102	2	40200710	VOC	64.40	64.40	64.40
42077	420770071	103	1	40200710	VOC	64.40	64.40	64.40
42077	420770071	104	1	40200710	VOC	64.40	64.40	64.40
42077	420770071	105	1	40200710	VOC	64.40	64.40	64.40
42081	420810039	113	1	40200710	VOC	64.40	64.40	64.40
42081	420810559	P104	1	40200710	VOC	64.40	64.40	64.40
42091	420910826	002	1	40200701	VOC	64.40	64.40	64.40
42097	420970001	105	1	40200710	VOC	64.40	64.40	64.40
42097	420970001	201	1	40200710	VOC	64.40	64.40	64.40

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
42097	420970001	202	1	40200710	VOC	64.40	64.40	64.40
42097	420970034	104	1	40200710	VOC	64.40	64.40	64.40
42097	420970034	105A	1	40200710	VOC	64.40	64.40	64.40
42101	4210101591	004	1	40200701	VOC	64.40	64.40	64.40
42101	4210102051	005	10	40200712	VOC	64.40	64.40	64.40
42101	4210102051	005	11	40200712	VOC	64.40	64.40	64.40
42101	4210102051	005	12	40200712	VOC	64.40	64.40	64.40
42101	4210102051	006	5	40200712	VOC	64.40	64.40	64.40
42101	4210102051	007	6	40200712	VOC	64.40	64.40	64.40
42101	4210102051	008	14	40200712	VOC	64.40	64.40	64.40
42101	4210102051	009	7	40200712	VOC	64.40	64.40	64.40
42101	4210103217	010	2	40200710	VOC	64.40	64.40	64.40
42109	421090001	113	1	40200710	VOC	64.40	64.40	64.40
42109	421090001	140	1	40200710	VOC	64.40	64.40	64.40
42119	421190477	P101	1	40200710	VOC	64.40	64.40	64.40
42129	421290071	105	1	40200701	VOC	64.40	64.40	64.40
42129	421290311	101	1	40200701	VOC	64.40	64.40	64.40
42133	421330034	103	1	40200701	VOC	64.40	64.40	64.40
42133	421330055	101	1	40200706	VOC	64.40	64.40	64.40
42133	421330055	101	2	40200706	VOC	64.40	64.40	64.40
44003	AIR1438	8	8	40200710	VOC	64.40	64.40	64.40
44007	AIR1859	2	2	40200701	VOC	64.40	64.40	64.40
44007	AIR3850	1	1	40200701	VOC	64.40	64.40	64.40
44007	AIR537	2	2	40200710	VOC	64.40	64.40	64.40
44009	AIR594	7	7	40200710	VOC	64.40	64.40	64.40
50005	9	4	1	40200701	VOC	64.40	64.40	64.40
Control Measure: Asphalt Production Plants								
34001	70003	U101	OS1	30500207	NOX	0.00	35.00	35.00
34001	70003	U101	OS2	30500207	NOX	0.00	35.00	35.00
34001	70003	U12	OS0	30500207	NOX	0.00	35.00	35.00
34001	70003	U13	OS0	30500207	NOX	0.00	35.00	35.00
34001	70003	U6	OS1	30500207	NOX	0.00	35.00	35.00
34001	70015	U401	OS1601	30500207	NOX	0.00	35.00	35.00
34001	70015	U401	OS2101	30500207	NOX	0.00	35.00	35.00
34001	70015	U401	OS401	30500207	NOX	0.00	35.00	35.00
34007	50373	U11	OS1	30500207	NOX	0.00	35.00	35.00
34007	50373	U6	OS1	30500207	NOX	0.00	35.00	35.00
34009	73014	U9	OS3	30500207	NOX	0.00	35.00	35.00
34009	73014	U9	OS7	30500207	NOX	0.00	35.00	35.00
34013	05005	U2	OS1	30500207	NOX	0.00	35.00	35.00
34015	55261	U4	OS1	30500207	NOX	0.00	35.00	35.00
34017	11171	U2	OS1	30500207	NOX	0.00	35.00	35.00
34021	60031	U6	OS1	30500207	NOX	0.00	35.00	35.00
34023	15129	U7	OS1	30500207	NOX	0.00	35.00	35.00
34025	20022	U1	OS1	30500207	NOX	0.00	35.00	35.00
34025	20023	U2	OS1	30500207	NOX	0.00	35.00	35.00
34025	20025	U26	OS1	30500207	NOX	0.00	35.00	35.00

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
34025	20025	U3	OS2	30500207	NOX	0.00	35.00	35.00
34027	25009	U13	OS1	30500207	NOX	0.00	35.00	35.00
34027	25009	U2	OS1	30500207	NOX	0.00	35.00	35.00
34027	25268	U100	OS101	30500207	NOX	0.00	35.00	35.00
34027	25268	U1601	OS1601	30500207	NOX	0.00	35.00	35.00
34027	25268	U1601	OS1602	30500207	NOX	0.00	35.00	35.00
34029	78010	U1500	OS1501	30500207	NOX	0.00	35.00	35.00
34029	78010	U1500	OS1502	30500207	NOX	0.00	35.00	35.00
34029	78010	U1601	OS1601	30500207	NOX	0.00	35.00	35.00
34029	78010	U900	OS1	30500207	NOX	0.00	35.00	35.00
34029	78012	U101	OS1	30500207	NOX	0.00	35.00	35.00
34029	78014	U2	OS1	30500207	NOX	0.00	35.00	35.00
34031	30005	U100	OS113	30500207	NOX	0.00	35.00	35.00
34031	30005	U2300	OS2301	30500207	NOX	0.00	35.00	35.00
34031	30005	U2300	OS2332	30500207	NOX	0.00	35.00	35.00
34031	30085	U100	OS201	30500207	NOX	0.00	35.00	35.00
34031	30085	U100	OS901	30500207	NOX	0.00	35.00	35.00
34031	30085	U100	OS903	30500207	NOX	0.00	35.00	35.00
34035	35014	U100	OS113	30500207	NOX	0.00	35.00	35.00
34035	35014	U100	OS2301	30500207	NOX	0.00	35.00	35.00
34035	36009	U1000	OS1201	30500207	NOX	0.00	35.00	35.00
34035	36009	U1000	OS1202	30500207	NOX	0.00	35.00	35.00
34035	36009	U1000	OS1301	30500207	NOX	0.00	35.00	35.00
34035	36009	U1000	OS1401	30500207	NOX	0.00	35.00	35.00
34037	83008	U4	OS1	30500207	NOX	0.00	35.00	35.00
36081	2630200138	D00001	P01FP	30500251	NOX	35.00	35.00	35.00
36085	2640300031	3ADRYR	302FP	30500251	NOX	35.00	35.00	35.00
36119	3550800247	1MIXER	001FP	30500205	NOX	35.00	35.00	35.00
Control Measure: Cement Kilns								
23013	2301300028	001	1	30500706	NOX	60.00	60.00	60.00
24013	013-0012	39	01S39	30500606	NOX	46.67	46.67	46.67
24021	021-0013	21	01S21	30500706	NOX	46.67	46.67	46.67
24021	021-0013	22	01S22	30500706	NOX	46.67	46.67	46.67
24043	043-0008	24	01S24	30500606	NOX	46.67	46.67	46.67
36001	4012200004	U00002	OX1FP	30501202	NOX	70.00	70.00	70.00
36001	4012200004	U00003	FZ1FP	30501204	NOX	70.00	70.00	70.00
36001	4012200004	U00003	FZ2FP	30501204	NOX	70.00	70.00	70.00
36001	4012200004	U00003	SS1FP	30501206	NOX	70.00	70.00	70.00
36001	4012200004	U00012	OX2FP	30501202	NOX	70.00	70.00	70.00
36001	4012200004	U00013	FC2FP	30501204	NOX	70.00	70.00	70.00
36001	4012400001	041000	K12FP	30500706	NOX	20.00	20.00	20.00
36039	4192600021	U00K18	00CEP	30500706	NOX	20.00	20.00	20.00
36113	5520500013	0UKILN	G02FP	30500606	NOX	20.00	20.00	20.00
42019	420190024	101	4	30500706	NOX	0.00	52.38	52.38
42019	420190024	121	4	30500706	NOX	0.00	52.38	52.38
42073	420730024	226	1	30500606	NOX	0.00	54.29	54.29
42073	420730024	227	1	30500606	NOX	0.00	60.00	60.00

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
42073	420730024	228	1	30500606	NOX	0.00	54.18	54.18
42073	420730026	501	1	30500706	NOX	0.00	56.52	56.52
42073	420730026	502	1	30500706	NOX	0.00	56.52	56.52
42077	420770019	101	2	30500606	NOX	0.00	54.40	54.40
42079	420790013	101	1	30501201	NOX	85.00	85.00	85.00
42079	420790013	102	1	30501201	NOX	85.00	85.00	85.00
42079	420790013	103	1	30501204	NOX	85.00	85.00	85.00
42079	420790013	104	1	30501204	NOX	85.00	85.00	85.00
42079	420790060	104	1	30501301	NOX	85.00	85.00	85.00
42095	420950006	102	1	30500606	NOX	0.00	57.04	57.04
42095	420950006	122	1	30500606	NOX	0.00	57.04	57.04
42095	420950012	101	2	30500706	NOX	0.00	45.21	45.21
42095	420950012	102	2	30500706	NOX	0.00	45.21	45.21
42095	420950045	142	1	30500606	NOX	0.00	32.20	32.20
42095	420950045	143	1	30500606	NOX	0.00	32.20	32.20
42095	420950127	101	1	30500606	NOX	0.00	32.20	32.20
42095	420950127	102	1	30500606	NOX	0.00	32.20	32.20
42095	420950127	103	1	30500606	NOX	0.00	32.20	32.20
42095	420950127	104	1	30500606	NOX	0.00	32.20	32.20
42133	421330060	200	4	39000602	NOX	0.00	45.21	45.21
Control Measure: Glass and Fiberglass Furnaces								
24510	510-0285	10	01S10	30501402	NOX	85.00	85.00	85.00
25027	1200856	04	0304	30501402	NOX	85.00	85.00	85.00
25027	1200856	05	0304	30501402	NOX	85.00	85.00	85.00
34005	45982	U6	OS0	39999991	NOX	0.00	20.00	20.00
34011	75475	U1	OS1	30501401	NOX	0.00	20.00	20.00
34011	75475	U3	OS1	30501401	NOX	0.00	20.00	20.00
34011	75475	U35	OS1	30501401	NOX	0.00	20.00	20.00
34011	75475	U37	OS1	30501401	NOX	0.00	20.00	20.00
34011	75475	U5	OS1	30501401	NOX	0.00	20.00	20.00
34011	75503	U2	OS1001	30501401	NOX	0.00	20.00	20.00
34011	75503	U3	OS1	30501401	NOX	0.00	20.00	20.00
34011	75503	U4	OS1	30501401	NOX	0.00	20.00	20.00
34011	75503	U5	OS1	30501401	NOX	0.00	20.00	20.00
34011	75505	U12	OS1	30599999	NOX	0.00	20.00	20.00
34011	75505	U143	OS1	30599999	NOX	0.00	20.00	20.00
34011	75505	U144	OS1	30599999	NOX	0.00	20.00	20.00
34011	75505	U146	OS1	30599999	NOX	0.00	20.00	20.00
34011	75505	U150	OS1	30599999	NOX	0.00	20.00	20.00
34011	75505	U151	OS1	30599999	NOX	0.00	20.00	20.00
34011	75505	U6	OS1	30599999	NOX	0.00	20.00	20.00
34011	75506	U1	OS1	30501401	NOX	0.00	20.00	20.00
34011	75506	U1	OS3	30501401	NOX	0.00	20.00	20.00
34023	18070	U1	OS1	30501401	NOX	0.00	20.00	20.00
34033	65499	U1	OS1	30501401	NOX	0.00	20.00	20.00
34033	65499	U2	OS1	30501401	NOX	0.00	20.00	20.00
34033	65499	U3	OS1	30501401	NOX	0.00	20.00	20.00

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
36001	4010300016	KILNSG	10BEI	39001399	NOX	20.00	20.00	20.00
36001	4010300016	KILNSG	KNFFP	39001399	NOX	20.00	20.00	20.00
36001	4012200004	EI0001	E20EI	39000689	NOX	70.00	70.00	70.00
36011	7055200004	AFURNC	FRNFP	30501402	NOX	70.00	70.00	70.00
36015	8070400036	000001	O1AFP	30501402	NOX	70.00	70.00	70.00
36069	8320500041	UFURNC	FURFP	30501403	NOX	70.00	70.00	70.00
36089	6403000002	U00001	101FP	30501401	NOX	70.00	70.00	70.00
36089	6403000002	U00003	300FP	30501416	NOX	70.00	70.00	70.00
36101	8460300008	PCCTNK	GL2FP	30501416	NOX	70.00	70.00	70.00
42003	4200300164	003	1	30501404	NOX	85.00	85.00	85.00
42003	4200300164	007	1	30501404	NOX	85.00	85.00	85.00
42003	4200300164	008	1	30501404	NOX	85.00	85.00	85.00
42003	4200300165	P01	1	30501402	NOX	85.00	85.00	85.00
42003	4200300165	P02	1	30501402	NOX	85.00	85.00	85.00
42003	4200300165	P04	1	30501402	NOX	85.00	85.00	85.00
42003	4200300227	003	1	30590003	NOX	85.00	85.00	85.00
42003	4200300227	003	2	30590003	NOX	85.00	85.00	85.00
42003	4200300342	002	1	30501403	NOX	85.00	85.00	85.00
42003	4200300342	002	3	30501403	NOX	85.00	85.00	85.00
42007	420070012	103	1	30501402	NOX	85.00	85.00	85.00
42007	420070012	104	1	30501408	NOX	85.00	85.00	85.00
42007	420070012	105	1	30501408	NOX	85.00	85.00	85.00
42007	420070022	102	1	30501799	NOX	85.00	85.00	85.00
42027	420270021	P101	1	30501404	NOX	85.00	85.00	85.00
42027	420270021	P102	1	30501404	NOX	85.00	85.00	85.00
42027	420270021	P102	3	30501404	NOX	85.00	85.00	85.00
42027	420270021	P103	1	30501404	NOX	85.00	85.00	85.00
42031	420310009	102	1	30501402	NOX	85.00	85.00	85.00
42031	420310009	S105A	1	30501402	NOX	85.00	85.00	85.00
42039	420390012	101	1	30501403	NOX	85.00	85.00	85.00
42039	420390012	102	1	30501403	NOX	85.00	85.00	85.00
42041	420410013	101	1	30501403	NOX	85.00	85.00	85.00
42041	420410013	102	1	30501403	NOX	85.00	85.00	85.00
42045	420450041	101	1	30501410	NOX	85.00	85.00	85.00
42051	420510020	101	1	30501402	NOX	85.00	85.00	85.00
42051	420510020	102	1	30501402	NOX	85.00	85.00	85.00
42065	420650003	110	1	30501402	NOX	85.00	85.00	85.00
42065	420650007	103	1	30501402	NOX	85.00	85.00	85.00
42065	420650007	104	1	30501402	NOX	85.00	85.00	85.00
42079	420790008	101	1	30501704	NOX	85.00	85.00	85.00
42079	420790008	102	1	30501704	NOX	85.00	85.00	85.00
42079	420790008	103	1	30501701	NOX	85.00	85.00	85.00
42079	420790018	101	1	30501402	NOX	85.00	85.00	85.00
42079	420790018	101	2	30501402	NOX	85.00	85.00	85.00
42079	420790018	102	1	30501402	NOX	85.00	85.00	85.00
42079	420790018	102	2	30501402	NOX	85.00	85.00	85.00
42079	420790018	103	1	30501402	NOX	85.00	85.00	85.00

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
42083	420830002	101	1	30501402	NOX	85.00	85.00	85.00
42083	420830002	201	1	30501402	NOX	85.00	85.00	85.00
42083	420830006	101	1	30501402	NOX	85.00	85.00	85.00
42083	420830006	102	1	30501402	NOX	85.00	85.00	85.00
42083	420830006	103	1	30501402	NOX	85.00	85.00	85.00
42095	420950047	101A	3	30501701	NOX	85.00	85.00	85.00
42095	420950047	103A	3	30501701	NOX	85.00	85.00	85.00
42117	421170020	P109	1	30501402	NOX	85.00	85.00	85.00
42117	421170020	P124	1	30501404	NOX	85.00	85.00	85.00
42117	421170020	P127	1	30501408	NOX	85.00	85.00	85.00
42125	421250001	107	1	30501404	NOX	85.00	85.00	85.00
42125	421250001	107	3	30501404	NOX	85.00	85.00	85.00
42129	421290233	101	2	30501404	NOX	85.00	85.00	85.00
42129	421290233	102	2	30501404	NOX	85.00	85.00	85.00
42129	421290553	101	1	30501402	NOX	85.00	85.00	85.00
42133	421330066	104	3	30501414	NOX	85.00	85.00	85.00

Table E-2 NonEGU BOTW Control Factors for ICI Boilers

SCC	Boiler Size Range (mmBtu/hour) < 25 CF0_25	25 to 50 CF25_50	50 to 100 CF50_100	100 to 250 CF100_250	>250 CF250	SCC_L4	SCC_L3
10200104	10	50	10	40	0	Traveling Grate (Overfeed) Stoker	Anthracite Coal
10200202	10	50	10	40	0	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal
10200203	10	50	10	40	0	Cyclone Furnace	Bituminous/Subbituminous Coal
10200204	10	50	10	40	0	Spreader Stoker	Bituminous/Subbituminous Coal
10200205	10	50	10	40	0	Overfeed Stoker	Bituminous/Subbituminous Coal
10200206	10	50	10	40	0	Underfeed Stoker	Bituminous/Subbituminous Coal
10200212	10	50	10	40	0	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal
10200222	10	50	10	40	0	Pulverized Coal: Dry Bottom (Subbituminous Coal)	Bituminous/Subbituminous Coal
10200401	10	50	10	40	0	Grade 6 Oil	Residual Oil
10200402	10	50	10	40	0	10-100 Million Btu/hr **	Residual Oil
10200403	10	50	10	40	0	< 10 Million Btu/hr **	Residual Oil
10200404	10	50	10	40	0	Grade 5 Oil	Residual Oil
10200405	10	50	10	40	0	Cogeneration	Residual Oil
10200501	10	50	10	40	0	Grades 1 and 2 Oil	Distillate Oil
10200502	10	50	10	40	0	10-100 Million Btu/hr **	Distillate Oil
10200503	10	50	10	40	0	< 10 Million Btu/hr **	Distillate Oil
10200504	10	50	10	40	0	Grade 4 Oil	Distillate Oil
10200505	10	50	10	40	0	Cogeneration	Distillate Oil
10200601	10	50	10	75	0	> 100 Million Btu/hr	Natural Gas
10200602	10	50	10	75	0	10-100 Million Btu/hr	Natural Gas
10200603	10	50	10	75	0	< 10 Million Btu/hr	Natural Gas
10200604	10	50	10	75	0	Cogeneration	Natural Gas
10200701	10	50	10	75	0	Petroleum Refinery Gas	Process Gas
10200704	10	50	10	75	0	Blast Furnace Gas	Process Gas
10200707	10	50	10	75	0	Coke Oven Gas	Process Gas
10200710	10	50	10	75	0	Cogeneration	Process Gas
10200799	10	50	10	75	0	Other: Specify in Comments	Process Gas
10200802	10	50	10	40	0	All Boiler Sizes	Petroleum Coke
10200901	10	10	10	10	10	Bark-fired Boiler	Wood/Bark Waste
10200902	10	10	10	10	10	Wood/Bark-fired Boiler	Wood/Bark Waste

	Boiler Size Range (mmBtu/hour)						
	< 25	**25 to 50**	**50 to 100**	**100 to 250**	**>250**		
SCC	**CF0_25**	**CF25_50**	**CF50_100**	**CF100_250**	**CF250**	**SCC_L4**	**SCC_L3**
10200903	10	10	10	10	10	Wood-fired Boiler - Wet Wood (>=20% moisture)	Wood/Bark Waste
10200904	10	10	10	10	10	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste
10200905	10	10	10	10	10	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste
10200906	10	10	10	10	10	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste
10200907	10	10	10	10	10	Wood Cogeneration	Wood/Bark Waste
10200908	10	10	10	10	10	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste
10201001	10	50	10	75	0	Butane	Liquified Petroleum Gas (LPG)
10201002	10	50	10	75	0	Propane	Liquified Petroleum Gas (LPG)
10201003	10	50	10	75	0	Butane/Propane Mixture: Specify Percent Butane in	Liquified Petroleum Gas (LPG)
10300101	10	50	10	40	0	Pulverized Coal	Anthracite Coal
10300102	10	50	10	40	0	Traveling Grate (Overfeed) Stoker	Anthracite Coal
10300103	10	50	10	40	0	Hand-fired	Anthracite Coal
10300203	10	50	10	40	0	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal
10300206	10	50	10	40	0	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal
10300207	10	50	10	40	0	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal
10300208	10	50	10	40	0	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal
10300209	10	50	10	40	0	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal
10300225	10	50	10	40	0	Traveling Grate (Overfeed) Stoker (Subbituminous C	Bituminous/Subbituminous Coal
10300226	10	50	10	40	0	Pulverized Coal: Dry Bottom Tangential (Subbitumin	Bituminous/Subbituminous Coal
10300401	10	50	10	40	0	Grade 6 Oil	Residual Oil
10300402	10	50	10	40	0	10-100 Million Btu/hr **	Residual Oil
10300403	10	50	10	40	0	< 10 Million Btu/hr **	Residual Oil
10300404	10	50	10	40	0	Grade 5 Oil	Residual Oil
10300501	10	50	10	40	0	Grades 1 and 2 Oil	Distillate Oil
10300502	10	50	10	40	0	10-100 Million Btu/hr **	Distillate Oil
10300503	10	50	10	40	0	< 10 Million Btu/hr **	Distillate Oil
10300504	10	50	10	40	0	Grade 4 Oil	Distillate Oil
10300601	10	50	10	75	0	> 100 Million Btu/hr	Natural Gas
10300602	10	50	10	75	0	10-100 Million Btu/hr	Natural Gas
10300603	10	50	10	75	0	< 10 Million Btu/hr	Natural Gas
10300701	10	50	10	75	0	POTW Digester Gas-fired Boiler	Process Gas
10300799	10	50	10	75	0	Other Not Classified	Process Gas

	Boiler Size Range (mmBtu/hour)						
	< 25	**25 to 50**	**50 to 100**	**100 to 250**	**>250**		
SCC	**CF0_25**	**CF25_50**	**CF50_100**	**CF100_250**	**CF250**	**SCC_L4**	**SCC_L3**
10300811	10	50	10	75	0	Landfill Gas	Landfill Gas
10300901	10	10	10	10	0	Bark-fired Boiler	Wood/Bark Waste
10300902	10	10	10	10	0	Wood/Bark-fired Boiler	Wood/Bark Waste
10300903	10	10	10	10	0	Wood-fired Boiler - Wet Wood (>=20% moisture)	Wood/Bark Waste
10300908	10	10	10	10	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste
10301002	10	50	10	75	0	Propane	Liquified Petroleum Gas (LPG)
10301003	10	50	10	75	0	Butane/Propane Mixture: Specify Percent Butane in	Liquified Petroleum Gas (LPG)

Table E-3 Area Source BOTW Control Factors for Adhesives and Sealants Application, Asphalt Paving, Consumer Products, and Portable Fuel Containers

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
Control Measure: Adhesives and Sealants					
09	2440020000	VOC	64.40	64.40	64.40
10	2440020000	VOC	64.40	64.40	64.40
11	2440020000	VOC	64.40	64.40	64.40
23	2440020000	VOC	64.40	64.40	64.40
24	2440020000	VOC	64.40	64.40	64.40
25	2440020000	VOC	64.40	64.40	64.40
33	2440020000	VOC	64.40	64.40	64.40
34	2440020000	VOC	64.40	64.40	64.40
36	2440020000	VOC	64.40	64.40	64.40
42	2440020000	VOC	64.40	64.40	64.40
44	2440020000	VOC	64.40	64.40	64.40
Control Measure: Asphalt Paving					
09	2461022000	VOC	20.00	20.00	20.00
24	2461022000	VOC	20.00	20.00	20.00
25	2461022000	VOC	20.00	20.00	20.00
33	2461022000	VOC	20.00	20.00	20.00
34	2461022000	VOC	75.00	75.00	75.00
36	2461022000	VOC	20.00	20.00	20.00
42	2461022000	VOC	0.00	20.00	20.00
Control Measure: Consumer Products					
09	2465000000	VOC	2.00	2.00	2.00
10	2460100000	VOC	2.00	2.00	2.00
10	2460200000	VOC	2.00	2.00	2.00
10	2460400000	VOC	2.00	2.00	2.00
10	2460500000	VOC	2.00	2.00	2.00
10	2460600000	VOC	2.00	2.00	2.00
10	2460800000	VOC	2.00	2.00	2.00
10	2460900000	VOC	2.00	2.00	2.00
11	2460100000	VOC	2.00	2.00	2.00
11	2460200000	VOC	2.00	2.00	2.00
11	2460400000	VOC	2.00	2.00	2.00
11	2460500000	VOC	2.00	2.00	2.00
11	2460600000	VOC	2.00	2.00	2.00
11	2460800000	VOC	2.00	2.00	2.00
11	2460900000	VOC	2.00	2.00	2.00
23	2460100000	VOC	2.00	2.00	2.00
23	2460200000	VOC	2.00	2.00	2.00
23	2460400000	VOC	2.00	2.00	2.00
23	2460500000	VOC	2.00	2.00	2.00
23	2460600000	VOC	2.00	2.00	2.00
23	2460800000	VOC	2.00	2.00	2.00

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
23	2460900000	VOC	2.00	2.00	2.00
24	2465000000	VOC	2.00	2.00	2.00
25	2460000000	VOC	2.00	2.00	2.00
33	2460000000	VOC	2.00	2.00	2.00
34	2465000000	VOC	2.00	2.00	2.00
36	2460000000	VOC	2.00	2.00	2.00
42	2465000000	VOC	2.00	2.00	2.00
44	2460100000	VOC	2.00	2.00	2.00
44	2460200000	VOC	2.00	2.00	2.00
44	2460400000	VOC	2.00	2.00	2.00
44	2460500000	VOC	2.00	2.00	2.00
44	2460600000	VOC	2.00	2.00	2.00
44	2460800000	VOC	2.00	2.00	2.00
44	2460900000	VOC	2.00	2.00	2.00
Control Measure: Portable Fuel Containers					
09	2501060300	VOC	5.80	23.20	58.00
10	2501011010	VOC	5.80	23.20	58.00
10	2501011011	VOC	5.80	23.20	58.00
10	2501011012	VOC	5.80	23.20	58.00
10	2501011015	VOC	5.80	23.20	58.00
10	2501011016	VOC	5.80	23.20	58.00
10	2501012010	VOC	5.80	23.20	58.00
10	2501012011	VOC	5.80	23.20	58.00
10	2501012012	VOC	5.80	23.20	58.00
10	2501012015	VOC	5.80	23.20	58.00
10	2501012016	VOC	5.80	23.20	58.00
11	2501011011	VOC	5.80	23.20	58.00
11	2501011012	VOC	5.80	23.20	58.00
11	2501011016	VOC	5.80	23.20	58.00
11	2501012011	VOC	5.80	23.20	58.00
11	2501012012	VOC	5.80	23.20	58.00
11	2501012016	VOC	5.80	23.20	58.00
23	2501060300	VOC	5.80	23.20	58.00
24	2501011011	VOC	5.80	23.20	58.00
24	2501011012	VOC	5.80	23.20	58.00
24	2501011016	VOC	5.80	23.20	58.00
24	2501012011	VOC	5.80	23.20	58.00
24	2501012012	VOC	5.80	23.20	58.00
24	2501012016	VOC	5.80	23.20	58.00
25	2501011000	VOC	0.00	23.20	58.00
25	2501012000	VOC	0.00	23.20	58.00
33	2501060300	VOC	5.80	23.20	58.00
34	2501000120	VOC	5.80	23.20	58.00
36	2501011011	VOC	5.80	23.20	58.00
36	2501011012	VOC	5.80	23.20	58.00
36	2501011016	VOC	5.80	23.20	58.00
36	2501012011	VOC	5.80	23.20	58.00

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
36	2501012012	VOC	5.80	23.20	58.00
36	2501012016	VOC	5.80	23.20	58.00
42	2501060300	VOC	5.80	23.20	58.00
44	2501060300	VOC	5.80	23.20	58.00

Table E-4 Area Source BOTW Control Factors for ICI Boilers

SCC	Control Factor	SCC_L4	SCC_L3	SCC_L2
2102001000	18.9	Total: All Boiler Types	Anthracite Coal	Industrial
2102002000	18.9	Total: All Boiler Types	Bituminous/Subbituminous Coal	Industrial
2102004000	18.9	Total: Boilers and IC Engines	Distillate Oil	Industrial
2102005000	18.9	Total: All Boiler Types	Residual Oil	Industrial
2102006000	18.9	Total: Boilers and IC Engines	Natural Gas	Industrial
2102007000	18.9	Total: All Boiler Types	Liquified Petroleum Gas (LPG)	Industrial
2102008000	10.0	Total: All Boiler Types	Wood	Industrial
2102011000	10.0	Total: All Boiler Types	Kerosene	Industrial
2103001000	19.5	Total: All Boiler Types	Anthracite Coal	Commercial/Institutional
2103002000	19.5	Total: All Boiler Types	Bituminous/Subbituminous Coal	Commercial/Institutional
2103004000	19.5	Total: Boilers and IC Engines	Distillate Oil	Commercial/Institutional
2103004001	19.5		Distillate Oil	Commercial/Institutional
2103004002	19.5		Distillate Oil	Commercial/Institutional
2103005000	19.5	Total: All Boiler Types	Residual Oil	Commercial/Institutional
2103006000	19.5	Total: Boilers and IC Engines	Natural Gas	Commercial/Institutional
2103007000	19.5	Total: All Combustor Types	Liquified Petroleum Gas (LPG)	Commercial/Institutional
2103008000	10.0	Total: All Boiler Types	Wood	Commercial/Institutional
2103011000	10.0	Total: All Combustor Types	Kerosene	Commercial/Institutional

APPENDIX 5C

Development of MANE-VU Mobile Source Projection Inventories

Technical Memorandum

Development of MANE-VU Mobile Source Projection Inventories for SMOKE/MOBILE6 Application

Jun 2006, NESCAUM

I. Background

The MANE-VU Emissions Inventory workgroup chose to utilize in-house expertise to develop future year mobile source emission estimates for use in Ozone, $PM_{2.5}$, and Regional Haze SIP modeling. Jung-Hun Woo, NESCAUM, and Megan Schuster, MARAMA compiled all the information necessary to run Mobile6 with Sparse Matrix Operator Kernel Emissions (SMOKE) based on the state submitted data. The purpose of this document is to describe how member states and NESCAUM/MARAMA prepared the mobile source activity data (i.e. non-link based VMT & Speed), Mobile6 scenario input files, and accompanying files in SMOKE/MOBILE6 format in support of future year projection inventory development.

II. Procedure

2.1. Base year (Y2002) inventory file

The MANE-VU 2002 base year SMOKE/M6-ready mobile source files served as a starting point for projection inventory development; hence, the procedures employed for the development of these files are summarized here. E.H Pechan, a contractor for MANE-VU, compiled MANE-VU 2002 mobile source inventories. The onroad emissions inventory was compiled from data supplied by the MANE-VU State agencies in the form of onroad emissions input data or emissions inventories either directly to MANE-VU or to EPA through their CERR submittal. States provided information in one or more of the following ways: (1) an onroad emission inventory submittal to EPA, (2) MOBILE6 inputs and VMT data in National Mobile Inventory Model (NMIM) format to EPA, (3) portions of MOBILE6 inputs or full MOBILE6 input files and supporting files plus VMT to EPA, or (4) portions of MOBILE6 inputs or full MOBILE6 input files and supporting files plus VMT to MANE-VU. Different procedures were followed in developing the MANE-VU 2002 onroad emission inventory depending upon how the data were submitted. All States provided information on 2002 onroad activity in the form of vehicle miles traveled (VMT) estimates, although the level of detail of the VMT data varied by State. After integration of all these data, Pechan compiled onroad mobile source files in a SMOKE/Mobile6 ready format.

2.2. Preparing technical guidance to create SMOKE/Mobile6 ready information

As described above, States had the ability and experience to develop their mobile source inventory data in NMIM, stand-alone Mobile6, and emissions inventory format. They, however, were not familiar with procedures for integrating files and converting them into a model ready format. To assist the State workgroup in the creation of an inventory in (as close as possible to) the SMOKE/Mobile6–ready format, NESCAUM/MARAMA developed a technical guidance document (http://www.marama.org/visibility/Inventory%20Summary/FutureEmissionsInventory.htm). In the document, we also explained how State workgroup could download the year 2002 files (ftp.marama.org) and update them to create projection inventory files.

In the technical guidance, States were requested to supply NESCAUM and MARAMA with the data described below, under Required Data. States also had the option to supply NESCAUM and MARAMA with the information listed under Optional Data.

REQUIRED DATA:

1) SMOKE/IDA Activity File
    a. Go to MARAMA FTP site (above), click on Onroad/ Final Smoke Files/ MANEVU_2002_mbinv.txt
    b. Open the MANEVU_2002_mbinv.txt file
    c. Delete all data that is not your state's.
    d. Update file with new header and annual VMT by SCC for 2009
    e. Name file: state_2009_mbinv.txt
    f. Repeat steps 'b' through 'e' for years 2012 and 2018

2) MOBILE6 input scenario files
    a. Go to MARAMA ftp site, click on MANE-VU Onroad/ Final Smoke Files/ MANEVU_2002_SMOKE_M6_InputFiles_12032004.zip /m6_2002/month/statecounty.in
    b. Provide updated statecounty.in files for each month and year 2009, 2012 and 2018
    c. Use same naming convention as the 2002 files – statecounty.in

OPTIONAL DATA:

1) If a state wants to, they can update registration data to either 2004 or 2005
    a. Go to MARAMA FTP site - Onroad/ Final Smoke Files/MANEVU_2002_SMOKE_M6_ExternalFiles.zip
    b. As an example, open file 0900002.reg (or any files with extension .reg)
    c. There is a long header followed by the real data. Real data starts at the line called REG DIST. (See example file below).
    d. States should update the registration data by vehicle class and age for 2004 or 2005.
    e. If you update this data and change the name of the file, make sure the M6 input scenario file (required data from above) includes the correct file name for registration data (REG DIST).

2.3. States data submittal and compiling future inventory

As States submitted their projected mobile source files as listed above, NESCAUM started to integrate Y2018 files and convert them into regional (i.e. MANE-VU) files. The following subsections summarize the compilation process for activity input, scenario input files, external files and other SMOKE related files.

1) Activity input data (VMT/Speed)
- All member states submitted VMT and speed data. There were minor issues in data formatting but nothing major.
- DE and MA re-submit VMT file at October, 2005 (MA change 2002 VMT, too)
- Merge update 2002 MBINV file, ptpro/ptref, scenario input files for CT and NJ

2) Scenario input files
- VT used the same input file for all the counties. So, only 36 input files (i.e. 12months * 3 future years) were provided. VT set 050001 as a reference county (MCREF).
- VT uses January as reference month for August processing. VT has confirm that they want to change reference month for Apr-Sep as July instead of January.
- ME submitted all monthly data in a file. NESCAUM split it by month.
- MA submitted only three input files (Avg Summer day, Typ Ozon day, Avg Winter day) which were submitted to PECHAN to develop base year input files. NESCAUM created *.in files by copying MANE-VU 2002 base-year *.in files, then change years into 2009/2012/2018 and the link to the new external files (LEV2CERT.D, LEV2EVAP.D, LEV2EXH.D).
- CT submitted *.IN files on 9/22/2005. The "> I/M DESC" file path had been removed.
- RI scenario input files have 044yyc.IN name convention that are supposed to be 044ccc.IN(yy stands for 2digit year and ccc stands for 3digit county FIPS). They are renamed and populated for 12months.
- Some states(MD) put "REBUILT EFFECTS" after "SCENARIO RECORD" line. They were moved ahead of it.
- PA put "ANTI-Tamp" records in external files that need to be in Scenario input files. NESCAUM wrote a Fortran code (pa_input_4_override.f) and a C-shell script(cp_antitamp_4_pa.csh) to put those records in scenario input files
- NJ has 2012 year tag in 2009 scenario input files. NESCAUM put them back to 2009.
- For 2002 scenario input files update (10/27/2006), CT puts 0.07 Rebuild effect, NJ didn't put any. So, I put 0.1 to NJ 2002 input files.
- Putting future year rebuild effect is a modeling decision that needs to be a constant throughout the region. So NESCAUM didn't correct that in file compilation. Modelers' put 10% for the base year (2002) and 90% for the future years(2009/2012/2018). NYSDEC put 0.9 into year 2009 files and NESCAUM put 0.9 into year 2018 files before SMOKE/Mobile6 processing.

3) External files
- VT uses some of NY state external files (e.g. NYLEV2.D, NYL2EXH.D, NYL2EVAP.D, and NYL2CERT.D)
- RI didn't provide any future-specific external files. 2002 MANE-VU M6 external files were used

- MA and ME used the same named files which have identical contents to each other: LEV2CERT.D, LEV2EVAP.D, and LEV2EXH.D
- DE, PA, and NJ submitted the same named files which have identical contents to each other: NLEVNE.D
- DC file produce warnings (but not errors) from SMOKE/Mobile6 test run "User Supplied HC IM240 Cutpoint of 0.500 for year 1 and Vehicle Type 1 is Too Low and has been Reset to 0.80 g/mi." Consulted with DC and get a confirm that it's ok to use it as-is.

4) Other SMOKE related files

- MCREF/MVREF

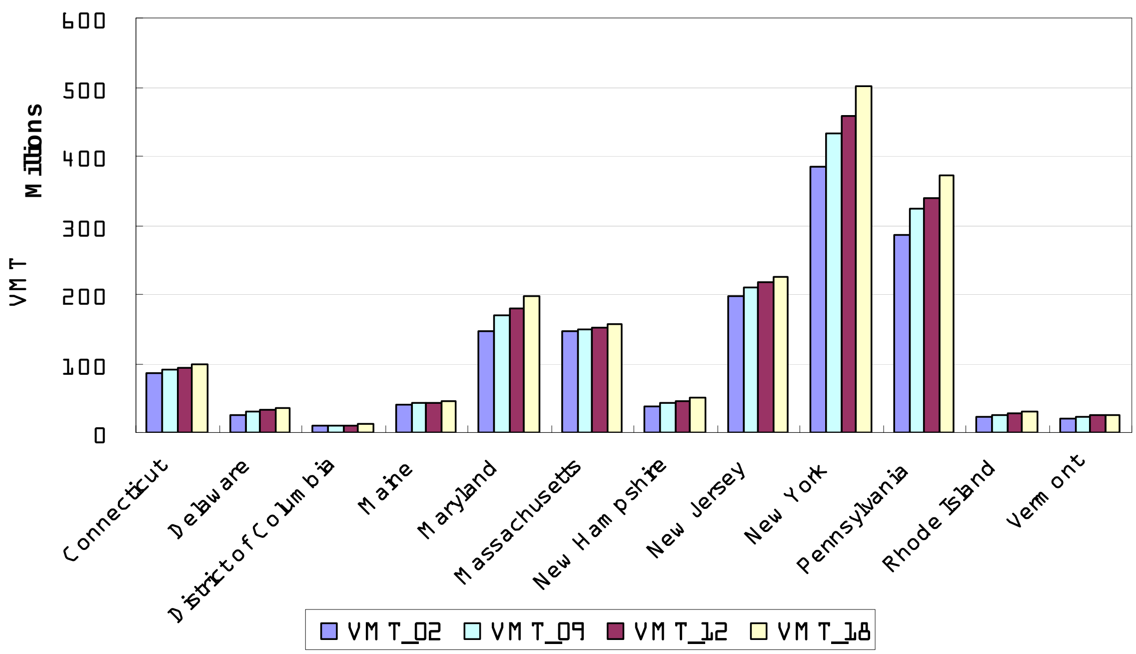
Update MANEVU_2002_mcref.txt for Maine because Penobscot county (23019) was not found from MAINE_pointerfile.xls. Tammy Gould @ Maine confirmed that Penobscot (019) has to be added where Piscataquis (021) is. Correct this problem on both MANEVU_2018_mcref.txt and MAINE_pointerfile.xls. MANEVU_2018_mvref.txt is updated by deleting non-ref counties in ME.

- MTPRO/MTREF

Add CT and NJ's temporal profile/x-ref to 2018 MANEVU files

III. Sample model run

Even though NESCAUM had not run SMOKE/Mobile6 for any of the complete projection years, we ran a day worth of each year: 1) to test compatibility of compiled data with SMOKE/Mobile6 system and 2) to examine trends in submitted projection data. As seen in the Figure 1 and Figure 2, VMT increases 10~20% compared to the base year (i.e. year 2002) for the most of states whereas speed remains the same except for NY and PA.



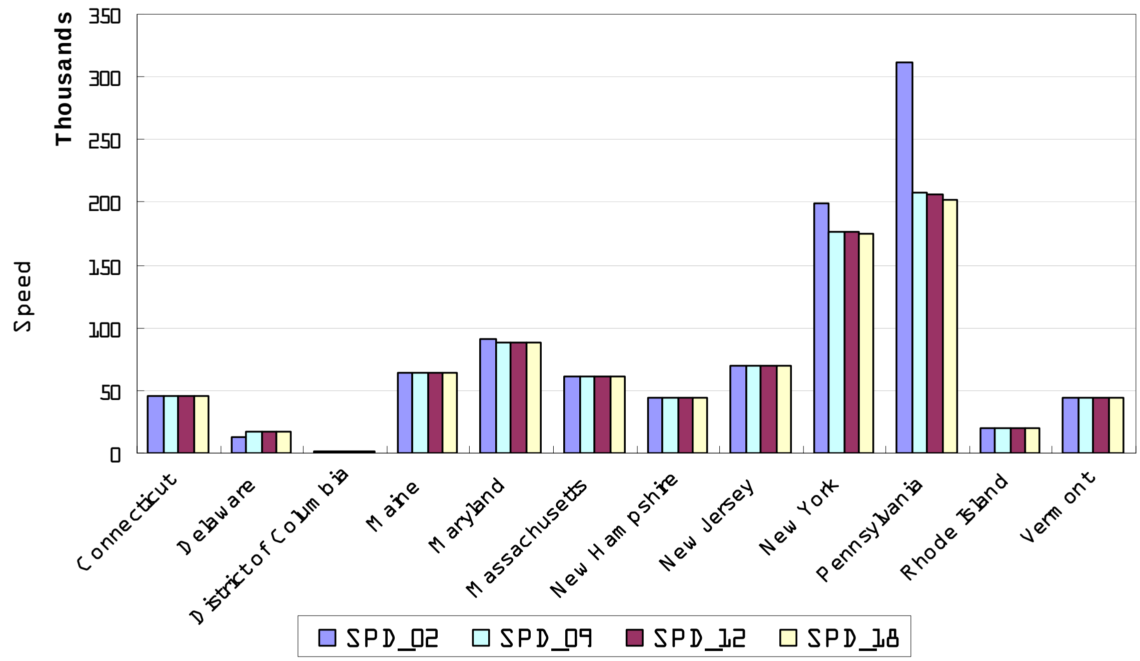
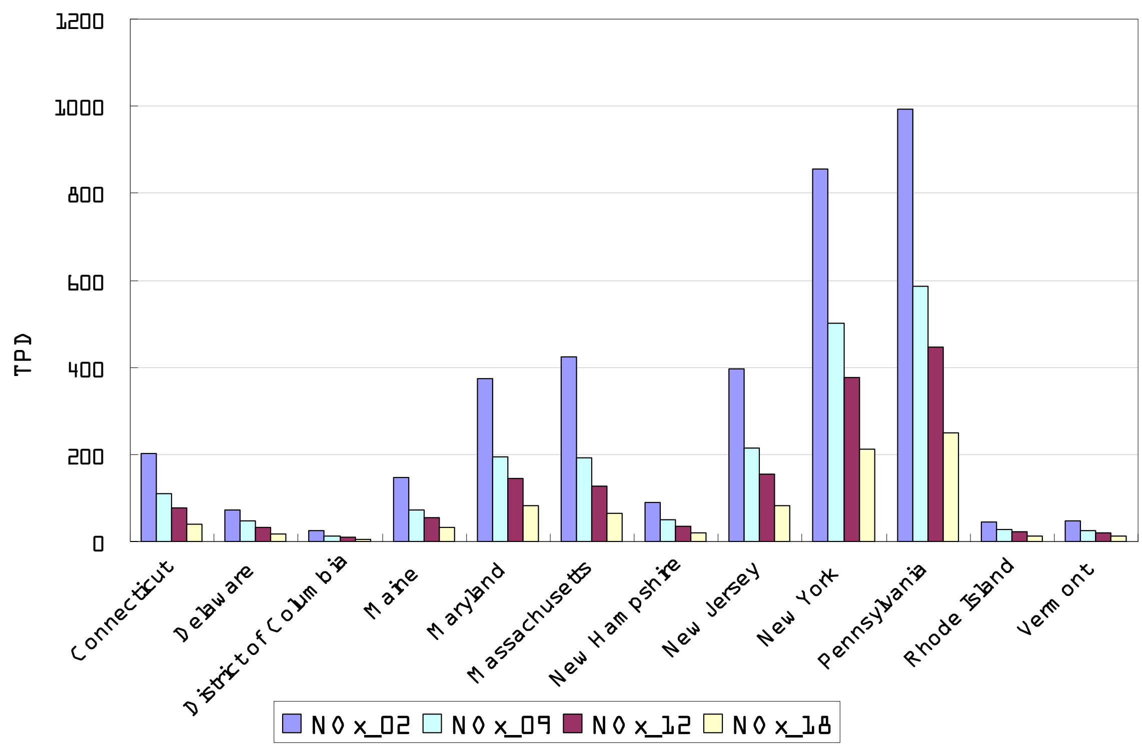


Figure 1. VMT(upper) and Speed (lower) for one day (August 1) of year 2002, 2009, 2012, and 2018



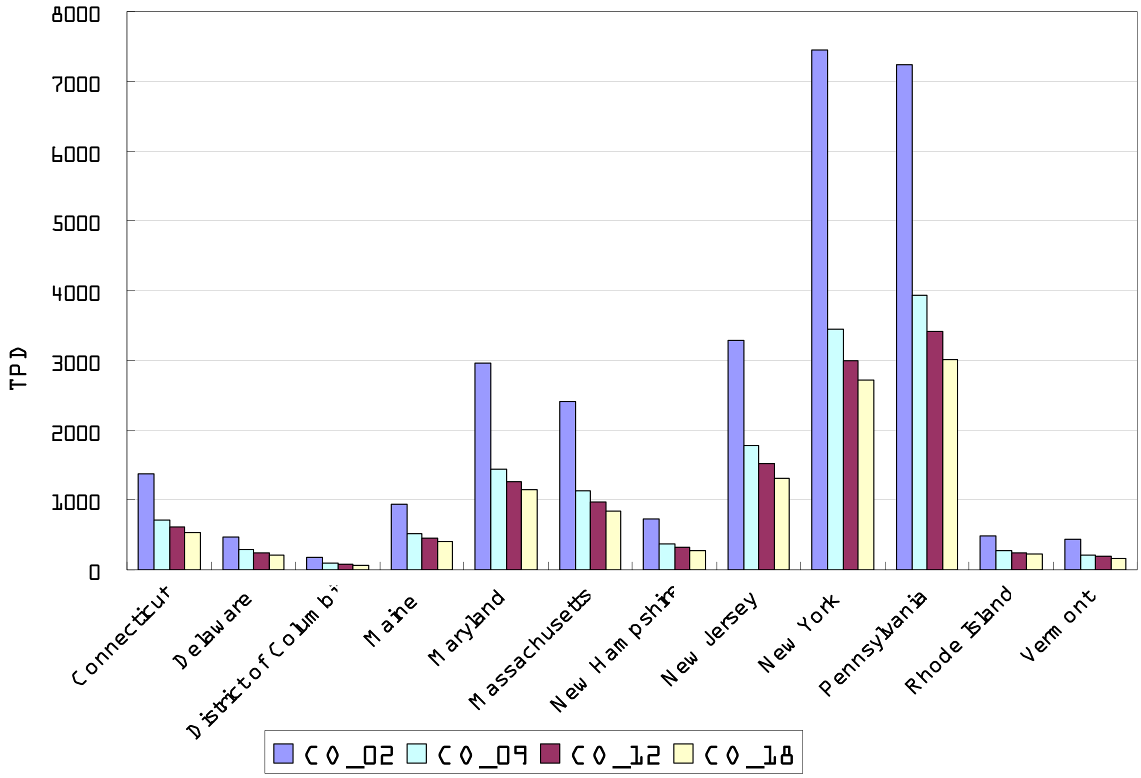


Figure 2. NOx(upper) and CO (lower) emissions for one day (August 1) of year 2002, 2009, 2012, and 2018

Despite VMT increases, NO_x and CO emissions decrease dramatically due to future-year control programs. Emissions decrease a bit more slowly after 2009 given fewer anticipated controls during post-2009 years.

NOx reductions seen from Figure 2 can be verified in the spatial (by county) NOx emission maps which were calculated using SMOKE/Mobile6 for August 1 of each year. As region wide emissions decreased by years, emissions from high emission areas (e.g. urban centers) decreased, as well.

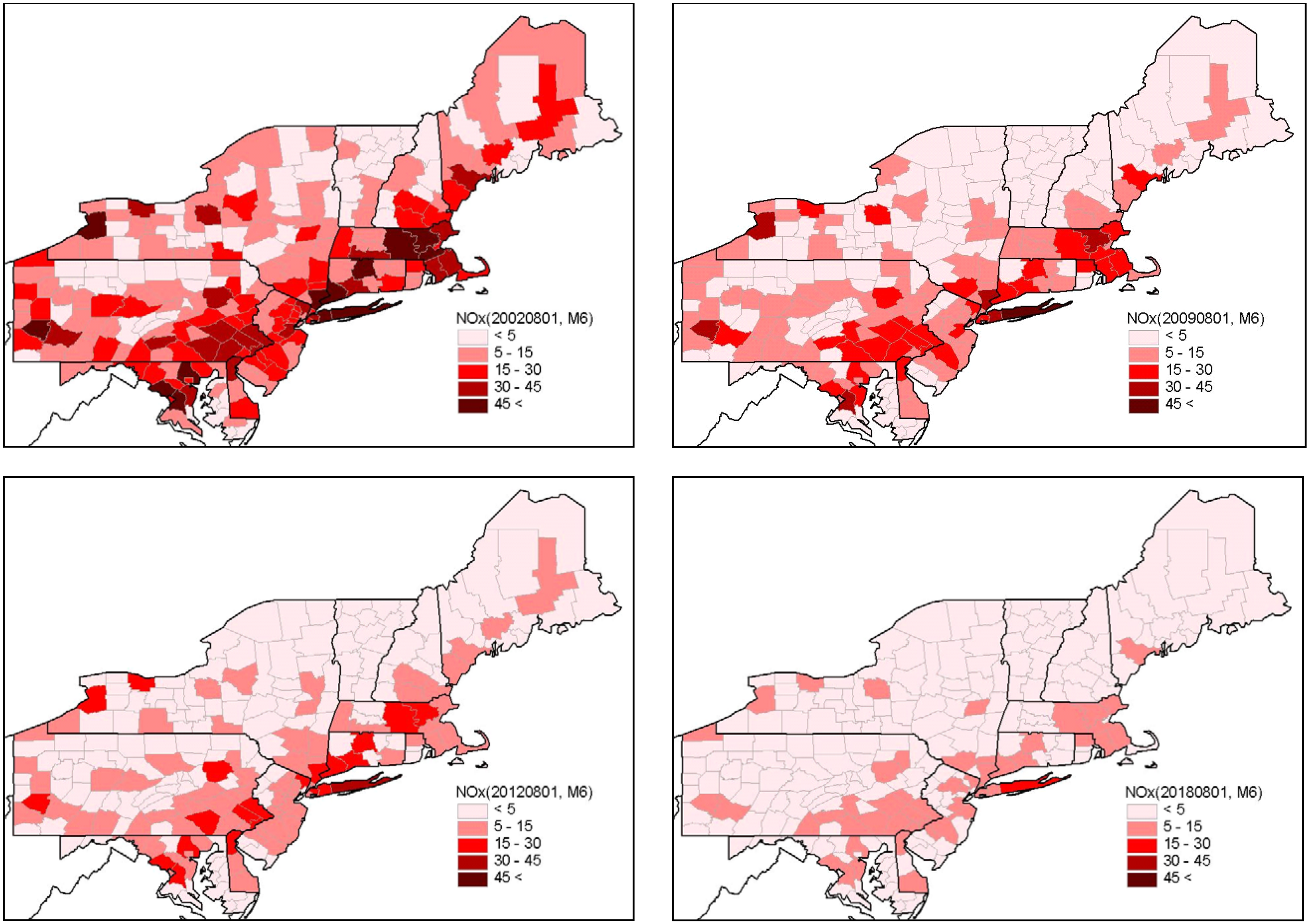


Figure 3. Spatial distribution of emissions from SMOKE/Mobile6 (August 1, NOx)

Appendix 5D

Documentation of Future Emissions from Electric Generating Units in the Eastern United States for MANE-VU's Regional Haze Modeling

Documentation of 2018 Emissions from Electric Generating Units in the Eastern United States for MANE-VU's Regional Haze Modeling

Revised Final Draft

28 April 2008

Prepared for:

Mid-Atlantic / Northeast Visibility Union (MANE-VU)

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Alpine Geophysics, LLC (Alpine), was under contract with the Mid-Atlantic Regional Air Management Association (MARAMA) to assist in the revision, analysis, and adjustment of emission inventories and associated factors necessary to provide data and inputs required for air quality analyses and state implementation plan (SIP) submittals.

Greg Stella of Alpine prepared a final draft of this document for MANE-VU/MARAMA under Work Order #7 of the MANE-VU Future Year Emissions Inventory Umbrella Contract. This work was supported by funds provided to MARAMA by the Ozone Transport Commission (OTC) through their memorandum of agreement. OTC's funding for this work was provided by the U.S. Environmental Protection Agency under assistance agreement XA 97318101.

MARAMA further revised Section 5 of the document after receipt of Mr. Stella's final work product. MARAMA provided text and tables to reflect emissions inventory analysis that continued after the expiration of Alpine's contract.

Special recognition is given to Julie McDill, MARAMA's project manager, who initiated the collection and aggregation of documentation used to prepare this report. Ms. McDill and Susan Wierman, MARAMA's Executive Director provided analytical and editorial contributions to the preparation of this document, and Patrick Davis of MARAMA and Dr. John Graham of NESCAUM contributed to emissions inventory data analysis and summaries.

This report was prepared for use by the MANE-VU States and does not necessarily represent the position of the U.S. Environmental Protection Agency.

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1 INTRODUCTION

1.1 Background

Development of an emissions inventory is an important foundation for performing regional scale atmospheric modeling for regulatory air quality management. The accuracy of the atmospheric model's prediction of air quality depends, in part, on the accurate representation of emissions from a variety of source sectors including point, area, non-road, on-road and biogenic sources. Electric generating units (EGUs) are an important point source sector and are often considered for controls to meet air quality objectives. Therefore, it is especially important to accurately represent and document EGU emissions and associated characteristics in a regulatory modeling application. This report is intended to describe the development of future year EGU emission estimates for use in Mid-Atlantic/Northeast Visibility Union (MANE-VU) 2018 regional haze modeling.

This document synthesizes information from several documents that already describe parts of the process of preparing emissions estimates and provides information not yet included in other documents. It covers the following: preparation of the inter-Regional Planning Organization (RPO) Integrated Planning Model® (IPM) runs commonly referred to as the Visibility Improvement State and Tribal Association of the Southeast (VISTAS) IPM runs, the post-processing of those runs to create Sparse Matrix Operator Kernel Emissions (SMOKE) input files, the modification of those files to reflect state estimates of emissions, and the adjustments made by MANE-VU modelers to maintain the Clean Air Interstate Rule (CAIR) cap. It also provides background information about preparing EGU forecasts and related work by the U.S. Environmental Protection Agency (EPA).

2 PREPARATION OF EGU FORECASTS

Emission projections for point sources are dependent upon changes in source level activity, the emission factors or installed controls. The approach taken to project point source emissions depends on the level of detail necessary in the projection year file. Changes in point source emissions are accounted for by a combination of growth, control, and retirement rates. Growth rates are applied to estimate the overall change in activity, while retirement rates are applied to estimate the decrease in emissions activity from existing sources. Retirement (and replacement of these sources with new sources) must be considered because regulations affecting new sources may differ from those affecting existing sources.

The projection year control factor accounts for both changes in emission factors due to technology improvements and new levels of control required by regulations. The control factor accounts for three variables: regulation control, rule effectiveness, and rule penetration.

Control factors are closely linked to the type of emission process (identified by Source Classification Code (SCC)) and secondarily to the type of industry identified by Standard Industrial Classification (SIC). Point source projections should account for Federal, State, and local regulations affecting these categories.

A complicating factor is the requirement for emission offsets in nonattainment areas through New Source Review requirements. This may be accounted for by 1) restricting growth under the assumption that it will be offset; 2) applying reductions to selected source categories to account for the emission growth which must be offset; or 3) selecting the individual sources, based on a cost analysis, from which offsets are likely to come.

When projecting Electricity Generating Unit (EGU) emissions in the Eastern United States, emission trading should be considered. There are three general approaches to performing projections while accounting for such trading schemes. The first option is to optimize control levels across the domain based on the cost of alternative controls. The second option is to survey individual sources to determine how they will comply (will they apply controls and sell or buy allowances) and use this as the basis for the future year control level. The third option is to apply the control level used to establish the budget to all affected sources and ignore which sources may choose to buy or sell credits/allowances.

Other factors which must be considered include programs, such as fuel switching, designed to provide source flexibility in meeting future air quality requirements. Fuel switching refers to instances where a unit historically burned one primary fuel, such as coal, and under a "fuel switching" program the unit would burn an alternate fuel, such as natural gas, during a certain period of time and may switch back to the "historic" fuel for some or all of the year. Fuel switching is often done in cases where sources average their emissions to meet federal mandates. Fuel switching may also be used as a seasonal compliance strategy (e.g., switching from residual fuel oil to natural gas in order to reduce NOx emissions during the ozone season. The variation in emissions over the course of the year caused by fuels switching must be calculated properly in projections.

Repowering is another example of a planned change in emission rates which should be considered. In this case, the unit may be switching entirely from coal to natural gas or may be completing a major modification which would lower the emission rate.

Spatial allocation is another factor which must be considered, particularly if air quality modeling will be performed using the projection. For point sources, important questions are which facilities will retire and where new growth will occur. Changes in land use patterns may also impact the location of point source emissions. As undeveloped and rural areas become suburban and urban areas, the number of point sources in that area will increase.

As can be seen from the discussion above, any number of complicating issues can lead to emission forecasts which may differ from user to user. An inconsistent decision made between two parties can lead to significant differences in growth, control, or placement of emissions from point source forecasts. For this reason, the RPOs made a conscious decision to utilize consistent forecasting methods for EGU emissions, as they are one of the most significant contributors to regional haze in the United States. This decision, to coordinate on the projection of EGU source emissions, led to the preparation of an EGU forecast methods document from which a coordinated decision was made on methods to develop EGU emissions in future years.

2.1 EGU Forecast Methods Document

Early in the planning process there was a joint agreement by the RPOs to work together to develop future year EGU emissions estimates based on the use of the Integrated Planning Model® (IPM). The decision to use IPM modeling resulted in part on a study of EGU forecast methods by E.H. Pechan and Associates, Inc. (Pechan) for the Midwest Regional Planning Organization (MRPO) (Pechan, 2004), which recommended IPM as a viable methodology. Although IPM results were available from work conducted by EPA to support their rulemaking for the Clean Air Interstate Rule (CAIR), the RPOs concluded that certain model inputs needed to be revised. Thus, the RPOs decided to work together to hire contractors to conduct new IPM modeling and to post-process the IPM results. This section describes the recommendation to use IPM.

The Lake Michigan Air Directors Consortium (LADCO) sought contractor assistance in reviewing emissions inventory growth for existing and new EGUs (Pechan, 2004). Because the results of EGU emission forecasts are used in urban or regional scale air quality modeling exercises to estimate future year air pollutant concentrations, growth methods are needed to supply model-ready emission model inputs. The purpose of LADCO’s project was to begin to examine EGU growth methods.

The primary pollutants of interest were sulfur dioxide (SO_2), oxides of nitrogen (NO_x), particulate matter (PM), ammonia (NH_3), and mercury (Hg). Projection years of interest included 2009 (the approximate time for ozone and $PM_{2.5}$ attainment) and 2018 (a longer term regional haze planning horizon). The geographic area of interest was the eastern half of the United States (to capture the trading issues affecting the Midwest States).

This 2004 Pechan report provided a detailed evaluation of three EGU growth modeling methods of interest to the LADCO States for consideration in developing its own approach. These evaluations addressed the following attributes of each modeling approach:

- Description of primary analytical modeling methods;
- Geographic areas of application;
- Advantages; and
- Disadvantages.

The material in this evaluation was intended to be used to determine which of the currently available modeling approaches might be best suited for use by the LADCO States (and other RPOs) for future state implementation plan (SIP) and air dispersion modeling work. The models evaluated in this report included the IPM, the National Energy Modeling System (NEMS), and the Electric Power Market Model (EPMM).

Based on the conclusions and summary of the report (Pechan, 2004), the four participating RPOs (MANE-VU, MRPO, VISTAS, and the Central Regional Air Planning Association, CENRAP) decided to use IPM as the tool for forecasting EGU emissions.

2.2 The Integrated Planning Model (IPM)

IPM was developed by ICF Consulting, Inc. (ICF) and used to support public and private sector clients. This model is a multi-regional, dynamic, deterministic linear programming model of the U.S. electric power sector. It provides forecasts of least-cost capacity expansion, electricity dispatch, and emission control strategies for meeting energy demand and environmental, transmission, dispatch, and reliability constraints. It can be used to evaluate the cost and emissions impacts of proposed policies to limit emissions of SO_2, NO_x, carbon dioxide (CO_2), and Hg from the electric power sector. The IPM model was a key analytical tool used by EPA in developing CAIR and the Clean Air Mercury Rule (CAMR).

Among the factors that make IPM particularly well suited to model multi-emissions control programs are (1) its ability to capture complex interactions among the electric power, fuel, and environmental markets; (2) its detail-rich representation of emission control options encompassing a broad array of retrofit technologies along with emission reductions through fuel switching, changes in capacity mix and electricity dispatch strategies; and (3) its capability to model a variety of environmental market mechanisms, such as emissions caps, allowances, trading, and banking. IPM's ability to capture the dynamics of the allowance market and its provision of a wide range of emissions reduction options are particularly important for assessing the impact of multi-emissions environmental policies like CAIR and CAMR.

2.3 U.S. EPA Use of IPM

The U.S. EPA uses IPM to analyze the projected impact of environmental policies on the electric power sector in the 48 contiguous states and the District of Columbia.

2.3.1 EPA's Base Case 2004

The EPA's Base Case 2004 (EPA, 2005a) served as the starting point against which EPA compared various policy scenarios. It is a projection of electricity sector activity that takes into account federal and state air emission laws and regulations whose provisions were either in effect or enacted and clearly delineated at the time the base case was finalized in August 2004. Regulations mandated under the Clean Air Act Amendments of 1990 (CAAA), but whose provisions have not yet been finalized, were not included in the base case. These include:

- <u>Measures to Implement Ozone and Particulate Matter (PM) Standards</u>: EPA Base Case 2004 predates and so does not include the provisions of CAIR, the primary federal regulatory measure for achieving the National Ambient Air Quality Standards (NAAQS) for ozone (8-hour standard of 0.08 ppm) and fine particles (24-hour average of 65 ug/m3 or less and annual mean of 15 ug/m3 for particles of diameter 2.5 micrometers or less, i.e., $PM_{2.5}$). EPA Base Case 2004 was used to evaluate policy alternatives which ultimately resulted in CAIR. The final CAIR was issued on March 10, 2005. EPA Base Case 2004 includes measures to implement ozone and particulate matter standards to the extent that some of the state regulations included in EPA Base Case 2004 contain measures to bring non-attainment areas into attainment. Individual permits issued by states in response to ozone and particulate matter standards are not captured in the base case.

- <u>Mercury Regulations on Electric Steam Generating Units:</u> EPA Base Case 2004 predates both CAMR, which was issued by EPA on March 15, 2005 and the "Maximum Achievable Control Technology" (MACT) standards, which were scheduled to be promulgated by December 15, 2004, but, pending litigation, have been superseded by CAMR. Consequently, this base case does not include any federal regulatory measures for mercury control. (CAMR was vacated in 2008.)

- <u>Clean Air Visibility Rules:</u> On July 1, 1999, EPA issued Regional Haze Regulations to meet the national goal for visibility established in Section 169A of the CAAA, which calls for "prevention of any future, and the remedying of any existing, impairment of visibility in Class I areas (156 national parks and wilderness areas), which impairment results from manmade air pollution." The regulations required states to submit revised SIPs that (1) establish goals that provide for reasonable progress towards achieving natural visibility conditions at Class I areas, (2) adopt a long-term control strategy that includes such measures as are necessary to achieve the reasonable progress goals, and (3) require Best Available Retrofit Technology (BART) for sources in listed source categories placed in operation between 1962 and 1977.

In effect, EPA Base Case 2004 offered a snapshot projection of the electric sector assuming that the only future environmental regulations were those with provisions known at the time that the base case assumptions were finalized. While not necessarily an accurate reflection of what would actually occur, this assumption ensured that the base case was policy neutral with respect to future environmental policies.

2.3.2 EPA CAIR Case

On January 30, 2004, EPA proposed CAIR, which set emission reduction requirements for 29 States and the District of Columbia. Those emission reduction requirements were based on achieving highly cost-effective emission reductions from large electricity generating units.

While EPA believed that the modeling it initially performed for the January 2004 proposal provided a reasonable estimate of the impact of requiring highly cost-effective emission reductions from electricity generating units, it did not exactly model the proposed control region. For both SO_2 and NO_x, EPA used modeling assumptions that differed slightly from the January 2004 CAIR proposal. For SO_2 in particular, EPA modeled the program assuming a cap on national emissions rather than in the 29 States proposed. Although EPA believed the modeling done at that time provided a reasonable approximation of the impacts of the original CAIR, because 92 percent of the SO_2 emissions in the 48 contiguous States occur in the 28 States that were covered by the proposal, EPA completed additional analysis. This additional analysis examined the effect of covering the geographic region proposed in the January 30, 2004 proposal using the NO_x emissions cap and a close approximation of the SO_2 cap proposed for CAIR (EPA, 2005a).

For the supplemental proposal, EPA performed refined modeling of the emission reduction requirements proposed on January 30, 2004. In this refined modeling, EPA modeled the exact control regions for both SO_2 and NO_x, as proposed.

2.3.3 EPA's CAIR Modeling Limitations

The U.S. EPA's modeling was based on its best judgment for various input assumptions that were uncertain, particularly assumptions for future fuel prices and electricity demand growth (EPA, 2004). In addition, modeling using IPM did not take into account the potential for advancements in the capabilities of pollution control technologies for SO_2 and NO_x removal as well as reductions in their costs over time.

<u>Retirement Ratios:</u> EPA issued a CAIR supplemental notice of proposed rulemaking that proposed two alternatives for how the SO_2 reduction target would be achieved. The proposal took comment on implementing the reduction requirements in the second phase either by using a 2.86 to 1 ratio (which would match the 65 percent SO_2 reduction target) of acid rain allowances to emissions, or alternatively, by implementing the reductions using a 3 to 1 ratio (for administrative simplicity) and then letting States create and distribute additional allowances equal to the surplus created by the 3 to 1 ratio to achieve the proposed 65 percent reduction. In either case, the effective cap on SO_2 emissions from the power sector would be the same.

Modelers assumed a 3 to 1 Title IV allowance retirement ratio for 2015 and beyond to implement the reductions in the proposed control region. The model did not add back the 130,000 tons of SO_2 from over-compliance that would result from this ratio. Therefore, in this modeling, EPA analyzed slightly greater SO_2 emission reductions than required by the proposal. This assumption was made for modeling simplicity and was expected to result in a slight overestimate of costs for the proposal and of the emissions reductions achieved.

BART: The EPA did not incorporate any best achievable retrofit technology (BART) modeling in this analysis. BART would achieve reductions in non-CAIR States and had the potential to mitigate leakage issues.

Demand Response: EPA's 2004 CAIR case includes a demand response to increased gas prices but not electricity prices. In the model, increased gas prices would prompt the public to curtail their use of gas and encourage them to seek substitutes. However, no provision for demand response was included for electricity prices. If demand had been allowed to change in response to increasing prices of electricity,, one can assume that consumers would have reduced their demand for electricity, lowering electricity prices and reducing generation and emissions to some extent.

State Rules: Only some State adopted rules were incorporated into EPA's modeling framework. A list of the State Multi-pollutant regulations used in IPM 2.1, IPM 2.1.6, and IPM 2.1.9 can be located in Appendix 3-2 of EPA's Standalone Documentation for EPA Base Case 2004 (v.2.1.9) Using the Integrated Planning Model (EPA, 2005a).

Because of the limitations noted above, the RPOs decided to initiate their own IPM modeling based on the EPA's latest update of the IPM input framework, called IPM 2.1.9. EPA completed the input framework for IPM 2.1.9 in March of 2003.

2.4 RPO Use of IPM – Phase I

In August 2004, VISTAS contracted with ICF to run IPM to provide revised utility forecasts for 2009 and 2018 under two future scenarios – Base Case and CAIR Case (ICF, 2004). The Base Case represented the current operation of the power system under laws and regulations as known at the time the run was made, including those that come into force in the study horizon. The CAIR Case was the Base Case with the proposed CAIR rule superimposed. Run results were parsed at the unit level for the 2009 and 2018 run years.

In August 2004, MRPO contracted with Pechan to post-process the VISTAS' IPM outputs to provide the (National Emission Inventory Input Format) NIF formatted emission files needed for the regional inventory. The IPM output files were delivered by ICF to VISTAS in November 2004 and the post-processed data files were delivered by Pechan to the MRPO in December 2004.

These IPM runs (VISTAS_CAIR_2) and the NIF files that were generated from the parsed data sets are commonly referred to as the Phase I Inter-RPO runs. The Phase I runs were ultimately not used in RPO modeling of regional haze, as further revisions to the inputs were necessary once CAIR was adopted.

2.5 RPO Adjustments to IPM – Phase II

On March 10, 2005, EPA issued the final CAIR. A consortium of RPOs, (MANE-VU, VISTAS, MRPO, and CENRAP) conducted another round of IPM modeling which reflected changes to control assumptions based on the final CAIR as well as additional changes to model inputs based on state and local agency and stakeholder comments. Several conference calls were conducted in the spring of 2005 among the participating RPOs to discuss and provide comments on IPM assumptions related to six main topics: power system operation, generating resources, emission control technologies, set-up parameters, financial assumptions, and fuel assumptions. Based on these discussions, VISTAS sponsored a new set of IPM runs to reflect the final CAIR requirements as well as certain changes to IPM assumptions that were agreed to by the RPOs. ICF performed the following four runs using IPM during the summer of 2005. This set of IPM runs is referred to as the VISTAS Phase II analysis or Inter-RPO v.2.1.9 runs.

- Base Case with EPA 2.1.9 coal, gas, and oil price assumptions (VISTASII_BC_1Z1).
- Base Case with EPA 2.1.9 coal and gas supply curves adjusted for the U.S. Energy Information Administration's most recent Annual Energy Outlook (AEO 2005) reference case price and volume relationships (VISTASII_BC_2Y).
- Strategy Case with EPA 2.1.9 coal, gas and oil price assumptions (VISTASII_PC_1f).
- Strategy Case with EPA 2.1.9 coal and gas supply curves adjusted for AEO 2005 reference case price and volume relationships (VISTASII_PC_2C).

The above runs were parsed for 2009 and 2018 run years. The output taken from the Strategy Case with EPA 2.1.9 coal, gas, and oil price assumptions (VISTASII_PC_1f) is also referred to as the Inter-RPO CAIR Case IPM 2.1.9 and is the basis for discussion in the remainder of this report.

The Phase II scenarios were based on VISTAS Phase I and EPA IPM 2.1.9 assumptions (EPA, 2005b). Additional changes that were implemented in the above four runs are summarized below and in associated documentation (ICF, 2007):

- Unadjusted AEO 2005 electricity demand projections were used. (U.S. EPA runs were adjusted to reflect reduced demand due to voluntary conservation projects sponsored by U.S. EPA)
- Gas supply curves were adjusted for AEO 2005 reference case price and volume relationships. The EPA 2.1.9 gas supply curves were scaled such that IPM solved for AEO 2005 gas prices when the power sector gas demand in IPM is consistent with AEO 2005 power sector gas demand projections.
- The coal supply curves used in EPA 2.1.9 were scaled such that the average mine mouth coal prices that the IPM was solving in aggregated coal supply regions were comparable to AEO 2005. Coal grades and supply regions contained in AEO 2005 and EPA 2.1.9 were not directly comparable. An iterative approach was used to obtain comparable results. The coal transportation matrix was not updated with Energy Information Administration (EIA) assumptions due to significant differences between the EPA 2.1.9 and EIA AEO 2005 coal supply and coal demand region configurations.

- The cost and performance of new units were updated to AEO 2005 reference case levels.
- The run years 2008, 2009, 2012, 2015, 2018, 2020 and 2026 were modeled.
- The AEO 2005 life extension costs for fossil and nuclear units were incorporated.
- The extensive NEEDS comments provided by VISTAS, MRPO, CENRAP and MANE-VU were incorporated into the Phase I NEEDS input file.
- MANE-VU's comments in regards to the northeast state regulations were incorporated.
- Northeast Renewable Portfolio Standards (RPS) were modeled based on the Regional Greenhouse Gas Initiative analysis. A single RPS cap was modeled for MA, RI, NY, NJ, MD, and CT. These states could buy credits from NY or from the PJM Interconnection and New England model regions.
- Selective Catalytic Reduction (SCR) and Scrubber Feasibility Limits: No limits were applied in 2008, 2009 and 2010 to the capacity for installing these emissions controls.
- The Clean Air Visibility Rule (CAVR) was not modeled.
- Modelers assumed a Title IV SO_2 Bank for 2007 of 4.98 million tons.
- The investments required under the Illinois Power, Mirant and First Energy NSR settlements (as identified during spring 2005) were incorporated in the above runs.

For the Phase II inter-RPO set of IPM runs, ICF generated two different parsed files for each of the two scenarios. One file includes all fuel burning units (fossil, biomass, landfill gas) as well as non-fuel burning units (hydro, wind, etc.). The second file contains just the fossil-fuel burning units (e.g., emissions from biomass and landfill gas are omitted). In all RPOs the fossil-only file was used for modeling. This is consistent with EPA, since EPA used the fossil only results for CAIR analyses.

2.6 State Results – Phase II

Table 1 presents unmodified State level fuel use and emission results from the 2018 Inter-RPO CAIR Case IPM v. 2.1.9 fossil-only parsed file (VISTASII_PC_1f). Note that IPM produces only NO_x and SO_2 emissions estimates.

Table 1. State Level Fuel Use and Emission Summary; 2018 VISTASII_PC_1f.xls. (fossil only)

		Fuel Use (TBtu)		Emissions (Tons)		
State	**RPO**	**Summer**	**Annual**	**Summer NOx**	**Annual NOx**	**Annual SO2**
Connecticut	MANE-VU	62.1572	142.7141	1,521	3,418	6,697
Delaware	MANE-VU	41.9472	92.7542	5,485	12,341	35,442
District Of Columbia	MANE-VU	2.0774	4.8716	49	103	83
Maine	MANE-VU	21.8494	49.8748	804	1,827	5,436
Maryland	MANE-VU	195.3393	437.8991	6,832	14,709	28,065
Massachusetts	MANE-VU	188.0653	433.3227	8,004	18,157	17,486
New Hampshire	MANE-VU	32.4638	73.8699	1,393	3,089	7,469
New Jersey	MANE-VU	140.8000	304.7240	6,432	13,636	32,495
New York	MANE-VU	282.4272	669.0821	10,926	24,376	51,445
Pennsylvania	MANE-VU	687.1446	1,540.1322	36,329	82,881	135,946
Rhode Island	MANE-VU	15.1701	40.0407	244	576	55
Vermont	MANE-VU	1.3677	3.0597	74	105	35
	MANE-VU Total	**1,670.8093**	**3,792.3450**	**78,093**	**175,219**	**320,651**
Alabama	VISTAS	605.2513	1,329.1117	19,416	41,715	190,029
Florida	VISTAS	831.5942	1,813.5433	26,620	56,506	139,526
Georgia	VISTAS	687.9659	1,530.2279	26,228	56,180	178,196
Kentucky	VISTAS	494.6026	1,121.9188	27,904	64,099	229,596
Mississippi	VISTAS	211.7079	443.3923	4,269	8,895	27,226
North Carolina	VISTAS	431.1262	984.5996	25,412	57,774	102,217
South Carolina	VISTAS	326.3757	749.2039	20,240	46,318	118,584
Tennessee	VISTAS	300.8087	672.6405	13,348	29,873	112,343
Virginia	VISTAS	305.6546	710.9991	18,443	43,144	80,602
West Virginia	VISTAS	477.7910	1,080.9570	22,556	51,208	124,464
	VISTAS Total	**4,672.8781**	**10,436.5940**	**204,435**	**455,711**	**1,302,784**
Illinois	MRPO	564.3359	1,281.6624	31,214	71,234	241,136
Indiana	MRPO	665.8976	1,534.4126	40,820	95,376	376,864
Michigan	MRPO	537.6731	1,257.6784	42,629	98,685	398,562
Ohio	MRPO	773.6334	1,785.3989	35,888	83,129	215,501
Wisconsin	MRPO	303.7451	691.5260	19,794	45,701	155,369
	MRPO Total	**2,845.2851**	**6,550.6783**	**170,345**	**394,124**	**1,387,433**
Arkansas	CENRAP	211.9455	479.1864	14,836	33,097	82,605
Iowa	CENRAP	238.7101	548.7369	22,252	51,119	147,305
Kansas	CENRAP	213.4288	465.8685	37,207	83,333	81,486
Louisiana	CENRAP	225.6282	481.9880	14,240	30,432	74,263
Minnesota	CENRAP	175.6582	388.8279	17,940	41,029	85,847
Missouri	CENRAP	416.5504	918.5720	34,350	77,660	280,887
Nebraska	CENRAP	113.8064	255.2901	22,524	50,781	73,629
Oklahoma	CENRAP	357.5522	745.1097	36,695	76,048	113,680
Texas	CENRAP	1,710.8244	3,236.6605	79,449	153,837	339,433
	CENRAP Total	**3,664.1040**	**7,520.2400**	**279,493**	**597,336**	**1,279,135**
Arizona	WRAP	442.6160	1,022.0551	36,168	81,858	60,640
California	WRAP	602.8505	1,403.6297	10,464	23,767	5,447
Colorado	WRAP	215.1782	486.7281	31,074	70,171	87,163
Idaho	WRAP	14.5575	34.1372	309	718	0
Montana	WRAP	88.4363	200.1442	17,034	38,504	22,066
Nevada	WRAP	179.3334	408.0758	20,978	47,404	31,172
New Mexico	WRAP	155.2294	344.7868	32,965	74,010	52,917
North Dakota	WRAP	131.5025	297.0199	31,745	71,711	108,645
Oregon	WRAP	109.6842	255.3128	4,968	11,330	10,034
South Dakota	WRAP	16.3929	36.8730	6,457	14,574	12,085
Utah	WRAP	146.1278	330.1164	26,905	60,782	37,819
Washington	WRAP	155.7190	362.9219	11,625	26,379	12,236
Wyoming	WRAP	202.3566	457.1643	35,935	81,182	40,265
	WRAP Total	**2,459.9843**	**5,638.9652**	**266,628**	**602,390**	**480,488**
National Total		**15,313.0609**	**33,938.8226**	**998,994**	**2,224,779**	**4,770,490**

2.7 MANE-VU Sponsored CAIR Plus IPM Modeling

Using the IPM Phase II RPO modeling platform MANE-VU contracted with ICF to evaluate the impact of both tightening the SO_2 and NO_x CAIR caps and to expand the CAIR region to include the electricity generating sector in additional states the Eastern United States. As part of this analysis, ICF developed a new Base Case that implemented EPA's CAIR, CAMR and CAVR policies and a Policy Case with lower SO_2 and NO_x CAIR caps in an extended region. The new Base Case was developed for comparison to the Policy Case. The model assumptions and data used in this analysis are somewhat different than those in the RPO Phase II analysis and are described in Section B of the project report (ICF, 2007). Neither the base or policy cases from the CAIR Plus project were used in subsequent SIP modeling.

3 POST PROCESSING OF IPM OUTPUT

3.1 Use of SMOKE Emissions Processing Model

On behalf of MANE-VU, NESCAUM modelers used an emissions processing model to prepare data produced by the IPM model for use in air quality and visibility modeling. The Sparse Matrix Operator Kernel Emissions (SMOKE) Modeling System is an emissions processing system designed to create gridded, speciated, hourly emissions for input into a variety of air quality models, such as EPA's Community Multi-Scale Air Quality (CMAQ) model and Regional Modeling System for Aerosols and Deposition (REMSAD) (Houyoux, et. al., 2000). SMOKE supports area, biogenic, mobile (both onroad and nonroad), and point source emissions processing for criteria, particulate, and toxic pollutants. For biogenic emissions modeling, SMOKE uses the Biogenic Emission Inventory System, version 2.3 (BEIS2) and version 3.09 and 3.12 (BEIS3). SMOKE is also integrated with the onroad emissions model MOBILE6.

The sparse matrix approach used throughout SMOKE permits rapid and flexible processing of emissions data. Flexible processing comes from splitting the processing steps of inventory growth, controls, chemical speciation, temporal allocation, and spatial allocation into independent steps whenever possible. The results from these steps are merged together in the final stage of processing using vector-matrix multiplication. It allows individual steps (such as adding a new control strategy, or processing for a different grid) to be performed and merged without having to redo all of the other processing steps. Individual emission scenarios were simulated for MANE-VU using the SMOKE Modeling System.

The Northeast States for Coordinated Air Use Management (NESCAUM), on behalf of MANE-VU and its participating States, conducted regional air quality simulations for calendar year 2002 and several future periods (NESCAUM, 2008). This work was directed at satisfying a number of goals under the Haze State Implementation Plan (SIP), including a contribution assessment, a pollution apportionment for 2018, and the evaluation of visibility benefits of control measures being considered for achieving reasonable progress goals and establishing a long-term emissions management strategy for MANE-VU Class I areas. The modeling tools utilized for these analyses include the Fifth-Generation NCAR / Penn State Mesoscale **Model** (MM5), SMOKE, CMAQ and REMSAD, and incorporate tagging features that allow for the tracking of individual source regions or measures. These tools have been evaluated and found to perform adequately relative to U.S. EPA modeling guidance.

As described below, in order for NESCAUM to process the Electric Generating Unit (EGU) emissions generated by the Integrated Planning Model® (IPM) procedures noted above, a series of intermediate steps were required to get the activity and emission data into the appropriate format for SMOKE processing.

3.2 Preparing IPM Output for Use in SMOKE Model

IPM can produce projections at the regional, state, plant, or unit level. Data must be parsed to provide the unit level information required for chemical transport modeling. Parsing involves developing detailed unit level information from the model's projections at the model plant level. ICF parsed the VISTASII_PC_1f data for use by the RPOs.

Further post-processing of IPM parsed output is needed to prepare the files for use by the SMOKE emissions processing model. The following sections describe the intermediate steps necessary to make these conversions. The first step is the augmentation of the IPM parsed output files to include additional unit level characteristics and pollutant estimates necessary for one atmosphere modeling. This step converts the IPM parsed data files into EPA's National Emission Inventory Input Format (NIF). The second step is the additional conversion of these NIF files into the Inventory Data Analyzer (IDA) format required by the SMOKE emissions processor.

3.2.1 IPM to NIF

After running IPM, ICF provided an initial spreadsheet file containing unit-level records for both:

(1) "existing" units (those currently in operation during the modeled base year) and
(2) committed/planned or new generic aggregates (new generic units expected to come online or identified as needed to meet electric generation demand in a geographic area).

IPM parsed file records include unit and fuel type data; existing, retrofit (for SO_2 and NO_x), and separate NO_x control information; annual SO_2 and NO_x emissions and heat input; summer season (May-September) NO_x and heat input; July day NO_x and heat input; coal heat input by coal type; nameplate capacity megawatt (MW), and State FIPS codes (Federal Information Processing codes used to identify geographic areas). Existing units also had county FIPS code, a unique plant identifier (ORISPL) and unit ID (also called boiler ID) (BLRID); generic units did not have these data.

The processing of IPM parsed data to NIF format included estimating emissions not generated by IPM and adding control efficiencies, stack parameters, latitude-longitude coordinates, and State identifiers (plant ID, point ID, stack ID, process ID) from a series of lookup tables or by matching to individual units as configured in base year 2002 emission files (Pechan, 2005). Additionally, new generic units created by IPM were sited in a county and given appropriate IDs. This processing is described in more detail below.

<u>Generic Units:</u> The new generic units and associated data were prepared by transforming the generic aggregates into units similar in size and fuel to existing units in terms of the available data. Generic aggregates were split into smaller generic units based on their unit types and capacity. Each generic unit was provided a dummy ORIS unique plant and boiler ID, and were given a county FIPS code based on an algorithm that sited each generic unit by assigning a sister plant that is in a county based on its attainment/nonattainment status. Within a State, existing plants (in county then ORIS plant code order) in attainment counties were used first as sister sites to new generic units (to obtain county location), followed by existing plants in PM nonattainment counties, followed by existing plants in 8-hour ozone nonattainment counties. No States identified counties that should not be considered when siting new generic units, so this process was identical to the one used for EPA IPM post-processing under CAIR.

SCCs were assigned to existing units using unit/fuel/firing/bottom type data. SCCs were assigned to generic units using unit and fuel type information. Latitude-longitude coordinates were assigned, first using the EPA-provided data files, secondly using an in-house contractor developed latitude-longitude file, and lastly using county centroids. These additional location files were only used when the data were not provided in the original 2002 base year files. Stack parameters were then assigned to each unit, first using the EPA-provided data files, secondly using an in-house stack parameter file based on previous EIA-767 data, and lastly using an EPA June 2003 SCC-based default stack parameter file. These data were only used when the data were not provided in the 2002 base year files.

IPM does not calculate emissions for all pollutants necessary for regional haze modeling. Therefore additional data were required to estimate VOC, CO, filterable primary PM_{10} and $PM_{2.5}$, PM condensable, and NH_3 emissions. Thus, ash and sulfur contents were assigned by first using 2002 EIA-767 values for existing units or SCC-based defaults; filterable PM_{10} and $PM_{2.5}$ efficiencies were obtained from the 2002 EGU NEI that were based on 2002 EIA-767 control data and the PM Calculator program (a default of 99.2 percent is used for coal units if necessary); fuel use was back calculated from the given heat input and a default SCC-based heat content; and emission factors were obtained from an EPA-approved emission factor file based on AP-42 emission factors. Table 2 presents the SCC-based default heat content and stack parameters used when actual data were not available. Table 3 (worksheet sccemfac100704 from MRPOpostprocdatafiles.xls, Pechan 2005) reflects emission factors used to develop emission estimates of CO, VOC, filterable PM, and NH_3.

Table 2. SCC Default Heat Content and Stack Parameters from IPM to NIF Conversion.

			Stack Parameters			
SCC	**Fuel**	**Heat Content (Btu/SCC Unit)**	**Height (ft)**	**Diameter (ft)**	**Temp (degrees F)**	**Velocity (ft/s)**
10100201	Bituminous Coal	23.4286	603.2	19.8	281.2	76.5
10100202	Bituminous Coal	23.4286	509.7	14.6	226.0	62.0
10100203	Bituminous Coal	23.4286	491.6	16.6	278.4	80.5
10100204	Bituminous Coal	23.4286	225.0	0.6	67.2	2.4
10100211	Bituminous Coal	23.4286	0.0	0.0	0.0	0.0
10100212	Bituminous Coal	23.4286	445.6	17.4	275.2	77.6
10100217	Bituminous Coal	23.4286	399.3	10.8	245.6	40.1
10100221	Subbituminous Coal	17.8870	983.0	22.8	350.0	110.0
10100222	Subbituminous Coal	17.8870	468.5	16.0	254.7	65.6
10100223	Subbituminous Coal	17.8870	446.8	15.9	308.0	93.6
10100224	Subbituminous Coal	17.8870	255.5	10.0	251.3	15.3
10100226	Subbituminous Coal	17.8870	495.8	18.9	259.2	91.2
10100238	Subbituminous Coal	17.8870	600.0	22.5	315.0	78.0
10100301	Lignite Coal	12.9149	427.5	22.3	232.8	74.2
10100302	Lignite Coal	12.9149	483.5	21.0	229.4	92.4
10100303	Lignite Coal	12.9149	462.0	21.7	271.3	72.5
10100317	Lignite Coal	12.9149	326.7	12.3	326.7	74.7
10100601	Natural Gas	1023.8846	263.9	10.3	236.0	46.9
10100801	Coke	27.4376	371.3	5.5	122.4	20.4
10102018	Waste Coal	12.0929	0.0	0.0	0.0	0.0
20100201	Natural Gas	1023.8846	62.0	10.0	585.3	61.3
20100301	Gasified Coal	1023.8846	62.0	10.0	585.3	61.3

Table 3. EPA-Approved Emission Factor File for CO, VOC, filterable PM, and NH_3.

SCC	FUEL	COEF	VOCEF	PM10EF	PM25EF	NH3EF	PMFLAG
10100201	BIT	0.5000	0.0400	2.6000	1.4800	0.030	A
10100202	BIT	0.5000	0.0600	2.3000	0.6000	0.030	A
10100203	BIT	0.5000	0.1100	0.2600	0.1100	0.030	A
10100204	BIT	5.0000	0.0500	13.2000	4.6000	0.030	
10100211	BIT	0.5000	0.0400	2.6000	1.4800	0.030	A
10100212	BIT	0.5000	0.0600	2.3000	0.6000	0.030	A
10100217	BIT	18.0000	0.0500	12.4000	1.3640	0.030	
10100221	SUB	0.5000	0.0400	2.6000	1.4800	0.030	A
10100222	SUB	0.5000	0.0600	2.3000	0.6000	0.030	A
10100223	SUB	0.5000	0.1100	0.2600	0.1100	0.030	A
10100224	SUB	5.0000	0.0500	13.2000	4.6000	0.030	
10100226	SUB	0.5000	0.0600	2.3000	0.6000	0.030	A
10100238	SUB	18.0000	0.0500	16.1000	4.2000	0.030	
10100301	LIG	0.2500	0.0700	1.8170	0.5214	0.030	A
10100302	LIG	0.6000	0.0700	2.3000	0.6600	0.030	A
10100303	LIG	0.6000	0.0700	0.8710	0.3690	0.030	A
10100317	LIG	0.1500	0.0300	12.0000	1.4000	0.030	
10100601	NG	84.0000	5.5000	1.9000	1.9000	3.200	
10100801	PC	0.6000	0.0700	7.9000	4.5000	0.397	A
10102018	WC	0.1500	0.0300	12.0000	1.4000	0.030	
20100201	NG	83.8628	2.1477	1.9380	1.9380	6.560	
20100301	IGCC	34.6500	2.2050	11.5500	11.5500	6.560	

Notes:

1. SCCs beginning with 101002 (coal), 101003 (coal), 101008 (coke), or 101020 (waste coal), emission factors in LB/TON; SCCs beginning with 101006 (natural gas), 201002 (natural gas), or 201003 (IGCC), emission factors are in LB/E6FT3.
2. If PMFLAG = 'A', then multiply ash content with PM emission factor.

Source: Table derived from worksheet sccemfac100704 from MRPOpostprocdatafiles.xls, Pechan 2005.

Condensable PM: To estimate total primary PM emissions, additional calculations were conducted to derive condensable PM emissions from these sources. In MANE VU and VISTAS PM condensable emissions were calculated based on factors derived from AP-42 defaults. In MRPO no condensable emissions were estimated or included in the inventory. (Janssen, 2008) Table 4 (worksheet pmcdef from MRPOpostprocdatafiles.xls, Pechan 2005) shows these PM condensable emission factors and SCC assignments.

Table 4. EPA-Approved Condensable PM Emission Factor Assignment.

SCC	PMCDEF (LB/E6BTU)
10100201, 10100202, 10100203, 10100211, 10100212, 10100221, 10100222, 10100223, 10100226, 10100301, 10100302, 10100303	0.0200[2]
10100201, 10100202, 10100203, 10100211, 10100212, 10100221, 10100222, 10100223, 10100226, 10100301, 10100302, 10100303 [1]	(0.1 * sulfur content - 0.03)[3]
10100204, 10100224	0.0400
10100217, 10100238, 10100317, 10102018	0.0100
10100601	0.0057
10100801	0.0100
20100201, 20100301	0.0047
Notes:	
1. If the emission factor is less than 0.01, then it is set equal to 0.01.	
2. AND there is either an SO_2 FGD or a PM scrubber (for MRPO post-processing); or AND there is an SO_2 wet FGD (for EPA post-processing).	
3. AND there is any PM control other than a scrubber and there is no SO_2 control (for MRPO post-processing); or AND there is any control other than an SO_2 wet FGD (for EPA post-processing).	

Source: Table derived from worksheet pmcdef from MRPOpostprocdatafiles.xls, Pechan 2005.

<ins>Additional Pollutants</ins>: As noted above, in processing IPM parsed data to convert it to NIF format, emissions of additional pollutants were estimated. Emissions for 28 temporal-pollutant combinations were estimated since there are seven pollutants (VOC, CO, primary PM_{10} and $PM_{2.5}$, NH_3, SO_2 and NO_x) and four temporal periods (annual, summer season, winter season, July day).

<ins>Crosswalk Match to 2002 Inventory</ins>: The final step in the IPM to NIF conversion process was to match the IPM unit IDs with the identifiers in the base year 2002 inventory for existing EGUs. A crosswalk file was used to obtain FIPS State and county, plant ID (within State and county), and point ID. If the FIPS State and county, plant ID and point ID were in the 2002 base year NIF tables, then the process ID and stack ID were obtained from the NIF; otherwise, defaults, described above, were used.

The post-processed files were then provided in NIF 3.0 format. Two sets of tables were developed : “NIF files” for IPM units that had a crosswalk match and were in the 2002 base year inventory, and “NoNIF files” for IPM units that were not in the 2002 base year inventory (which included existing units with or without a crosswalk match as well as generic units). Two special cases relating to the crosswalk match were handled as follows:

1. One-to-many match: At a given plant, if one IPM boiler ID was matched to more than one point ID, the boiler data were put on the first point ID records; records from the other point IDs were deleted from the relevant tables.

2. Many-to-one match: At a given plant, if more than one IPM boiler ID was matched to one point ID, all the boilers’ emissions (tons), throughput (really heat input in MMBtu), and capacity (MW) were summed (“summed boiler”) and put on that point

ID's records in the relevant tables. The values for stack parameters and latitude-longitude values were those from the first record summed.

3.3 State Results – Phase II Augmented

Summarizing the results of the estimation of additional pollutants, Table 5 presents additional pollutant augmented State level emission results from the 2018 Inter-RPO CAIR Case IPM v. 2.1.9 fossil-only parsed file (VISTASII_PC_1f with pollutant augmentation; found in modeling file *ida_egu_18_basef_2453605.txt* from VISTAS BaseF). A comparison of RPO totals for SO_2 and NO_x shows that these are the same as presented in Table 1.

3.4 NIF to IDA

The main purpose of the SMOKE conversion task was to convert EGU emission inventories provided in NIF format into the IDA format required by the SMOKE model for the criteria pollutants VOC, NO_x, CO, SO_2, PM_{10}, $PM_{2.5}$, and NH_3. Annual and seasonal emissions were taken directly from the NIF structured inventories with no alternate temporal calculations performed (e.g., estimate seasonal emissions from annual or annual from seasonal). The temporal allocation module of the SMOKE emissions processor was intended to be used to further define temporal distribution of these emissions.

No quality assurance (QA) related to the reported values in the NIF files was conducted (e.g., it was assumed that reported emission levels were correct) and therefore the QA focus was to maintain the integrity of the mass files in the conversion to IDA.

Each set of NIF structured data had a unique set of relational tables necessary to maintain the information required in each source sector based on its reporting requirements. Conversion scripts to read the information from each of these relational data sets and convert them to the IDA structures required by this task were implemented by Alpine (Alpine, 2006). Prior to and after the conversion from NIF to IDA, a list of emission summary reports was developed to check that the emissions input into the conversion process were the same as output into the IDA formatted files.

Table 5. State Level Emission Summary; 2018 VISTASII_PC_1f with Pollutant Augmentation. Modeling file *ida_egu_18_basef_2453605.txt* from VISTAS Base F. (fossil-only)

		Annual Emissions (Tons)						
		IPM Generated		Augmented Pollutants				
State	**RPO**	**NOx**	**SO2**	**VOC**	**CO**	**PM-10**	**PM-2.5**	**NH3**
Connecticut	MANE-VU	3,418	6,697	145	9,837	959	927	341
Delaware	MANE-VU	12,341	35,442	117	1,183	2,950	2,438	76
District Of Columbia	MANE-VU	103	83	5	154	104	99	12
Maine	MANE-VU	1,827	5,436	53	4,057	296	279	139
Maryland	MANE-VU	14,709	28,065	575	11,831	8,253	6,433	435
Massachusetts	MANE-VU	18,157	17,486	484	13,860	3,918	3,233	1,059
New Hampshire	MANE-VU	3,089	7,469	73	1,697	2,268	2,156	124
New Jersey	MANE-VU	13,636	32,495	352	7,611	4,017	3,515	564
New York	MANE-VU	24,376	51,445	758	22,242	11,031	9,343	1,472
Pennsylvania	MANE-VU	82,881	135,946	1,920	41,445	31,580	23,756	1,790
Rhode Island	MANE-VU	576	55	42	1,627	157	156	127
Vermont	MANE-VU	105	35	3	117	26	25	9
	MANE-VU Total	**175,218**	**320,651**	**4,528**	**115,659**	**65,558**	**52,360**	**6,148**
Alabama	VISTAS	41,714	190,029	1,599	27,888	20,401	15,936	2,009
Florida	VISTAS	56,506	139,526	2,027	58,982	24,804	18,403	3,948
Georgia	VISTAS	56,180	178,196	1,940	33,040	25,929	19,087	2,374
Kentucky	VISTAS	64,099	229,596	1,623	17,103	24,659	18,813	782
Mississippi	VISTAS	8,895	27,226	511	12,228	7,270	4,358	918
North Carolina	VISTAS	57,774	102,217	1,232	14,386	31,797	26,551	847
South Carolina	VISTAS	46,318	118,584	932	11,263	26,740	22,629	793
Tennessee	VISTAS	29,873	112,343	922	7,391	15,008	12,988	449
Virginia	VISTAS	43,144	80,602	863	16,482	19,652	17,300	881
West Virginia	VISTAS	51,208	124,464	1,447	12,946	23,538	16,968	721
	VISTAS Total	**455,711**	**1,302,784**	**13,096**	**211,709**	**219,798**	**173,034**	**13,722**
Illinois	MRPO	71,233	241,136	2,229	17,868	32,650	30,132	1,152
Indiana	MRPO	95,376	376,864	2,105	19,416	35,082	27,835	1,274
Michigan	MRPO	98,685	398,562	1,623	17,522	38,902	34,276	1,091
Ohio	MRPO	83,129	215,501	2,254	23,832	42,754	33,323	1,773
Wisconsin	MRPO	45,701	155,369	1,101	11,901	15,629	14,246	626
	MRPO Total	**394,124**	**1,387,432**	**9,312**	**90,539**	**165,016**	**139,813**	**5,915**
Arkansas	CENRAP	33,097	82,605	696	11,429	3,897	3,326	814
Iowa	CENRAP	51,119	147,305	770	8,759	10,033	8,615	569
Kansas	CENRAP	83,333	81,486	798	7,203	8,520	6,807	461
Louisiana	CENRAP	30,432	74,263	660	11,043	3,966	3,590	919
Minnesota	CENRAP	41,029	85,847	674	5,563	8,162	7,034	343
Missouri	CENRAP	77,660	280,887	1,579	13,165	18,456	16,769	800
Nebraska	CENRAP	50,781	73,629	450	3,590	2,296	1,915	217
Oklahoma	CENRAP	76,048	113,680	1,008	28,182	5,561	4,840	1,355
Texas	CENRAP	153,837	339,433	4,988	102,583	38,952	31,631	6,424
	CENRAP Total	**597,336**	**1,279,135**	**11,622**	**191,518**	**99,842**	**84,528**	**11,902**
Arizona	WRAP	81,858	60,640	1,170	29,037	11,515	9,644	2,189
California	WRAP	23,767	5,447	1,496	56,188	5,442	5,337	4,402
Colorado	WRAP	70,171	87,163	667	12,139	4,751	4,166	609
Idaho	WRAP	718	0	36	1,398	113	113	109
Montana	WRAP	38,504	22,066	326	3,035	7,217	4,636	193
Nevada	WRAP	47,404	31,172	479	9,862	5,244	4,315	750
New Mexico	WRAP	74,010	52,916	554	5,991	13,435	7,637	388
North Dakota	WRAP	71,711	108,645	784	9,937	5,670	4,757	324
Oregon	WRAP	11,330	10,034	276	9,322	1,311	1,305	722
South Dakota	WRAP	14,574	12,085	110	536	362	297	33
Utah	WRAP	60,782	37,819	423	3,523	6,459	4,881	211
Washington	WRAP	26,379	12,236	451	11,848	3,780	3,192	898
Wyoming	WRAP	81,182	40,265	678	5,672	8,537	7,116	341
	WRAP Total	**602,389**	**480,488**	**7,449**	**158,487**	**73,834**	**57,395**	**11,170**
National Total		**2,224,778**	**4,770,490**	**46,007**	**767,912**	**624,049**	**507,129**	**48,857**

4 MODIFICATIONS BY OTHER REGIONS

4.1 Emission Control Modifications within VISTAS, MRPO, and CENRAP

State and local agencies and invited stakeholders from VISTAS, MRPO, and CENRAP reviewed the results of the Inter-RPO Phase II set of IPM runs. These stakeholders primarily reviewed and commented on the IPM results with respect to IPM decisions on NO_x post-combustion controls and SO_2 scrubbers and provided additional information on when and where new SO_2 and NO_x controls were planned to come online based on the best available data from state rules, enforcement agreements, compliance plans, permits, and discussions/commitments from individual companies. They also reviewed the IPM results to verify that known and existing controls and emission rates were properly reflected in the IPM runs. After considering comments, adjustments to the IPM results were made to specific units using any new information they had as part of the permitting process or other contact with the industry that indicated which units would install controls as a result of CAIR and when these new controls would come on-line (MACTEC, 2007; MRPO 2006; ENVIRON 2007).

As described in the following section, some entities specified changes to the controls assigned by IPM to reflect their best estimates of emission control levels. These changes typically involved either 1) adding selective catalytic reduction (SCR) or scrubber controls to units where IPM did not predict SCR or scrubber controls, or 2) removing IPM-assigned SCR or scrubber controls at units where the commenting entity indicated there were no firm plans for controls at those units.

At this point in the process MANE-VU decided not to make any changes to the northeastern state IPM output regardless of state knowledge of discrepancies with actual conditions. MANE-VU determined that IPM provided a reasonable estimate of the impact of the CAIR cap and trade program consistent with methods used by EPA, and planners were concerned that adjustments would not reflect the allocation of ALL allowed emissions under CAIR.

In MANE-VU's final modeling, many of the changes made by the other RPOs were included, but due to the timing of the release of revised data, the location with respect to the modeling domain, and need to progress with modeling, MANE-VU did not incorporate changes reflected in the final CENRAP EGU files.

4.2 Emission Factor and Control Modifications for VISTAS Emission Sources

VISTAS reviewed the PM and NH_3 emissions from its States' EGUs provided after the original IPM to NIF conversation conducted for the RPOs and identified significantly higher emissions in 2009/2018 than in 2002. VISTAS determined this conversion used a set of PM and NH_3 emission factors that were "the most recent EPA approved uncontrolled emission factors" for estimating 2009/2018 EGU emissions but were most likely not the same emission factors used by States for estimating these emissions in 2002. Thus, the emission increase from 2002 to 2009/2018 was simply an artifact of the change in emission factors, not anything to do with changes in activity or control technology application. During this review, VISTAS additionally identified an inconsistent use of SCCs for determining emission factors between the base and future years.

Documentation (Alpine, 2005a, b) indicates that VISTAS adjusted the 2002 base year emissions inventory to account for these discrepancies in base year and future year PM and NH_3 emission factor use. Using the latest “EPA-approved” uncontrolled emission factors by SCC, Alpine utilized data collected under EPA’s Consolidated Emissions Reporting Rule (CERR) or data reported by VISTAS. Alpine used reported annual heat input, fuel throughput, heat, ash, and sulfur content to estimate annual uncontrolled emissions for units identified as output by IPM. This step was conducted for non-CEM pollutants (CO, VOC, PM, and NH_3) only. For PM emissions, the condensable component of emissions was calculated and added to the resulting PM primary estimations. The resulting emissions were then adjusted by any control efficiency factors reported in the CERR or VISTAS data collection effort. The second adjustment was to the future year inventories. Alpine updated the SCCs in the future year inventory to assign the same base year SCC. Using the same methods as described for the 2002 revisions, those non-IPM generated pollutants were estimated using IPM predicted fuel characteristics and base year 2002 SCC assignments.

In addition to the changes to the emission factor assignments, SCC, and IPM-assigned controls, VISTAS also specified other changes to the IPM results or converted IPM to NIF files. Comments on changes in stack parameters from the 2002 inventory were implemented in the converted files for the 2018 inventory. Changes to stack parameters were also made in cases where new controls were scheduled to be installed. In cases where an emission unit was projected to have an SO_2 scrubber by 2018, some States were able to provide revised stack parameters for some units based on design features for the new control system. Other units projected to install scrubbers by 2018 were not far enough along in the design process to have specific design details. For those units, VISTAS made the following assumptions: 1) the scrubber is a wet scrubber; 2) keep the current stack height the same; 3) keep the current flow rate the same, and 4) change the stack exit temperature to 169 degrees F (this is the virtual temperature derived from a wet temperature of 130 degrees F) (MACTEC, 2007). VISTAS determined that exit temperature (wet) of 130 degrees F +/- 5 degrees F is representative of different size units and wet scrubber technology.

4.3 Emission Inventory Replacement within WRAP Domain

During the development of their EGU emission forecast, the western states RPO (WRAP) conducted an exercise where IPM was not used to prepare emission estimates from EGU sources. Using capacity factor adjustments and emission control assumptions, WRAP developed a forecast of EGU emissions based on its initial 2002 base year inventory (ERG, 2006). This revised forecast was used by many of the RPOs and replaced the emissions generated for the domain by IPM. This change by WRAP is reflected in the difference in State emission totals between Tables 5 and 6. As WRAP is outside the MANE VU modeling domain, this change was not reflected in MANE-VU modeling. MANE-VU did not change its boundary conditions to reflect this change.

4.4 Eliminating Double Counting of EGU Units

An additional set of procedures was used by MANE-VU and VISTAS to avoid double counting of EGU emissions in the 2018 point source inventory (MACTEC, 2006, 2007). Since each

RPO's 2002 emissions inventory file contained both EGUs and non-EGU point sources, and EGU emissions were projected using IPM, it was necessary to split the 2002 point source file into two components. The first component contained those emission units accounted for in the IPM forecasts. The second component contained all other point sources not accounted for in IPM.

As described in the previous section, 2018 NIF files for EGUs were prepared from the IPM parsed files. All IPM matched units were initially removed from the 2018 point source inventory to create the non-EGU inventory (which was projected to 2018 using non-EGU growth and control factors). This was done on a unit-by-unit basis based on a cross-reference table that matched IPM emission unit identifiers (ORISPL plant code and BLRID emission unit code) to NIF emission unit identifiers (FIPSST state code, FIPSCNTY county code, State Plant ID, State Point ID). When there was a match between the IPM ORISPL/BLRID and the emission unit ID, the unit was assigned to the EGU inventory; all other emission units were assigned to the non-EGU inventory.

If an emission unit was contained in the NIF files created from the IPM output, the corresponding unit was removed from the initial 2018 point source inventory. For VISTAS, the NIF 2018 EGU files from the IPM parsed files were then merged with the non-EGU 2018 files to create a complete 2018 point source scenario.

Next, several ad-hoc QA/QC queries were done to verify that there was no double-counting of emissions in the EGU and non-EGU inventories:

- The IPM parsed files were reviewed to identify EGUs accounted for in IPM. This list of emission units was compared to the non-EGU inventory derived from the IPM-NIF cross-reference table to verify that units accounted for in IPM were not double-counted in the non-EGU inventory. As a result of this comparison, a few adjustments were made in the cross-reference table to add emission units for plants to ensure these units accounted for in IPM were moved to the EGU inventory.

- The non-EGU inventory was further reviewed to identify remaining emission units with an Standard Industrial Classification (SIC) code of "4911 Electrical Services" or Source Classification Code of "1-01-xxx-xx External Combustion Boiler, Electric Generation". The list of sources meeting these selection criteria were compared to the IPM parsed file to ensure that these units were not double-counted.

- VISTAS invited various stakeholder groups to review the 2018 point source inventory to verify whether there was any double counting of EGU emissions. In some instances, corrections were provided where an emission unit was double counted.

4.5 Preliminary Results from Phase II Additional Modifications

Table 6 summarizes the Base G emissions inventory for EGUs, presenting State level emission results from the 2018 Inter-RPO CAIR Case IPM v. 2.1.9 parsed file modified by VISTAS, MRPO, and WRAP per the methods noted in the above sections. Note that no changes occurred to the MANE-VU state emissions as a result of these changes.

Table 6. State Level Emission Summary; 2018 VISTAS Base G Modeling file ptinv_egu_2018_11sep2006.txt. Based on 2018 VISTASII_PC_1f (fossil-only) with adjustments from VISTAS, MRPO, and WRAP.

		Annual Emissions (Tons)						
State	**RPO**	**NOx**	**SO2**	**VOC**	**CO**	**PM-10**	**PM-2.5**	**NH3**
Connecticut	MANE-VU	3,418	6,697	145	9,836	959	927	341
Delaware	MANE-VU	12,341	35,442	117	1,183	2,950	2,438	76
District Of Columbia	MANE-VU	103	83	5	154	104	99	12
Maine	MANE-VU	1,827	5,436	53	4,057	296	279	139
Maryland	MANE-VU	14,709	28,065	575	11,831	8,253	6,433	435
Massachusetts	MANE-VU	18,157	17,486	484	13,860	3,917	3,233	1,059
New Hampshire	MANE-VU	3,089	7,469	73	1,697	2,268	2,156	124
New Jersey	MANE-VU	13,636	32,495	352	7,611	4,017	3,515	564
New York	MANE-VU	24,376	51,445	758	22,242	11,031	9,343	1,471
Pennsylvania	MANE-VU	82,881	135,946	1,919	41,446	31,580	23,756	1,790
Rhode Island	MANE-VU	576	55	42	1,627	157	156	127
Vermont	MANE-VU	105	35	3	117	26	25	9
	MANE-VU Total	**175,219**	**320,651**	**4,528**	**115,660**	**65,558**	**52,360**	**6,148**
Alabama	VISTAS	62,860	135,782	1,620	21,611	7,385	4,380	1,033
Florida	VISTAS	56,827	133,037	1,857	42,573	9,287	6,288	2,665
Georgia	VISTAS	69,308	226,477	1,805	35,584	18,217	11,319	1,676
Kentucky	VISTAS	59,740	211,225	1,344	12,125	6,194	4,067	436
Mississippi	VISTAS	10,455	15,143	1,055	11,822	7,007	6,853	545
North Carolina	VISTAS	56,526	96,402	1,147	16,376	32,676	26,014	608
South Carolina	VISTAS	50,068	87,202	860	13,078	28,110	24,454	578
Tennessee	VISTAS	30,008	112,353	886	7,126	15,861	13,321	241
Virginia	VISTAS	60,615	109,391	921	14,017	13,505	11,757	553
West Virginia	VISTAS	51,177	115,322	1,382	11,896	6,344	3,643	177
	VISTAS Total	**507,583**	**1,242,334**	**12,877**	**186,205**	**144,586**	**112,094**	**8,513**
Illinois	MRPO	71,233	241,136	2,229	17,868	32,649	30,132	1,152
Indiana	MRPO	95,376	351,858	2,105	19,416	35,081	27,835	1,274
Michigan	MRPO	78,605	288,006	1,623	17,521	38,902	34,276	1,091
Ohio	MRPO	83,129	215,501	2,254	23,832	42,753	33,322	1,772
Wisconsin	MRPO	45,701	155,369	1,101	11,901	15,629	14,246	626
	MRPO Total	**374,044**	**1,251,871**	**9,311**	**90,539**	**165,015**	**139,812**	**5,915**
Arkansas	CENRAP	33,097	82,605	696	11,429	3,897	3,326	814
Iowa	CENRAP	51,119	147,305	770	8,758	10,033	8,615	569
Kansas	CENRAP	83,333	81,486	798	7,203	8,520	6,807	461
Louisiana	CENRAP	30,432	74,263	660	11,043	3,966	3,590	919
Minnesota	CENRAP	41,029	85,847	674	5,563	8,162	7,035	343
Missouri	CENRAP	77,660	280,887	1,579	13,165	18,456	16,769	799
Nebraska	CENRAP	50,781	73,629	450	3,590	2,296	1,914	217
Oklahoma	CENRAP	76,048	113,680	1,008	28,182	5,561	4,840	1,355
Texas	CENRAP	153,837	339,433	4,988	102,581	38,952	31,630	6,424
	CENRAP Total	**597,336**	**1,279,135**	**11,622**	**191,515**	**99,842**	**84,527**	**11,901**
Arizona	WRAP	59,774	55,941	724	17,806	2,811	634	630
California	WRAP	17,537	1,528	2,558	31,173	1,219	1,059	0
Colorado	WRAP	77,113	60,914	1,465	18,939	3,138	307	537
Idaho	WRAP	2,236	1,683	50	3,283	335	87	0
Montana	WRAP	44,733	31,303	565	11,818	1,796	247	13
Nevada	WRAP	54,300	22,118	1,570	10,598	4,230	768	903
New Mexico	WRAP	32,925	17,796	695	10,976	794	627	43
North Dakota	WRAP	82,741	152,828	909	13,647	3,958	2,645	383
Oregon	WRAP	15,742	15,096	474	5,753	1,288	323	219
South Dakota	WRAP	17,681	13,522	118	689	247	217	52
Utah	WRAP	76,136	41,394	597	17,150	4,637	2,000	1,350
Washington	WRAP	16,884	7,011	249	4,008	1,474	1,027	12
Wyoming	WRAP	104,142	96,745	1,147	18,871	10,445	7,411	404
	WRAP Total	**601,942**	**517,879**	**11,122**	**164,711**	**36,371**	**17,353**	**4,547**
National Total		**2,256,124**	**4,611,869**	**49,460**	**748,629**	**511,371**	**406,146**	**37,024**

4.6 Revised Results – VISTAS Base G2 Adjustment

VISTAS further refined their future predictions based on further state input. The resulting modeling file was called the Base G2 inventory. Table 7 presents State level emission results from the Base G2 2018 Inter-RPO CAIR Case IPM v. 2.1.9 parsed file modified by VISTAS.

Some states specified changes to the controls assigned by IPM to reflect their best estimates of emission control levels. These changes typically involved either 1) adding selective catalytic reduction (SCR) or scrubber controls to units where IPM did not predict SCR or scrubber controls, or 2) removing IPM-assigned SCR or scrubber controls at units where the commenting entity indicated their were no firm plans for controls at those units. These changes were based on those states' best available information about where and when emissions controls were expected to be installed, as well as information concerning IPM-predicted plant closures that were deemed unlikely to occur. In comparing Table 7 with Table 6, it can be seen that the changes included in the Base G2 inventory were requested by the states of Florida, Georgia, and North Carolina.

Note that no changes were made at this time by the MANE-VU states. The net effect of these changes was to reduce emissions of SO_2 relative to either Table 5 or Table 6.

Table 7. State Level Emission Summary; 2018 VISTAS Base G2 Modeling file egu_18_vistas_g2_20feb2007.txt. Based on 2018 VISTASII_PC_1f (fossil-only) with adjustments from VISTAS, MRPO, and WRAP.

		Annual Emissions (Tons)						
State	**RPO**	**NOx**	**SO2**	**VOC**	**CO**	**PM-10**	**PM-2.5**	**NH3**
Connecticut	MANE-VU	3,418	6,697	145	9,836	959	927	341
Delaware	MANE-VU	12,341	35,442	117	1,183	2,950	2,438	76
District Of Columbia	MANE-VU	103	83	5	154	104	99	12
Maine	MANE-VU	1,827	5,436	53	4,057	296	279	139
Maryland	MANE-VU	14,709	28,065	575	11,831	8,253	6,433	435
Massachusetts	MANE-VU	18,157	17,486	484	13,860	3,917	3,233	1,059
New Hampshire	MANE-VU	3,089	7,469	73	1,697	2,268	2,156	124
New Jersey	MANE-VU	13,636	32,495	352	7,611	4,017	3,515	564
New York	MANE-VU	24,376	51,445	758	22,242	11,031	9,343	1,471
Pennsylvania	MANE-VU	82,881	135,946	1,919	41,446	31,580	23,756	1,790
Rhode Island	MANE-VU	576	55	42	1,627	157	156	127
Vermont	MANE-VU	105	35	3	117	26	25	9
	MANE-VU Total	**175,219**	**320,651**	**4,528**	**115,660**	**65,558**	**52,360**	**6,148**
Alabama	VISTAS	62,860	135,782	1,620	21,611	7,385	4,380	1,033
Florida	VISTAS	58,341	139,200	1,904	42,947	9,355	6,331	2,665
Georgia	VISTAS	69,308	75,051	1,805	35,584	18,217	11,319	1,676
Kentucky	VISTAS	59,740	211,225	1,344	12,125	6,194	4,067	436
Mississippi	VISTAS	10,455	15,143	1,055	11,822	7,007	6,853	545
North Carolina	VISTAS	56,526	102,680	1,147	16,376	32,676	26,014	608
South Carolina	VISTAS	50,068	87,202	860	13,078	28,110	24,454	578
Tennessee	VISTAS	30,008	112,353	886	7,126	15,861	13,321	241
Virginia	VISTAS	60,615	109,391	921	14,017	13,505	11,757	553
West Virginia	VISTAS	51,177	105,932	1,382	11,896	6,344	3,643	177
	VISTAS Total	**509,098**	**1,093,959**	**12,923**	**186,579**	**144,654**	**112,137**	**8,513**
Illinois	MRPO	71,233	241,136	2,229	17,868	32,649	30,132	1,152
Indiana	MRPO	95,376	351,858	2,105	19,416	35,081	27,835	1,274
Michigan	MRPO	78,605	288,006	1,623	17,521	38,902	34,276	1,091
Ohio	MRPO	83,129	215,501	2,254	23,832	42,753	33,322	1,772
Wisconsin	MRPO	45,701	155,369	1,101	11,901	15,629	14,246	626
	MRPO Total	**374,044**	**1,251,871**	**9,311**	**90,539**	**165,015**	**139,812**	**5,915**
Arkansas	CENRAP	33,097	82,605	696	11,429	3,897	3,326	814
Iowa	CENRAP	51,119	147,305	770	8,758	10,033	8,615	569
Kansas	CENRAP	83,333	81,486	798	7,203	8,520	6,807	461
Louisiana	CENRAP	30,432	74,263	660	11,043	3,966	3,590	919
Minnesota	CENRAP	41,029	85,847	674	5,563	8,162	7,035	343
Missouri	CENRAP	77,660	280,887	1,579	13,165	18,456	16,769	799
Nebraska	CENRAP	50,781	73,629	450	3,590	2,296	1,914	217
Oklahoma	CENRAP	76,048	113,680	1,008	28,182	5,561	4,840	1,355
Texas	CENRAP	153,837	339,433	4,988	102,581	38,952	31,630	6,424
	CENRAP Total	**597,336**	**1,279,135**	**11,622**	**191,515**	**99,842**	**84,527**	**11,901**
Arizona	WRAP	59,774	55,941	724	17,806	2,811	634	630
California	WRAP	17,537	1,528	2,558	31,173	1,219	1,059	0
Colorado	WRAP	77,113	60,914	1,465	18,939	3,138	307	537
Idaho	WRAP	2,236	1,683	50	3,283	335	87	0
Montana	WRAP	44,733	31,303	565	11,818	1,796	247	13
Nevada	WRAP	54,300	22,118	1,570	10,598	4,230	768	903
New Mexico	WRAP	32,925	17,796	695	10,976	794	627	43
North Dakota	WRAP	82,741	152,828	909	13,647	3,958	2,645	383
Oregon	WRAP	15,742	15,096	474	5,753	1,288	323	219
South Dakota	WRAP	17,681	13,522	118	689	247	217	52
Utah	WRAP	76,136	41,394	597	17,150	4,637	2,000	1,350
Washington	WRAP	16,884	7,011	249	4,008	1,474	1,027	12
Wyoming	WRAP	104,142	96,745	1,147	18,871	10,445	7,411	404
	WRAP Total	**601,942**	**517,879**	**11,122**	**164,711**	**36,371**	**17,353**	**4,547**
National Total		**2,257,639**	**4,463,494**	**49,506**	**749,003**	**511,439**	**406,189**	**37,024**

5 ADDITIONAL ADJUSTMENTS BY NORTHEASTERN STATES AND MODELERS FOR REGIONAL HAZE SIP MODELING

5.1 Introduction

MANE VU used the G2 inventory as the basis for further adjustments to incorporate MANE-VU state changes and also to represent the MANE VU control strategy for key EGUs. These modifications resulted in a) SO_2 emissions reductions at one MANE-VU EGU source subject to Best Available Retrofit Technology (BART) requirements, 2) emissions increases in MANE-VU to reflect states' best estimates that some sources predicted by IPM to be closed would continue to operate and information about where and when emission controls would or would not be installed, 3) SO_2 emissions reductions at key EGUs (or alternative facilities) to reflect the MANE-VU EGU strategy, and 4) increases in SO_2 emissions to estimate the effect of emissions trading under the CAIR program. Each of these is explained below.

5.2 Best Available Retrofit Technology (BART)

To assess the impacts of the implementation of the BART provisions of the Regional Haze Rule, NESCAUM included estimated reductions anticipated for BART-eligible facilities not covered by CAIR in the MANE-VU region in the 2018 CMAQ modeling analysis. A survey of state staff indicated that eight units would likely be controlled under BART alone. State-provided potential control technologies and levels of control for these sources were incorporated into the 2018 emission inventory projections used in MANE-VU's March 2008 modeling run (NESCAUM, 2008b). The eight BART-eligible units included one EGU point source, which is located in Maine (Wyman Station).

5.3 MANE-VU State Modifications of IPM Results

Previously, during development of the Base G and Base G2 inventories, MANE-VU states had relied on the RPO IPM model results (Base F) without revisions. In 2007, the MANE-VU states decided that they should revise the estimates, as other RPOs had done, to reflect their best estimates of future source operations and controls. State and regional staff reviewed and revised the IPM results with respect to when and where new SO_2 controls were planned to come online. Modifications were based on state rules, enforcement agreements, compliance plans, permits, and commitments from individual companies. States reviewed the IPM results to verify that known and existing controls and emission rates were properly reflected in the IPM results. In addition, states noted that some units predicted by IPM to close were very unlikely to cease operation.

The net effect of these adjustments was an increase in SO_2 emissions in the MANE-VU region as a whole. In Delaware SO_2 emissions decreased due to controls on a major source. Emissions in Connecticut, the District of Columbia, Rhode Island, and Vermont remained the same as predicted by RPO IPM 2.1.9 (Base F). Emissions of SO_2 in other MANE-VU states increased. No changes were made in emissions of other pollutants.

5.4 MANE-VU EGU Strategy

MANE-VU states have recognized that SO_2 emissions from power plants are the single largest contributing sector to visibility impairment in the Northeast's Class I areas. Sulfate formed through atmospheric processes from SO_2 emissions are responsible for over half the mass and approximately 70-80 percent of the extinction on the worst visibility days (NESCAUM, 2006a, and b). The emissions from power plants dominate the SO_2 inventory.

A modeling analysis was conducted to identify those EGUs with the greatest impact on visibility in MANE-VU. As part of the MANE VU Contribution Assessment, two MANE-VU modeling centers undertook CALPUFF modeling to identify the top 100 stacks that impacted three of the MANE VU Class I areas in the base year, 2002. These three areas are Acadia, Brigantine and Lye Brook. Details of the modeling are provided in Appendix D of the Contribution Assessment. (NESCAUM, 2006a) The 100 top stacks for each Class I area are listed in Tables 10 and 20 from Appendix D "Dispersion Model Techniques" of the Contribution Assessment.

The two modeling centers used 2002 U.S. EPA Continuous Emission Monitoring System (CEMS) data reported by the power companies, which is stack based rather than emission unit based. A power plant may have several stacks. Each stack may vent emissions from one or more units at the plant. The two modeling centers also used different meteorological data—one used data from the MM5 model and the other used National Weather Service observation-based meteorology.

There are differences between results from the two centers because of the differences in meteorological input data and also because of rounding when summing annual emissions. As a result the MM5-based modeling identified some stacks as being in the top 100 impacting a MANE-VU Class I area that were not identified by the observation-based modeling, and vice versa. For purposes of identifying key stacks, all stacks on either list were included.

MARAMA combined the lists of the top 100 EGU stacks in Tables 10 and 20 from Appendix D of the Contribution Assessment and eliminated both duplications and stacks that were outside the MANE-VU consultation area. (The consultation area includes states contributing at least 2% of the sulfate monitored at MANE-VU Class I areas in 2002.) This process resulted in 167 unique stacks impacting one or more of the three MANE-VU Class I areas. The use of stacks rather than units or facilities was chosen as more consistent with the results of the modeling presented in the Contribution Assessment. The Contribution Assessment Appendix D tables did not identify the units or facilities that were modeled, only providing a CEMS Identification number. MARAMA used information contained in IPM input files to match up the plant name and type where the stack was located. The resulting list of 167 stacks is found in Appendix A of this report.

MANE-VU asked states in the consultation area to pursue 90 percent control on all units emitting from those stacks by 2018. MANE-VU recognized that this level of control may not be feasible in all cases. NESCAUM modelers incorporated State comments gathered during the inter-RPO consultation process in estimating the impact of this strategy on visibility at Class I areas. This process is described below in Section 5.5.

5.5 Implementation of MANE-VU Control Strategy for Key EGUs

As part of the MANE-VU strategy to improve visibility, MANE-VU asked states to pursue a 90 percent reduction in SO_2 emissions from the 167 EGU stacks identified as described in Section 5.4 and listed in Appendix A. MARAMA gathered information from MANE-VU, MRPO, and VISTAS states and regional staff to obtain information about anticipated emissions changes.

State and local agencies and individual stakeholders from MANE-VU, MRPO and VISTAS reviewed and revised the IPM results with respect to controls planned to come online. They also reviewed the IPM results to verify that known and existing controls and emission rates were properly reflected in the IPM runs. In addition, commenters noted that some units predicted by IPM to be shutdown would not shutdown.

Adjustments to the IPM results were made to specific units using information states had obtained as part of the permitting process or other contact with the industry that indicated which units would install controls as a result of CAIR and when these new controls would come on-line (Koerber, 2007; VISTAS 2007). In general, the changes at specific EGUs provided by VISTAS reflected their Base G2 inventory, and, as discussed with MRPO, the changes NESCAUM made to emissions from sources in the MRPO were consistent with sources where controls were predicted in EPA's IPM 3.0 run for 2018, since MRPO modeling relied on IPM 3.0. In addition to the 167 stacks, MANE-VU incorporated further corrections to source emissions as requested by VISTAS states at the following locations: North Carolina (Cliffside), South Carolina (Jefferies), Kentucky (Spurlock), and Virginia (Chesapeake and Clinch River). .

NESCAUM determined the desired emissions levels for the 167 key stacks based on a 90 percent reduction in continuous emissions monitoring data from 2002. This established a target emissions level for the region from those stacks. NESCAUM compared these levels with the information provided by the states for those sources. In each region, predicted 2018 emissions exceeded the target level. Therefore, emissions reductions from other sources were considered in order to meet the target emissions reductions for the region.(both within MANE-VU and in other RPOs). This resulted in a net decrease in emissions in all three affected RPOs. Emissions of SO_2 would have decreased by over 14,000 tons per year in MANE-VU, over 304,000 tons per year in the Midwest, and over 197,000 tons per year in the VISTAS region.

However, MANE-VU planners recognized that CAIR allows emissions trading, and that reductions at one unit could be offset increases at another unit within the CAIR region. Because most states do not restrict trading, MANE-VU decided that emissions should be increased to represent the implementation of the strategy for the 167 stacks within the limits of the CAIR program. Therefore, NESCAUM increased the emissions from states subject to the CAIR cap and trade program. For MANE-VU, 75,809 tons were added back, leaving total regional emissions from the MANE-VU region greater than the original Inter-RPO IPM-based estimate but consistent with state projections. The remaining 440,541 tons added back were allocated to

VISTAS and MRPO based on the fraction of their contribution to the total SO_2 emissions. The additional emissions correspond to an increase of 20.5 percent, with a total of 223,856 tons added to MRPO and 216,685 added to VISTAS.

Table 8 shows the emissions difference between the results of two IPM runs and the modeling inventories used by three Regional Planning Organizations (RPOs). VISTAS used Base G2, MANE-VU used the March 2008 Modeling Inventory, and MRPO used IPM 3.0..

Table 8. Comparison of Regional SO_2 Emissions Estimates.
(1000 tons per year)

	MANE-VU	MRPO	VISTAS	TOTAL
RPO 2.1.9 (VISTASII_PC_1f) (fossil only)	**321**	**1,387**	**1,303**	**3,011**
Reductions made by VISTAS and MRPO (Base G2)	0	-136	-209	-344
Net additional changes made by MANE-VU	66	24	222	311
MANE-VU March 2008 Modeling Inventory (fossil only)	**387**	**1,276**	**1,316**	**2,978**
MANE-VU minus RPO 2.1.9 (negative numbers mean MANE-VU's modeling inventory was less than RPO 2.1.9)	66	-112	13	-33
EPA 3.0 (fossil only)	**421**	**1,328**	**1,458**	**3,207**
RPO 2.1.9 minus EPA 3.0 (negative number means RPO 2.1.9 was less than EPA 3.0)	-100	59	-155	-196
MANE-VU 3/08 minus EPA 3.0 (negative numbers mean MANE-VU's modeling inventory was less than EPA 3.0)	-34	-53	-142	-229

The intent of the MANE-VU modelers' final EGU emissions adjustments was to retain the same level of emissions as predicted by the RPO CAIR IPM run for the three regions together, but to modify the locations of the emissions to better reflect the states' estimates and to achieve reductions at the 167 stacks identifie++d as important contributors to regional haze at MANE-VU Class I areas. As shown in Table 8, above, the MANE-VU adjustments resulted in total emissions from the three regions being less than the SO_2 emissions predicted by the RPO 2.1.9 IPM run but greater than emissions in the G2 inventory used by VISTAS modelers. In both the MANE-VU and VISTAS regions, the MANE-VU Modeling Inventory is greater than the VISTAS/Inter-RPO IPM run and in MRPO it is smaller. Results from IPM 3.0 also are provided for comparison, and are uniformly greater than the MANE-VU Modeling Inventory for EGUs.

All future EGU emissions estimates involve uncertainty. MANE-VU believes its process of adding back emissions resulted in a reasonable, conservative estimate of the implementation of the MANE-VU request for a 90% reduction at key EGU facilities.

5.6 State Results – Northeastern State Adjustments

Table 9 presents State level emission results as modified by the Northeastern States per the methods noted in the above sections. This table summarizes the input data used in the MANE-VU 2018 March 2008 Modeling run as documented in NESCAUM's *2018 Visibility Projections* report dated March 2008.

Table 9. State Level 2018 Emission Summary; March 2008 MANE-VU EGU Modeling Inventory. (See next page for file names.)

		Annual Emissions (Tons)						
State	**RPO**	**NOx**	**SO2**	**VOC**	**CO**	**PM-10**	**PM-2.5**	**NH3**
Connecticut	MANE-VU	3,418	6,697	145	9,836	959	927	341
Delaware	MANE-VU	12,341	10,941	117	1,183	2,950	2,438	76
District Of Columbia	MANE-VU	103	83	5	154	104	99	12
Maine	MANE-VU	1,827	6,806	53	4,057	296	279	139
Maryland	MANE-VU	14,709	43,764	575	11,831	8,253	6,433	435
Massachusetts	MANE-VU	18,157	45,941	484	13,860	3,917	3,233	1,059
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New Jersey	MANE-VU	13,636	15,918	352	7,611	4,017	3,515	564
New York	MANE-VU	24,376	74,587	758	22,242	11,031	9,343	1,471
Pennsylvania	MANE-VU	82,881	170,992	1,919	41,446	31,580	23,756	1,790
Rhode Island	MANE-VU	576	55	42	1,627	157	156	127
Vermont	MANE-VU	105	35	3	117	26	25	9
	MANE-VU Total	**175,219**	**386,584**	**4,528**	**115,660**	**65,558**	**52,360**	**6,148**
Alabama	VISTAS	62,860	163,567	1,620	21,611	7,385	4,380	1,033
Florida	VISTAS	58,341	167,685	1,903	42,946	9,355	6,330	2,665
Georgia	VISTAS	69,308	90,408	1,805	35,584	18,217	11,319	1,676
Kentucky	VISTAS	59,740	255,559	1,344	12,125	6,194	4,067	436
Mississippi	VISTAS	10,455	18,241	1,055	11,822	7,007	6,853	545
North Carolina	VISTAS	56,526	126,042	1,147	16,376	32,676	26,014	608
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	VISTAS Total	**509,098**	**1,315,740**	**12,922**	**186,579**	**144,653**	**112,137**	**8,512**
Illinois	MRPO	71,233	208,832	2,229	17,868	32,649	30,132	1,152
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	MRPO Total	**374,044**	**1,275,598**	**9,311**	**90,539**	**165,015**	**139,812**	**5,915**
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Louisiana	CENRAP	30,432	74,263	660	11,043	3,966	3,590	919
Minnesota	CENRAP	41,029	85,847	674	5,563	8,162	7,035	343
Missouri	CENRAP	77,660	280,887	1,579	13,165	18,456	16,769	799
Nebraska	CENRAP	50,781	73,629	450	3,590	2,296	1,914	217
Oklahoma	CENRAP	76,048	113,680	1,008	28,182	5,561	4,840	1,355
Texas	CENRAP	153,837	339,433	4,988	102,581	38,952	31,630	6,424
	CENRAP Total	**597,336**	**1,279,135**	**11,622**	**191,515**	**99,842**	**84,527**	**11,901**
Arizona	WRAP	59,774	55,941	724	17,806	2,811	634	630
California	WRAP	17,537	1,528	2,558	31,173	1,219	1,059	0
Colorado	WRAP	77,113	60,914	1,465	18,939	3,138	307	537
Idaho	WRAP	2,236	1,683	50	3,283	335	87	0
Montana	WRAP	44,733	31,303	565	11,818	1,796	247	13
Nevada	WRAP	54,300	22,118	1,570	10,598	4,230	768	903
New Mexico	WRAP	32,925	17,796	695	10,976	794	627	43
North Dakota	WRAP	82,741	152,828	909	13,647	3,958	2,645	383
Oregon	WRAP	15,742	15,096	474	5,753	1,288	323	219
South Dakota	WRAP	17,681	13,522	118	689	247	217	52
Utah	WRAP	76,136	41,394	597	17,150	4,637	2,000	1,350
Washington	WRAP	16,884	7,011	249	4,008	1,474	1,027	12
Wyoming	WRAP	104,142	96,745	1,147	18,871	10,445	7,411	404
	WRAP Total	**601,942**	**517,879**	**11,122**	**164,711**	**36,371**	**17,353**	**4,547**
National Total		**2,257,639**	**4,774,936**	**49,505**	**749,003**	**511,439**	**406,188**	**37,023**

Files used in preparing Table 9 include for CENRAP and WRAP, the VISTAS Base G2 Modeling file (egu_18_vistas_g2_20feb2007.txt.), and the following additional files:

MANE-VU:
- EGU2018_MANEVUv3_nonSO2.ida
- EGU2018_MANEVU_SO2_non167plus.ida
- EGU2018_MANEVU_SO2_167plus.ida

VISTAS:
- EGU2018_VISTASG2_SO2_non167plus_CAIR addback.ida
- EGU2018_VISTASG2_SO2_167plus_CAIRadd back.ida
- EGU2018_VISTASG2_nonSO2.ida

MRPO:
- EGU2018_MWRPO_SO2_167plus_CAIRaddback. ida
- EGU2018_MWRPO_SO2_non167p_non65_CAIR addback.ida
- EGU2018_MWRPO_SO2_65_CAIRaddback.ida
- EGU2018_MWRPO_nonSO2.ida

6 EGU PREPARATION TIMELINE

The following section provides a chronological review of the events and milestones that occurred during the preparation of EGU emission forecasts in support of regional haze SIP preparation.

2004

- VISTAS/MRPO sponsor first IPM 2.1.6 runs for 2018 (Phase I)
- Phase I (VISTAS_CAIR_2) results released

2005

- RPOs move to IPM 2.1.9 (Phase II)
- Revisions to NEEDS input file and global parameters submitted by RPOs for revised runs
- Phase II (VISTAS_II_PC_1f) results released
- IPM parsed to NIF and NIF to SMOKE IDA format conversion occurs
- Initial RPO adjustments and modifications of IPM results
- RPOs share IPM 2.1.9 inputs and configuration from Phase II with EPA
- EPA releases IPM 2.1.9 results of CAIR/CAMR modeling

2006

- Additional RPO control and modeling file adjustments to Phase II runs
- RPOs simulate 2018 forecast year to support regional haze SIP submittals
- RPOs work with EPA to configure NEEDS 3.0 for next round of EPA modeling
- EPA releases IPM 2006 revised projections
- RPOs identify potential control measures and estimate benefits for meeting reasonable progress goals
- Additional RPO control and modeling file adjustments to Phase II runs

2007

- RPOs analyze cost and other factors associated with potential control measures
- RPOs coordinate with EPA on inputs and runs of IPM 3.0
- EPA releases IPM 3.0 results of revised CAIR/CAMR/CAVR modeling
- Interstate and inter-regional consultation regarding potential control measures
- MANE-VU states agree to pursue several control measures
- RPOs begin regional modeling to assess visibility impacts of controls

2008

- RPOs model to determine progress goals for regional haze SIP
- States finalize regional haze SIPs

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Appendix A

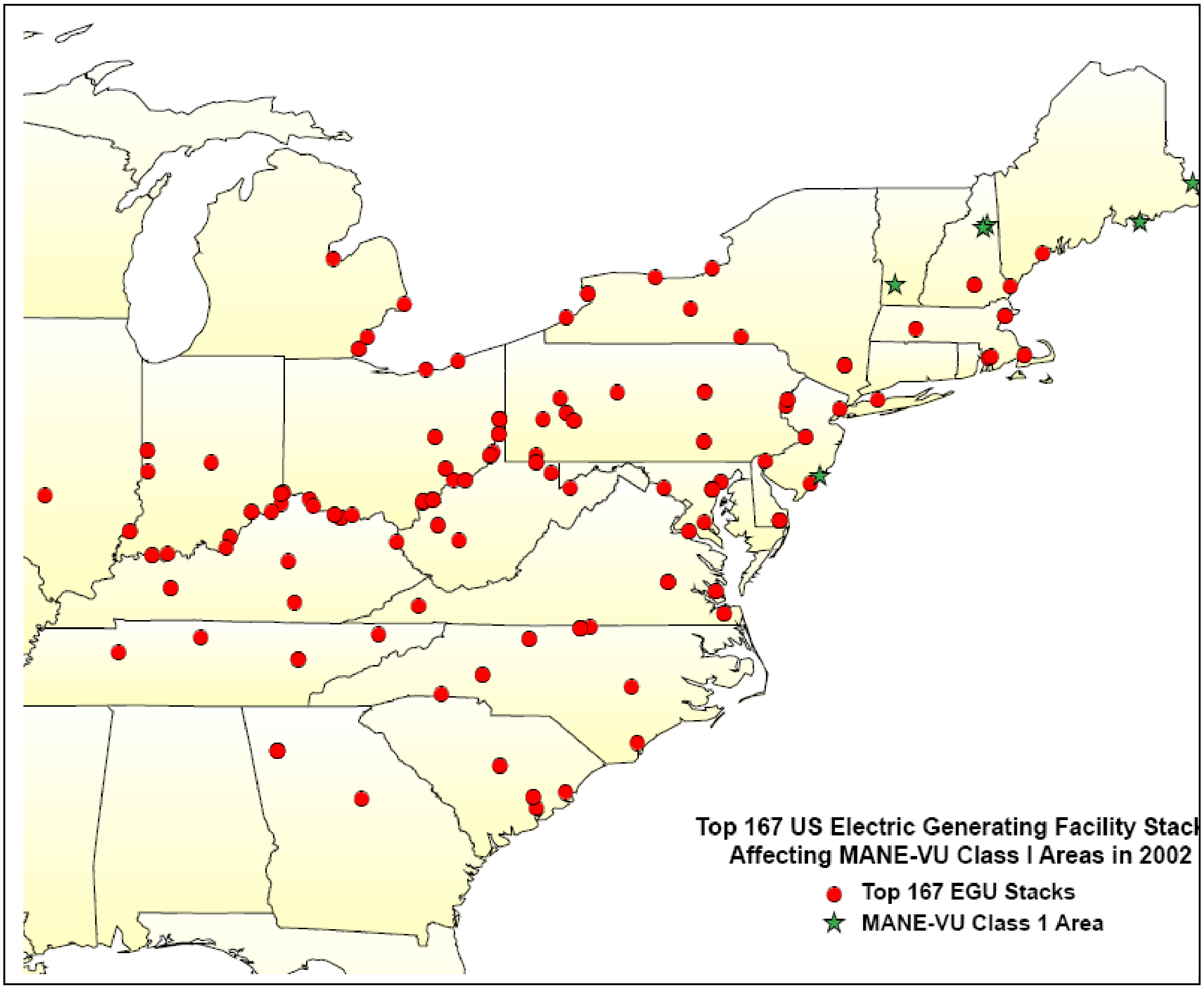
TOP ELECTRIC GENERATING EMISSION POINTS CONTRIBUTING TO VISIBILITY IMPAIRMENT IN MANE-VU IN 2002

For each of three MANE-VU Class I Areas the 100 Electric Generating Unit (EGU) stacks with the most significant impact on visibility impairment were identified by Calpuff modeling conducted by two modeling centers.[1] Many of these stacks have a regional impact and therefore significantly impact more than one Class I Area. When the "Top Impacting" stacks are aggregated into a single group there are 167 individual "Top Impacting" stacks identified. The map on the following page indicates the location of the 167 stacks, and the table following the map provides identifying information, emissions used in the Calpuff modeling, and predicted impacts. The following information may be found in the listed columns of the following table:

1. Row Number (1 through 167)
2. CEMS Unit ID: an arbitrary number identifying the CEMS unit
3. ORIS ID: a standard identification number associated with each unit
4. Acadia MM5: The rank of this source based on its predicted sulfate ion annual impact on Acadia in 2002 using meteorological data from the MM5 model. (A blank in columns 4, 5, 6, 7, 8, or 9 indicates this source was not among the top 100 for this Class I area as predicted by the indicated model.)
5. Acadia VTDEC: The rank of this source in terms of its predicted sulfate ion annual impact on Acadia in 2002 using National Weather Service data.
6. Brig MM5: The rank of this source in terms of its predicted sulfate ion annual impact on Brigantine in 2002 using meteorological data from the MM5 model.
7. Brig VTDEC: The rank of this source in terms of its predicted sulfate ion annual impact on Brigantine in 2002 using National Weather Service data.
8. Lye MM5: The rank of this source in terms of its predicted sulfate ion annual impact on Lye Brook in 2002 using meteorological data from the MM5 model.
9. Lye VTDEC: The rank of this source in terms of its predicted sulfate ion annual impact on Lye Brook in 2002 using National Weather Service data.
10. MM5 2002 SO_2 Tons per Year: Emissions calculated from CEMS data and used by modelers who used the MM5 generated meteorological data
11. VTDEC 2002 SO_2 Tons per Year: Emissions calculated from CEMS data and used by modelers who used the national weather service generated meteorological data
12. Plant Number (1 through 105): The 167 stacks are located at 105 plants.
13. Plant Name—table is in alphabetical order by plant within each state
14. Plant Type: coal fired or oil/gas fired electric generating units
15. State Name—table is in alphabetical order by state
16. State Code

[1] For more information and detailed modeling results, see Appendix D: Source Dispersion Model Methods, in NESCAUM 2006a.

Figure A-1. Top 167 US Electric Generating Facility Stacks Affecting MANE-VU Class I Areas in 2002.



Row number	CEMS Unit	ORIS ID	Acadia MM5	Acadia VTDEC	Brig MM5	Brig VTDEC	Lye MM5	Lye VTDEC	MM5 2002 S02 TPY	VTDEC 2002 SO2 TPY		Plant Name	Plant Type	State Name	State Code
1	D005935	593			90	54			2,138	2,136	1	EDGE MOOR	O/G Steam	Delaware	10
2	D005941	594				95				3,742	2	INDIAN RIVER	Coal Steam	Delaware	10
3	D005942	594				74				3,760	2	INDIAN RIVER	Coal Steam	Delaware	10
4	D005943	594			84	44			4,686	4,682	2	INDIAN RIVER	Coal Steam	Delaware	10
5	D005944	594			69	21			7,390	7,384	2	INDIAN RIVER	Coal Steam	Delaware	10
6	D007031LR	703	79			86		75	38,520	38,486	3	BOWEN	Coal Steam	Georgia	13
7	D007032LR	703	72		89		61	68	37,289	37,256	3	BOWEN	Coal Steam	Georgia	13
8	D007033LR	703	71	99	74	64	63	94	43,067	43,029	3	BOWEN	Coal Steam	Georgia	13
9	D007034LR	703	69	95	86	58	60	89	41,010	40,974	3	BOWEN	Coal Steam	Georgia	13
10	D00709C02	709		84		75	89	71	47,591	47,549	4	HARLLEE BRANCH	Coal Steam	Georgia	13
11	D00861C01	861	28	96		65	46	62	42,355	42,318	5	COFFEEN	Coal Steam	Illinois	17
12	D010011	1001			53				28,876	28,851	6	CAYUGA	Coal Steam	Indiana	18
13	D010012	1001	95		46	68			26,016	25,992	6	CAYUGA	Coal Steam	Indiana	18
14	D00983C01	983					52		19,922		7	CLIFTY CREEK	Coal Steam	Indiana	18
15	D00983C02	983					54		18,131		7	CLIFTY CREEK	Coal Steam	Indiana	18
16	D0099070	990		55	100	70		37	29,801	29,774	8	ELMER W STOUT	O/G Steam	Indiana	18
17	D06113C03	6113	30	48	14	43	22	41	71,182	71,119	9	GIBSON	Coal Steam	Indiana	18
18	D06113C04	6113	44	70	97	83	73	83	27,848	27,823	9	GIBSON	Coal Steam	Indiana	18
19	D01008C01	1008			73		100	47	24,109	24,087	10	R GALLAGHER	Coal Steam	Indiana	18
20	D01008C02	1008			98			55	23,849	23,828	10	R GALLAGHER	Coal Steam	Indiana	18
21	D06166C02	6166	62	44	30	81	33	57	51,708	51,663	11	ROCKPORT	Coal Steam	Indiana	18
22	D00988C03	988						77		15,946	12	TANNERS CREEK	Coal Steam	Indiana	18
23	D00988U4	988	14	29	52	34	7	19	45,062	45,022	12	TANNERS CREEK	Coal Steam	Indiana	18
24	D01010C05	1010	43	32	12	28	31	17	60,747	60,693	13	WABASH RIVER	Coal Steam	Indiana	18
25	D067054	6705	34	60	34		44	73	40,118	40,082	14	WARRICK	Coal Steam	Indiana	18
26	D06705C02	6705	92		75		96		27,895		14	WARRICK	Coal Steam	Indiana	18
27	D01353C02	1353	38	30	15	26	85	29	41,545	41,508	15	BIG SANDY	Coal Steam	Kentucky	21

Row number	CEMS Unit	ORIS ID	Acadia MM5	Acadia VTDEC	Brig MM5	Brig VTDEC	Lye MM5	Lye VTDEC	MM5 2002 S02 TPY	VTDEC 2002 SO2 TPY		Plant Name	Plant Type	State Name	State Code
28	D01384CS1	1384	22				58		21,837	21,817	16	COOPER	Coal Steam	Kentucky	21
29	D01355C03	1355	21		51	99	68	52	38,104	38,070	17	E W BROWN	Coal Steam	Kentucky	21
30	D060182	6018	83				39		12,083		18	EAST BEND	Coal Steam	Kentucky	21
31	D01356C02	1356	93	71		88	50	59	25,646	25,623	19	GHENT	Coal Steam	Kentucky	21
32	D060411	6041	61						18,375		20	H L SPURLOCK	Coal Steam	Kentucky	21
33	D060412	6041	53		91			98	20,491	20,473	20	H L SPURLOCK	Coal Steam	Kentucky	21
34	D013644	1364			81				7,185		21	MILL CREEK	Coal Steam	Kentucky	21
35	D013782	1378					87		20,245		22	PARADISE	Coal Steam	Kentucky	21
36	D013783	1378	76	100	11	84	55	42	46,701	46,660	22	PARADISE	Coal Steam	Kentucky	21
37	D015074	1507	78						1,170		23	WILLIAM F WYMAN	O/G Steam	Maine	23
38	D006021	602	90		38			100	20,014	19,996	24	BRANDON SHORES	Coal Steam	Maryland	24
39	D006022	602	99		29			99	19,280	19,263	24	BRANDON SHORES	Coal Steam	Maryland	24
40	D015521	1552			63				17,782	17,767	25	C P CRANE	Coal Steam	Maryland	24
41	D015522	1552			68				14,274	14,262	25	C P CRANE	Coal Steam	Maryland	24
42	D01571CE2	1571	42	47	1	4	20	28	48,566	48,522	26	CHALK POINT	Coal Steam	Maryland	24
43	D01572C23	1572	73	79	47	45	69	32	32,188	32,159	27	DICKERSON	Coal Steam	Maryland	24
44	D015543	1554			77				10,084	10,075	28	HERBERT A WAGNER	O/G Steam	Maryland	24
45	D015731	1573	67	50	16	12	56	38	36,823	36,790	29	MORGANTOWN	Coal Steam	Maryland	24
46	D015732	1573	59	53	10	13	51	39	30,788	30,761	29	MORGANTOWN	Coal Steam	Maryland	24
47	D016191	1619	37	80					9,252	9,244	30	BRAYTON POINT	Coal Steam	Massachusetts	25
48	D016192	1619	35	66					8,889	8,881	30	BRAYTON POINT	Coal Steam	Massachusetts	25
49	D016193	1619	4	14	65	56	79		19,325	19,308	30	BRAYTON POINT	Coal Steam	Massachusetts	25
50	D015991	1599	5	36			65		13,014	13,002	31	CANAL	O/G Steam	Massachusetts	25
51	D015992	1599	7	27			74		8,980	8,971	31	CANAL	O/G Steam	Massachusetts	25
52	D016061	1606						48		5,249	32	MOUNT TOM	Coal Steam	Massachusetts	25
53	D016261	1626	85						3,430		33	SALEM HARBOR	Coal Steam	Massachusetts	25
54	D016263	1626	91	78					4,971	4,966	33	SALEM HARBOR	Coal Steam	Massachusetts	25

Row number	CEMS Unit	ORIS ID	Acadia MM5	Acadia VTDEC	Brig MM5	Brig VTDEC	Lye MM5	Lye VTDEC	MM5 2002 S02 TPY	VTDEC 2002 SO2 TPY		Plant Name	Plant Type	State Name	State Code
55	D016264	1626	32	25					2,880	2,878	33	SALEM HARBOR	O/G Steam	Massachusetts	25
56	D016138	1613	94						4,376		34	SOMERSET	Coal Steam	Massachusetts	25
57	D01702C09	1702						96		4,565	35	DAN E KARN	Coal Steam	Michigan	26
58	D01733C12	1733	49	24	80	80	45	22	46,081	46,040	36	MONROE	Coal Steam	Michigan	26
59	D01733C34	1733	27	26		76	26	27	39,362	39,327	36	MONROE	Coal Steam	Michigan	26
60	D017437	1743		91						15,805	37	ST CLAIR	Coal Steam	Michigan	26
61	D017459A	1745					76	61	18,341	18,324	38	TRENTON CHANNEL	Coal Steam	Michigan	26
62	D023641	2364	2	57					9,356	9,348	39	MERRIMACK	Coal Steam	New Hampshire	33
63	D023642	2364	1	17	99		28	87	19,453	19,435	39	MERRIMACK	Coal Steam	New Hampshire	33
64	D080021	8002	45	74					5,033	5,028	40	NEWINGTON	O/G Steam	New Hampshire	33
65	D023781	2378		81	2	15			9,747	9,738	41	B L ENGLAND	Coal Steam	New Jersey	34
66	D024032	2403	63	97	25	50	40	44	18,785	18,768	42	HUDSON	O/G Steam	New Jersey	34
67	D024081	2408			95				8,076		43	MERCER	Coal Steam	New Jersey	34
68	D024082	2408			60				5,675		43	MERCER	Coal Steam	New Jersey	34
69	D02549C01	2549		64	41		42	72	25,343	25,320	44	C R HUNTLEY	Coal Steam	New York	36
70	D02549C02	2549					99		12,317		44	C R HUNTLEY	Coal Steam	New York	36
71	D024804	2480					71		7,720		45	DANSKAMMER	O/G Steam	New York	36
72	D02554C03	2554	33	51	62		27	51	30,151	30,125	46	DUNKIRK	Coal Steam	New York	36
73	D02526C03	2526					78		14,929		47	WESTOVER	Coal Steam	New York	36
74	D025276	2527					80		12,650		48	GREENIDGE	Coal Steam	New York	36
75	D025163	2516			96				7,359		49	NORTHPORT	O/G Steam	New York	36
76	D025945	2594		76						1,747	50	OSWEGO	O/G Steam	New York	36
77	D02642CS2	2642					91		14,086		51	ROCHESTER 7	Coal Steam	New York	36
78	D080061	8006						93		3,817	52	ROSETON	O/G Steam	New York	36
79	D080062	8006						88		2,840	52	ROSETON	O/G Steam	New York	36
80	D080421	8042	13	12	18	5	10	34	57,820	57,769	53	BELEWS CREEK	Coal Steam	North Carolina	37
81	D080422	8042	23	15	32	10	15	49	45,296	45,256	53	BELEWS CREEK	Coal Steam	North Carolina	37
82	D027215	2721	98	45	87	39	97	85	19,145	19,128	54	CLIFFSIDE	Coal Steam	North Carolina	37
83	D027133	2713		61						14,460	55	L V SUTTON	Coal Steam	North Carolina	37

Row number	CEMS Unit	ORIS ID	Acadia MM5	Acadia VTDEC	Brig MM5	Brig VTDEC	Lye MM5	Lye VTDEC	MM5 2002 S02 TPY	VTDEC 2002 SO2 TPY		Plant Name	Plant Type	State Name	State Code
84	D027093	2709				97				9,390	56	LEE	Coal Steam	North Carolina	37
85	D027273	2727	100	40		48	75	84	26,329	26,305	57	MARSHALL	Coal Steam	North Carolina	37
86	D027274	2727	89	39	83	51	66	82	27,308	27,284	57	MARSHALL	Coal Steam	North Carolina	37
87	D06250C05	6250	60	59		35	37		27,395	27,371	58	MAYO	Coal Steam	North Carolina	37
88	D027121	2712				59			12,031	12,020	59	ROXBORO	Coal Steam	North Carolina	37
89	D027122	2712	82	41	54	23	94		29,337	29,310	59	ROXBORO	Coal Steam	North Carolina	37
90	D02712C03	2712	56	37	57	24	21	78	30,776	30,749	59	ROXBORO	Coal Steam	North Carolina	37
91	D02712C04	2712	88	72		47	47		22,962	22,941	59	ROXBORO	Coal Steam	North Carolina	37
92	D0283612	2836	55	20	48	89	29	35	41,432	41,395	60	AVON LAKE	Coal Steam	Ohio	39
93	D028281	2828	29	9	31	30	24	8	37,307	37,274	61	CARDINAL	Coal Steam	Ohio	39
94	D028282	2828						56	20,598	20,580	61	CARDINAL	Coal Steam	Ohio	39
95	D028283	2828						80		15,372	61	CARDINAL	Coal Steam	Ohio	39
96	D028404	2840	3	1	6	2	2	3	87,801	87,724	62	CONESVILLE	Coal Steam	Ohio	39
97	D02840C02	2840	84	73			81	63	22,791	22,771	62	CONESVILLE	Coal Steam	Ohio	39
98	D028375	2837		86	56		35	70	35,970	35,938	63	EASTLAKE	Coal Steam	Ohio	39
99	D081021	8102			23	71	59	95	18,207	18,191	64	GEN J M GAVIN	Coal Steam	Ohio	39
100	D081022	8102				78			12,333	12,322	64	GEN J M GAVIN	Coal Steam	Ohio	39
101	D028501	2850	36	67	39	53		45	30,798	30,771	65	J M STUART	Coal Steam	Ohio	39
102	D028502	2850	24	65	40	49	98	46	28,698	28,673	65	J M STUART	Coal Steam	Ohio	39
103	D028503	2850	26		72	62			27,968	27,944	65	J M STUART	Coal Steam	Ohio	39
104	D028504	2850	20	77	45	52	88	54	27,343	27,319	65	J M STUART	Coal Steam	Ohio	39
105	D060312	6031			67	77		90	19,517	19,500	66	KILLEN STATION	Coal Steam	Ohio	39
106	D02876C01	2876	40	7	3	9	30	10	72,593	72,529	67	KYGER CREEK	Coal Steam	Ohio	39
107	D028327	2832	65	28	59	22	48	20	46,991	46,950	68	MIAMI FORT	Coal Steam	Ohio	39
108	D02832C06	2832				60	43	64	23,694	23,673	68	MIAMI FORT	Coal Steam	Ohio	39
109	D028725	2872	74	92	78		90	36	30,079	30,052	69	MUSKINGUM RIVER	Coal Steam	Ohio	39
110	D02872C04	2872	6	19	13	6	19	15	83,134	83,060	69	MUSKINGUM RIVER	Coal Steam	Ohio	39
111	D02864C01	2864	70	56	61	63	49	24	35,193	35,162	70	R E BURGER	Coal Steam	Ohio	39

Row number	CEMS Unit	ORIS ID	Acadia MM5	Acadia VTDEC	Brig MM5	Brig VTDEC	Lye MM5	Lye VTDEC	MM5 2002 S02 TPY	VTDEC 2002 SO2 TPY		Plant Name	Plant Type	State Name	State Code
112	D07253C01	7253		89	58	57		33	30,977	30,949	71	RICHARD GORSUCH		Ohio	39
113	D028665	2866		82				53	19,796	19,779	72	W H SAMMIS	Coal Steam	Ohio	39
114	D028667	2866	57	16	42	41	41	16	33,601	33,572	72	W H SAMMIS	Coal Steam	Ohio	39
115	D02866C01	2866	97	54	93	96	92	30	24,649	24,627	72	W H SAMMIS	Coal Steam	Ohio	39
116	D02866C02	2866		69	92			50	26,022	25,999	72	W H SAMMIS	Coal Steam	Ohio	39
117	D02866M6A	2866		85				58	19,564	19,546	72	W H SAMMIS	Coal Steam	Ohio	39
118	D060191	6019		93		72		60		21,496	73	W H ZIMMER	Coal Steam	Ohio	39
119	D028306	2830	46	38	70	40	12	69	30,466	30,439	74	WALTER C BECKJORD	Coal Steam	Ohio	39
120	D031782	3178	77	63				81	16,484	16,469	75	ARMSTRONG	Coal Steam	Pennsylvania	42
121	D031403	3140	31	34	9	46	18	18	38,801	38,767	76	BRUNNER ISLAND	Coal Steam	Pennsylvania	42
122	D03140C12	3140	52	46	49	69	25	23	29,736	29,709	76	BRUNNER ISLAND	Coal Steam	Pennsylvania	42
123	D082261	8226	25	21	33	42	36	9	40,268	40,232	77	CHESWICK	Coal Steam	Pennsylvania	42
124	D03179C01	3179	16	10	5	8	5	4	79,635	79,565	78	HATFIELD'S FERRY	Coal Steam	Pennsylvania	42
125	D031221	3122	11	6	26	38	17	14	45,754	45,714	79	HOMER CITY	Coal Steam	Pennsylvania	42
126	D031222	3122	9	4	37	92	13	11	55,216	55,167	79	HOMER CITY	Coal Steam	Pennsylvania	42
127	D031361	3136	8	2	4	14	6	1	87,434	87,357	80	KEYSTONE	Coal Steam	Pennsylvania	42
128	D031362	3136	18	3	8	19	8	2	62,847	62,791	80	KEYSTONE	Coal Steam	Pennsylvania	42
129	D03148C12	3148			71		84		17,214		81	MARTINS CREEK	Coal Steam	Pennsylvania	42
130	D031491	3149	19	8	35	7	1	6	60,242	60,188	82	MONTOUR	Coal Steam	Pennsylvania	42
131	D031492	3149	15	5	21	20	3	5	50,276	50,232	82	MONTOUR	Coal Steam	Pennsylvania	42
132	D031131	3113			82				9,674		83	PORTLAND	Coal Steam	Pennsylvania	42
133	D031132	3113			36		93		14,294		83	PORTLAND	Coal Steam	Pennsylvania	42
134	D03131CS1	3131	54	31	79		32	65	22,344	22,324	84	SHAWVILLE	Coal Steam	Pennsylvania	42
135	D033193	3319				10 0				11,045	85	JEFFERIES	O/G Steam	South Carolina	45
136	D033194	3319		90		87				11,838	85	JEFFERIES	O/G Steam	South Carolina	45
137	D03297WT1	3297		68		61				17,671	86	WATEREE	Coal Steam	South Carolina	45
138	D03297WT2	3297		83		73				17,199	86	WATEREE	Coal Steam	South Carolina	45
139	D03298WL1	3298		35	94	37			25,170	25,148	87	WILLIAMS	Coal Steam	South Carolina	45

Row number	CEMS Unit	ORIS ID	Acadia MM5	Acadia VTDEC	Brig MM5	Brig VTDEC	Lye MM5	Lye VTDEC	MM5 2002 S02 TPY	VTDEC 2002 SO2 TPY		Plant Name	Plant Type	State Name	State Code
140	D062491	6249		58		82				17,920	88	WINYAH	Coal Steam	South Carolina	45
141	D03403C34	3403			85				20,314		89	GALLATIN	Coal Steam	Tennessee	47
142	D03405C34	3405	39						19,368		90	JOHN SEVIER	Coal Steam	Tennessee	47
143	D03406C10	3406	10	11	27	33	4	43	104,523	104,431	91	JOHNSONVILLE	Coal Steam	Tennessee	47
144	D03407C15	3407	64	87		66	67	76	37,308	37,274	92	KINGSTON	Coal Steam	Tennessee	47
145	D03407C69	3407	48	98		91	82	91	38,645	38,611	92	KINGSTON	Coal Steam	Tennessee	47
146	D038033	3803				55				9,493	93	CHESAPEAKE	Coal Steam	Virginia	51
147	D038034	3803		94		16				10,806	93	CHESAPEAKE	Coal Steam	Virginia	51
148	D037974	3797				90				9,293	94	CHESTERFIELD	Coal Steam	Virginia	51
149	D037975	3797		88	44	27	86		19,620	19,602	94	CHESTERFIELD	Coal Steam	Virginia	51
150	D037976	3797	66	18	7	3	34	66	40,570	40,534	94	CHESTERFIELD	Coal Steam	Virginia	51
151	D03775C02	3775	47						16,674		95	CLINCH RIVER	Coal Steam	Virginia	51
152	D038093	3809		52	64	29			10,477	10,468	96	YORKTOWN	Coal Steam	Virginia	51
153	D03809CS0	3809	96	43	19	17	62		21,219	21,201	96	YORKTOWN	Coal Steam	Virginia	51
154	D039423	3942						79		10,126	97	ALBRIGHT	Coal Steam	West Virginia	54
155	D039431	3943	51	23	20	32	16	13	42,385	42,348	97	FORT MARTIN	Coal Steam	West Virginia	54
156	D039432	3943	50	22	22	31	14	12	45,850	45,809	97	FORT MARTIN	Coal Steam	West Virginia	54
157	D039353	3935	41	33	28	11	64	26	42,212	42,174	98	JOHN E AMOS	Coal Steam	West Virginia	54
158	D03935C02	3935	17	42	43	1	11	21	63,066	63,010	98	JOHN E AMOS	Coal Steam	West Virginia	54
159	D03947C03	3947	86	62	55		57	25	38,575	38,541	99	KAMMER	Coal Steam	West Virginia	54
160	D03936C02	3936				98			15,480	15,467	100	KANAWHA RIVER	Coal Steam	West Virginia	54
161	D03948C02	3948	58	13	17	36	9	7	55,405	55,356	101	MITCHELL	Coal Steam	West Virginia	54
162	D062641	6264	75	49	50	18	77	40	42,757	42,719	102	MOUNTAINEER	Coal Steam	West Virginia	54
163	D03954CS0	3954	68		24	25	23	67	20,130	20,112	103	MT STORM	Coal Steam	West Virginia	54
164	D0393851	3938				79		97	12,948	12,936	104	PHILIP SPORN	Coal Steam	West Virginia	54
165	D03938C04	3938				94			26,451	26,427	104	PHILIP SPORN	Coal Steam	West Virginia	54
166	D060041	6004			66		83	31	21,581	21,562	105	PLEASANTS	Coal Steam	West Virginia	54
167	D060042	6004			88			92	20,550	20,532	105	PLEASANTS	Coal Steam	West Virginia	54

Appendix 7A

Early $PM_{2.5}$ Transportation Conformity Emission Budgets for the Connecticut Portion of the New York-New Jersey-Long Island-Connecticut $PM_{2.5}$ Nonattainment Area

April 17, 2007

The State of Connecticut
Department of Environmental Protection

State Implementation Plan Revision
Establishment of Interim Progress
for the
Fine Particle National Ambient Air Quality Standard

<u>Technical Support Document</u>
Early $PM_{2.5}$ Transportation Conformity
Emission Budgets
for the Connecticut Portion of the
New York-New Jersey-Long Island-Connecticut
$PM_{2.5}$ Nonattainment Area

April 17, 2007

Table of Contents

i. Definitions and Abbreviations

"CT DEP" – The State of Connecticut Department of Environmental Protection.

"CT DOL" – The State of Connecticut Department of Labor.

"ConnDOT" – The State of Connecticut Department of Transportation.

"EPA" – The United States Environmental Protection Agency.

"FHWA" – The United States Department of Transportation Federal Highway Administration.

"MANE-VU" – Mid-Atlantic/Northeast Visibility Union.

"MARAMA" – Mid-Atlantic Regional Air Management Association.

"NAAQS" – National Ambient Air Quality Standards.

"NEI" – EPA's National Emissions Inventory.

"NO_x" – Oxides of Nitrogen.

"$PM_{2.5}$" – Fine Particulate Matter or particles equal to or less than 2.5 micrometers in diameter.

"SCC" – Standard Classification Code.

"SIP" – State Implementation Plan.

"US DOE, EIA" – The United States Department of Energy, Energy Information Administration.

"VMT" – Vehicle Miles Traveled.

ii. Executive Summary

This technical support document (TSD) provides the basis for establishing early $PM_{2.5}$ transportation conformity budgets for the Connecticut portion of the New York-Northern New Jersey-Long Island, NY-NJ-CT $PM_{2.5}$ Nonattainment Area.

Connecticut's Fairfield and New Haven Counties were judged by the United States Environmental Protection Agency (EPA) as contributing to measured violations of the annual $PM_{2.5}$ National Ambient Air Quality Standards (NAAQS) in New York City, thus were included in the above mentioned Nonattainment Area. However, there were no monitored violations to EPA's 1997 annual $PM_{2.5}$ standards in Fairfield and New Haven counties in 2002, and any reduction in the overall inventory, for the two county area, below 2002 levels should help ensure that this level of air quality is maintained or improved in the future.

EPA established a $PM_{2.5}$ transportation conformity rule (69 FR 40028; July 1, 2004) indicating that states with $PM_{2.5}$ Nonattainment Areas can elect to submit a State Implementation Plan (SIP) revision containing early motor vehicle emission budgets that address the NAAQS in advance of a complete SIP attainment demonstration. Early budget submittals do not need to demonstrate attainment, but must achieve some progress towards attainment, consistent with adopted control measures and projected emissions. Progress is demonstrated if projected emissions in the 2009 attainment year are less than emissions in the 2002 base year.

EPA finalized $PM_{2.5}$ precursor requirements for transportation conformity in a May 6, 2005, final rule (70 FR 24280). The final rule also identified NO_x, VOCs, SO_x, and NH_3 as potential transportation-related $PM_{2.5}$ precursors; however, the only precursor found to be significant at this time for onroad mobile sources is NO_x.

This TSD demonstrates a very large percent reduction for onroad emissions in both direct $PM_{2.5}$ and NO_x (31% and 46%, respectively). Also, this document demonstrates a decrease in overall $PM_{2.5}$ and NO_x emissions by 2009. By 2009 emissions of direct $PM_{2.5}$ will be reduced by 168 tons or 2.5%, and NO_x emissions will be reduced by 16,766 tons or 27% compared to 2002 base year levels.

The annual reductions of 2.5% for direct $PM_{2.5}$ emissions and of 27% for NO_x emissions are demonstrated as the basis for establishing the early budgets. The early budget established for annual direct $PM_{2.5}$ emissions is 360 tons per year and for annual NO_x emissions is 18,279 tons per year.

Summary of Results

Table 1 compares calculated 2002 and 2009 direct $PM_{2.5}$ inventories by source type for the Connecticut portion of the NY-NJ-CT $PM_{2.5}$ Nonattainment Area. Although direct $PM_{2.5}$ emissions from area and point sources are projected to increase by two and eight percent, respectively, emissions from nonroad and onroad sources are projected to decrease by 13 and 31 percent, respectively. Overall this represents a 2.5% reduction in direct $PM_{2.5}$ emissions.

TABLE 1

	DIRECT ANNUAL $PM_{2.5}$ EMISSIONS (tons/year)											
	AREA			NONROAD			POINT			ONROAD		
COUNTY	2002	2009	Dif.	2002	2009	Dif.	2002	2009	Dif.	2002	2009	Dif.
Fairfield	2,349	2,388		526	454		190	202		269	185	
New Haven	2,427	2,476		448	395		202	220		252	175	
Total for CT portion of NY-NJ-CT NAA	4,776	4,864	+88 (+2%)	974	849	-125 (-13%)	392	422	+30 (+8%)	521	**360**	-161 (-31%)
Overall Comparison of Direct PM2.5 Emissions for the CT Portion of the NY/NJ/CT PM2.5 Nonattainment Area 2002: 6,663 tpy 2009: 6,495 tpy Difference: -168 tpy (-2.5%)												

Table 2 compares calculated 2002 and 2009 annual NO_x inventories by source type for the Connecticut portion of the NY-NJ-CT $PM_{2.5}$ Nonattainment Area. Although NO_x emissions from area and point sources are projected to increase by four and seven percent, respectively, emissions from nonroad and onroad sources are projected to decrease by 12 and 46 percent, respectively. Overall this represents a 27% reduction in annual NO_x emissions.

TABLE 2

	ANNUAL NO_x EMISSIONS (tons/year)											
	AREA			NONROAD			POINT			ONROAD		
COUNTY	2002	2009	Dif.	2002	2009	Dif.	2002	2009	Dif.	2002	2009	Dif.
Fairfield	3,134	3,269		7,150	6,104		3,892	4,183		17,411	9,314	
New Haven	2,937	3,061		7,935	7,108		2,305	2,429		16,435	8,965	
Total for CT portion of NY-NJ-CT NAA	6,071	6,330	+259 (+4%)	15,085	13,212	-1,873 (-12%)	6,197	6,612	+415 (+7%)	33,846	**18,279**	-15,567 (-46%)
Overall Comparison of NOx Emissions for the CT Portion of the NY/NJ/CT PM2.5 Nonattainment Area 2002: 61,199 tpy 2009: 44,433 tpy Difference: -16,766 tpy (-27%)												

The early direct $PM_{2.5}$ and annual NO_x motor vehicle emissions budgets being established are the on-road portion of the 2009 projections illustrated in Table 3; that is, 360 tons per year for direct $PM_{2.5}$ and 18,279 tons per year for NO_x. The State of Connecticut Department of Transportation (ConnDOT), and Metropolitan Planning Organizations within the Connecticut portion of the NY-NJ-CT $PM_{2.5}$ Nonattainment Area, shall use these budgets for future transportation conformity determinations once EPA finds them adequate or approves them for transportation conformity purposes.

TABLE 3

2009 Transportation Conformity Emission Budgets		
CT portion of the NY-NJ-Long Island-CT $PM_{2.5}$ Nonattainment Area	Annual Direct $PM_{2.5}$ Emissions (tons per year)	Annual NO_x Emissions (tons per year)
	360	**18,279**

Documentation of methodologies and a more complete summary of projections and calculations are provided in this TSD.

It should be noted that if the fraction of road dust and residential wood-burning emission estimates were decreased, to be consistent with observed monitoring data and wood-burning control analyses, the net result in overall direct $PM_{2.5}$ emission reductions between 2002 and 2009 would be much greater than the 2.5% demonstrated in this TSD.

I. BACKGROUND

Fine particulate matter is a mixture of microscopic solids and liquid droplets suspended in air, where the size of the particles is equal to or less than 2.5 micrometers, which is about one-thirtieth the diameter of a human hair. Fine particles can be emitted directly, such as smoke from a fire or as a component of motor vehicle exhaust, or be formed indirectly in the air from power plant, industrial and mobile source emissions of gases such as sulfur dioxide (SO_2) and NO_x.

The health effects associated with exposure to fine particles are serious. Scientific studies have shown significant associations between elevated fine particle levels and premature death. Effects associated with $PM_{2.5}$ exposure include aggravation of respiratory and cardiovascular disease, lung disease, decreased lung function, asthma episodes, and certain cardiovascular problems such as heart attacks and cardiac arrhythmia. While fine particles are unhealthy for anyone to breathe, people with heart or lung disease, asthmatics, older adults, and children are especially at risk.

In 1997, EPA promulgated National Ambient Air Quality Standards (NAAQS) for $PM_{2.5}$. After prolonged litigation and deployment of a monitoring network, EPA finalized air quality designations for $PM_{2.5}$ in April 2005. Those areas not meeting the $PM_{2.5}$ NAAQS were designated as $PM_{2.5}$ Nonattainment Areas. Connecticut's Fairfield and New Haven Counties, judged by EPA as contributing to measured violations of the 1997 annual $PM_{2.5}$ NAAQS in New York City, were included in a Nonattainment Area that also includes the northern New Jersey and New York counties of the New York City metropolitan area, known as the NY-NJ-CT $PM_{2.5}$ Nonattainment Area. See Figure 1 for a map of this area.

The Clean Air Act Amendments of 1990 require states to submit State Implementation Plans (SIPs) to EPA within three years after designations to demonstrate how they will improve air quality and attain the standard. Nonattainment Areas are also subject to a federal rule known as "transportation conformity," which requires local and state transportation and air quality officials to coordinate planning efforts to ensure that transportation projects, such as road construction, do not hinder an area's ability to reach its clean air goals. Transportation conformity requirements become effective one year after an area is designated as nonattainment.

During the period after conformity requirements have been triggered, but final transportation conformity budgets have not yet been established as part of the attainment SIP process, interim emission tests must be passed to show conformity. Alternative interim tests include:

1) Demonstrating that planned build scenarios for key years of transportation plans do not result in increased emissions when compared to the corresponding no-build scenario for each year;
2) Comparing area wide on-road emission estimates for key years in transportation plans to the 2002 base year emission levels to ensure transportation plans do not increase emissions; or

3) Establishing state and/or local "early" conformity budgets at a level consistent with progress toward attainment and demonstrating that transportation plans do not exceed those budgets.

In April 2006, affected transportation and air quality agencies in the NY-NJ-CT $PM_{2.5}$ Nonattainment Area met the initial one year deadline for demonstrating conformity through a complex multi-state interagency consultation process that showed future year transportation-related emissions throughout the multi-state Nonattainment Area would not exceed base year emission levels from 2002 using the second optional test above. The State of New Jersey subsequently proposed local early conformity budgets that were approved by EPA on July 10, 2006 for use in that state's future conformity determinations until final budgets are in place through the $PM_{2.5}$ attainment SIP process. With early budgets now in place for its portion of the Nonattainment Area, New Jersey is no longer obligated to take part in the multi-state consultation process.

As described in this TSD, the Connecticut Department of Environmental Protection (CT DEP) has also decided to pursue adoption of early $PM_{2.5}$ conformity budgets for the Connecticut portion of the NY-NJ-CT $PM_{2.5}$ Nonattainment Area, also referred to as the CT portion of the NY-NJ-CT NAA. The early budgets will not only simplify the administrative process for demonstrating conformity, but also will ensure interim progress will be made toward achieving the 1997 annual $PM_{2.5}$ NAAQS by limiting transportation plans to emission levels more restrictive than allowed by the current 2002 baseline year interim emissions test.

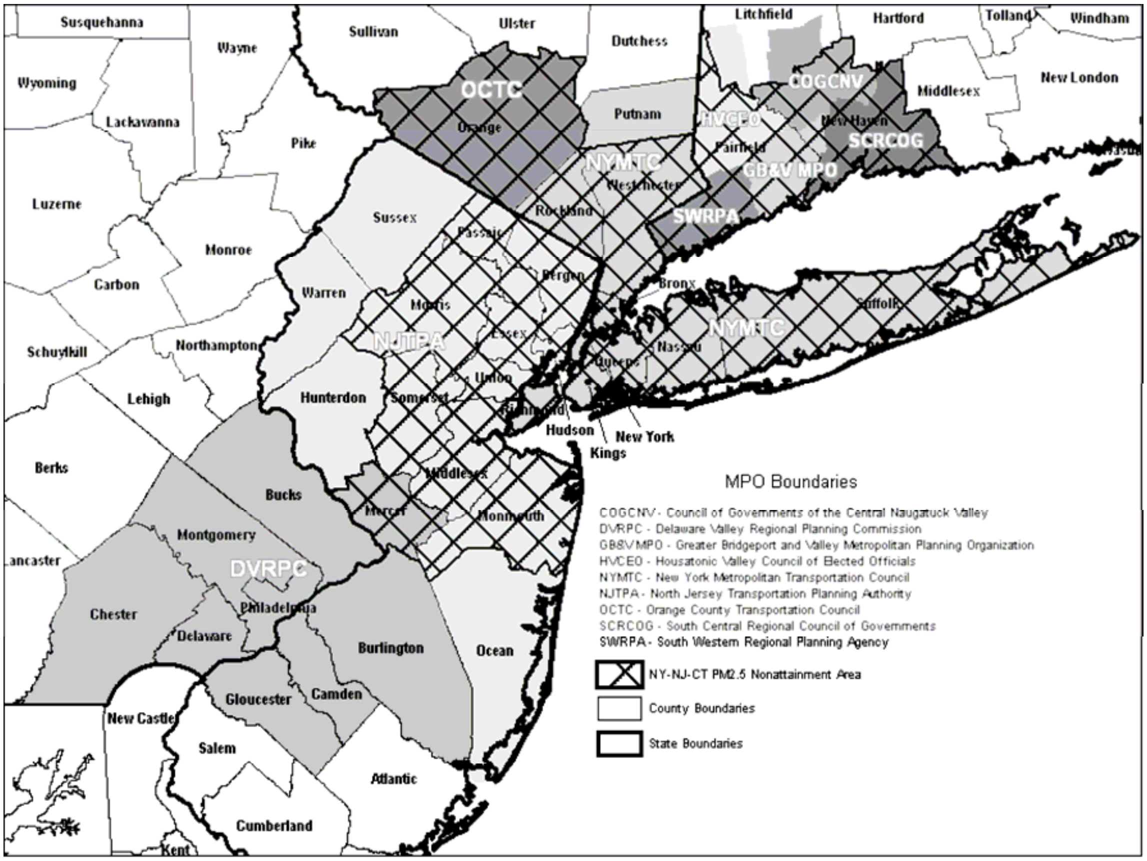


Figure 1: The New York-New Jersey-Connecticut $PM_{2.5}$ Nonattainment Area (in cross-hatch)

II. METHODOLOGY

EPA's $PM_{2.5}$ transportation conformity rule (69 FR 40028; July 1, 2004) indicates that states with $PM_{2.5}$ Nonattainment Areas can elect to submit a SIP revision containing early motor vehicle emission budgets that address the new NAAQS in advance of a complete SIP attainment demonstration. Early budget submittals do not need to demonstrate attainment, but must achieve some progress towards attainment, consistent with adopted control measures and projected emissions. Specifically, if total projected emissions from all source categories in the required attainment year of 2009 are shown to be less than in the baseline year of 2002, then the on-road portion of the projected attainment year inventory can be used as the early transportation conformity budget.

In addition to direct $PM_{2.5}$ emissions, EPA's May 6, 2005 conformity rule amendment (70 FR 24282) requires that NOx emissions be considered for $PM_{2.5}$ conformity, unless the state air agency and EPA administrator make a finding that NO_x is not a significant $PM_{2.5}$ contributor. Conversely, VOC, SO_x and ammonia are only to be considered for $PM_{2.5}$ conformity analyses if the state air agency or EPA administrator finds that on-road emissions of these precursors significantly contribute to $PM_{2.5}$ levels. Neither CT DEP nor EPA have made such findings at this point; therefore, NO_x is the only $PM_{2.5}$ precursor considered in the development of early budgets.

This section documents the development of $PM_{2.5}$ and NO_x emission estimates for the Connecticut portion of the NY-NJ-CT $PM_{2.5}$ Nonattainment Area. Annual $PM_{2.5}$ and NO_x point and area source emission estimates for 2002 were obtained from the 2002 Mid-Atlantic/Northeast Visibility Union (MANE-VU) Emissions Inventory (version 3). Projected point and area source emissions for 2009 were developed by applying growth factors to the 2002 emission estimates. For non-road and on-road sources, 2002 and 2009 emission estimates were developed using EPA's NONROAD2005 and MOBILE6.2 models, respectively. Details on how 2009 emission projections were developed are provided below. Growth factors and local modeling inputs used in the EPA models are attached as Attachment A and Attachment B, respectively.

<u>Area and Point Sources</u>

Forecasted employment data from the Connecticut Department of Labor (CT DOL) were used to develop growth projections for the period from 2002 to 2009 for all area and point source categories, except as noted below.

- United States Census Bureau statewide population[1] projections for 2009 were used to determine growth for area source residential categories, as well as for paved and unpaved road dust emissions.
- Growth factors for all fuel combustion area and point source categories were derived from the United States Department of Energy (US DOE), Energy Information Administration's (EIA's) Annual Energy Outlook 2005 report[2]. The

[1] http://www.census.gov/popest/datasets.html

[2] US DOE, EIA. Annual Energy Outlook 2005, February 2005.

growth factors were determined using 2009 projected energy consumption data for the New England region, as compared to data for the 2002 base year.

- Growth factors for structural fires and forest wildfires were computed using information from the National Fire Safety Association's "Fire Loss in the United States During 2002" and "Fire Loss in the United States During 2004" reports[3]. The number of fires in the northeast region per thousand population are fairly close to the national numbers. However, it was recognized that wildfire activity in the western/southwestern part of the country may increase the growth factor derived from projected values. Using growth factors derived from national data extrapolated for 2009 is not a solid indicator of fire activity in Connecticut. However, fire activity growth factors were derived from the referenced National Fire Safety Association's reports because these growth factors have very little effect on overall emissions inventory totals.

Using a conservative approach, for the purpose of this analysis, CT DEP assumed that no additional emission controls would be applied to area and point sources in the period between 2002 and 2009. This approach is conservative because it does not include $PM_{2.5}$ or $PM_{2.5}$ precursor reductions expected between 2002 and 2009 from recent state regulations which limit SO_2 (i.e., RCSA Section 22a-174-19a) and NO_x (i.e., RCSA Section 22a-174-22) or federal requirements (i.e., CAIR ozone season NO_x program).

<u>Non-Road Sources</u>

Non-road emissions in 2002 and 2009 were developed, for all categories except aircraft, locomotive and commercial marine vessels, using the default growth and control assumptions built into EPA's NONROAD2005 model, with appropriate local inputs for temperatures and fuel composition. The 2002 MANE-VU Emissions Inventory was used as the basis for aircraft, locomotive and commercial marine vessels. Growth factors for aircraft activity were calculated from aircraft operational count data at Bradley International Airport[4]. Airport activity was extrapolated for 2009, assuming the same growth witnessed in airport activity of years prior to the events of September 11, 2001. Growth factors for marine activity were obtained from CT DOL employment data for water transportation. Growth factors for locomotive activity were obtained from locomotive fuel sales data from EIA[5].

<u>On-Road Sources</u>

On-road motor vehicle emission estimates, for 2002 and 2009, were compiled by applying MOBILE6.2 modeled emission factors to the State of Connecticut Department of Transportation's (ConnDOT's) Travel Demand Model for those years. This approach, including data and assumptions, is similar to that employed in ConnDOT's most recent transportation conformity analysis[6]. The interagency consultation process was used to

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[3] National Fire Protection Association. *Fire Loss in the United States During 2002,* September 2003. *Fire Loss in the United States During 2004,* September 2005.
[4] http://www.bradleyairport.com/news/news.php.
[5] http://www.eia.doe.gov/oil_gas/petroleum/data_publications/fuel_oil_and_kerosene_sales/foks.html.
[6] Connecticut Department of Transportation. PM2.5 Air Quality Conformity Determination of the 2004 Regional Transportation Plans and the FY 2007-2011 Transportation Improvement Programs for the Connecticut portion of the NY-NJ-CT $PM_{2.5}$ Nonattainment Area, June 2006.

develop the proper procedures and methodologies for estimating annual $PM_{2.5}$ and NO_x emissions. CT DEP provided some of the MOBILE6.2 model inputs, such as the motor vehicle inspection and maintenance program input file and vehicle age distributions, while ConnDOT used up-to-date vehicle miles traveled (VMT) data to produce the appropriate VMT distribution files. MOBILE6.2 output emission factors and VMT data were used in the post-processing efforts to develop emission projections.

Similar to transportation budgets established previously for ozone precursors, a modeling uncertainty factor was added to the on-road emission projections and included in the resulting budgets for 2009 to avoid unnecessary complications in future conformity determinations due to minor changes to EPA or the United States Department of Transportation Federal Highway Administration (FHWA) modeling procedures. The modeling uncertainty factor used was 2%, which is a reduction from the previously used uncertainty factor of 3%. The 3% value has historically been used by Connecticut for planning purposes.

III. EMISSION ESTIMATES AND 2009 CONFORMITY BUDGETS

Table 1 compares 2002 $PM_{2.5}$ emission estimates to 2009 $PM_{2.5}$ emission projections. Annual direct $PM_{2.5}$ emissions from area and point sources are projected to increase by 2% and 8% percent, respectively. However, emissions from nonroad and onroad sources are projected to decrease by 13% and 31%, respectively. Overall this represents a 2.5%, or 168 tons per year, reduction in direct $PM_{2.5}$ emissions between 2002 and 2009.

CT DEP considers that the estimated direct $PM_{2.5}$ emission reduction of 2.5% is understated due to likely overestimations of $PM_{2.5}$ emissions resulting from two area source categories, namely re-entrained road dust and residential wood-burning activities. This determination for re-entrained road dust is based on examination of local speciated $PM_{2.5}$ monitoring data, as documented in Attachment C. Attachment C also contains material indicative of overestimations in residential wood-burning activity.

If the fraction of road dust and residential wood-burning emission estimates were decreased, to be consistent with observed monitoring data and wood-burning control analyses, the nonroad and onroad sectors would become a larger proportion of total $PM_{2.5}$ emissions. Therefore, the net result in overall direct $PM_{2.5}$ emission reductions between 2002 and 2009 would be much greater than the 2.5% reflected in this TSD.

TABLE 1

COUNTY	DIRECT ANNUAL $PM_{2.5}$ EMISSIONS (tons/year)											
	AREA			NONROAD			POINT			ONROAD		
	2002	**2009**	**Dif.**	**2002**	**2009**	**Dif.**	**2002**	**2009**	**Dif.**	**2002**	**2009**	**Dif.**
Fairfield	2,349	2,388		526	454		190	202		269	185	
New Haven	2,427	2,476		448	395		202	220		252	175	
Total for CT portion of NY-NJ-CT NAA	4,776	4,864	+88 (+2%)	974	849	-125 (-13%)	392	422	+30 (+8%)	521	**360**	-161 (-31%)

Overall Comparison of Direct PM2.5 Emissions for the CT Portion of the NY/NJ/CT PM2.5 Nonattainment Area
2002: 6,663 tpy 2009: 6,495 tpy Difference: -168 tpy (-2.5%)

Table 2 compares 2002 NO_x emission estimates to 2009 NO_x emission projections. Annual NO_x emissions from area and point sources are projected to increase by 4% and 7% percent, respectively. However, emissions from nonroad and onroad sources are projected to decrease by 12% and 46%, respectively. Overall this represents a 27%, or 16,766 tons per year, reduction in NO_x emissions between 2002 and 2009.

TABLE 2

COUNTY	ANNUAL NO_x EMISSIONS (tons/year)											
	AREA			NONROAD			POINT			ONROAD		
	2002	**2009**	**Dif.**	**2002**	**2009**	**Dif.**	**2002**	**2009**	**Dif.**	**2002**	**2009**	**Dif.**
Fairfield	3,134	3,269		7,150	6,104		3,892	4,183		17,411	9,314	
New Haven	2,937	3,061		7,935	7,108		2,305	2,429		16,435	8,965	
Total for CT portion of NY-NJ-CT NAA	6,071	6,330	+259 (+4%)	15,085	13,212	-1,873 (-12%)	6,197	6,612	+415 (+7%)	33,846	**18,279**	-15,567 (-46%)

Overall Comparison of NOx Emissions for the CT Portion of the NY/NJ/CT PM2.5 Nonattainment Area
2002: 61,199 tpy 2009: 44,433 tpy Difference: -16,766 tpy (-27%)

The overall projected reductions in annual direct $PM_{2.5}$ and NO_x emissions demonstrate that adopted control programs will ensure progress between 2002 and 2009 toward attaining the $PM_{2.5}$ NAAQS, thus meeting EPA's criteria for establishing early $PM_{2.5}$ and NO_x transportation conformity budgets. The 2009 annual budgets for Connecticut's portion of the NY-NJ-CT $PM_{2.5}$ Nonattainment Area, as summarized in Table 3, are 360 tons per year of direct $PM_{2.5}$ and 18,279 tons per year of NO_x. These values represent the onroad portion of the 2009 emissions projections. ConnDOT and affected Metropolitan Planning Organizations must use these transportation conformity budgets for future transportation conformity determinations once EPA finds them adequate or approves them for transportation conformity purposes.

TABLE 3

2009 Transportation Conformity Emission Budgets		
CT portion of the NY-NJ-Long Island-CT $PM_{2.5}$ Nonattainment Area	Direct $PM_{2.5}$ Emissions (tons per year)	Annual NO_x Emissions (tons per year)
	360	**18,279**

ATTACHMENT A:

Growth Factor Selection Table

ATTACHMENT A

SECTOR	SOURCE CATEGORY	GROWTH FACTOR	GROWTH FACTOR SOURCE
AREA	Stationary Source Fuel Combustion: Residential	1.0305	Population Growth
	Mobile Sources: Paved and Unpaved Roads	1.0305	Population Growth
	Stationary Source Fuel Combustion: Industrial-Distillate	1.0588	Fuel Data: Industrial-Distillate
	Stationary Source Fuel Combustion: Industrial-Natural Gas	1	Fuel Data: Industrial-Natural Gas
	Stationary Source Fuel Combustion: Industrial-LPG	1	Fuel Data: Industrial-LPG
	Stationary Source Fuel Combustion: Commercial-Distillate	1.0921	Fuel Data: Commercial-Distillate
	Industrial Process: Food	0.9355	Employment Data: Food Manufacturing
	Industrial Process: Construction-Residential	1.0618	Employment Data: Construction of Buildings
	Industrial Process: Construction-Industrial/Commercial/Road	0.9705	Employment Data: Heavy Construction
	Industrial Process: Mining and Quarrying	0.94	Employment Data: Mining
	Waste Disposal: Open Burning	1.0179	CT Open Burning Data ('03 to '04 change)
	Miscellaneous Area Sources: Forest Fires	0.964	Fire Data ('01 to '02 change)
	Miscellaneous Area Sources: Structural Fires	1.091	Fire Data ('03 to '04 change from '02 to '09)
	Miscellaneous Area Sources: Agriculture-Crops	1.0019	Employment Data: Crop Production
POINT	External Combustion Boilers: Electric Generation-Coal	1.1282	Fuel Data: Electric Power-Steam Coal
	External Combustion Boilers: Electric Generation-Residual	1.0198	Fuel Data: Electric Power-Residual
	External Combustion Boilers: Electric Generation-Distillate	0.8571	Fuel Data: Electric Power-Distillate
	External Combustion Boilers: Electric Generation-Natural Gas	1.1063	Fuel Data: Electric Power-Natural Gas
	External Combustion Boilers: Industrial-Residual	1.3654	Fuel Data: Industrial-Residual
	External Combustion Boilers: Industrial-Distillate	1.0588	Fuel Data: Industrial-Distillate
	External Combustion Boilers: Industrial-Natural Gas	1	Fuel Data: Industrial-Natural Gas
	External Combustion Boilers: Industrial-Liquid Waste	1.1511	Fuel Data: Industrial-Renewable
	External Combustion Boilers: Industrial-Space Heaters-LPG	1	Fuel Data: Industrial-LPG
	External Combustion Boilers: Industrial-Space Heaters-Natural Gas	1	Fuel Data: Industrial-Natural Gas
	External Combustion Boilers: Commercial-Residual	1.0921	Fuel Data: Commercial-Distillate
	External Combustion Boilers: Commercial-Distillate	1.125	Fuel Data: Commercial-Residual
	External Combustion Boilers: Commercial-Natural Gas	1.0657	Fuel Data: Commercial-Natural Gas
	External Combustion Boilers: Commercial-LPG	1	Fuel Data: Commercial-LPG
	Internal Combustion Engines: Electric Generation-Distillate	0.8571	Fuel Data: Electric Power-Distillate
	Internal Combustion Engines: Electric Generation-Natural Gas	1.1063	Fuel Data: Electric Power-Natural Gas
	Internal Combustion Engines: Electric Generation-Kerosene	1.1618	Fuel Data: Delivered Energy-Jet Fuel
	Internal Combustion Engines: Industrial-Distillate	1.0588	Fuel Data: Industrial-Distillate

	Internal Combustion Engines: Commercial-Distillate	1.0921	Fuel Data: Commercial-Distillate
	Internal Combustion Engines: Commercial-Natural Gas	1.0657	Fuel Data: Commercial-Natural Gas
	Internal Combustion Engines: Commercial-LPG	1	Fuel Data: Commercial-LPG
	Internal Combustion Engines: Engine Testing-Gasoline	1	Fuel Data: Commercial-Motor Gasoline
	Industrial Process: Chemical Manufacturing	1.1024	Employment Data: Chemical Manufacturing
	Industrial Process: Chemical Manufacturing-Plastics Production	0.9591	Employment Data: Plastics and Rubber
	Industrial Process: Food and Agriculture-Bakeries	0.9355	Employment Data: Food Manufacturing
	Industrial Process: Food and Agriculture-Tobacco Processing	1.1556	Employment Data: Beverage and Tobacco
	Industrial Process: Primary Metal Production	0.8713	Employment Data: Primary Metal Manufac.
	Industrial Process: Secondary Metal Production	0.915	Employment Data: Fabricated Metal Product
	Industrial Process: Mineral Products	0.8982	Employment Data: Nonmetallic mineral
	Industrial Process: Petroleum Industry	0.9591	Employment Data: Plastics and Rubber
	Industrial Process: Plastics and Rubber	1.0204	Fuel Data: Industrial-Other Petroleum
	Industrial Process: Textile Products	0.9254	Textile Product Mills
	Industrial Process: Fabricated Metal Products	0.915	Employment Data: Fabricated Metal Product
	Industrial Process: Health Care-Hospitals	1.0709	Employment Data: Health and Personal Care
	Industrial Process: In-process Fuel Use-Natural Gas	1	Fuel Data: Industrial-Natural Gas
	Industrial Process: In-process Fuel Use-Distillate	1.0588	Fuel Data: Industrial-Distillate
	Industrial Process: In-process Fuel Use-LPG	1	Fuel Data: Industrial-LPG
	Industrial Process: Miscellaneous Manufacturing	0.9841	Employment Data: Miscellaneous Manufac.
	Petroleum and Solvent Evaporation: Organic Solvent Evaporation	1.1024	Employment Data: Chemical Manufacturing
	Petroleum and Solvent Evaporation: Surface Coating Operations	1.1024	Employment Data: Chemical Manufacturing
	Petroleum and Solvent Evaporation: Surface Coating Operations-Printing	0.8386	Employment Data: Printing and Related
	Petroleum and Solvent Evaporation: Surface Coating Operations-Metal	1.0435	Employment Data: Furniture and Related
	Petroleum and Solvent Evaporation: Surface Coating Operations-Wood	1.0679	Employment Data: Wood Product Manufac.
	Petroleum and Solvent Evaporation: Surface Coating Operations-Aircraft	0.9929	Employment Data: Air Transportation
	Petroleum and Solvent Evaporation: Petroleum Storage	1.0921	Employment Data: Warehousing/Storage
	Petroleum and Solvent Evaporation: Printing/Publishing	1.0503	Employment Data: Publishing Industries
	Petroleum and Solvent Evaporation: Petroleum Product Transportation	1.1252	Fuel Data: Delivered Energy-Petroleum
NON-ROAD	Mobile Sources: Aircraft	1.2923	Aircraft Operation
	Mobile Sources: Marine Vessels	1.1021	Employment Data: Water Transportation
	Mobile Sources: Railroad Equipment	0.529	EIA Locomotive Fuel Data

ATTACHMENT B:

Modeling Inputs Table

ATTACHMENT B

SECTOR	ON-ROAD	NON-ROAD
<u>*MODEL*</u>	*MOBILE6.2*	*NONROAD2005*
INPUTS	Temperature Data	Temperature Data
	Diesel Sulfur	Diesel Sulfur
	Registration Distribution	
	Inspection & Maintenance Program	
	VMT Data	

MOBILE6.2 Temperature Data:

Two Season	Max Temp (F)	Min Temp (F)
Summer (Apr-Sep)	74.9	51.9
Winter (Oct-Mar)	45.4	26.2

NONROAD2005 Temperature Data:

Four Season	Max Temp (F)	Min Temp (F)	Average Min Temp + 2/3(Max-Min)
Summer (Jun-Aug)	81.6	58.7	74
Fall (Sep-Nov)	61.2	40.3	54.2
Winter (Dec-Feb)	37.5	19.5	31.5
Spring (Mar-May)	60.3	37.5	52.7

MOBILE6.2 Diesel Sulfur:

	2002	2009
Summer Diesel Sulfur	367 ppm	43 ppm
Winter Diesel Sulfur	340 ppm	43 ppm

NONROAD2005 Diesel Sulfur:

	2002*	2009
Diesel Sulfur %	0.2284	0.0351
Marine Diesel Sulfur %	0.2637	0.0435

*Model Default Value

MOBILE6.2 VMT Data:

	2002	2009
Total Summer VMT	7,886,520,325	8,447,294,463
Total Winter VMT	7,098,094,593	7,601,533,618

MOBILE6.2 Inspection & Maintenance Program (2002):

```
> 2002 CT I/M PROGRAMS    Revised 12/13/04
> File has been updated w/2002 stringency/compliance/waiver rates.
> 12/13/04 draft of I/M File.  Current Name CTIM02.d

> Annual I/M test for the pre-81 CARS
> Idle test started 1983 was upgraded to an ASM 2525 test in 1998.
I/M PROGRAM         : 1 1998 2050 1 T/O ASM 2525 PHASE-IN
I/M MODEL YEARS     : 1 1978 1980
I/M VEHICLES        : 1 22222 11111111 1
I/M EXEMPTION AGE   : 1 25
I/M STRINGENCY      : 1 22.0
I/M COMPLIANCE      : 1 94.9
I/M WAIVER RATES    : 1 5.55 3.83

> Biennial I/M for the post-80 CARS
> Idle test started 1983 was upgraded to an ASM 2525 test in 1998.
I/M PROGRAM         : 2 1998 2050 2 T/O ASM 2525 PHASE-IN
I/M MODEL YEARS     : 2 1981 2050
I/M VEHICLES        : 2 22222 11111111 1
I/M EXEMPTION AGE   : 2 25
I/M STRINGENCY      : 2 22.0
I/M COMPLIANCE      : 2 94.9
I/M WAIVER RATES    : 2 5.55 3.83

> Annual Evap test for the pre-81 cars
I/M PROGRAM         : 3 1983 2050 1 T/O GC
I/M MODEL YEARS     : 3 1978 1980
I/M VEHICLES        : 3 22222 21111111 1
I/M EXEMPTION AGE   : 3 25
I/M COMPLIANCE      : 3 94.9
I/M WAIVER RATES    : 3 0.00 0.00

> Biennial Evap test for the post-81 cars
I/M PROGRAM         : 4 1983 2050 2 T/O GC
I/M MODEL YEARS     : 4 1981 2050
I/M VEHICLES        : 4 22222 21111111 1
I/M EXEMPTION AGE   : 4 25
I/M COMPLIANCE      : 4 94.9
I/M WAIVER RATES    : 4 0.00 0.00

> Annual I/M test for the pre-81 Trucks (GVWR 8,501-10,000lb)
I/M PROGRAM         : 5 1983 2050 1 T/O IDLE
I/M MODEL YEARS     : 5 1978 1980
I/M VEHICLES        : 5 11111 21111111 1
I/M EXEMPTION AGE   : 5 25
```

```
I/M STRINGENCY     : 5 22.0
I/M COMPLIANCE     : 5 94.9
I/M WAIVER RATES   : 5 5.55 3.83

> Biennial I/M test for the post-80 Trucks (GVWR 8,501-10,000lb)
I/M PROGRAM        : 6 1983 2050 2 T/O IDLE
I/M MODEL YEARS    : 6 1981 2050
I/M VEHICLES       : 6 11111 21111111 1
I/M EXEMPTION AGE  : 6 25
I/M STRINGENCY     : 6 22.0
I/M COMPLIANCE     : 6 94.9
I/M WAIVER RATES   : 6 5.55 3.83
```

MOBILE6.2 Inspection & Maintenance Program (2009):

```
>CT I/M PROGRAMS for all years 2005 and later (modified Jun 05
PMB/AG to reflect DMV info that 8,501-10,000 lb get TSI & GC (no
OBD)
>Biennial OBDII I/M "tailpipe" test for post-MY1995 gasoline
vehicles up to 8,500 lbs GVWR. Program start year reflects OBD test
that replaced the ASM test (in operation since 1998) which in turn
replaced the Idle test (in operation since 1983) per agreement with
EPA.
I/M PROGRAM        : 1 1983 2050 2 TRC OBD I/M
I/M MODEL YEARS    : 1 1996 2050
I/M GRACE PERIOD   : 1 4
I/M EXEMPTION AGE  : 1 25
I/M VEHICLES       : 1 22222 11111111 1
I/M STRINGENCY     : 1 22.0
I/M COMPLIANCE     : 1 96.0
I/M WAIVER RATES   : 1 1.0 1.0

>Biennial OBDII evaporative "test" for post-MY1995 gasoline
vehicles up to 8,500 lbs GVWR
I/M PROGRAM        : 2 1983 2050 2 TRC EVAP OBD
I/M MODEL YEARS    : 2 1996 2050
I/M GRACE PERIOD   : 2 4
I/M EXEMPTION AGE  : 2 25
I/M VEHICLES       : 2 22222 11111111 1
I/M COMPLIANCE     : 2 96.0
I/M WAIVER RATES   : 2 1.0 1.0

>Biennial 2500/IDLE I/M tailpipe test for all HDGT 8,501 - 10,000
lbs GVWR (per above comment)
I/M PROGRAM        : 3 1983 2050 2 TRC 2500/IDLE
I/M MODEL YEARS    : 3 1981 2050
I/M GRACE PERIOD   : 3 4
```

```
I/M EXEMPTION AGE  : 3 25
I/M VEHICLES       : 3 11111 21111111 1
I/M STRINGENCY     : 3 22.0
I/M COMPLIANCE     : 3 96.0
I/M WAIVER RATES   : 3 1.0 1.0

>Biennial GC evaporative "test" for all HDGT 8,501 - 10,000 lbs
(per above comment)
I/M PROGRAM        : 4 1983 2050 2 TRC GC
I/M MODEL YEARS    : 4 1981 2050
I/M GRACE PERIOD   : 4 4
I/M EXEMPTION AGE  : 4 25
I/M VEHICLES       : 4 11111 21111111 1
I/M COMPLIANCE     : 4 96.0
I/M WAIVER RATES   : 4 1.0 1.0

>Biennial ASM I/M tailpipe test for pre-96 gasoline vehicles up to
8,500 lbs GVWR
I/M PROGRAM        : 5 1983 2050 2 TRC ASM 2525 FINAL
I/M MODEL YEARS    : 5 1981 1995
I/M GRACE PERIOD   : 5 4
I/M EXEMPTION AGE  : 5 25
I/M VEHICLES       : 5 22222 11111111 1
I/M STRINGENCY     : 5 22.0
I/M COMPLIANCE     : 5 96.0
I/M WAIVER RATES   : 5 1.0 1.0

>Biennial Gas Cap evaporative test for pre-96 gasoline vehicles up
to 8,500 lbs GVWR
I/M PROGRAM        : 6 1983 2050 2 TRC GC
I/M MODEL YEARS    : 6 1981 1995
I/M GRACE PERIOD   : 6 4
I/M EXEMPTION AGE  : 6 25
I/M VEHICLES       : 6 22222 11111111 1
I/M COMPLIANCE     : 6 96.0
I/M WAIVER RATES   : 6 1.0 1.0
```

MOBILE6.2 Registration Distribution:

* SWP 12/07/2002: 2002 CT Registration Data provided by Klausmeier and ERG to
* be processed via a VIN Decoder and matched to a light duty vehicle class.
* Motorcycles were analyzed separately by the Connecticut Department of Environmental
* Protection. Light duty vehicle results were specified to or modified to:
* 1) exclude Model Year 2003 data;
* 2) include all Model Year 2002 vehicles (no fraction was eliminated);
* 3) include all pre-1972 data, as well as all other data excluded by ERG that
*   could be matched up with a Mobile 6 vehicle type and model year;
* Note that CT data were used for only LDV, LDT1, LDT2, LDT3, and LDT4 vehicles
* and Motorcycles; all others age distributions used were MOBILE6 default values.
*
* Calendar Year: 2002.000User-Input
* This file contains some CT specific and some default MOBILE6 values for
* the distribution of vehicles by age for July of any calendar year. Data was
* pulled from the DMV Grand List 10/1/2002, but should correspond to July considering
* that all the distribution excludes any model year 2003 vehicles.
* There are sixteen (16) sets of values representing 16 combined gasoline/diesel vehicle
* class distributions. These distributions are split for gasoline and diesel
* using the separate input (or default) values for diesel sales fractions.
* Each distribution contains 25 values, which represent the fraction of
* all vehicles in that class (gasoline and diesel) of that age in July.
* The first number is for age 1 (calendar year minus model year plus one)
* and the last number is for age 25. The last age includes all vehicles
* of age 25 or older. The first number in each distribution is an integer
* which indicates which of the 16 vehicle classes are represented by the
* distribution. The sixteen vehicle classes are:
*
* 1 LDV   Light-Duty Vehicles (Passenger Cars)
* 2 LDT1   Light-Duty Trucks 1 (0-6,000 lbs. GVWR, 0-3750 lbs. LVW)
* 3 LDT2   Light Duty Trucks 2 (0-6,001 lbs. GVWR, 3751-5750 lbs. LVW)
* 4 LDT3   Light Duty Trucks 3 (6,001-8500 lbs. GVWR, 0-3750 lbs. LVW)
* 5 LDT4   Light Duty Trucks 4 (6,001-8500 lbs. GVWR, 3751-5750 lbs. LVW)
* 6 HDV2B Class 2b Heavy Duty Vehicles (8501-10,000 lbs. GVWR)
* 7 HDV3   Class 3 Heavy Duty Vehicles (10,001-14,000 lbs. GVWR)
* 8 HDV4   Class 4 Heavy Duty Vehicles (14,001-16,000 lbs. GVWR)
* 9 HDV5   Class 5 Heavy Duty Vehicles (16,001-19,500 lbs. GVWR)
* 10 HDV6   Class 6 Heavy Duty Vehicles (19,501-26,000 lbs. GVWR)
* 11 HDV7   Class 7 Heavy Duty Vehicles (26,001-33,000 lbs. GVWR)
* 12 HDV8A Class 8a Heavy Duty Vehicles (33,001-60,000 lbs. GVWR)
* 13 HDV8B Class 8b Heavy Duty Vehicles (>60,000 lbs. GVWR)

* 14 HDBS   School Busses
* 15 HDBT   Transit and Urban Busses
* 16 MC   Motorcycles (All)
*
* The 25 age values are arranged in two rows of 10 values followed by a row
* with the last 5 values. Comments (such as this one) are indicated by
* an asterisk in the first column. Empty rows are ignored. Values are
* read "free format," meaning any number may appear in any row with as
* many characters as needed (including a decimal) as long as 25 values
* follow the initial integer value separated by a space.
*
* If all 28 vehicle classes do not need to be altered from the default
* values, then only the vehicle classes that need to be changed need to
* be included in this file. The order in which the vehicle classes are
* read does not matter, however each vehicle class set must contain 25
* values and be in the proper age order.
*
REG DIST
* RESULTING MOBILE6-BASED REGISTRATION FRACTIONS LDV, LDT1, LDT2, LDT3, LDT4 and MC CT Specific
*
* MOBILE6 REGISTRATION FRACTIONS BY VEHICLE CLASS AND AGE
* LDV - Connecticut Specific 2002 Combined Diesel and Gas Vehicle Data
 1 0.0700 0.0803 0.0851 0.0757 0.0708 0.0714 0.0618 0.0705 0.0593 0.0569
   0.0490 0.0427 0.0416 0.0396 0.0331 0.0280 0.0198 0.0131 0.0087 0.0047
   0.0027 0.0021 0.0016 0.0023 0.0092
* LDT1 - Connecticut Specific 2002 Combined Diesel and Gas Vehicle Data
 2 0.0745 0.0458 0.0350 0.0342 0.0412 0.0415 0.0594 0.0691 0.0708 0.0544
   0.0404 0.0505 0.0555 0.0705 0.0639 0.0713 0.0489 0.0278 0.0169 0.0081
   0.006 0.0053 0.0008 0.001 0.0072
* LDT2 - Connecticut Specific 2002 Combined Diesel and Gas Vehicle Data
 3 0.1051 0.1115 0.1209 0.1029 0.1030 0.0930 0.0697 0.0677 0.0586 0.0453
   0.0311 0.0218 0.0128 0.0144 0.0191 0.0053 0.0046 0.0033 0.0026 0.0018
   0.0007 0.0006 0.0006 0.0009 0.0027
* LDT3 - Connecticut Specific 2002 Combined Diesel and Gas Vehicle Data
 4 0.0824 0.0993 0.0875 0.0994 0.0632 0.0586 0.0497 0.0643 0.0526 0.0378
   0.0273 0.0204 0.0280 0.0418 0.0451 0.0321 0.0269 0.0201 0.0128 0.0081
   0.0036 0.0024 0.0019 0.0051 0.0296
* LDT4 - Connecticut Specific 2002 Combined Diesel and Gas Vehicle Data
 5 0.1580 0.1399 0.1159 0.1244 0.0929 0.0778 0.0489 0.0589 0.0397 0.0181
   0.0119 0.0071 0.0135 0.0113 0.0164 0.0098 0.0083 0.0077 0.0044 0.0022
   0.0017 0.0005 0.0002 0.0069 0.0236
* HDV2B - EPA MOBILE 6 Default Combined Diesel and Gas Vehicle Data
 6 0.0503 0.0916 0.0833 0.0758 0.0690 0.0627 0.0571 0.0519 0.0472 0.0430
   0.0391 0.0356 0.0324 0.0294 0.0268 0.0244 0.0222 0.0202 0.0184 0.0167
   0.0152 0.0138 0.0126 0.0114 0.0499
* HDV3 - EPA MOBILE 6 Default Combined Diesel and Gas Vehicle Data

7 0.0503 0.0916 0.0833 0.0758 0.0690 0.0627 0.0571 0.0519 0.0472 0.0430
0.0391 0.0356 0.0324 0.0294 0.0268 0.0244 0.0222 0.0202 0.0184 0.0167
0.0152 0.0138 0.0126 0.0114 0.0499
* HDV4 - EPA MOBILE 6 Default Combined Diesel and Gas Vehicle Data
8 0.0388 0.0726 0.0679 0.0635 0.0594 0.0556 0.0520 0.0486 0.0455 0.0425
0.0398 0.0372 0.0348 0.0326 0.0304 0.0285 0.0266 0.0249 0.0233 0.0218
0.0204 0.0191 0.0178 0.0167 0.0797
* HDV5 - EPA MOBILE 6 Default Combined Diesel and Gas Vehicle Data
9 0.0388 0.0726 0.0679 0.0635 0.0594 0.0556 0.0520 0.0486 0.0455 0.0425
0.0398 0.0372 0.0348 0.0326 0.0304 0.0285 0.0266 0.0249 0.0233 0.0218
0.0204 0.0191 0.0178 0.0167 0.0797
* HDV6 - EPA MOBILE 6 Default Combined Diesel and Gas Vehicle Data
10 0.0388 0.0726 0.0679 0.0635 0.0594 0.0556 0.0520 0.0486 0.0455 0.0425
0.0398 0.0372 0.0348 0.0326 0.0304 0.0285 0.0266 0.0249 0.0233 0.0218
0.0204 0.0191 0.0178 0.0167 0.0797
* HDV7 - EPA MOBILE 6 Default Combined Diesel and Gas Vehicle Data
11 0.0388 0.0726 0.0679 0.0635 0.0594 0.0556 0.0520 0.0486 0.0455 0.0425
0.0398 0.0372 0.0348 0.0326 0.0304 0.0285 0.0266 0.0249 0.0233 0.0218
0.0204 0.0191 0.0178 0.0167 0.0797
* HDV8a - EPA MOBILE 6 Default Combined Diesel and Gas Vehicle Data
12 0.0388 0.0726 0.0679 0.0635 0.0594 0.0556 0.0520 0.0486 0.0455 0.0425
0.0398 0.0372 0.0348 0.0326 0.0304 0.0285 0.0266 0.0249 0.0233 0.0218
0.0204 0.0191 0.0178 0.0167 0.0797
* HDV8b - EPA MOBILE 6 Default Combined Diesel and Gas Vehicle Data
13 0.0388 0.0726 0.0679 0.0635 0.0594 0.0556 0.0520 0.0486 0.0455 0.0425
0.0398 0.0372 0.0348 0.0326 0.0304 0.0285 0.0266 0.0249 0.0233 0.0218
0.0204 0.0191 0.0178 0.0167 0.0797
* HDBS - EPA MOBILE 6 Default Combined Diesel and Gas Vehicle Data
14 0.0393 0.0734 0.0686 0.0641 0.0599 0.0559 0.0522 0.0488 0.0456 0.0426
0.0398 0.0372 0.0347 0.0324 0.0303 0.0283 0.0264 0.0247 0.0231 0.0216
0.0201 0.0188 0.0176 0.0165 0.0781
* HDBT - EPA MOBILE 6 Default Combined Diesel and Gas Vehicle Data
15 0.0307 0.0614 0.0614 0.0614 0.0614 0.0614 0.0614 0.0614 0.0614 0.0613
0.0611 0.0607 0.0595 0.0568 0.0511 0.0406 0.0254 0.0121 0.0099 0.0081
0.0066 0.0054 0.0044 0.0037 0.0114
* Motorcycles - Connecticut Specific 2002 Data
16 0.0975 0.0943 0.0744 0.0676 0.0500 0.0425 0.0401 0.0357 0.0290 0.0285
0.0215 0.0170 0.0182 0.0189 0.0181 0.0231 0.0308 0.0298 0.0217 0.0257
0.0351 0.0302 0.0263 0.0183 0.1057

<u>ATTACHMENT C:</u>

Weight of Evidence

ATTACHMENT C

WEIGHT OF EVIDENCE

The emission inventory projections described in the main body of this document demonstrate that adopted control programs will ensure progress toward attaining the 1997 annual $PM_{2.5}$ NAAQS, with an overall reduction between 2002 and 2009 of 27% for NOx emissions and 2.5% for direct $PM_{2.5}$ emissions. As discussed below, monitored $PM_{2.5}$ levels and a soon-to-be-released review of wood burning sources indicate that current direct $PM_{2.5}$ inventory estimates of re-entrained road dust and residential wood burning emissions may be significantly overestimated. This information provides additional weight of evidence that even greater progress towards $PM_{2.5}$ attainment will occur.

Re-entrained Road Dust Emissions

The 2002 MANE-VU Emissions Inventory Version 3 road dust emissions used in this report reflect revised emission estimation methods released be EPA in March 2006. The road dust emissions from the 2002 MANE-VU Emissions Inventory Version 3 are identical to those contained in EPA's 2002 Final NEI Version 2.0 which was released on October 23, 2006. Although the revised methods provide lower emission estimates than previous procedures, comparison to available speciated $PM_{2.5}$ monitoring data indicates that road dust emissions may still be overestimated. This can be shown by comparing emission inventory estimates and monitored levels for combustion-related sources to those for road dust sources.

The 2002 MANE-VU inventory estimates Connecticut combustion-related carbonaceous $PM_{2.5}$ emissions as about 14,500 tons per year. Statewide dust-related $PM_{2.5}$ emissions in Connecticut are estimated as about 4,807 tons per year, or about 33% of the carbonaceous emissions. However, using Connecticut speciated monitoring data (see Table C-1), the actual measured ratio of the natural dust component to the carbonaceous component is about 6.5%. Assuming the inventory estimates of carbonaceous $PM_{2.5}$ emissions is correct and the monitoring data is representative of statewide conditions, statewide dust-related emissions are more likely on the order of 943 tons per year (6.5% of 14,500 tons/year). Therefore, MANE-VU $PM_{2.5}$ fugitive dust inventory emissions are likely over-estimated by about a factor of five (4,807 tons per year divided by 943 tons/year). Although these are statewide calculations, the level of overestimation would be comparable when applied to Fairfield and New Haven counties, which comprise the Connecticut portion of the NY-NJ-CT $PM_{2.5}$ Nonattainment Area.

Table C-1
Connecticut Speciated PM2.5 Data

Site	Dates	Carbonaceous (%)	Natural Dust (%)	Ratio (Natural to Carbonaceous) %
Westport	Apr-02 to May-03	51.38	3.38	6.58
New Haven (State Street)	Jun-03 to Feb-04	45.43	2.90	6.39
New Haven (Criscuolo Park)	Feb-04 to Mar-06	48.41	3.23	6.66
Average		48.41	3.17	6.54

Residential Wood Burning Emissions

In addition, a recent study conducted by OMNI Environmental Services, Inc, for the Mid-Atlantic Regional Air Management Association (MARAMA) indicates that residential wood burning emission inventory estimates are likely over-estimated[7]. OMNI concludes that statewide residential wood $PM_{2.5}$ emissions in Connecticut are actually about 4,400 tons per year. Both the 2002 MANE_VU inventory and EPA's 2002 NEI estimate statewide residential wood $PM_{2.5}$ emissions are about 8,000 tons per year. Therefore, MANE-VU and NEI emission inventory estimates of $PM_{2.5}$ emissions from residential wood burning in Connecticut are about 80% higher than the values reported by OMNI.

Conclusion

If the area source emissions of Table 1 in Section III of the TSD were adjusted downward to reflect the overestimations of dust and wood burning emissions, overall reductions in direct $PM_{2.5}$ emissions between 2002 and 2009 would be even greater than the 2.5% cited in this report. Based on this weight of evidence analysis, CT DEP is confident that current programs will ensure progress towards attainment through 2009.

[7] OMNI Environmental Services, Inc. Prepared for: MARAMA. *Task 4, Technical Memorandum 2 (Emission Inventory): Control Analysis and Documentation for Residential Wood Combustion in the MANE-VU Region.* June 9, 2006. Table 5.2, Emission Inventory Summary.

Appendix 8A

A Modeling Protocol for the OTC SIP Quality Modeling System for Assessment of the Ozone National Ambient Air Quality Standard in the Ozone Transport Region

A Modeling Protocol for the OTC SIP Quality Modeling System for Assessment of the Ozone National Ambient Air Quality Standard in the Ozone Transport Region

December 31, 2006

The Modeling Committee of the
Ozone Transport Commission

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1 STUDY DESIGN

1.1 Background

Moderate non-attainment areas in the Ozone Transport Region (OTR) are required to attain the 8-hour ozone NAAQS by 2010. Modeled or monitored attainment is based on the summer ozone season preceding 2010, so the target year for attainment modeling is 2009 for moderate non-attainment areas. The Ozone Transport Commission (OTC) has embarked on the task of preparing a State Implementation Plan (SIP) ozone modeling system for exercising photochemical grid model(s) to assess the impact of candidate ozone control strategies in moderate and serious non-attainment areas in the OTR. The OTC Directors endorsed the Modeling Protocol for the OTC SIP Quality Modeling System For Assessment of the Ozone National Ambient Air Quality Standard in the Ozone Transport Region at the November 12-13, 2003 Fall meeting of the OTC. The subject protocol has been modified since then to incorporate CMAQ model modifications and emission inventory improvements.

This modeling protocol outlines procedures to prepare and use the OTC SIP ozone modeling system to help design an ozone attainment strategy to attain the ozone 8-hour NAAQS in the OTR. Emission inventories for point, area, on–road and off-road sources of NO_x, VOC and CO will be developed for a base year of 2002. BEIS3 will be used to estimate biogenic emissions. MM5 will be used at a 12 km grid resolution and, in the photochemical grid model, 4 km grid cells will be nested in urban areas where appropriate. A model performance evaluation will be prepared for 2002. If model performance is satisfactory, emission input files reflecting candidate control strategy scenarios for 2009 will be prepared, and 2009 ozone levels will be simulated with the modeling system. OTC States with moderate and serious non-attainment areas will then use these modeling results to help support required ozone attainment demonstrations. However, it has become apparent that modeling at a higher resolution than 12 km is not possible without improvements in the modeling system in terms of the physical and chemical formulation as well as the need for development of emissions estimates at spatial resolutions higher than county-level estimates.

1.2 Objective

The New York Department of Environmental Conservation has agreed to be the lead agency for developing a SIP quality ozone modeling system for assessing the future year attainment of the ozone 8-hour NAAQS in the OTR. The CMAQ model will be used to evaluate the effectiveness of control strategies in the OTR Modeling Domain. The regulatory objective will be to design an ozone control strategy that will result in attainment of the 8-hour ozone NAAQS in moderate non-attainment areas by 2009.

1.3 Photochemical Modeling System

The OTC Modeling Committee in its prior work exercised both CMAQ and CAMx and noticed that even though these models had performed similarly in estimating ozone on an over-all basis, the level of agreement between the simulated and measured concentrations varied from good to bad depending on the model and depending upon the simulation day. So, as part of this protocol, both models (which continue to be updated by their developers) will be applied for an episode that occurred in 2002. However, it was soon recognized that there was a need for application of a *one-atmosphere* modeling system that would provide estimates of both ozone and particulate matter and that the same base year emissions and meteorological data would be utilized in the development of appropriate SIPs. This together with USEPA's launching of the CMAS center that provides a venue for sharing information from other modelers led the OTC modeling committee to select the CMAQ model for application in its SIP Quality Ozone Modeling System for testing the effectiveness of proposed control strategies in the OTR.

The OTC Modeling Committee also examined the performances of two emissions processors (EMS2001 and SMOKE, both using CB4 chemistry) from prior work and concluded that there are differences between them that could be minimized by forcing the models to use a common speciation and surrogate database. Since CMAQ was the air quality model of choice, given that it handled inputs from SMOKE more readily than it did from the EMS2001 processor, the SMOKE emission processor was selected for constructing emission files for the SIP Quality Ozone Modeling System for the OTR Domain.

1.4 Deliverables

The key deliverables for the SIP quality ozone modeling system for the OTR are listed below.

- Select Ozone Episodes
- Prepare Meteorological Fields
- Prepare 2002 Emission Inventories for each OTC State
- Acquire 2002 Emission Inventories for non-OTC States in the OTR Domain
- Prepare 2002 Emission Input Files for the OTR Domain
- Complete 2002 Model Performance Evaluation for the OTR Domain
- Prepare 2009 CAA Emission Inventories for each OTC State
- Acquire 2009 CAA Emission Inventories for non-OTC States in the OTR Domain
- Prepare 2009 CAA Emission Input Files for the OTR Domain
- Complete Modeling Runs for 2009 CAA Scenarios
- Design Control Strategy for the OTR Modeling Domain.
- Prepare 2009 Emission Input Files for OTR Control Strategy
- Complete Modeling Runs for the OTR Control Strategy for 2009
- Complete Evaluation Report for 2009 Control Strategy

1.5 Schedule

The schedule for developing the SIP quality modeling system and the assessment of the ozone NAAQS in the Ozone Transport Region is provided in Appendix A. Because of delays encountered in developing, integrating and processing state-of-the-art emission inventories from Regional Planning Organizations in the MANE-VU modeling domain, schedule target dates have been moved back approximately 9 months (complete Modeling TSD report in March of 2007 instead of June of 2006).

2 MANAGEMENT STRUCTURE

2.1 OTR Oversight Committee (Appendix B)

OTC Air Directors will serve as the OTR Oversight Committee. The Air Directors will ensure that 2002 and 2009 CAA emission inventories are prepared for each OTC state in the OTR Modeling Domain, and will also be responsible for obtaining emission inventories for the non OTR States that are part of the OTR Modeling Domain. The Air Directors will oversee the design of ozone control strategies for the OTR, and will make the final decision on any funding needed to develop the OTC SIP Quality Modeling System. The Air Directors will review all OTC SIP Quality Modeling System documentation before it is released to interested parties. The state members of the OTC Modeling Committee will keep Air Directors informed of the development of the OTC SIP Quality Modeling System.

2.2 OTR Photochemical Modeling Workgroup (Appendix B)

OTR Photochemical Modeling Workgroup will be responsible for preparing the modeling assessment of the ozone NAAQS in the OTR. The Workgroup will be responsible for collecting and processing model input data, setting up all model input files, performing model runs, and interpreting and documenting the results of the modeling analyses for the OTR domain.
The Workgroup will prepare and submit all OTC SIP quality modeling system documentation to the OTC Air Directors.

2.3 OTR Meteorological Modeling Workgroup (Appendix B)

The OTR Meteorological Modeling Workgroup will be responsible for preparing and assessing MM5 meteorological fields for the OTR Modeling Domain. This Workgroup will also work with the OTR Photochemical Modeling Workgroup to prepare all meteorological input files for the OTC SIP quality modeling system.

2.4 OTR Emission Inventory Development Workgroup (Appendix B)

The OTR Emission Inventory Development Workgroup will be responsible for obtaining and developing guidance for preparing 2002 and 2009 state emission inventories for all states in the OTR. The OTC Air Directors will be responsible for obtaining emission inventories for non-OTR states in the OTR Modeling Domain. The Mid-Atlantic Regional Air Management Association (MARAMA) and the Mid-Atlantic /Northeast Visibility Union (MANE-VU) organizations will provide funding for contractors and work with OTR states to help prepare state-of-the-art 2002 emission files, 2009 CAA emission files and 2009 Control Strategy emission files for the OTR Modeling Domain.

2.5 OTR Control Strategy Development Workgroup (Appendix B)

The OTR Control Strategy Development Workgroup will be responsible for designing an ozone control strategy for the OTR Domain that will attain the ozone NAAQS by 2009 in moderate non-attainment areas and 2012 in serious non-attainment areas. The Workgroup will work with the

OTC stationary /area source committee and the OTC mobile source committee to design an effective ozone control strategy for the OTR domain.

3 OTR MODELING DOMAIN

3.1 Description

The OTR modeling domain (see Figure 1) follows the national grid adopted by the Regional Haze Regional Planning Organizations (RPOs), but with focus on the eastern U.S. The areal extent of the domain was selected such that the northeastern areas of Maine are inside the domain. Based upon the existing computer resources, the southern and western boundaries were limited to the region shown in Figure 1. At a horizontal grid resolution of 12 km, there are 172 grids in the east-west and 172 grids in north-south direction. Details of the modeling system setup can be found at ftp://ftp.dec.state.ny.us/dar/air_research/gsistla/otc-mm5-cmaq-grid-def.doc

3.2 Horizontal Grid Size

Following EPA and as noted above, a 12 km grid resolution will be used for the domain. A coarser mesh may not be appropriate for urban area applications. Modeling at a higher resolution than 12 km will not be performed at this time; to do would require improvements in the modeling system in terms of the physical and chemical formulation as well as the need for development of emissions at a higher spatial resolution than that for the currently available county-level estimates.

3.3 Number of Vertical Layers

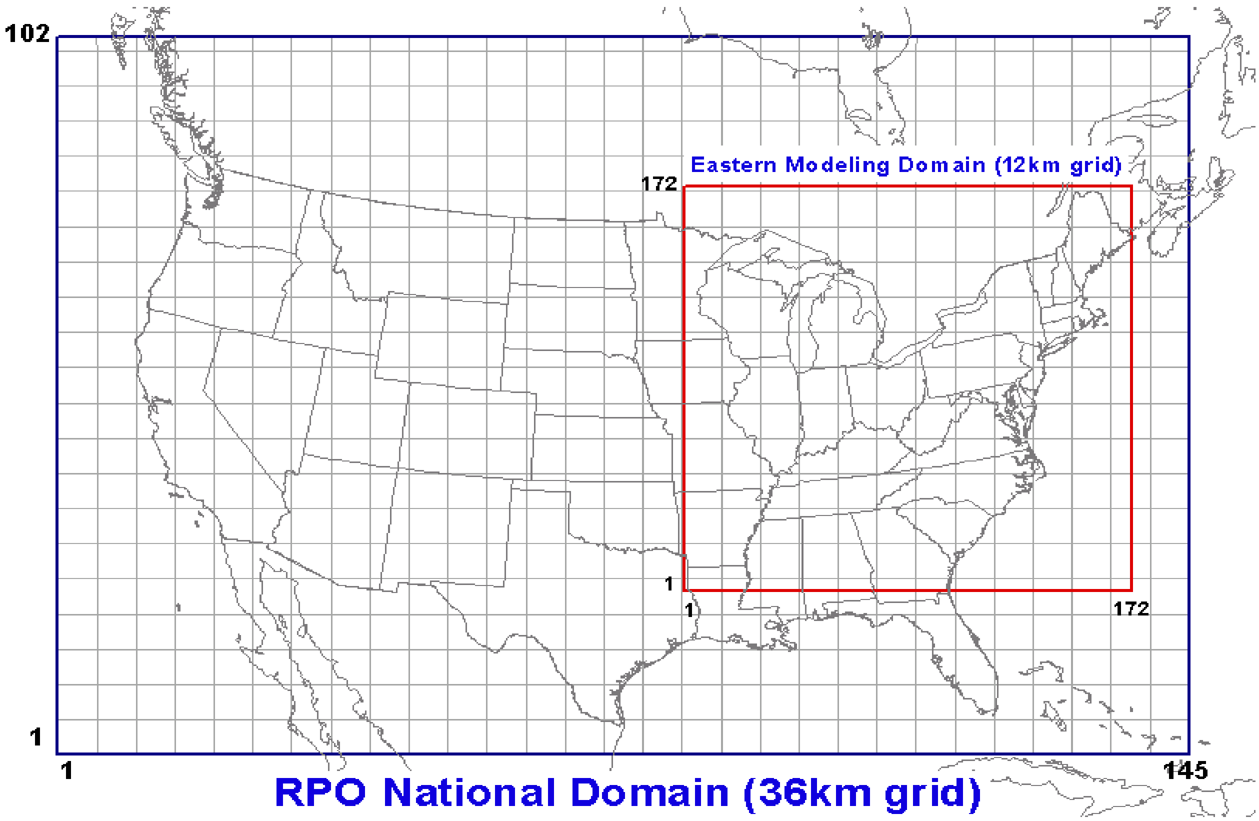
Similar to the horizontal grid spacing which is fixed by the default set forth in the design of the meteorological model, in this case 12 km, the definition of the vertical structure could also be adopted one-to-one based upon the meteorological model which has 29 layers. However, given the computational resources and runtime needs the number of vertical layers in the photochemical model was limited to 22, of which the lower 16 layers (approximately 3km) were set one-to-one with those of the meteorological model.

4 OZONE EPISODES

4.1 Episode Selection Criteria

Since it would be impractical to model every violation day, EPA has recommended targeting a select group of episode days for ozone attainment demonstrations. Such episode days should be (1) meteorologically representative of typical high ozone exceedance days in the domain, and (2) so severe that any control strategies predicted to attain the ozone NAAQS for that episode day would also result in attainment for all other exceedance days.

Figure 1: OTC Modeling Domain with areal extent of 12km and 36km grids



4.2 Proposed Episode Selection Procedure

While the above-suggested approach is perhaps feasible for isolated urban areas, such an approach may not be meaningful given the areal extent of concern and the modeling domain. Also, selection of episodes from different years would require the generation of the meteorological fields and emissions database, which would be an extremely difficult proposition given the modeling domain. The 2002 ozone season had a significant number of exceedance days (the spatial distribution of the daily 1-hr and 8-hr maxima over the eastern U. S. can be examined at the site ftp://ftp.state.ny.us/dar/air_research/htdocs/index.html). It was decided that the 5-month ozone season of 2002 would be simulated with the OTC SIP Quality Modeling System which will involve investigating numerous ozone episodes and would provide for better assessment of the simulated pollutant fields. The Environ report “Determination of Representativeness of 2002 Ozone Season for Ozone Transport Region SIP Modeling” demonstrated that 2002 episode days are (1) meteorologically representative of typical high ozone exceedance days in the domain, and (2) are probably so severe that control strategies predicted to attain the ozone NAAQS for those episode day would also result in attainment for all other exceedance days.

5 METEOROLOGICAL FIELDS

5.1 MM5 Meteorological Fields

The MM5 setup has been described by Zhang (2000) for generating meteorological fields based on a modified Blackadar scheme for the boundary layer. Since there are a variety of options that can be exercised in the application of MM5, initial testing was performed for a high ozone event of 2002 with the most commonly used default options as well as with modified boundary layer schemes (Zhang and Zheng 2004). A set of options was selected and used by Prof. Zhang of UMD in consultation with NYDEC Staff for running MM5 for the 2002 5-month ozone season.

5.2 Quality Assurance of Meteorological Fields

As a part of this effort, the simulated meteorological fields will be compared to data collected under CASTNET as well as with observations from the National Weather Service (NWS). Prior experience has shown that these approaches provide for an independent assessment of the simulated meteorological conditions. Also, data from any other special measurements will be sought and compared with the simulated fields. This analysis should provide a degree of confidence in the simulated meteorological fields and their use in photochemical grid modeling. This work will be coordinated through the meteorological model work group.

6 BASE CASE EMISSION INVENTORIES FOR 2002

6.1 2002 Base Case Emission Inventories for OTC states

Each state in the OTR Domain will prepare a 2002 base year emission Inventory that include VOC, NO_x, and CO for a typical ozone summer day. States are to follow EPA guidance documents for this base year inventory, which is due to EPA by June 1, 2004. Note this inventory may also qualify as the consolidated emissions regulatory report (CERR).

Emissions for all categories will be estimated for each county and state and the seasonal factors will facilitate spatial and temporal adjustments for modeling. Point and area source data will be submitted by individual states to EPA for uploading to EPA's National Emission Inventory (NEI) database using the required EPA format. MOBILE6.2 input files and VMT data will be submitted to NEI so that EPA can generate on-road mobile emissions for each state by county in a format that can be easily gridded and speciated. Similarly, off-road input files will be sent to EPA for running the latest NONROAD model.

It is anticipated that these state inventories will follow the EPA prescribed approach and should be formatted in a consistent manner. While this protocol deals with 8-hr ozone issues, the inventory would also contain the necessary information for exercising the particulate option of the photochemical model. This would be of help in those cases where the one-atmosphere option is to be exercised in the assessment. Biogenic emissions will be estimated with EPA's BEIS-3 emissions model.

6.2 2002 Base Case Emission Inventories for All Other States in the OTR Domain

A 2002 base year emission inventory that includes VOC, NO_x, and CO for a typical ozone summer day will be obtained for all non-OTC states in the OTR domain. It is anticipated that these inventories will be developed following EPA guidance, and will be formatted in a consistent manner.

7 BASE CASE EMISSION INPUT FILES FOR 2002

7.1 Preparation of 2002 Emission Input Files for the OTR Domain

Emissions data will be processed using SMOKE. The surrogate data files for the OTR grid have been previously developed by NY DEC and will be used in this study. For those pollutants that depend upon ambient temperature, MM5 layer-1 gridded temperature fields will be used.

7.2 Quality Assurance of 2002 Emission Input Files for the OTR Domain

The processing of the emissions data will include several quality checks before the data are exercised in the simulations. Prior experience has shown that considerable time and resources are often invested in developing the gridded emissions data. While there are many avenues to improve or correct the data, based upon consensus of the OTC Photochemical Modeling Workgroup, a definite closure of the emissions processing will be adhered to and any further changes or corrections will be archived and incorporated at a later date. In performing this work, close attention will be paid to the emissions within the OTR and, if necessary, corrections will be incorporated on the advice of the OTC Photochemical Modeling Workgroup.

Biogenic emissions will be prepared for each episode day using BEIS-3. The temperature data from MM5 layer-1 will be used along with cloud cover information obtained from MM5.

8 AIR QUALITY DATA

8.1 Initial Conditions

Prior experience has shown that a 3-day ramp-up period is sufficient to establish pollutant levels that are encountered in the beginning of the ozone episode. In this application clean conditions will be assumed for the 1st hour of the simulation along with the emissions and boundary conditions as described below. Since the application was to be in one-atmosphere mode using a common platform, it was determined that a longer ramp-up period of 15 days was needed because experiments indicated that some of the $PM_{2.5}$ species from the initial conditions (IC) were retained for ramp-up periods of 10 days or less. Thus the CMAQ model run will start on May 1, 2002; the first 15 days are assumed to be ramp-up days and will not used for performance evaluation purposes.

8.2 Boundary Conditions

In prior studies attempts were made to include any available information from ozonesondes and monitors that are near the western and northern boundaries of the modeling domain. For this study, similar attempts will be made to obtain pollutant data at the boundaries.

For boundary conditions, NY DEC will run CMAQ with the continental 36 km grid using GEOS-CHEM simulation data for 2002. The GEOS-CHEM information will be obtained by NESCAUM from Prof. Daniel Jacob's group of Harvard University. Hour by hour boundary conditions will then be extracted from the continental 36 km CMAQ run results and used for the OTR 12 km modeling domain.

8.3 Ambient Air Quality Data

Ambient air quality data will be extracted from the EPA AQS archive for ozone, CO, NO_x, and total and speciated hydrocarbons reported as part of the PAMS network. Also, data from CASTNET will be obtained. Since the OTR modeling domain extends over two time zones, while the model simulations are reflective of a single time zone, EST, there will be a need to ”correct” the clock and assemble the ambient air quality database. Any special measurements that are relevant to this study during the summer of 2002 will also be acquired, including upper air measurements.

9 DIAGNOSTIC ANALYSES

9.1 Quality Assurance Tests of Input Components

Before proceeding with modeling, all air quality, emissions, and meteorological data will be reviewed to ensure completeness, accuracy, and consistency. Any errors, missing data or inconsistencies will be addressed using appropriate methods that are consistent with standard practices.

9.2 Diagnostic Tests

Attempts will be made to perform diagnostic tests to ensure that the simulated ozone patterns are in agreement with observed patterns over the entire simulation period. While it is unrealistic to expect day-to-day agreement between the measured and predicted data, close attention will be paid to the changes in pattern of the measured ozone levels and the ability of the model to capture such changes.

10 MODEL PERFORMANCE EVALUATION

10.1 Performance Criteria

This is an area that will likely require dialog among member states. While there are many statistical tests that can be applied to predicted ozone concentrations, it is important to define a priori some of the conditions of the analysis and the targets of evaluation. Also, it is important to define the areal extent for which the assessment needs to be done to address the performance of the model. Statistical tests are to be applied to the precursor data as well, recognizing that all tests applied to the ozone data may or may not be valid.

As part of the model assessment, qualitative analysis will also be performed by comparing predicted and measured pollutant fields to establish if the spatial patterns are captured by the modeling system. This is a critical step, since the measured concentrations may fall into a neighboring grid cell (but not at the measured location itself) and may be found to be in good agreement.

Another area that is quite important is the predictive ability of the model with respect to height. Recognizing that the pollutants trapped above the mixed layer during the overnight hours would mix down during the daytime, comparison will be made between measurements and model predictions. Special attention will be paid to elevated monitoring stations, such as the television tower near Durham, North Carolina; the Sears Tower in Chicago, Illinois, and monitors located at elevated rural stations at Whiteface Mountain, NY.

10.2 Statistical Performance Measures

The recommended EPA procedures will be used to calculate the recommended performance measures. At a minimum, the following three statistical performance measures will be used to assess CAMx model performance for each episode.

- Unpaired highest-prediction accuracy

  This measure quantifies the difference between the highest observed eight-hour value in the domain and the highest predicted value in the domain. The acceptable performance range is plus or minus 15-20 percent.

- Normalized bias

  This measure indicates the degree to which simulated eight-hour values are over or under-predicted. The acceptable performance range is plus or minus 5-15 percent.

- Gross error of all pairs above 40 ppb

  This measure indicates the average discrepancy between predicted and observed values and provides an overall assessment of model performance. The acceptable performance range is 30-35 percent.

11 CAA EMISSION INVENTORIES FOR 2009

11.1 CAA Emission Inventories for OTR States for 2009

Each OTC state in the OTR Domain will prepare a 2009 CAA emission **i**nventory that is consistent with the regulations and rules adopted or expected to be in-place. The inventory will be developed consistent with EPA guidance. The states will develop the information on growth factors and controls used in the development of the inventory. Each state will submit a report on the development of these future year inventories.

Since the electric energy generation and use are highly inter-connected, coupled with the existing rules on trading and banking of pollutants, it is expected that an inventory consistent with this information would be developed for all electric energy generation units using models such as IPM**.**

Recognizing that any prediction of future emissions are subject to changes, the OTC Modeling Committee would develop a decision framework on obtaining these emissions to be consistent with the OTC SIP quality modeling system schedule (Appendix A).

11.2 CAA Emission Inventories for all non-OTR States for 2009

A 2009 CAA emission inventory that includes VOC, NO_x, and CO for a typical ozone summer day will be obtained for all non-OTC states in the OTR. It is anticipated that these inventories will be developed following EPA guidance, and will be formatted in a consistent manner.

12 CAA EMISSION INPUT FILES FOR 2009 FOR THE OTR DOMAIN

12.1 CAA Emission Input Files for OTR Domain for 2009

2009 CAA emissions data will be processed using SMOKE. For pollutants that depend on ambient temperature, MM5 layer-1 gridded temperature fields will be used to estimate hourly emission rates. The biogenic emission input files prepared for the base 2002 will be used as a surrogate for 2009 biogenic emissions. These emissions data will be processed using the quality assurance checks described in section 7.2.

It should be noted that the CAA means all on the books and on the way control measures (OTB/OTW) scheduled to be in effect by 2009.

13 OTR DOMAIN OZONE CONTROL STRATEGY

13.1 OTC CALGRID System Screening Runs

A series of CALGRID screening runs will be performed to investigate the level of emissions reductions needed both within and outside of the OTR. This will help identify potential emission reductions scenarios that can be used for CMAX future year SIP modeling runs.

13.2 OTC SIP Modeling Platform Runs

OTC SIP modeling platform CAA runs for 2009 will be reviewed to help determine the level of emissions reductions needed to attain the ozone NAAQS. VOC and NOX sensitivity runs will also be performed to help identify potential emission reductions scenarios that can be used to lower ozone levels in the OTR.

13.3 Analysis of Available Air Quality and Emission Databases

A review of air quality and emission databases (for example, EPA Clear Skies and Transport Rule emission files) will be performed to help identify potential source sectors of ozone precursors. Analysis of available EPA modeling results will also be performed to help identify potential source sectors of ozone precursors in, and upwind, of the OTR domain.

13.4 Ozone Control Strategy for the OTR Domain

The OTR Control Strategy Development Team will review CALGRID results, other available databases**,** and EPA databases, to help identify potential control programs. The Team will work with OTR states and the OTC stationary, area and mobile source committees to design ozone control strategies for the OTR Domain with the goal of meeting regulatory target dates.

14 OZONE CONTROL STRATEGY EMISSION INPUT FILES

14.1 Ozone Control Strategy Emission Input Files for the OTR Domain for 2009

Emissions files for the selected ozone control strategy for the OTR Domain for 2009 will be prepared in a consistent manner as per schedule. If necessary, additional IPM simulations may be performed to obtain EGU emission estimates.

15 OZONE PREDICTIONS FOR 2009

15.1 Initial Conditions

The initial conditions at the startup will be “clean”. The OTR Modeling Team will use the 2002 initial condition files as a surrogate for initial conditions for 2009 modeling runs.

15.2 Boundary conditions

EPA will be consulted for guidance in estimating boundary conditions for 2009 or, under default, would utilize those adapted for the Base 2002 base year simulation. It should be noted that the default option was used for the 2009 CMAQ simulation.

15.3 CAA Ozone Predictions for 2009

The model will be run with the CAA emission files developed for 2009. Tile plots, difference plots, and model statistics will be prepared to help characterize the extent of any remaining non-attainment areas predicted in the OTR in 2009.

15.4 Ozone Control Strategy Predictions for 2009.

The model will be run with OTR control strategy emission files prepared for 2009. Tile plots, difference plots and model statistics will be prepared to help characterize the extent of any remaining non-attainment areas predicted in the OTR for the year 2009.

16 DOCUMENTATION

A report titled “Assessment of the Ozone National Ambient Air Quality Standards in the Ozone Transport Region will be prepared by the OTR Modeling Team”. The report would cover model performance evaluation, and an evaluation of the OTR control strategy runs for 2009. This technical document will be made available to all interested parties and will be used by the member States in their SIP submission documentation as needed.

17 REFERENCES

Environ (2006): Determination of Representativeness of 2002 Ozone Season for Ozone Transport Region SIP Modeling

Dalin Zhang (2000): Development of meteorological database for summer 1997 using MM5 at 12 km resolution in Photochemical Model Simulations

Dalin Zhang and William Zheng (2004): Diurnal cycles of surface winds and temperatures as simulated by five boundary-layer parameterizations, Journal of Appl. Meteorology 43, 157-169

Gopal Sistla (1999): Development of a surrogate database for use in Regional/Urban-scale Modeling at 4 km spatial resolution (see http://envpro.ncsc.org/emcenter/)

Wick Havens (2000): Development of an Emissions Inventory for Regional/Urban-scale Modeling, MARAMA-RTC (see http://www.marama.org/)

APPENDIX A

Workgroups for the Development and Application of the OTC SIP Quality Modeling System for Assessment of the Ozone National Ambient Air Quality Standard in the Ozone Transport Region

OTC Photochemical Modeling Workgroup

State Lead	Gopal Sistla
OTC contact	Tom Frankiewicz
Chair OTC Modeling Committee	Barbara Kwetz

Delaware	Mohammed Majeed
DC	Rama Tangirala
Maine	Tom Downs
Maryland	Mike Woodman
Massachusetts	Steve Dennis
New Hampshire	Jeff Underhill
New York	Gopal Sistla
Pennsylvania	Tim Leon Gurrero
NESCAUM	Gary Kleiman
EPA	Invited for selected discussions

OTC Meteorological Modeling Workgroup

State Lead	Mike Woodman
OTC contact	Tom Frankiewicz
Connecticut	Dave Wackter
Delaware	Mohammed Majeed
DC	Rama Tangirala
Maine	Tom Downs
Maryland	Tad Aburn Matt Seybold Mike Woodman Jeff Stehr
Massachusetts	Rich Fields
New Hampshire	Jeff Underhill
New Jersey	Alan Dresser
New York	Gopal Sistla
Pennsylvania	Tim Leon Gurrero
Vermont	Paul Wishinski
Virginia	Kirit Chaudhar
MARAMA	Serpil Kayin
NESCAUM	Gary Kleiman
EPA	Invited for selected discussions

<u>OTC Emission Inventory Development Workgroup</u>

State Lead	Ray Malenfant
OTC contact	Tom Frankiewicz
Connecticut	Bill Simpson
Delaware	Dave Fees
DC	Rama Tangirala
Maine	Dave Wright
Maryland	Roger Thgunell
Massachusetts	Ken Santlal
New Hampshire	Mike Fitzgerald Andy Bodnarik
New Jersey	Joan Held
New York	Jim Ralston
Pennsylvania	Dean Van Orden
Rhode Island	Karen Slattery
Vermont	Jeff Merrell
Virginia	Tom Ballou
MARAMA	Serpil Kayin
EPA	Invited for selected discussions

OTC/MANE-VU Control Strategies Workgroup

State Lead	Jeff Underhill
OTC contact	Tom Frankiewicz
Connecticut	Dave Wackter Kurt Kebschull
Delaware	Ray Malenfant Mohammed Majeed
Maine	Jeff Crawford Tom Downs
Maryland	Tad Aburn Matt Seybold Mike Woodman Jeff Stehr
Massachusetts	Eileen Hiney Steve Dennis
New Hampshire	Jeff Underhill Andy Bodnarik
New Jersey	Bob Stern Ray Papalski Alan Dresser Robert Huizer
New York	Gopal Sistla
Pennsylvania	Wick Havens Tim Leon Gurrero
Rhode Island	Barbara Morin
Vermont	Paul Wishinski
Virginia	Kirit Chaudhar
MARAMA	Serpil Kayin Megan Schuster
NESCAUM	Leah Weiss Gary Kleiman
EPA	Invited for selected discussions

APPENDIX B

Work Plan for the Development and Application of the OTC SIP Quality Modeling System.

Work plan for the Development and Application of the OTC SIP Quality Modeling System†

Task No.	Activity or Task	Initial Target Date	Organization(s) Performing Task	Remarks & Status Notes & Revisions
	Initial Planning			
1	Prepare a Work plan and a Modeling Protocol for the development of the OTC SIP quality modeling system to address ozone non-attainment problems in the OTR.	Nov 03	NY, MA	Completed
	Meteorology			
2 3 4	Complete MM5 modeling for 2002 (May thru Sep) Episode evaluation and assessment Evaluate MM5 data and process for photochemical models.	Dec 04 Dec 04 Mar 05	MD (UMCP), NY Contract Support MD (UMCP), NY	In progress In progress Inn progress
	Emissions Inventories			
5	Prepare 2002 emission inventories for MANEVU states in the OTR Domain.	Jan 05	MARAMA	
6	Obtain 2002 emission inventories for non-MANEVU states in the OTR Domain.	Jan 05	MARAMA	
7	Prepare 2009 CAA emission inventories for MANEVU states in the OTR Domain.	Aug 05	MARAMA	
8	Obtain 2009 CAA emission inventories for non-MANEVU states in the OTR Domain.	Aug 05	MARAMA	
	Emission Input files			
9	Prepare 2002 emission files for the OTR domain with SMOKE and /or EMS2001, and QA emissions data.	Nov 04	NY	Delayed until Jan 05
10	Prepare 2009 CAA emission files for the OTR domain with SMOKE and /or EMS2001, and QA emissions data.	Nov 05	NY	
11	Prepare 2009 emission files for OTR control strategy with SMOKE and /or EMS2001, and QA emissions data.	Nov 05	NY	

Task No.	Activity or Task	Initial Target Date	Organization(s) Performing Task	Remarks & Status Notes & Revisions
	Modeling			
12	Complete 2002 model performance evaluation for OTR Domain.	May 05	NY	
13	Test model sensitivity to NOx, VOC reductions and potential control measure options.	Sep 05	NY	
14	Complete modeling runs for 2009 CAA scenarios.	Jan 06	NY	
15	Complete modeling runs for 2009 OTR control strategy	Jan 06	NY	
	OTR Control Strategy Development			
16	Perform screening runs with OTC CALGRID modeling system	Mar 05	OTR Control Strategy Development Workgroup	
17	Review air quality and emission databases to help identify potential sources of ozone in the OTR.	Jul 05	OTR Control Strategy Development Workgroup	
18	Design Control Strategy for the OTR Domain	Sep 05	OTR Control Strategy Development Workgroup	
	Reports			
19	Complete technical support documents presenting regional OTR modeling and air quality/emission database analyses. (These two documents will provide technical support for state ozone SIPs.	Jun 06	NY, other OTC states	This will allow states nine months to prepare SIP revisions due in April 2007.
	Management			
20	Day-to-day management and coordination.	on-going	OTC Modeling Committee	
21	Provide direction, oversight, and obtain any necessary funding.	on-going	OTC Air Directors	

[†] To be used as needed for Ozone SIPs in the OTR. Based on EPA draft guidance, Ozone SIPs expected submission by April 2007.

Appendix 8B

CMAQ Air Quality Model Configuration

OTC CMAQ Air Quality Model Configuration

Science Options	Configuration	Details/Comments
Model	CMAQ Version 4.5	
Horizontal Grid Mesh	36km/12km	
36-km grid	145x102 cells	
12-km grid	172x172 cells	
Vertical Grid Mesh	22 Layers	
Grid Interaction	One-way nesting	
Boundary Conditions	GEOS-CHEM	
Emissions		
Baseline Emissions Processing	SMOKE (Version 2.1) model configuration	MM5 meteorology input to SMOKE & CMAQ
Sub-grid-scale Plumes	No Plume –in-Grid (PinG)	
Chemistry		
Gas Phase Chemistry	CBM-IV	
Aerosol Chemistry	AE3/ISORROPIA	
Secondary Organic Aerosols	Secondary Organic Aerosol Model (SORGAM)	
Aerosol Mass Conservation Patch	Yes	Schell et. al., (2001)
Cloud Chemistry	RADM-type aqueous chemistry	Includes sub-grid cloud processes
N_2O_5 Reaction Probability	0.01-0.001	
Meteorological Processor	MCIP Version 3.0	
Horizontal Transport		
Eddy Diffusivity Scheme	K-theory with Kh grid size dependence	Multi-scale Smagorinsky (1963) approach
Vertical Transport		
Eddy Diffusivity Scheme	K-theory	
Diffusivity Lower Limit	Kzmin = 1.0	
Planetary Boundary Layer	No Patch	
Deposition Scheme	M3dry	Directly linked to Pleim-Xiu Land Surface Model parameters
Numerics		
Gas Phase Chemistry	Euler Backward Iterative	Hertel et. Al. (1993) EBI solver ~2x

Science Options	Configuration	Details/Comments
Solver	(EBI) solver	faster than MEBI
Horizontal Advection Scheme	Piecewise Parabolic Method (PPM) scheme	
Simulation Periods	2002	
Platform	Linux Cluster	

Appendix 8C

MM5 Model Configuration

OTC MM5 Meteorological Model Configuration

Science Options	Configuration	Details/Comments
Model Code	MM5 Version 3.6	
Horizontal Grid Mesh	36km/12km	
36-km grid	149x129 cells	
12-km grid	175x175 cells	
Vertical Grid Mesh	29 layers	
Grid Interaction	No feedback	Two-way nesting
Initialization	Eta first guess fields/LittleR	
Boundary Conditions	Eta first guess fields/LittleR	
Microphysics	Simple Ice	
Cumulus Scheme	Kain-Fritsch	36km/12km grids
Planetary Boundary Layer	High-resolution Blackadar PBL	
Radiation	Simple cooling	
Vegetation Data	USGS	24 Category Scheme
Land Surface Model	Five-Layer Soil model	
Shallow Convection	None	
Sea Surface Temperature	Do not update SST	
Thermal Roughness	Default	
Snow Cover Effects	None	
4D Data Assimilation	Analysis Nudging: 36km/12km	
Integration Time Step	75 seconds	
Simulation Periods	2002	
Platform	Linux Cluster	Done at UMD

Appendix 8D

Technical Support Documents from

Bureau of Air Quality Analysis and Research

Division of Air Resources

New York State Department of Environmental Conservation

Albany, NY 12233

TSD-1	**Meteorological Modeling of 2002 using Penn State/NCAR 5th Generation Mesoscale Model (MM5)**
TSD-2a	**Processing of 2002 Biogenic Emissions for OTC / MANE-VU Regional and Urban Modeling**
TSD-2b	**Processing of 2002 Anthropogenic Emissions: OTC Regional and Urban 12km Base Year Simulation**
TSD-2c	**$PM_{2.5}$ modeling using the SMOKE/CMAQ system over the Ozone Transport Region (OTR)**
TSD-3a	**Analysis of Ambient $PM_{2.5}$ Mass and Speciation for the New York Metropolitan Area through 2006**
TSD-3b	**Analysis of Ambient $PM_{2.5}$ Mass: CT and NJ portions of the New York City Metropolitan Non-attainment Area through 2006**
TSD-4	**Future Year Emissions Inventory for Regional and Urban Modeling over the OTR**
TSD-5	**Baseline and Future $PM_{2.5}$ Design Values in the New York City Metropolitan Non-Attainment Area**

TSD-1

Meteorological Modeling of 2002 using Penn State/NCAR 5th Generation Mesoscale Model (MM5)

Bureau of Air Quality Analysis and Research

Division of Air Resources

New York State Department of Environmental Conservation

Albany, NY 12233

January 10, 2008

Meteorological Modeling using Penn State/NCAR 5th Generation Mesoscale Model (MM5)

Version 3.6 of MM5 was used to generate annual 2002 meteorology for the Mid-Atlantic Northeast Visibility Union (MANE-VU) through the Modeling Committee of Ozone Transport Commission (OTC). Prof. Dalin Zhang of the University of Maryland (UMD) performed the MM5 simulations in consultation with NYSDEC staffs. The model was applied in Lambert conformal map projection and utilized MPP Version developed for clusters. The two-way nested domain consisted of a coarse (36km) and fine (12km) mesh corresponding to 149x129 and 175x175 grids, respectively, in this application (see Figure 1).

The Lambert projection used in this work followed the Regional Planning Organization (RPO) national domain setup with the center at (40°N, 97°W) and parallels at 33°N and 45°N. Map projection parameters in reference to the projection center point are as follows: Southwest corner for the 36 km grid is at (-2664km, -2304km) and the northeast corner at (2664km, 2304km). In the case of the 12km grid, the southwest corner is at (252km, -900km) and the northeast corner at (2340km, 1188km). In the vertical direction, the terrain following σ-coordinate system was used with the pressure at each σ-level determined from a reference state that is estimated using the hydrostatic equation from a given sea-level pressure and temperature with a standard lapse rate. There are 30 unevenly spaced σ levels, giving 29 vertical layers, with higher resolution within the planetary boundary layer (PBL). The σ levels are:

1.0000, 0.9974, 0.9940, 0.8980, 0.9820, 0.9720, 0.9590, 0.9430, 0.9230, 0.8990, 0.8710, 0.8390, 0.8030, 0.7630, 0.7180, 0.6680, 0.6180, 0.5680, 0.5180, 0.4680, 0.3680, 0.3180, 0.2680, 0.2180, 0.1680, 0.1230, 0.0800, 0.0400, 0.0000

The surface layer was set at about 10m, the level at which surface winds were typically observed, and the model top was set at 50hPa with a radiative top boundary condition. The time steps for the 36km and 12km domains were 75 and 25 seconds, respectively.

The important model physics options used for this MM5 simulation include:

- Kain-Fritsch (1993) convective scheme for both 36- and 12-km domains
- Explicit moisture scheme (without the mixed phase) containing prognostic equations for cloud water (ice) and rainwater (snow) (Dudhia 1989; Zhang 1989)
- Modified version of the Blackadar planetary boundary layer (PBL) scheme (Zhang and Anthes 1982; Zhang and Zheng 2004)
- Simple radiative cooling scheme (Grell et al. 1994)
- Multi-layer soil model to predict land surface temperatures using the surface energy budget equation (Dudhia 1996)

Note that the Blackadar PBL scheme has been modified in order to correct the phase shift of surface wind speed and temperature diurnal cycle, following a study that compared five different PBL schemes: the Gayno-Seaman TKE scheme (Shafran et al. 2000), Burk-

Thompson (1989), Blackadar (Zhang and Anthes 1982), MRF (Hong and Pan 1996), and Mellor-Yamada-Jajic (Mellor and Yamada 1974; Jajic 1990, 1994). The details of the study can be found at Zhang and Zheng (2004).

Nudging Processes

The MM5 provides options for nudging observations for each domain during the model integration process (Stauffer and Seaman, 1990; Stauffer et al. 1991). The Eta analyses of upper-air winds, temperature and water-vapor mixing ratio as well as their associated surface fields were used for nudging every 6 hours, and the Eta surface wind fields blended with surface wind observations were used to nudge every 3 hours. While only the surface winds were nudged, their influences could extend into the PBL as well (see Stauffer et al. 1991). Based on UMD's prior experience in numerical experiments, the following nudging coefficients have been used:

- Upper-air wind fields: 5. 0E-4s^{-1} for Domain 1 (36km), and 2. 5E-4s^{-1} for Domain 2 (12km);
- Upper-air temperature fields: 1.0E-5s^{-1} for both Domains;
- Surface winds: 5. 0s^{-1}E-4s^{-1} for Domain 1, and 2.5E-4s^{-1} for Domain 2; and
- Surface temperature and moisture: not nudged due to instability consideration.

ASSESSMENT

National Weather Service (NWS) and CASTNet data – Surface temperature, Wind Speed, and Humidity

NWS (TDL) and CASTNet (www.epa.gov/castnet/) surface measurements of temperature, wind speed, and humidity (note there were no humidity measurements for CASTNet) were used to compare with the MM5 outputs. The evaluation was performed with METSTAT program developed by Environ Corporation (www.camx.com/files/metstat.15feb05.tar.gz) When comparing to NWS data, the METSTAT interpolates the first layer MM5 (at 10m height) temperature and humidity data to a height of 2m, the level that corresponds to the NWS measurement of these parameters, but no interpolation was made for wind speed and direction. In the case of CASTNet surface measurements, no interpolations were made as CASTNet data were reported at 10m height. In this analysis, no exclusion was made for calm conditions. The reported calm winds (zero wind speed measured) were treated *as is* in this evaluation effort. The METSTAT calculated standard statistical measures – average, bias, error and index of agreement between the measured and predicted parameters. Table 1 summarizes the MM5 average bias for each month for wind speed, wind direction, temperature, and humidity by comparing data from NWS and CASTNet networks. The humidity data is only available for NWS network. In general, there is no systematic bias between winter and summer seasons for MM5 in terms of wind speed, wind direction and temperature. However, MM5 showed dry bias in the summer and wet bias in the winter when compared with humidity data from NWS.

Figure 2a and 2b display the time series comparison of wind speed between MM5 and measured data from NWS and CASTNet networks for winter months (January, February and December) and summer months (June, July and August), respectively. MM5 underpredicted NWS and overpredicted CASTNet daytime peak wind speed, while MM5 appears to track quite well the nighttime wind speed minimum for CASTNet and overpredicted nighttime wind speed minimum for the NWS data. MM5 performed quite well in capturing magnitude and diurnal timing for temperature from both NWS and CASTNet data (Figures 3a and 3b). It should be pointed out that there are differences in how the meteorological information is collected and reported by the two networks and as computed in MM5. The CASTNet measurements are based on hourly averaged wind speed while NWS reports 2min average at 10min before the hour, whereas MM5 predictions are reflective of the last time-step of the hour of computation. In the case of humidity (Figure 4), MM5 tracked the NWS observed humidity trend well, but exhibits dry bias for summer season and wet bias for winter season and misses the observed semi-diurnal cycles. Comparisons for the whole year of 2002 including bias and root mean square error from both NWS and CASTNet are available on request from NYSDEC.

The above assessment is based on domain-wide averages to provide an overall response of the model. Another way of assessing the model is to examine the spatial distribution of correlation between the measured and predicted parameters at each monitor. Figures 5a and 5b display such a comparison for wind speed and temperature over winter months and summer months, respectively. For the wind speed (Figure 5a), the correlation is in the range of 0.8 to 0.9 for winter months and 0.7 to 0.8 for summer months. For the temperature (Figure 5b), the correlation is above 0.95 for summer months, slightly higher than winter months. The correlation for humidity (Figure 5c) is in the range of 0.8 to 0.9 for both winter and summer months. These correlations indicate that MM5 simulation has captured both the diurnal and synoptic scale variations. Detailed plots of this comparison are available on request from NYSDEC.

Vertical Profiler – Winds

The Wind-Profiler network measurements along the U. S. East Coast (www.madis-fsl.org/cap) were used to evaluate the vertical profiles from MM5. There are twelve wind-profiler measurement stations from which data were available for comparison. For convenience of comparison, the wind-profiler measurements were interpolated to the MM5 vertical levels. The approach used was simple interpolation between two adjacent wind-profiler layers to the MM5 vertical level, and was limited to that reported by the profiler measurement. The focus of the comparison was to assess if MM5 was able to capture the measured vertical structure, and for this we used the observed Low Level Jet (LLJ) as an indicator. The comparison was performed for June, July and August 2002. In general it is found that MM5 captures the profiler measured vertical wind field structure reasonably well. Figure 6 displays an example of the MM5 and wind profiler comparison for the August 2002 episode at Richmond, VA and Concord, NH. MM5 predicted weaker LLJ winds compared to those based on the wind-profiler measurements. The detailed plots of this comparison are available on request from NYSDEC.

Cloud Cover – Satellite cloud image

Cloud information derived from satellite image data (www.atmos.umd.edu/~srb/gcip/webgcip.htm) were used to assess the MM5 prediction of cloud cover. The 0.5^{o} by 0.5^{o} resolution of the satellite data were interpolated into the 12km MM5 grid for comparison. The MM5 total cloud fraction was estimated by MCIP based on the MM5's low cloud, middle cloud and high cloud predictions. In general, MM5 seems to capture the satellite cloud pattern well but underestimates the satellite cloud fraction (see Figure 7a and 7b as examples), which may in part be due to the coarse resolution of the satellite cloud data.

Precipitation comparison

The monthly total observed precipitation data were constructed from 1/8-degree daily precipitation analysis data (http://data.eol.ucar.edu/codiac/dss/id=21.093) produced by Climate Prediction Center, based on 7,000-8,000 hourly/6-hourly gauge reports and radar). The MM5 monthly total precipitation was estimated from the MM5 predicted convective and non-convective rainfall and summed up for each month. In general, MM5 captured the observed spatial patterns (see examples of Figures 8a and 8b). For winter months, MM5 performed well for February (Figure 8a) but underpredicted for November. For the summer months, MM5 performed well for May and September, but no so well for June, July and August (See Figure 8b), that may reflect the summertime convective rain activities are not captured by MM5.

Calm Conditions

Calm conditions are defined as observed wind speed of zero knots and wind direction as 0^{o}. It would be useful to assess how MM5 performs under observed calm conditions, because of potential pollutant buildup that could occur under such conditions. Table 2a and 2b list the summary of the percentage of calm condition at each hour for the February and August 2002, respectively from the NWS data within the 12km domain. It is apparent from the Table that the calm conditions occur primarily during the night and early morning hours, from 23Z (7 p.m. EDT) to 15Z (11 a.m. EDT) with a peak at around 10Z (6 a.m. EDT). August had much higher percentage of calm condition than February. To assess MM5 performance, the observed and MM5 predicted wind speeds were divided into calm and non-calm according to observed wind speed. In general MM5 underpredicted the observed non-calm conditions for both February and August (Table 2a and 2b). Figure 9 displays such a comparison of the MM5 predicted wind speed to the observed wind speed under the calm and non-calm conditions for the month of August 2002. For the "calm" group, the average wind speed for MM5 varies from 1 m/s during the night and early morning hours and over 1.5 m/s during the day. MM5 is over-predicting during observed calm wind conditions. There are local minima every 3 hours, due to the surface observed wind speed nudging in MM5. In contrast under the non-calm conditions, MM5 underpredicts by about 0.5 m/s for all hours with noticeable local maximum happening at the nudging hours. The MM5 nudging process would pull predictions toward the measured data, while the underprediction of MM5 for the non-calm conditions may due to the adopted PBL scheme in this simulation.

Summary

In this study, we performed an assessment of the MM5 simulation to measured data, both with the surface measurement networks as well as with information from the vertical wind profilers and satellite cloud images. While there are no specific recommended procedures identified for this assessment, similar approaches have been used elsewhere (Dolwick 2005, Baker 2004, and Johnson 2004). Traditionally, the NWS surface measurements are used for such a comparison. Since NWS data had been used through nudging processes in developing the MM5 simulation, the comparisons should not be far removed from each other. In this study, we extended the evaluation by using CASTNet measurements that were not used in the nudging of MM5 simulation. Thus comparison with CASTNet data provides for an independent assessment and should complement the comparison with NWS data. We also compared the MM5 results with the wind profiler data and cloud data derived from satellite images to diagnose if the MM5 simulation is yielding the right dynamics in the vertical. The analyses shows that in general, the performance of the MM5 is reasonable both at the surface and in the vertical, thereby providing confidence in the use of these data in the CMAQ simulations.

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Table 1: Average bias of wind speed, wind direction, temperature, and humidity of MM5 in comparing with observed data from TDL and CASTNet networks for each *month* in 2002

Month	Wind Speed (TDL / CASTNet)	Wind Direction (TDL / CASTNet)	Temperature (TDL / CASTNet)	Humidity TDL
January	-0.53 / 0.34	3.12 / 2.54	-1.18 / -1.25	0.45
February	-0.56 / 0.31	3.31 / 0.88	-1.00 / -0.65	0.48
March	-0.59 / 0.31	3.48 / 1.93	-0.72 / -0.35	0.52
April	-0.55 / 0.38	3.61 / 2.49	-0.48 / -0.52	0.52
May	-0.52 / 0.44	3.53 / 2.33	-0.18 / 0.67	-0.02
June	-0.56 / 0.28	3.89 / 3.33	-0.12 / 1.03	-0.33
July	-0.58 / 0.31	3.62 / 1.44	-0.34 / 0.34	-0.55
August	-0.61 / 0.24	2.74 / 2.34	-0.42 / 0.32	-0.23
September	-0.54 / 0.30	3.31 / 3.01	-0.54 / 0.76	0.03
October	-0.56 / 0.32	2.81 / 1.39	-0.79 / -0.56	0.15
November	-0.57 / 0.37	2.28 / 2.35	-1.35 / -1.25	0.34
December	-0.59 / 0.39	3.41 / 2.69	-1.20 / -1.17	0.34

Table 2a: Measured calm and non-calm occurrences over the modeling domain during *February* 2002 based on NWS data

Hour (UTC)	Obs Not Calm	Obs Calm	Obs Total	Percent Calm (%)	TDL Avg WinSpd Not Calm	MM5 Avg WinSpd Not Calm
0	17266	2711	19977	13.6	4.28	3.84
1	17270	3324	20594	16.1	4.30	3.82
2	17051	3421	20472	16.7	4.30	3.75
3	16878	3499	20377	17.2	4.32	3.79
4	16401	3513	19914	17.6	4.33	3.78
5	16127	3532	19659	18.0	4.28	3.75
6	15914	3645	19559	18.6	4.26	3.81
7	15841	3703	19544	18.9	4.23	3.75
8	15784	3783	19567	19.3	4.20	3.71
9	15752	3857	19609	19.7	4.19	3.73
10	15630	3932	19562	20.1	4.18	3.70
11	15911	4020	19931	**20.2**	4.16	3.72
12	16451	4104	20555	20.0	4.21	3.82
13	16844	3891	20735	18.8	4.28	3.86
14	17779	2945	20724	14.2	4.62	4.00
15	18741	1822	20563	8.9	4.98	4.37
16	18740	1337	20077	6.7	5.21	4.66
17	19079	1106	20185	5.5	5.38	4.83
18	19158	954	20112	4.7	5.46	4.93
19	19380	880	20260	4.3	5.49	4.91
20	19545	883	20428	4.3	5.47	4.75
21	19648	859	20507	4.2	5.33	4.46
22	19576	1027	20603	5.0	5.03	4.02
23	18941	1772	20713	8.6	4.57	3.79

Table 2b: Measured calm and non-calm occurrences over the modeling domain during *August* 2002 based on NWS data

Hour (UTC)	Obs Not Calm	Obs Calm	Obs Total	Percent Calm (%)	TDL Avg WinSpd Not Calm	MM5 Avg WinSpd Not Calm
0	18209	3924	22133	17.7	3.14	2.56
1	16531	6026	22557	26.7	2.85	2.45
2	15604	6929	22533	30.8	2.79	2.33
3	14983	7245	22228	32.6	2.81	2.33
4	14309	7540	21849	34.5	2.80	2.28
5	14073	7735	21808	35.5	2.79	2.24
6	13934	7949	21883	36.3	2.78	2.29
7	13792	8040	21832	36.8	2.76	2.23
8	13542	8273	21815	37.9	2.75	2.22
9	13542	8385	21927	38.2	2.74	2.28
10	13708	8591	22299	**38.5**	2.72	2.25
11	14139	8693	22832	38.1	2.74	2.25
12	15297	7690	22987	33.5	2.89	2.33
13	17336	5192	22528	23.0	3.14	2.41
14	18522	3439	21961	15.7	3.39	2.63
15	18755	2617	21372	12.2	3.60	2.98
16	19169	2015	21184	9.5	3.79	3.15
17	19555	1617	21172	7.6	3.97	3.22
18	19982	1430	21412	6.7	4.08	3.38
19	20149	1389	21538	6.4	4.16	3.43
20	20565	1288	21853	5.9	4.14	3.41
21	20518	1383	21901	6.3	4.06	3.41
22	20672	1556	22228	7.0	3.88	3.12
23	20231	2292	22523	10.2	3.56	2.74

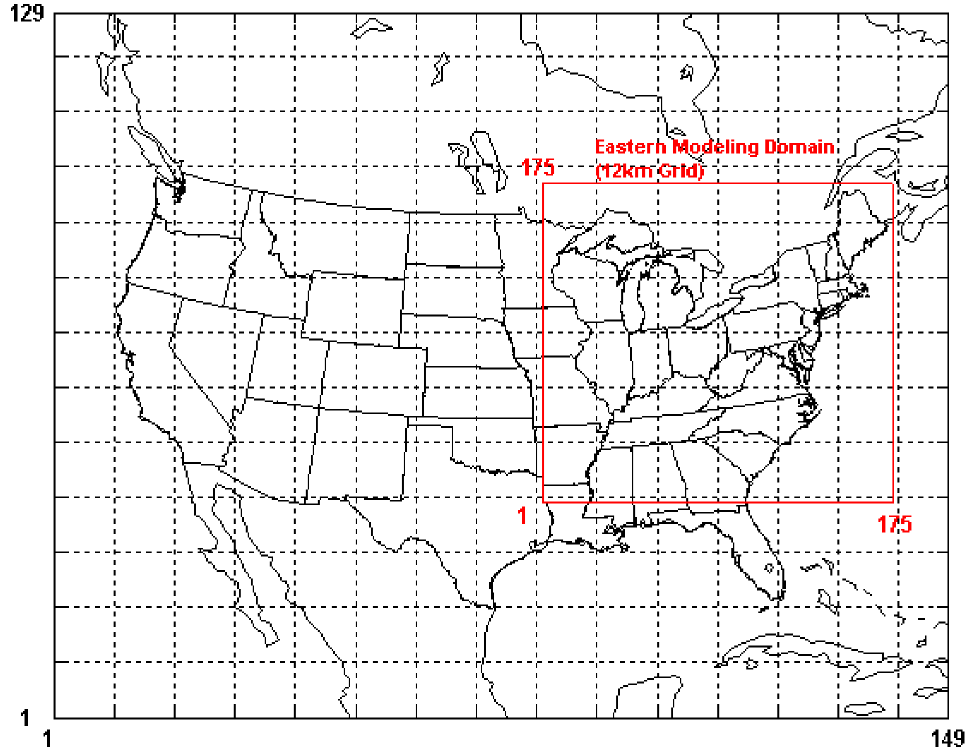
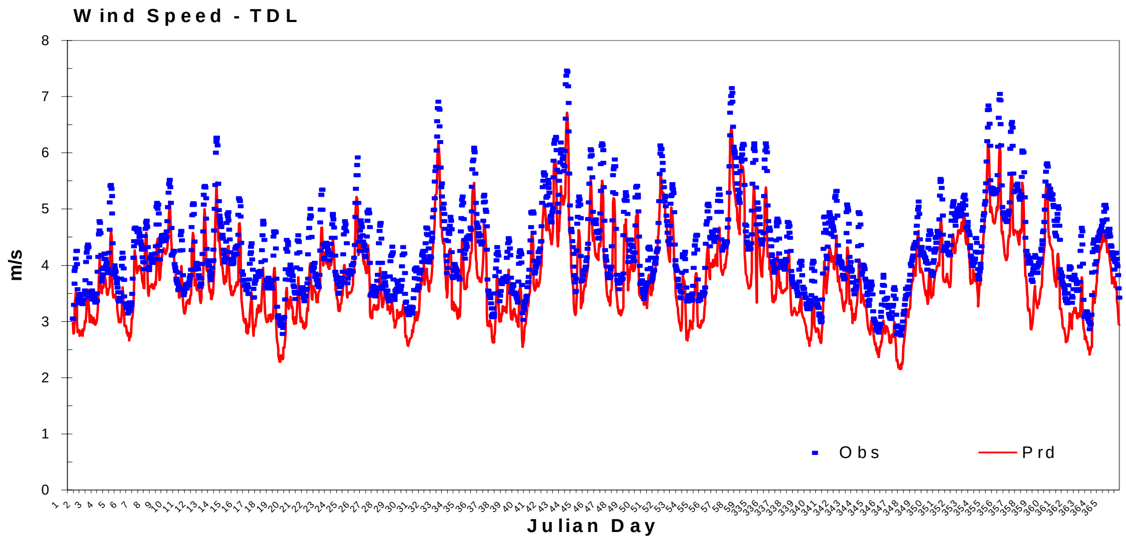


Figure 1: OTC MM5 modeling domain with areal extent of 12km and 36km grids



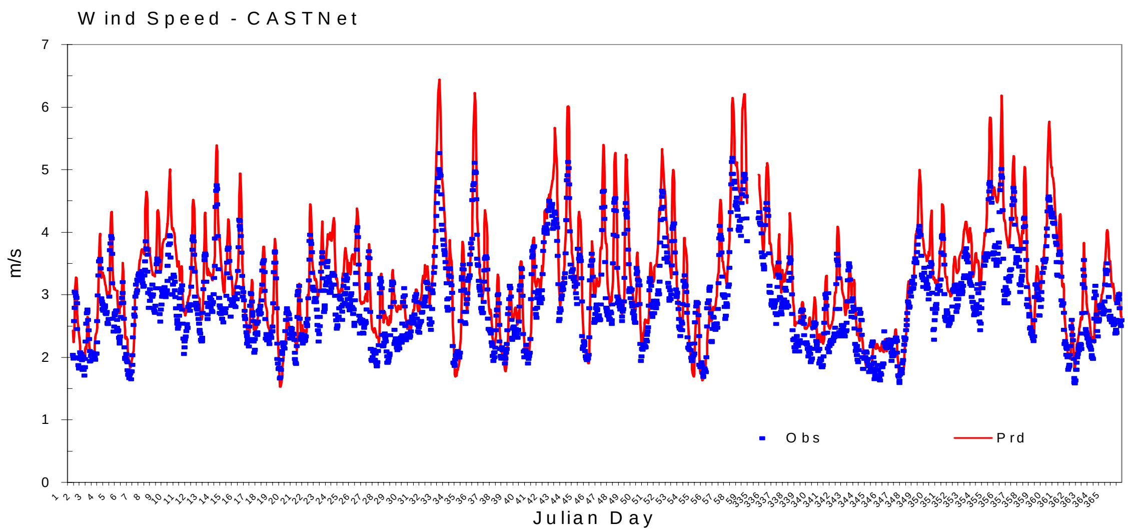
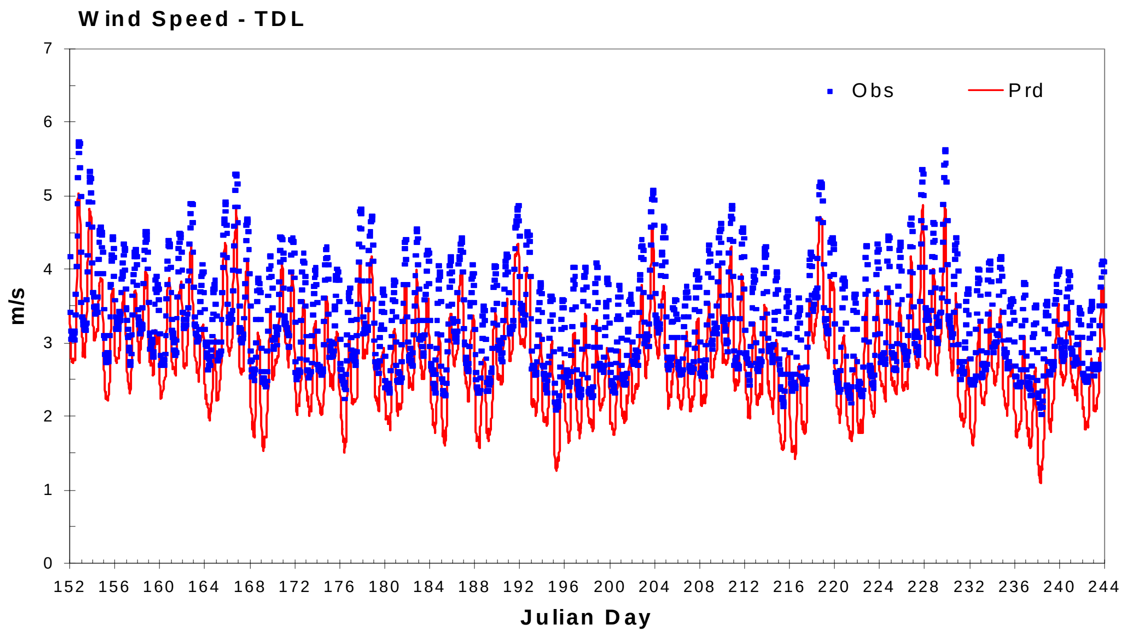


Figure 2a: Wind speed comparison for winter months - January, February, and December, 2002. The upper panel is the comparison between MM5 and NWS data, and the lower panel is the comparison between MM5 and CASTNet data.



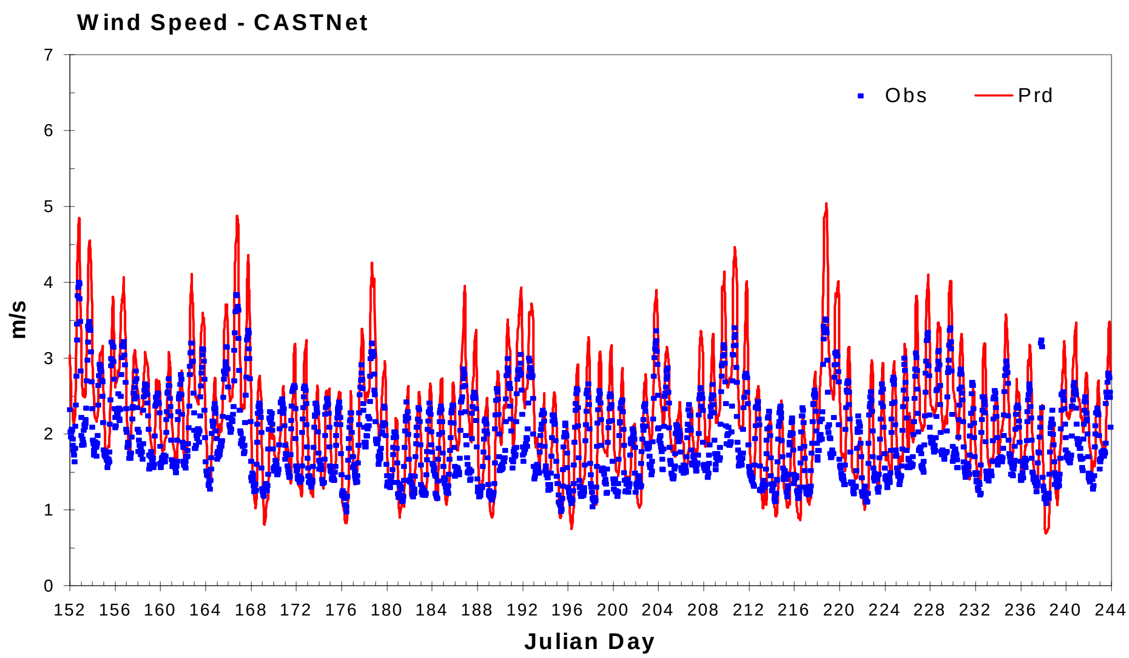
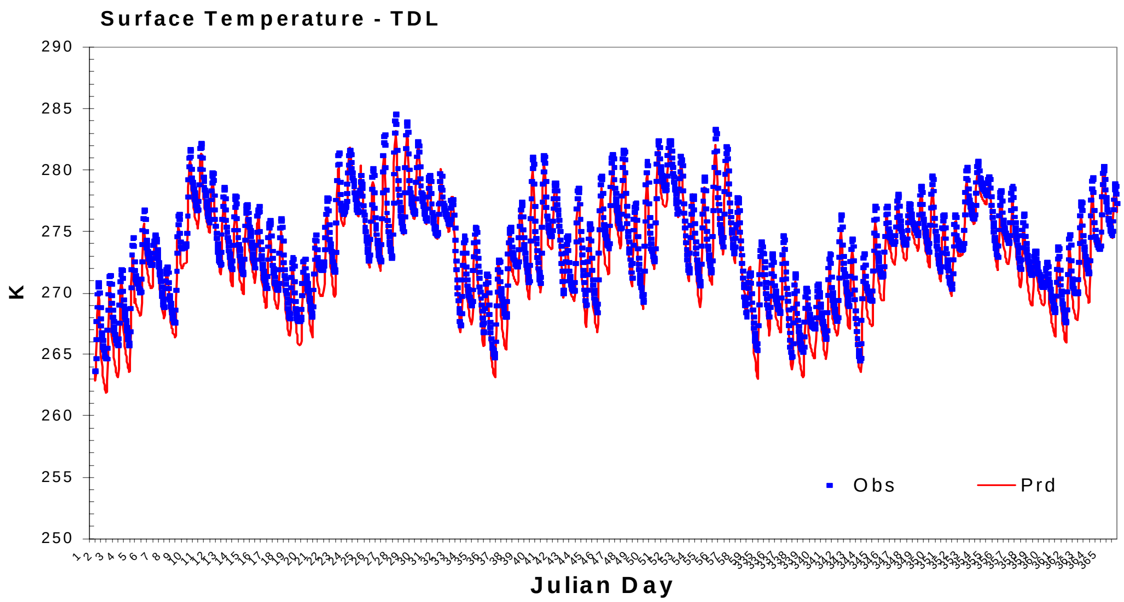


Figure 2b: Wind speed comparison for summer months - June, July, and August, 2002. The upper panel is the comparison between MM5 and NWS data, and the lower panel is the comparison between MM5 and CASTNet data.



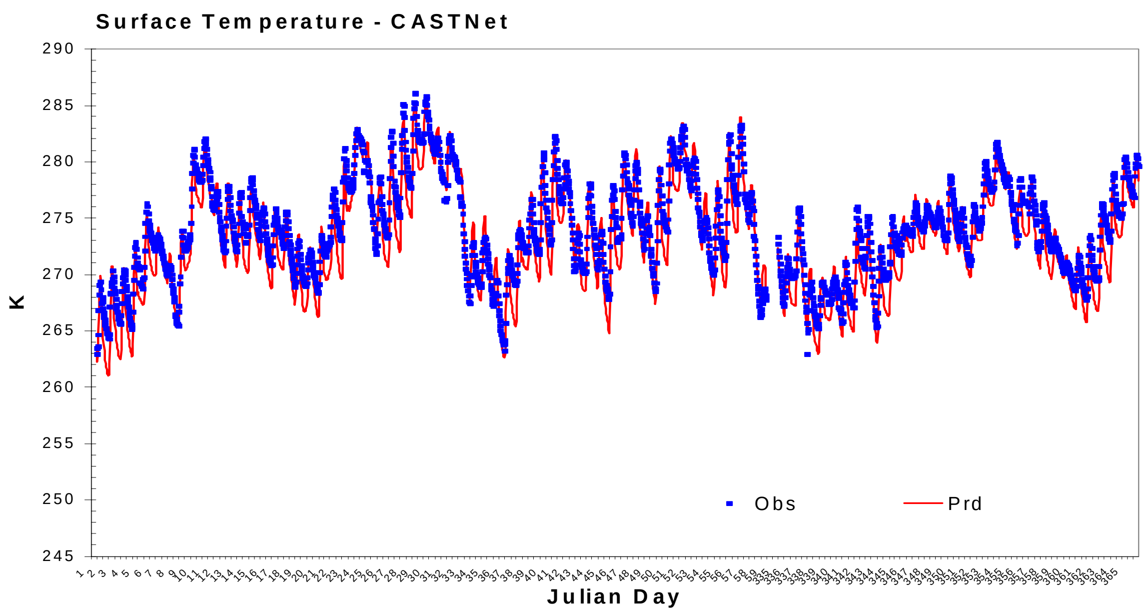
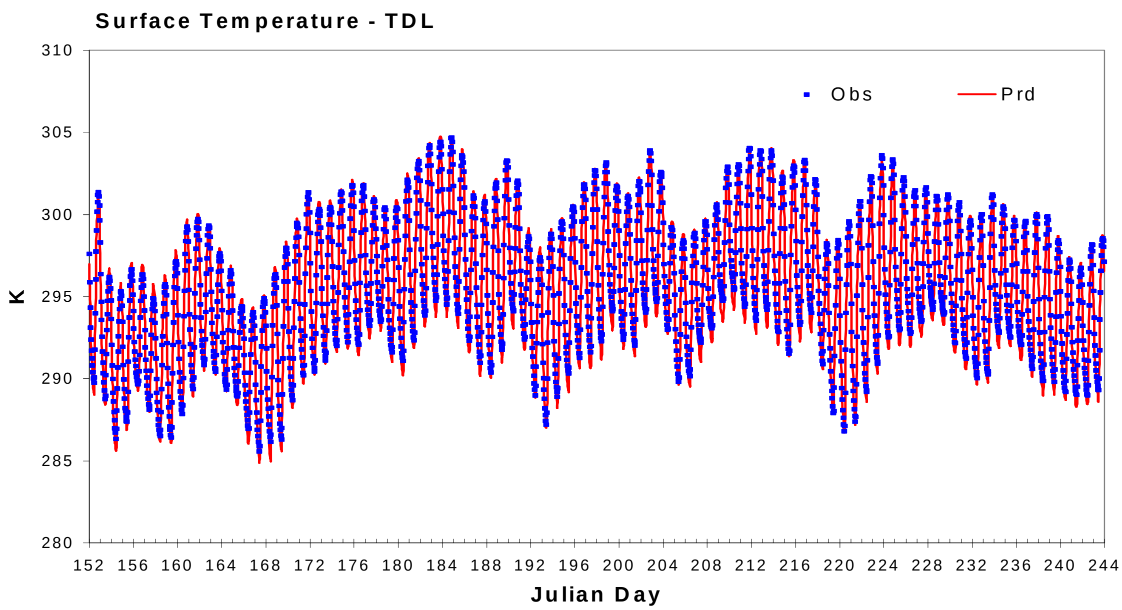


Figure 3a: Temperature comparison for winter months - January, February, and December, 2002. Upper panel is the comparison between MM5 and NWS data, and the lower panel is the comparison between MM5 and CASTNet data.



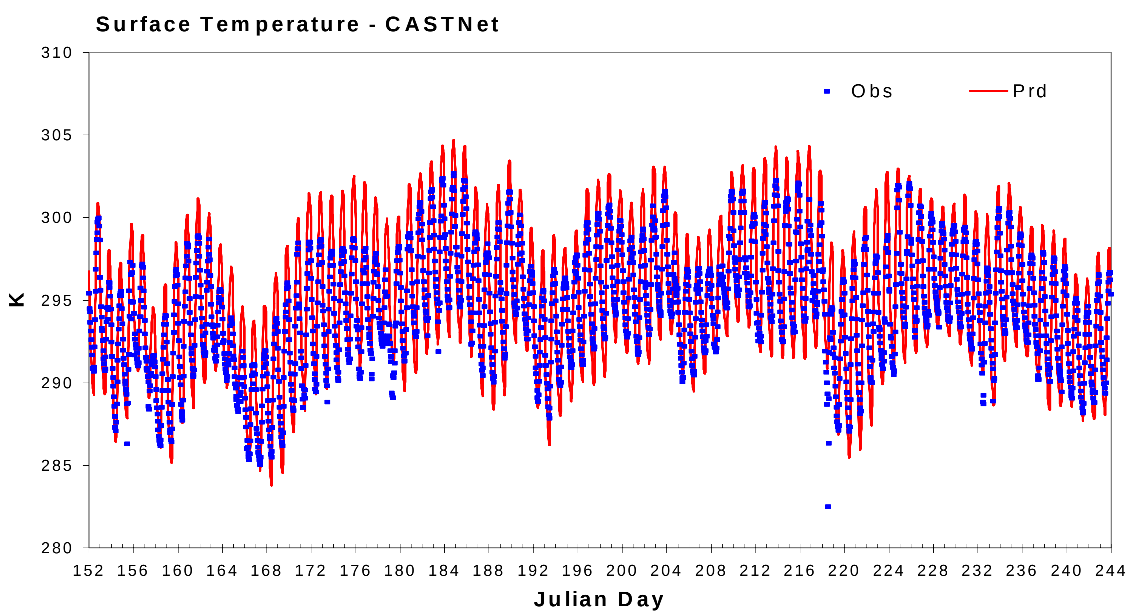
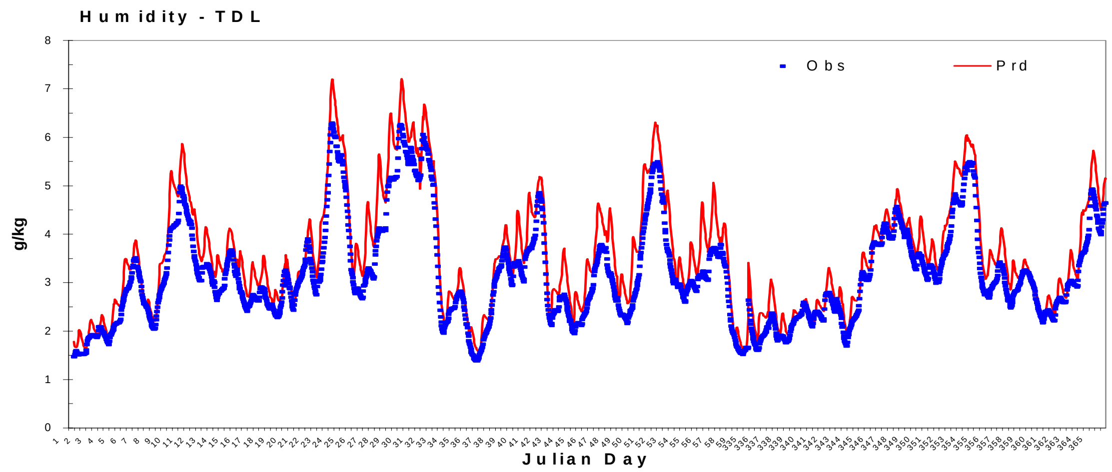


Figure 3b: Temperature comparison for summer months - June, July, and August, 2002. The upper panel is the comparison between MM5 and NWS data, and the lower panel is thew comparison between MM5 and CASTNet data.



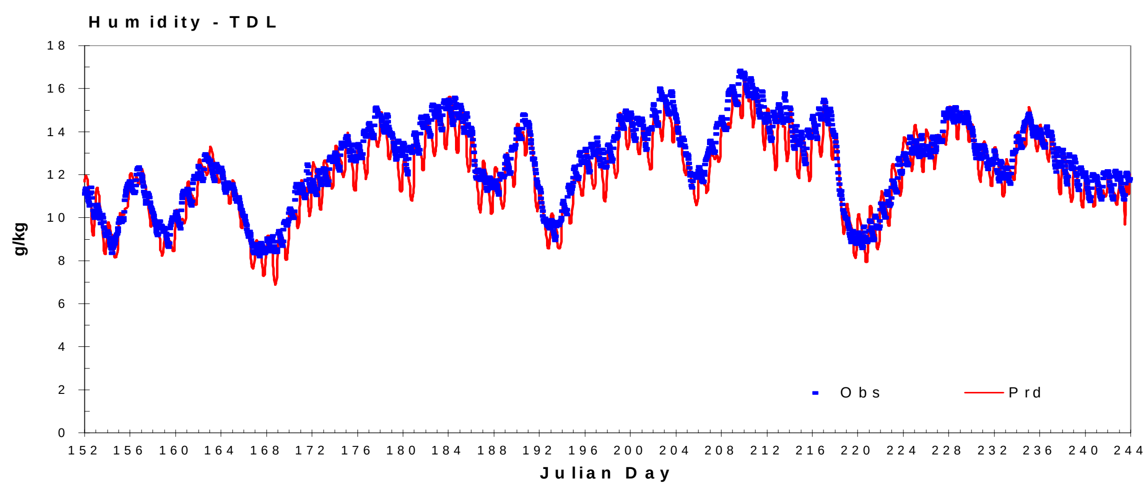
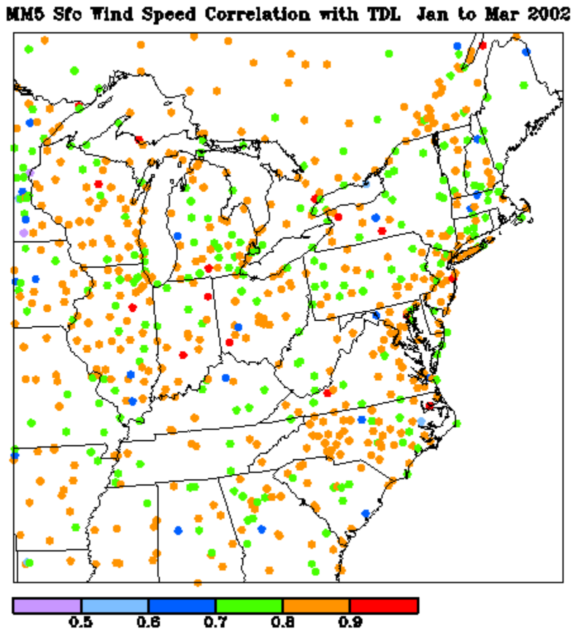


Figure 4: Humidity comparison for winter months - January, February, and December, 2002, (top panel), and summer months - June, July, and August, 2002 (bottom panel).



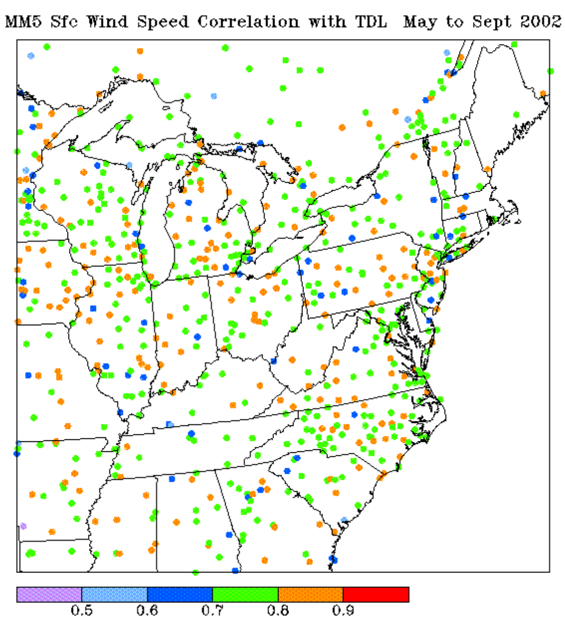


Figure 5a: Spatial correlation estimates between MM5 and NWS data for wind speed for winter months – January to March, 2002 (top panel) and summer months - May to September, 2002 (bottom panel).

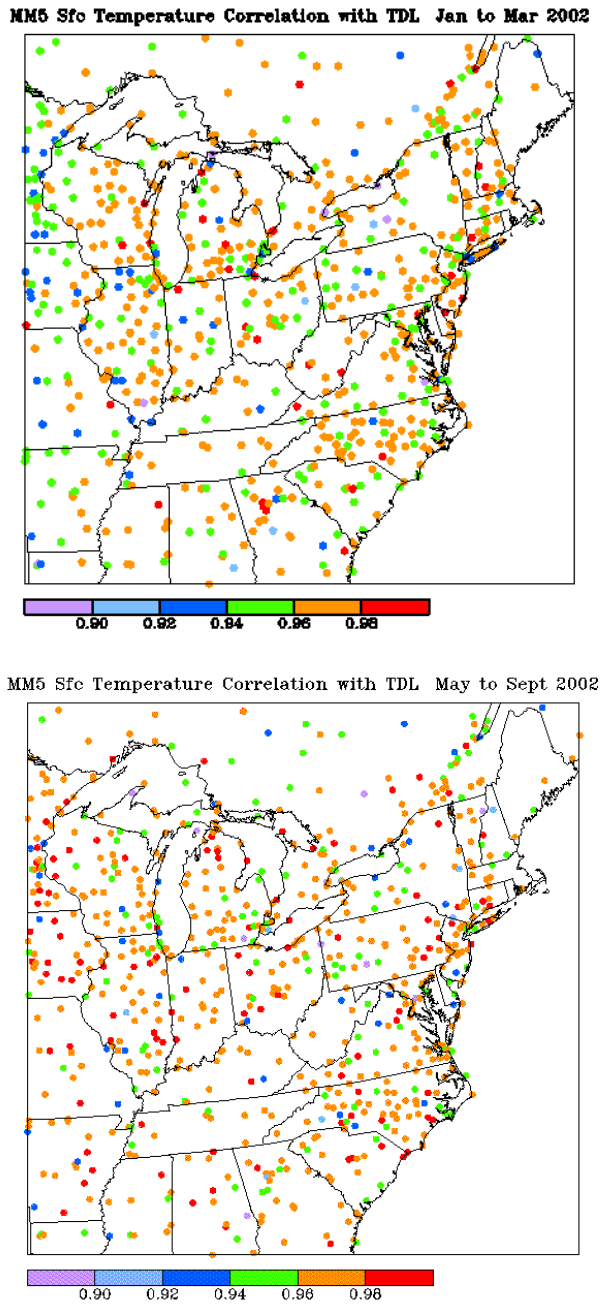


Figure 5b: Spatial distribution of correlation coefficients for Temperature between MM5 and NWS data for winter months – January to March, 2002 (top panel), and summer months - May to September, 2002 (bottom panel).

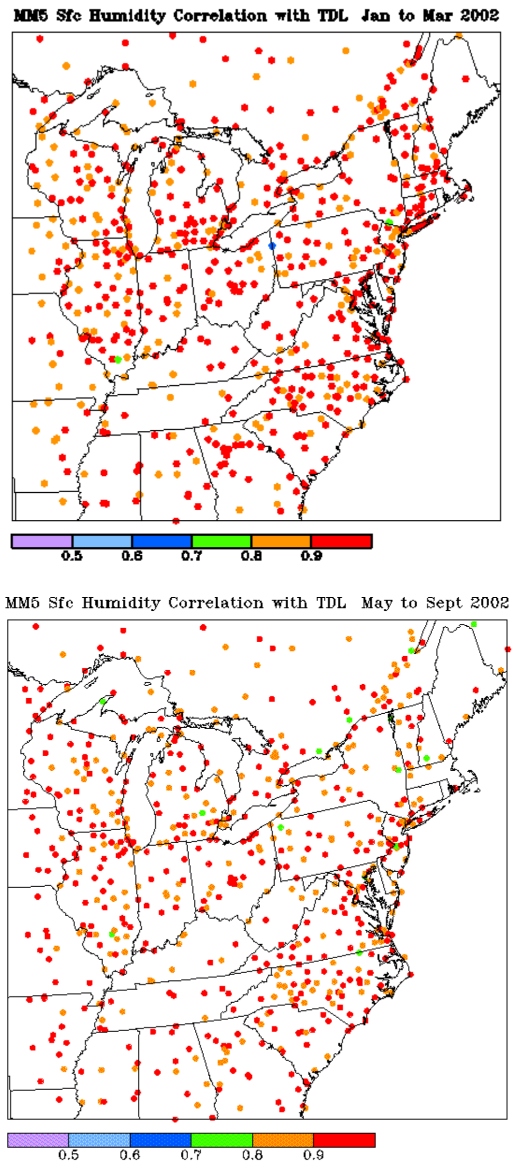
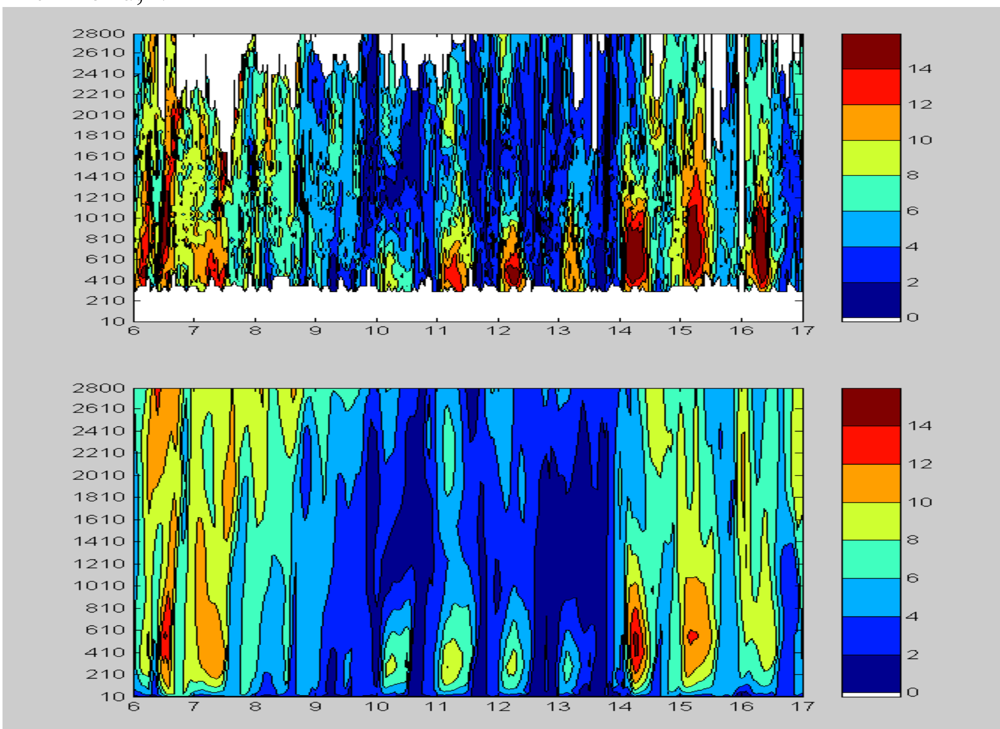


Figure 5c: Spatial distribution of correlation coefficients for Humidity between MM5 and NWS data for winter months – January to March, 2002 (top panel), and summer months - May to September, 2002 (bottom panel).

Richmond, VA



Concord, NH

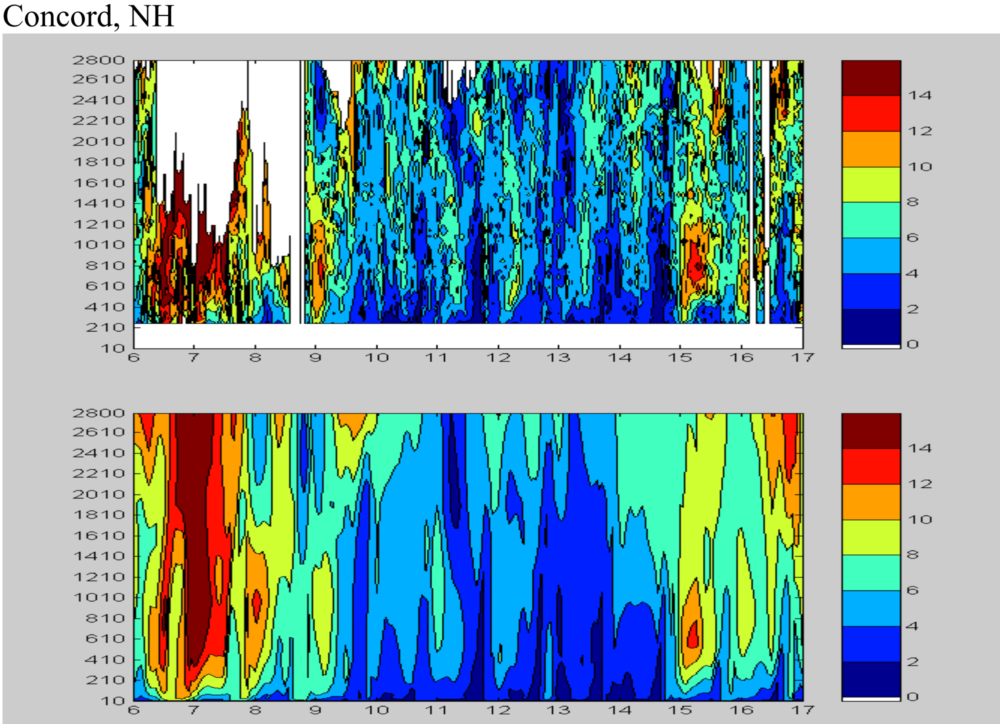


Figure 6: MM5 and Wind profiler comparison for August 6 to 17, 2002 at Richmond, VA and Concord, NH. The upper and lower panes at each station are for MM5 and profiler, respectively. The abscissa represents day and the ordinate the height (m).

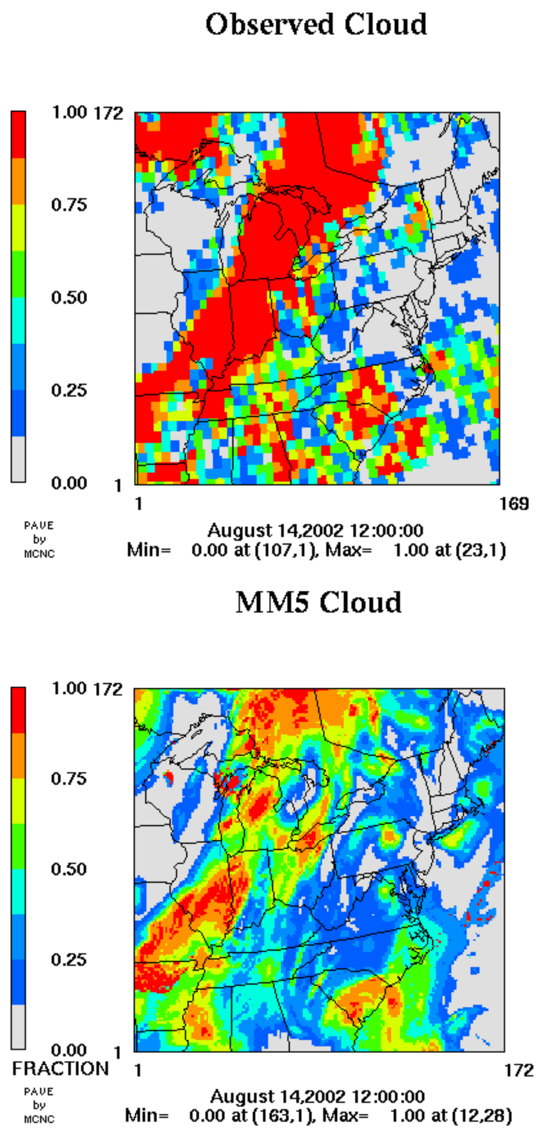


Figure 7a: Observed Satellite and MM5 cloud images for *August* 14, 2002 at 0700 EST

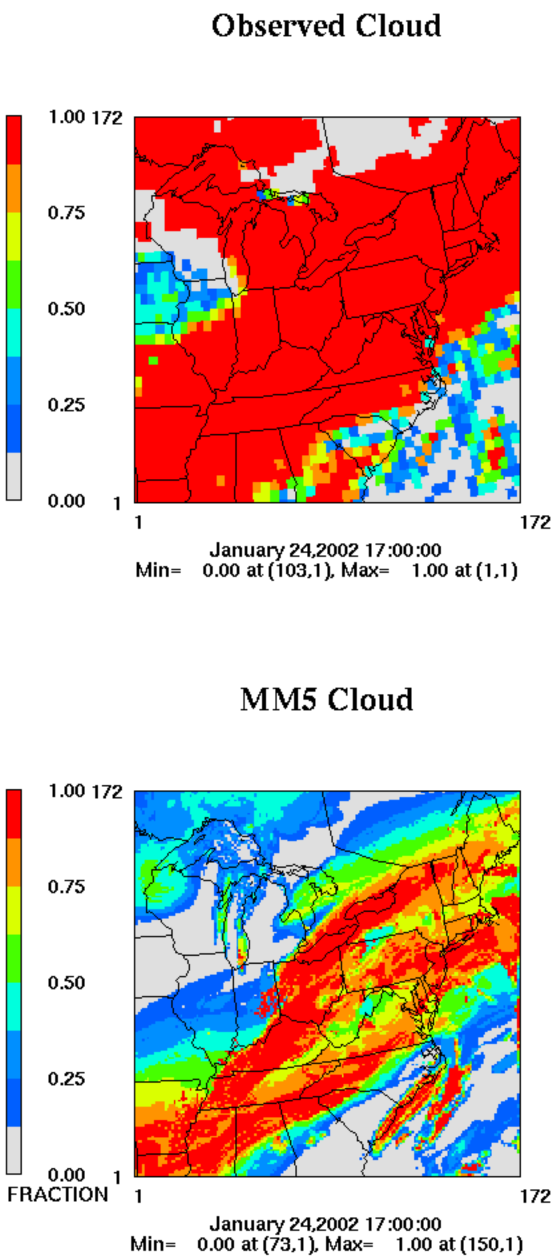


Figure 7b: Observed Satellite and MM5 cloud images for *January* 24, 2002 at 1200 EST

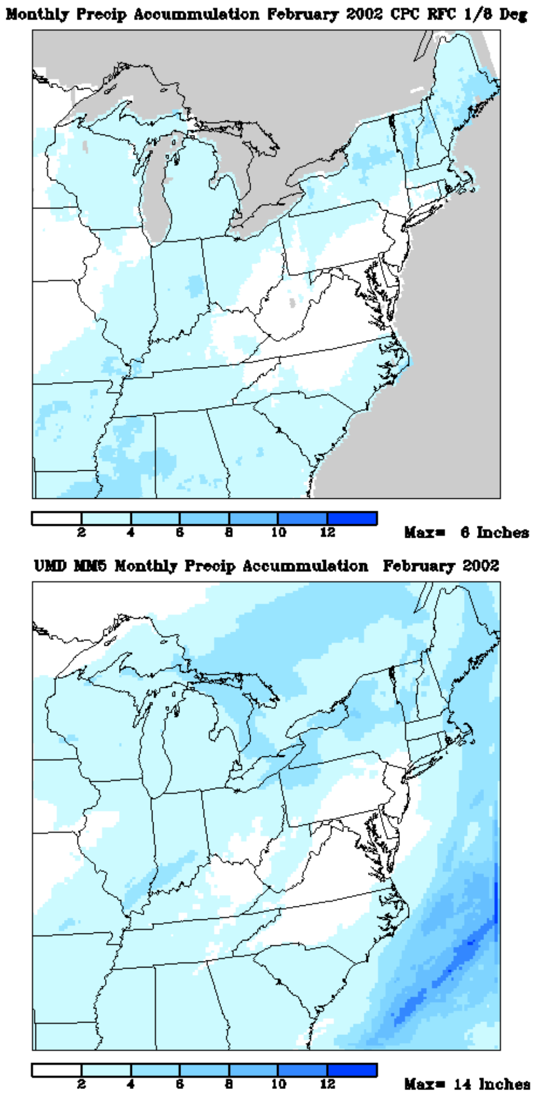
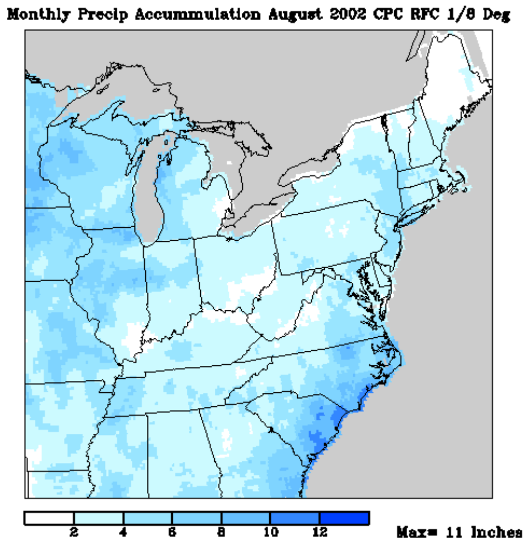


Figure 8a: Measured and MM5 predicted precipitation over the domain for the month of *February* 2002.



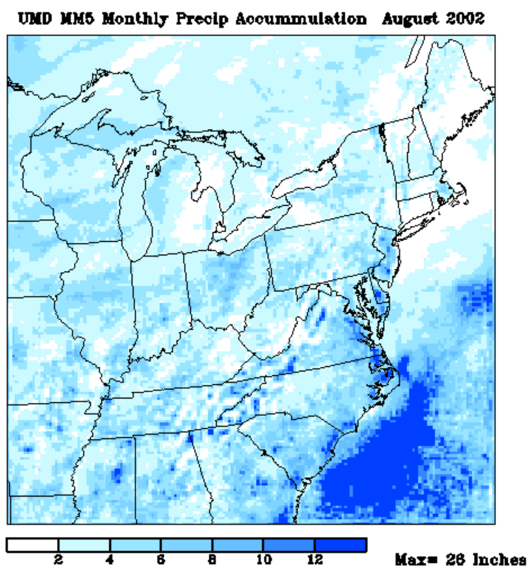


Figure 8b: Measured and MM5 predicted precipitation over the domain for the month of *August* 2002

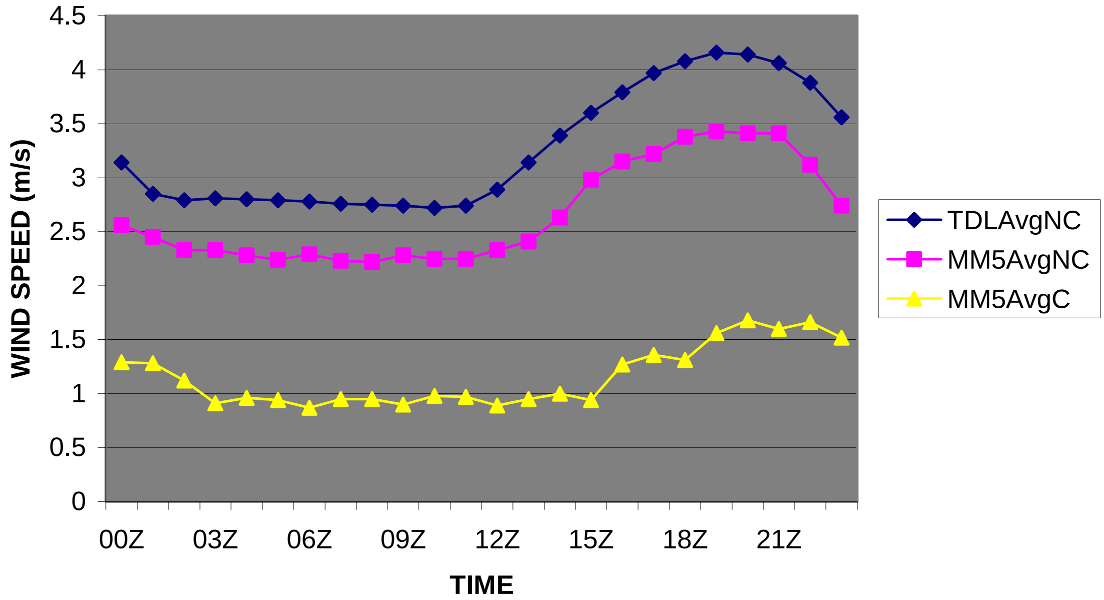


Figure 9: Comparison of averaged wind speed between MM5 and observed under calm (C) and non-calm (NC) conditions.

TSD-2a

Processing of 2002 Biogenic Emissions for OTC / MANE-VU Regional and Urban Modeling

Bureau of Air Quality Analysis and Research
Division of Air Resources
New York State Department of Environmental Conservation
Albany, NY 12233

September 19, 2006

Biogenic emissions for the time period from January 1, 2002 – December 31, 2002 were calculated by NYSDEC using the Biogenic Emissions Inventory System (BEIS) version 3.12 integrated within SMOKE2.1. General information about BEIS is available at http://www.epa.gov/AMD/biogen.html while documentation about biogenic emissions processing within SMOKE2.1 is available at http://cf.unc.edu/cep/empd/products/smoke/version2.1/html/ch06s10.html and http://cf.unc.edu/cep/empd/products/smoke/version2.1/html/ch06s17.html . Note that the SMOKE documentation refers to BEIS3.09 and has not yet been updated for BEIS3.12. This affects the number of species modeled as well as the use of different speciation profiles. However, the general processing approach has not changed from BEIS3.09 to BEIS3.12. In short, this processing approach is as follows and was utilized by NYSDEC for its biogenic emission processing for 8-hr ozone and $PM_{2.5}$ modeling:

1. **Normbeis3** reads gridded land use data and emissions factors and produces gridded normalized biogenic emissions for 34 species/compounds. The gridded land use includes 230 different land use types. Both summer and winter emissions factors for each species/compound are provided for each of the 230 land use types. On output, **Normbeis3** generates a file `B3GRD` which contains gridded summer and winter emission fluxes for the modeling domain that are normalized to 30 °C and a photosynthetic active radiation (PAR) of 1000 μmol/m^2s. In addition, gridded summer and winter leaf area indices (LAI) are also written to `B3GRD`.

2. **Tmpbeis3** reads the gridded, normalized emissions file `B3GRD` and meteorological data from the MCIP-processed MM5 meteorological fields generated by the University of Maryland for MANE-VU/OTC modeling. Specifically, the following MM5/MCIP meteorological variables are used by **Tmpbeis3** to compute hour-specific, gridded biogenic emissions from the normalized emission fluxed contained in `B3GRD`: layer-1 air temperature ("TA"), layer-1 pressure ("PRES"), total incoming solar radiation at the surface ("RGRND"), and convective ("RC") and non-convective ("RN") rainfall. Additionally, the emissions for the 34 species/compounds modeled by

BEIS3.12 are converted to CO, NO, and the CB-IV VOC species utilized in CMAQ via the use of the BEIS3.12-CB-IV speciation profile. In adition, an optional seasonal switch file, `BIOSEASON`, was utilized to decide whether to use summer or winter emissions factors for any given grid cell on any given day. This file was generated by the SMOKE2.1 utility **Metscan** based on MM5 layer-1 air temperatures to determine the date of the last spring frost and first fall frost at each grid cell. Summer emission factors are used by **Tmpbeis3** for the time period between the last spring frost and first fall frost at any given grid cell, and winter emission factors are used for the remaining time period. Documentation for the **Metscan** utility is available at http://cf.unc.edu/cep/empd/products/smoke/version2.1/html/ch05s07.html . An animated GIF file showing the `BIOSEASON` file used by NYSDEC can be found at ftp://ftp.dec.state.ny.us/dar/air_research/chogrefe/biog_reports/b3season_movie.gif

3. For reporting purposes, the hourly, speciated, gridded emissions were aggregated to the county level for each day. For any given grid cell, emissions are distributed among the counties intersecting this grid cell in proportion to the area of each of these counties within the grid cell. The area gridding surrogates needed for this aggregration are based on a file obtained from EPA via http://www.epa.gov/ttn/chief/emch/spatial/new/bgpro.12km_041604.us.gz followed by windowing for the MANE-VU/OTC modeling domain.

Table 1 County and State totals of estimated biogenic emissions (tpy)

State	FIPS	County	NO [TPY]	CO [TPY]	VOC [TPY]
Connecticut	009001	Fairfield	52	894	7150
	009003	Hartford	88	915	8537
	009005	Litchfield	98	1261	12221
	009007	Middlesex	54	615	5587
	009009	New Haven	80	876	7544
	009011	New London	74	906	8960
	009013	Tolland	55	651	5999
	009015	Windham	60	772	8019
Connecticut		**TOTAL**	560	6889	64017
Deleware	010001	Kent	308	1354	15912
	010003	New Castle	143	875	8834
	010005	Sussex	539	2045	21595
Deleware		**TOTAL**	990	4274	46342
DC	011001	Washington	30	150	1726
DC		**TOTAL**	30	150	1726
Maine	023001	Androscoggin	35	885	8204
	023003	Aroostook	741	15531	140877
	023005	Cumberland	49	1298	11528
	023007	Franklin	72	3269	32111
	023009	Hancock	66	2950	27090
	023011	Kennebec	73	1425	12849
	023013	Knox	30	689	6680
	023015	Lincoln	32	849	8072
	023017	Oxford	79	3224	34189
	023019	Penobscot	211	7249	63128
	023021	Piscataquis	146	8638	80748
	023023	Sagadahoc	37	526	4504
	023025	Somerset	173	8413	77850
	023027	Waldo	57	1833	18125
	023029	Washington	144	6459	58678
	023031	York	73	1698	15571
Maine		**TOTAL**	2018	64936	600203
Maryland	024001	Allegany	63	661	8664
	024003	Anne Arundel	79	945	12786
	024005	Baltimore	166	847	8102
	024009	Calvert	59	798	10048

	024011	Caroline	202	648	7907
	024013	Carroll	189	822	7853
	024015	Cecil	86	654	10093
	024017	Charles	78	1079	15042
	024019	Dorchester	134	829	10337
	024021	Frederick	204	1123	10964
	024023	Garrett	102	930	11391
	024025	Harford	141	911	9053
	024027	Howard	75	562	4460
	024029	Kent	177	498	4761
	024031	Montgomery	134	813	6786
	024033	Prince Georges	87	732	10214
	024035	Queen Annes	222	684	7146
	024037	St Marys	99	886	10793
	024039	Somerset	58	498	5796
	024041	Talbot	131	495	5225
	024043	Washington	112	781	7538
	024045	Wicomico	124	796	10304
	024047	Worcester	158	1121	13079
	024510	Baltimore	54	235	1762
Maryland		**TOTAL**	2934	18350	210104
Massachusetts	025001	Barnstable	261	668	5905
	025003	Berkshire	73	1182	11029
	025005	Bristol	107	753	7142
	025007	Dukes	115	252	1728
	025009	Essex	55	794	7128
	025011	Franklin	61	1031	9424
	025013	Hampden	51	904	9201
	025015	Hampshire	61	820	7056
	025017	Middlesex	68	1085	11630
	025019	Nantucket	56	159	1362
	025021	Norfolk	49	615	5513
	025023	Plymouth	170	1197	11876
	025025	Suffolk	26	177	1351
	025027	Worcester	103	1955	23612
Massachusetts		**TOTAL**	1257	11594	113957
New Hampshire	033001	Belknap	25	693	6915
	033003	Carroll	40	1512	14981
	033005	Cheshire	49	1019	10099
	033007	Coos	72	3239	33668
	033009	Grafton	91	2442	23151
	033011	Hillsborough	48	1337	14503
	033013	Merrimack	48	1314	13566
	033015	Rockingham	39	1120	10080
	033017	Strafford	25	686	6617
	033019	Sullivan	45	943	8314

New Hampshire		**TOTAL**	482	14306	141894
New Jersey	034001	Atlantic	135	1225	18890
	034003	Bergen	37	239	2455
	034005	Burlington	151	1827	25255
	034007	Camden	68	491	7751
	034009	Cape May	90	566	7763
	034011	Cumberland	122	773	10699
	034013	Essex	57	199	1831
	034015	Gloucester	119	556	8444
	034017	Hudson	26	125	701
	034019	Hunterdon	81	706	5743
	034021	Mercer	85	475	4889
	034023	Middlesex	98	456	5267
	034025	Monmouth	125	1152	15423
	034027	Morris	63	604	7288
	034029	Ocean	128	1871	27063
	034031	Passaic	41	339	3841
	034033	Salem	123	535	8304
	034035	Somerset	49	518	5548
	034037	Sussex	67	718	7768
	034039	Union	21	168	2191
	034041	Warren	125	517	4505
New Jersey		**TOTAL**	1813	14058	181618
New York	036001	Albany	59	730	6253
	036003	Allegany	129	1218	9526
	036005	Bronx	25	100	657
	036007	Broome	107	879	7861
	036009	Cattaraugus	148	1654	13540
	036011	Cayuga	227	986	7928
	036013	Chautauqua	202	1260	8144
	036015	Chemung	88	521	3911
	036017	Chenango	149	1120	7833
	036019	Clinton	138	1631	13341
	036021	Columbia	96	896	8484
	036023	Cortland	101	616	4280
	036025	Delaware	133	1672	13435
	036027	Dutchess	90	1096	10288
	036029	Erie	165	1127	6898
	036031	Essex	94	2547	20888
	036033	Franklin	228	2337	17197
	036035	Fulton	90	764	5275
	036037	Genesee	201	645	3993
	036039	Greene	47	886	8182
	036041	Hamilton	78	2092	16056
	036043	Herkimer	175	1783	12846
	036045	Jefferson	251	1754	12503

	036047	Kings	15	60	309
	036049	Lewis	154	1693	12116
	036051	Livingston	222	888	6048
	036053	Madison	149	1049	7528
	036055	Monroe	223	990	6237
	036057	Montgomery	106	579	4715
	036059	Nassau	81	408	2859
	036061	New York	16	76	473
	036063	Niagara	335	940	5182
	036065	Oneida	214	1515	10021
	036067	Onondaga	171	929	6259
	036069	Ontario	178	767	6024
	036071	Orange	110	1065	13024
	036073	Orleans	195	635	3314
	036075	Oswego	119	1277	7911
	036077	Otsego	157	1190	7958
	036079	Putnam	32	473	5243
	036081	Queens	20	105	543
	036083	Rensselaer	96	894	7316
	036085	Richmond	47	173	1292
	036087	Rockland	26	300	4006
	036089	St. Lawrence	376	3876	28960
	036091	Saratoga	76	1125	9010
	036093	Schenectady	39	377	3032
	036095	Schoharie	95	737	5496
	036097	Schuyler	87	438	3193
	036099	Seneca	127	438	3305
	036101	Steuben	267	1475	12085
	036103	Suffolk	368	1328	12886
	036105	Sullivan	76	1325	12538
	036107	Tioga	102	730	5400
	036109	Tompkins	96	576	4128
	036111	Ulster	82	1493	15714
	036113	Warren	46	1396	11568
	036115	Washington	183	1109	8355
	036117	Wayne	270	920	5940
	036119	Westchester	35	549	5347
	036121	Wyoming	194	720	3813
	036123	Yates	107	507	4017
New York		**TOTAL**	8313	63436	492483
Pennsylvania	042001	Adams	186	892	8926
	042003	Allegheny	182	948	6727
	042005	Armstrong	108	940	9955
	042007	Beaver	69	600	4895
	042009	Bedford	128	1249	14127
	042011	Berks	280	1377	14146
	042013	Blair	91	729	7579

042015	Bradford	224	1265	9423
042017	Bucks	144	954	8399
042019	Butler	149	1032	8602
042021	Cambria	128	805	6545
042023	Cameron	25	627	7563
042025	Carbon	53	585	8121
042027	Centre	158	1344	16886
042029	Chester	264	1176	10474
042031	Clarion	85	848	10743
042033	Clearfield	149	1368	13267
042035	Clinton	71	1230	18191
042037	Columbia	106	802	9080
042039	Crawford	204	1297	10839
042041	Cumberland	193	816	9505
042043	Dauphin	116	799	8502
042045	Delaware	35	410	3250
042047	Elk	49	949	8921
042049	Erie	199	1107	8273
042051	Fayette	156	1087	9277
042053	Forest	26	577	7122
042055	Franklin	271	1057	10296
042057	Fulton	93	744	9341
042059	Greene	91	830	6966
042061	Huntingdon	135	1093	12606
042063	Indiana	144	1078	9156
042065	Jefferson	101	865	7362
042067	Juniata	79	588	8263
042069	Lackawanna	58	586	5569
042071	Lancaster	464	1299	9565
042073	Lawrence	114	503	3755
042075	Lebanon	155	623	5827
042077	Lehigh	149	594	6040
042079	Luzerne	75	1013	13215
042081	Lycoming	152	1457	16633
042083	Mc Kean	57	1044	7113
042085	Mercer	175	865	7114
042087	Mifflin	107	620	7508
042089	Monroe	75	773	8856
042091	Montgomery	106	812	6736
042093	Montour	85	321	3306
042095	Northampton	144	506	4416
042097	Northumberland	92	570	6340
042099	Perry	113	804	10216
042101	Philadelphia	29	194	1420
042103	Pike	37	757	9946
042105	Potter	89	1129	9027
042107	Schuylkill	123	1050	15001
042109	Snyder	88	538	6373

	042111	Somerset	221	1251	11228
	042113	Sullivan	45	684	5112
	042115	Susquehanna	126	978	6448
	042117	Tioga	176	1313	10942
	042119	Union	71	541	6435
	042121	Venango	72	855	9086
	042123	Warren	76	1031	7352
	042125	Washington	166	1068	7429
	042127	Wayne	89	862	5954
	042129	Westmoreland	199	1297	10589
	042131	Wyoming	60	551	4634
	042133	York	366	1393	12758
Pennsylvania		**TOTAL**	8645	59945	585271
Rhode Island	044001	Bristol	40	90	441
	044003	Kent	41	328	3471
	044005	Newport	37	183	1646
	044007	Providence	39	591	6901
	044009	Washington	54	572	6775
Rhode Island		**TOTAL**	211	1764	19233
Vermont	050001	Addison	186	922	6274
	050003	Bennington	43	896	7349
	050005	Caledonia	58	1149	10239
	050007	Chittenden	74	606	3633
	050009	Essex	61	1315	11795
	050011	Franklin	208	971	5927
	050013	Grand Isle	50	490	3506
	050015	Lamoille	36	727	5627
	050017	Orange	57	1182	10120
	050019	Orleans	120	1570	12842
	050021	Rutland	102	1257	9867
	050023	Washington	47	1099	9502
	050025	Windham	42	1232	10898
	050027	Windsor	57	1330	10796
Vermont		**TOTAL**	1142	14745	118376
Virginia	051001	Accomack	187	959	9472
	051003	Albemarle	140	1246	12533
	051005	Alleghany	35	522	7369
	051007	Amelia	70	915	10717
	051009	Amherst	80	905	10823
	051011	Appomattox	76	830	10447
	051013	Arlington	17	64	531
	051015	Augusta	135	1049	13291
	051017	Bath	46	771	11636
	051019	Bedford	189	1279	13052
	051021	Bland	41	515	7097

051023	Botetourt	74	780	10211
051025	Brunswick	98	1458	18254
051027	Buchanan	32	722	9557
051029	Buckingham	76	1287	18830
051031	Campbell	112	1078	12933
051033	Caroline	73	1173	16020
051035	Carroll	132	634	6885
051036	Charles City	93	415	4711
051037	Charlotte	84	1219	14277
051041	Chesterfield	69	802	10686
051043	Clarke	56	369	4009
051045	Craig	39	538	7314
051047	Culpeper	105	894	10720
051049	Cumberland	56	814	10677
051051	Dickenson	20	550	6910
051053	Dinwiddie	82	1207	16511
051057	Essex	58	671	7403
051059	Fairfax	111	533	5538
051061	Fauquier	150	1166	14084
051063	Floyd	47	593	6493
051065	Fluvanna	54	775	10756
051067	Franklin	119	1297	15933
051069	Frederick	64	588	8798
051071	Giles	38	508	4918
051073	Gloucester	32	510	5945
051075	Goochland	47	670	10392
051077	Grayson	60	627	8260
051079	Greene	57	434	5727
051081	Greensville	63	735	9009
051083	Halifax	201	1852	22730
051085	Hanover	91	950	12493
051087	Henri	81	427	5468
051089	Henry	59	805	9772
051091	Highland	44	608	8579
051093	Isle Of Wight	178	813	8049
051095	James City	41	314	3989
051097	King And Queen	77	673	7615
051099	King George	62	540	6111
051101	King William	102	712	7846
051103	Lancaster	33	311	3669
051105	Lee	97	680	7221
051107	Loudoun	137	942	8999
051109	Louisa	78	1142	16780
051111	Lunenberg	88	1108	13611
051113	Madison	70	598	7305
051115	Mathews	27	367	4025
051117	Mecklenburg	145	1478	18507
051119	Middlesex	42	480	5561

051121	Montgomery	70	501	5366
051125	Nelson	67	979	12465
051127	New Kent	35	600	8240
051131	Northampton	90	263	2019
051133	Northumberland	88	778	9298
051135	Nottoway	74	894	10670
051137	Orange	98	759	8265
051139	Page	77	540	6705
051141	Patrick	75	884	10255
051143	Pittsylvania	203	1806	22102
051145	Powhatan	47	675	10194
051147	Prince Edward	69	942	12042
051149	Prince George	73	572	6484
051153	Prince William	38	718	10979
051155	Pulaski	61	450	6510
051157	Rappahannock	61	521	7141
051159	Richmond	63	383	4548
051161	Roanoke	63	427	5278
051163	Rockbridge	101	813	9710
051165	Rockingham	189	1020	12959
051167	Russell	56	703	7975
051169	Scott	95	753	9943
051171	Shenandoah	117	757	10570
051173	Smyth	78	603	7159
051175	Southampton	177	1306	15588
051177	Spotsylvania	46	911	12575
051179	Stafford	27	637	8344
051181	Surry	85	784	10024
051183	Sussex	102	1267	16362
051185	Tazewell	77	639	7477
051187	Warren	44	438	6310
051191	Washington	142	632	6822
051193	Westmoreland	101	777	9357
051195	Wise	35	462	5685
051197	Wythe	109	596	7803
051199	York	35	271	3423
051510	Alexandria	38	145	1065
051515	Bedford	22	101	604
051520	Bristol	37	135	1220
051530	Buena Vista	6	43	381
051540	Charlottesville	18	98	528
051550	Chesapeake	71	666	8477
051560	Clifton Forge	27	61	436
051570	Colonial Heights	35	88	662
051580	Covington	24	114	1605
051590	Danville	55	343	3405
051595	Emporia	19	234	3300
051600	Fairfax	18	96	1518

	051610	Falls Church	16	98	1120
	051620	Franklin	66	142	1041
	051630	Fredericksburg	14	250	3012
	051640	Galax	45	94	519
	051650	Hampton	24	127	1112
	051660	Harrisonburg	73	143	746
	051670	Hopewell	26	79	711
	051678	Lexington	8	62	620
	051680	Lynchburg	45	250	2135
	051683	Manassas	17	86	743
	051685	Manassas Park	17	50	268
	051690	Martinsville	19	190	1625
	051700	Newport News	63	231	2187
	051710	Norfolk	42	197	2692
	051720	Norton	13	120	1305
	051730	Petersburg	58	171	1419
	051735	Poquoson	17	122	1351
	051740	Portsmouth	34	285	3215
	051750	Radford	27	76	609
	051760	Richmond	29	239	3517
	051770	Roanoke	33	91	770
	051775	Salem	14	61	568
	051790	Staunton	69	205	1550
	051800	Suffolk	118	964	11269
	051810	Virginia Beach	186	924	8724
	051820	Waynesboro	43	120	895
	051830	Williamsburg	3	38	446
	051840	Winchester	42	117	772
Virginia		**TOTAL**	9267	80615	981848

TSD-2b

Processing of 2002 Anthropogenic Emissions: OTC Regional and Urban 12km Base Year Simulation

Bureau of Air Quality Analysis and Research
Division of Air Resources
New York State Department of Environmental Conservation
Albany, NY 12233

March 19, 2007

Overview

All emissions processing for the revised 2002 OTC regional and urban 12 km base case simulations was performed with SMOKE2.1 compiled on a Red Hat 9.0 Linux operating system with the Portland group fortran compiler version 5.1. The emissions processing was performed on a month-by-month and RPO-by-RPO basis, i.e. SMOKE processing was performed for each month for each of the RPOs (MANE-VU, VISTAS, CENRAP, MRPO) individually as well as for Canada. For each month/RPO combination, a separate SMOKE ASSIGNS file was created, and the length of the episode in each of these ASSIGNS files was set to the entire month. Also, as discussed in Section 3, there was no difference between “episode-average” temperatures and “monthly-average” temperatures for the Mobile6 simulations that used the option of temperature averaging.

This document is structured as follows: A listing of all emission inventories is given in Section 2, organized by RPO and source category. Section 3 discusses the Mobile6 processing approach employed for the different RPOs, while Section 4 describes the processing of biogenic emissions with BEIS3.12. Finally, Sections 5 through7 describe the temporal allocation, speciation, and spatial allocation of the emissions inventories, respectively.

Emission Inventories

MANE-VU

Version 3 of the MANE_VU inventory was utilized to generate CMAQ-ready emissions. This emissions inventory data were obtained from the MANEVU archive in April 2006.

Area Sources

- Files: MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt and MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt prepared by PECHAN, downloaded from **ftp.marama.org** (username mane-vu, password exchange)
- Fugitive dust correction: This was applied as county-specific correction factors for SCC’s listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA’s CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing

Nonroad Sources

- File: MANEVU_NRD2002_SMOKE_030306 prepared by PECHAN; downloaded from **ftp.marama.org** (username mane-vu, password exchange)

Mobile Sources

- VMT/Speed: MANEVU_2002_mbinv_02022006_addCT.txt prepared by PECHAN and NESCAUM; downloaded from http://bronze.nescaum.org/Private/junghun/MANE-VU/onroad_ver3_update/MANEVU_V3_update.tar

Point Sources

- Files: MANEVU_Point_SMOKE_INPUT_ANNUAL_SUMMERDAY_041006.txt and MANEVU_Point_SMOKE_INPUT_ANNUAL_WINTERDAY_041006.txt prepared by PECHAN were downloaded from **ftp.marama.org** (username mane-vu, password exchange)

- Fugitive dust correction: This was applied as county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing
- Corrected the omission of 2,100 tons/year VOC emissions from several point sources in NJ. NJDEP provided updated IDA files on June 30 that were used for modeling.

CENRAP

The inventory data were obtained from the CENRAP ftp site in March 2006 and reflect version BaseB of the CENRAP inventory.

Area Sources

- Files:
    - CENRAP_AREA_SMOKE_INPUT_ANN_STATES_081705.txt
    - CENRAP_AREA_MISC_SMOKE_INPUT_ANN_STATE_071905.txt
    - CENRAP_AREA_BURNING_SMOKE_INPUT_ANN_TX_NELI_071905.txt
    - CENRAP_AREA_MISC_SMOKE_INPUT_NH3_MONTH_{MMM}_072805.txt where {MMM} is JAN, FEB, … DEC
    - CENRAP_AREA_SMOKE_INPUT_NH3_MONTH_{MMM}_071905.txt where {MMM} is JAN, FEB, … DEC
- Fugitive dust correction: This was applied as county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing
- Note about area and nonroad source SMOKE processing for the CENRAP region: All area source inventories (both annual and month-specific) were processed in one step through SMOKE. SMK_AVEDAY_YN was set to N, so seasonal profiles were used to apportion the annual inventories numbers by month. This setting was also used for the nonroad processing performed in a separate step. This was necessary since the month-specific files had zero in their 'average-day' column and the annual total column reflects the "monthly emissions as annual totals" as per header line. Therefore, seasonal profiles are used to apportion both the annual and month-specific files. As described below, we utilized the temporal profiles and cross-reference files generated by CENRAP. However, we did not verify that this approach indeed leads to the intended monthly allocation of ammonia and nonroad emissions.

Nonroad Sources

- Files:
  - CENRAP_NONROAD_SMOKE_INPUT_ANN_071305.txt
  - CENRAP_NONROAD_SMOKE_INPUT_MONTH_{MMM}_071305.txt where {MMM} is JAN, FEB, … DEC

Mobile Sources

- VMT/Speed files:
  - mbinv02_vmt_cenrap_ce.ida
  - mbinv02_vmt_cenrap_no.ida
  - mbinv02_vmt_cenrap_so.ida
  - mbinv02_vmt_cenrap_we.ida

Point Sources

- File: CENRAP_POINT_SMOKE_INPUT_ANNUAL_DAILY_072505.txt
- Fugitive dust correction: This was applied as county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing.

VISTAS

All VISTAS emission files were obtained from the Alpine Geophysics ftp site. They reflect version BaseG of the VISTAS inventory with the exception of fire emissions which reflect BaseF and BaseD. These files were downloaded between February and August, 2006.

Area Sources

- Files:
  - arinv_vistas_2002g_2453922_w_pmfac.txt
  - ida_ar_fire_2002_vistaonly_basef.ida
- Note: the header lines of these files indicate that the fugitive dust correction was already applied, so no further correction was performed.

Nonroad Sources

- Files:
  - nrinv_vistas_2002g_2453908.txt
  - marinv_vistas_2002g_2453972.txt

Mobile Sources

- VMT/Speed file: mbinv_vistas_02g_vmt_12jun06.txt

Point Sources

- Files:
  - Annual:
    - egu_ptinv_vistas_2002typ_baseg_2453909.txt
    - negu_ptinv_vistas_2002typ_baseg_2453909.txt
    - ptinv_fires_{MM}_typ.vistas.ida where {MM} is 01, 02, 03, etc. depending on the month; these annual point fire files were

generated as part of the VISTAS BaseD inventory and were obtained in January 2005
    - Hour-specific:
        - pthour_2002typ_baseg_{MMM}_28jun2006.ems where {MMM} is jan, feb, mar, etc.
        - pthour_fires_{MM}_typ.vistas.ida where {MM} is 01, 02, 03, etc. depending on the month; these hourly point fire files were generated as part of the VISTAS BaseD inventory and were obtained in January 2005
- Note: No fugitive dust correction was performed for these files.

MRPO

MRPO emissions for SMOKE modeling were generated by Alpine Geophysics through a contract from MARAMA to convert the MRPO BaseK inventory from NIF to IDA format. The files were downloaded from the MARAMA ftp site **ftp.marama.org** (username mane-vu, password exchange) between April and June 2006.

Area Sources

- Files:
    - Annual:
        - arinv_mar_mrpok_2002_27apr2006.txt
        - arinv_other_mrpok_2002_20jun2006.txt
    - Month-specific:
        - arinv_nh3_2002_mrpok_{mmm}_3may2006.txt where {mmm} is jan, feb, etc.
        - dustinv_2002_mrpok_{mmm}_23may2006.txt where {mmm} is jan, feb, etc.
- Fugitive dust correction: This correction was performed only to the arinv_other_mrpok_2002_20jun2006.txt file using county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing.
- Note about area source SMOKE processing: SMOKE processing was performed separately for the annual and month-specific files. For the annual inventory processing, SMK_AVEDAY_YN was set to N, so seasonal profiles were used to apportion the annual inventories numbers by month. For the month-specific inventory processing, this variable was set to Y so that no seasonal profiles would be applied and the inventory numbers in the 'average day' column would be used. To save a SMOKE processing step, the annual "marine" inventory "arinv_mar_mrpok_2002_27apr2006.txt" was processed together with the annual "other area source" inventory "arinv_other_mrpok_2002_20jun2006.txt" even though it technically is part of the nonroad inventory.

Nonroad Sources

- Files: nrinv_2002_mrpok_{mmm}_3may2006.txt where {mmm} is jan, feb, etc.

Mobile Sources

- VMT/Speed file: mbinv_mrpo_02f_vmt_02may06.txt

Point Sources

- Files: ptinv_egu_negu_2002_mrpok_1may2006.txt
- Fugitive dust correction: This correction was performed only to the arinv_other_mrpok_2002_20jun2006.txt file using county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing.

Canada

Area Sources

- File: AS2000_SMOKEready.txt obtained from ftp://ftp.epa.gov/EmisInventory/canada_2000inventory
- Fugitive dust correction: We applied "divide-by-four" correction for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; this adjustment was performed outside SMOKE with in-house Fortran programs. No county/province-specific correction factors were available for Canada

Nonroad Sources

- File: NONROAD2000_SMOKEready.txt obtained from ftp://ftp.epa.gov/EmisInventory/canada_2000inventory

Mobile Sources

- File: MOBILE2000_SMOKEready.txt obtained from ftp://ftp.epa.gov/EmisInventory/canada_2000inventory
- Fugitive dust correction: applied "divide-by-four" correction for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; this adjustment was performed outside of SMOKE with in-house Fortran programs. No county/province-specific correction factors were available for Canada.

Point Sources

There has long been difficulty in obtaining an up-to-date Canadian criteria emissions inventory for point sources. This is due largely to confidentiality rights afforded to Canadian facilities. Thus far, the most recent inventory of Canadian point sources is rooted in the 1985 NAPAP data and is close to two decades old. Because there are a number of high emitting industrial facilities in southern Canada it is of particular importance to have a reasonably accurate inventory of these sources especially when modeling air quality over the Northeast and Midwest United States. Toward this end, an effort was made to obtain more recent Canadian point source data and incorporate it into an inventory database, which could then be used for the 2002 OTC air quality modeling.

Perhaps the most accurate and publicly accessible source of Canadian pollutant data is now available from the National Pollutant Release Inventory (NPRI) database. This database contains 268 substances. Facilities that manufacture, process or otherwise use one of these substances and that meet reporting thresholds are required to report these emissions to Environment Canada on an annual basis. The NPRI data are available at Environment Canada's website and can be found at the link http://www.ec.gc.ca/pdb/npri/npri_home_e.cfm. The page hosts an on-line search engine where one can locate emissions by pollutant or location. In addition, the entire database is available for download as an MS Access or Excel file. The NPRI database contains numerous pages with a rather comprehensive list of information. Detailed information is available about each facility, including location, activity and annual emissions. In addition, facilities having stacks with a height of 50 meters or more are required to report stack parameters.

Unfortunately, one of the limitations of the NPRI database for modeling purposes is that the data are only available at the facility level. Emissions models require process level information, so in order to use this data, a few generalizations had to be made. Each facility has a Standard Industrial Classification (SIC) code associated with it; however, emissions models require Source Classification Codes (SCC's). SCC's are of critical importance as the emissions models use these codes for assignment of temporal and speciation profiles. SIC codes describe the general activity of a facility while SCC codes describe specific processes taking place at each facility. While no direct relationship exists between these two codes, a general albeit subjective association can be made.

For the purposes of creating a model-ready inventory file it was necessary to obtain the whole NPRI database. After merging all the necessary components from the NPRI database required in the SMOKE inventory file, the SIC code from each facility was examined and assigned an SCC code. In most cases, only a SCC3 level code was assigned with confidence. While this is admittedly a less than desirable process, it does allow for the use of the most recent emissions from the NPRI database to be used in modeling. Furthermore, having some level of SCC associated with these emissions will ensure that they will be assigned a temporal and speciation profile by the model, other than the default. Once the model-ready inventory file was developed, it was processed through SMOKE.

Mobile6 Processing

MANE-VU

Mobile6 input files

- Month-specific input files were prepared by PECHAN and NESCAUM and were downloaded from http://bronze.nescaum.org/Private/junghun/MANE-VU/onroad_ver3_update/MANEVU_V3_update.tar
- Added the line "REBUILD EFFECTS :0.10" to each file before the SCENARIO record to override the Mobile6 default setting of 0.9 (90%) for the "chip reflash" effectiveness

SMOKE/Mobile6 auxiliary files

- SMOKE/Mobile6 auxiliary files were prepared by PECHAN and NESCAUM and were downloaded from http://bronze.nescaum.org/Private/junghun/MANE-VU/onroad_ver3_update/MANEVU_V3_update.tar

Temperature averaging

- Following the setting in the MANEVU_2002_mvref.txt files, the following procedures were used by SMOKE for temporal and spatial temperature averaging in the calculation of emission factors:
  - Spatial averaging: temperatures were averaged over all counties that share a common reference county (i.e. Mobile6 input file)
  - Temporal averaging for May – September emissions processing: no temporal averaging was used, i.e. day-specific temperatures were used to calculate emission factors for each day.
  - Temporal averaging for non-summer-months emissions processing: Temporal averaging over the duration of the episode (i.e. the entire month, see introduction) was used, i.e. monthly average temperatures were used to calculate the emission factors.

CENRAP

Mobile6 input files

- Mobile6 input files for the CENRAP region for January and July were contained in the files central_M6_{MMM}.zip, north_M6_{MMM}.zip, south_M6_{MMM}.zip, west_M6_{MMM}.zip where {MMM} is either jan or jul. July input files were used for April – September processing, while January input files were used for the remaining months
- All files were downloaded from the CENRAP ftp site in March 2006.

SMOKE/Mobile6 auxiliary files

- SMOKE/Mobile6 auxiliary files were contained in the files central_M6_RD.zip, north_M6_RD.zip, south_M6_RD.zip, and west_M6_RD.zip. The SMOKE MCREF, MVREF, and MCODES files were contained in the file MOBILESMOKE_Inputs.zip. The MCREF and MVREF files were combined for the different regions ("central", "east", "west", "north")
- All files were downloaded from the CENRAP ftp site in March 2006.

Temperature averaging

- The following procedures were used by SMOKE for temporal and spatial temperature averaging in the calculation of emission factors according to the setting in the mvref files:
  - Spatial averaging: no spatial averaging of temperatures, i.e. the temperatures for the reference county is used to calculate emission factors for all counties that share this reference county (i.e. Mobile6 input file)
  - Temporal averaging: Temporal averaging over the duration of the episode (i.e. the entire month, see introduction) was used, i.e. monthly average temperatures were used to calculate the emission factors.

VISTAS

Mobile6 input files

- Month-specific Mobile6 input files were obtained from the Alpine Geophysics ftp site in July 2006. They reflect version BaseG of the VISTAS inventory.

SMOKE/Mobile6 auxiliary files

- SMOKE/Mobile6 auxiliary files utilized were obtained from the Alpine Geophysics ftp site in July 2006. They reflect version BaseG of the VISTAS inventory.

Temperature averaging

- The following procedures were used by SMOKE for the temporal and spatial temperature averaging in the calculation of emission factors according to the setting in the mvref_baseg.36k.ag.txt file:
  - Spatial averaging: temperatures averaged over all counties that share a common reference county (i.e. Mobile6 input file)
  - Temporal averaging: Temporal averaging over the duration of the episode (i.e. the entire month, see introduction) was used, i.e. monthly average temperatures were used to calculate the emission factors.

MRPO

Mobile6 input files

- Month-specific Mobile6 input files for SMOKE modeling were generated by Alpine Geophysics through a contract from MARAMA. They are based on version BaseK of the MRPO inventory. The files were downloaded from the MARAMA ftp site **ftp.marama.org** (username mane-vu, password exchange) in May 2006.

SMOKE/Mobile6 auxiliary files

- SMOKE/Mobile6 auxiliary files for SMOKE modeling were generated by Alpine Geophysics through a contract from MARAMA. They are based on version BaseK of the MRPO inventory. The files were downloaded from the MARAMA ftp site **ftp.marama.org** (username mane-vu, password exchange) in May 2006.

Temperature averaging

- The following procedures were used by SMOKE for the temporal and spatial temperature averaging in the calculation of emission factors according to the setting in the mvreg_mrpo_basek.txt file:
  - Spatial averaging: temperatures averaged over all counties that share a common reference county (i.e. Mobile6 input file)
  - Temporal averaging: Temporal averaging over the duration of the episode (i.e. the entire month, see introduction) was used, i.e. monthly average temperatures were used to calculate the emission factors.

Biogenic Emission Processing

Hourly gridded biogenic emissions for the 12 km and 36 km modeling domains were calculated by BEIS3.12 through SMOKE, using MCIP-processed MM5 fields for temperature ("TA", layer-1 temperature), solar radiation ("RGRND"), surface pressure ("PRES"), and precipitation ("RN" and "RC"). A 'seasonal switch' file was generated by the SMOKE utility metscan to determine whether winter or summer emission factors should be used for any given grid cell on any given day. Winter emission factors are used from January 1st through the date of the last frost and again from the data of the first frost in fall through December 31st. Summer emission factors are used for the time period in between. This calculation is performed separately for each grid cell.

Temporal Allocation

MANE-VU

Area and nonroad sources

- Generated as part of the MANE-VU version 1 inventory
- amptpro.m3.us+can.manevu.030205.txt
- amptref.m3.manevu.012405.txt
- downloaded from **ftp.marama.org** (username mane-vu, password exchange) in January 2005

Mobile sources

- MANEVU_2002_mtpro_02022006_addCT.txt
- MANEVU_2002_mtref_02022006_addCT.txt
- prepared by PECHAN and NESCAUM and downloaded from http://bronze.nescaum.org/Private/junghun/MANE-VU/onroad_ver3_update/MANEVU_V3_update.tar

Point Sources

- Based on the same files as for the MANE-VU area and nonroad temporal files listed above, but added the CEM-based 2002 state-specific temporal profiles and cross-references for EGU sources for the MANE-VU states that were generated by VISTAS for their BaseD modeling and obtained in February 2005.
- No CEM-based hour-specific EGU emissions were utilized

CENRAP

The following temporal profiles and cross-reference files were used:

- Area and nonroad sources:
  - amptpro.m3.us+can.cenrap.010605_incl_nrd.txt
  - amptref.m3.cenrap.010605_add_nh3_and_nrd.txt
- Mobile sources:
  - mtpro.cenrap.v3.txt
  - mtref.cenrap.v3.txt
- Point sources:
  - ptpro.{QQ}.cenrap_egus_cem.00-03avg.121205.txt where {QQ} is Q1 for January/February/March, Q2 for April/May/June, etc.
  - ptref.{QQ}.cenrap_egus_cem.00-03avg.121205.txt where {QQ} is Q1 for January/February/March, Q2 for April/May/June, etc.
- All files were downloaded from the CENRAP ftp site in March 2006.

VISTAS

The following month-specific temporal profiles and cross-reference files were used:

- Area and nonroad sources:
  - atpro_vistas_basef_15jul05.txt
  - atref_vistas_basef_15jul05.txt
- Mobile sources:
  - mtpro_vistas_basef_04jul05.txt
  - mtref_us_can_vistas_basef_04jul05.txt
- Point sources:
  - ptpro_typ_{MMM}_vistasg_28jun2006.txt where {MMM} is jan, feb, mar, etc.
  - ptref_typ_vistas_baseg_28jun2006.txt
- These files were obtained from the Alpine Geophysics ftp site. They reflect version BaseG of the VISTAS inventory for the point source allocation files and version BaseF for the area, nonroad, and mobile source allocation files. These files were downloaded between February and July, 2006.

MRPO

The following month-specific temporal profiles and cross-reference files were used for all source categories:

- amptpro_typ_us_can_{MMM}_vistas_27nov04.txt where {MMM} is jan, feb, mar, etc.
- amptref_2002_us_can_vistas_17dec04.txt
- These files were obtained from VISTAS in January 2005 and reflect their BaseD modeling. No updated temporal profiles or cross-reference files were developed for use with the MRPO BaseK inventory.

Canada

For Canada, the SMOKE2.1 default temporal profiles and cross-reference files (amptpro.m3.us+can.txt and amptref.m3.us+can.txt) were utilized.

Speciation

The same speciation profiles (gspro.cmaq.cb4p25.txt) and cross-references (gsref.cmaq.cb4p25.txt) were utilized for all regions and all source categories. Different versions of these files were obtained (SMOKE2.1 default, EPA-CAIR modeling, VISTAS, CENRAP and MANE-VU) and compared. After comparing the creation dates and header lines of these files, it was determined that the EPA-CAIR and MANE-VU files had the most recent updates, and consequently the final speciation profile and cross-reference files used for all regions and source categories was based on the EPA-CAIR files with the addition of MANE-VU specific updates.

Spatial Allocation

U.S.

The spatial surrogates for the 12km domain were extracted from the national grid 12km U.S. gridding surrogates posted at EPA's website at
http://www.epa.gov/ttn/chief/emch/spatial/newsurrogate.html
The gridding cross-references were also obtained from this website, but for the processing of MANE-VU area source emissions, MANE-VU specific cross-reference entries posted on the MARAMA ftp site were added.

Canada

The spatial surrogates for Canadian emissions for the 12km domain were extracted from the national grid 12km Canadian gridding surrogates posted at EPA's website at
http://www.epa.gov/ttn/chief/emch/spatial/newsurrogate.html
The gridding cross-references were also obtained from this website.

Reference:

Pechan: (2006) Technical Support document for 2002 MANE-VU SIP Modeling inventories, version 3. Prepared by E. H. Pechan & Associates, Inc. 3622 Lyckan Parkway, Suite 2005, Durham, NC 27707.

TSD-2c

$PM_{2.5}$ modeling using the SMOKE/CMAQ system over the Ozone Transport Region (OTR)

Bureau of Air Quality Analysis and Research

Division of Air Resources

New York State Department of Environmental Conservation

Albany, NY 12233

February 1, 2006

Air Quality Modeling Domain

The modeling domain utilized in this application represented a sub-set of the inter-RPO's continental modeling domain that covered the entire 48-state region with emphasis on the Ozone Transport Region. The OTC modeling domain at 12km horizontal mesh is displayed in Figure 1 is part of the 36km continental domain that is designed to provide boundary conditions (BCs). The particulars of the two modeling domains are:

The 36km domain covered the continental US by a 149 by 129 mesh in the east-west and north-south directions, respectively. The domain is based on Lambert Conformal Projection with the center at (97ºW 40ºN) and parallels at 33ºN and 45ºN. As evident from Figure 1, the 12km domain utilized in this analysis covers most areas of the eastern US and has 172 by 172 mesh in the horizontal. Both domains utilize 22 layers in the vertical extending to about 16km with 16 layers placed within the lower 3km.

Photochemical Modeling -- CMAQ

The CMAQ (version 4.5.1) with CB4 chemistry, aerosol module for $PM_{2.5}$ and RADM cloud scheme was utilized in this study. Photochemical modeling was performed with the CCTM software that is part of the CMAQ modeling package. Version 4.5.1 of this modeling software was obtained from the CMAS modeling center at http://www.cmascenter.org. The following module options were used in compiling the CCTM executable:

- Horizontal advection: yamo
- Vertical advection: yamo
- Horizontal diffusion: multiscale
- Vertical diffusion: eddy
- Plume-in-Grid: non operational
- Gas phase chemical mechanism: CB-4
- Chemical solver: EBI
- Aerosol module: aero3
- Process analysis: non operational

The following computational choices were made during compilation:

- Compiler version: PGI 6.0
- Fortran compiler flags:-Mfixed -Mextend -Bstatic -O2 -module ${MODLOC} -I.
- C compiler flags: -v -O2 -I${MPICH}/include
- IOAPI library: version 3.0
- NETCDF library: version 3.6.0
- Parallel processing library version: mpich 1.2.6
- Static compilation on 32-bit system

The following choices were made for running the executable:

- Number of processors: 8
- Domain decomposition for parallel processing: 4 columns, 2 rows
- Number of species written to the layer-1 hourly-average concentration output (ACONC) file: 39 (O3, NO, CO, NO2, HNO3, N2O5, HONO, PNA, PAN, NTR, NH3, SO2, FORM, ALD2, PAR, OLE, ETH, TOL, XYL, ISOP, ASO4I, ASO4J, ANO3I, ANO3J, ANH4I, ANH4J, AORGAI, AORGAJ, AORGPAI, AORGPAJ, AORGBI, AORGBJ, AECI, AECJ, A25I, A25J, ACORS, ASEAS, ASOIL)
- Each daily simulation was performed for 24 hours starting at 05:00 GMT (00:00 EST)

The following postprocessing steps were performed using utility tools from the "ioapi" software package obtained from http://www.baronams.com/products/ioapi/AA.html#tools:

- Extract and combine the following species for each hour for the first 16 model layers from the full 3-D instantaneous concentration output file: O3, CO, NO, NO2, NOY_1 (=*NO + NO2 + PAN + HNO3*), NOY_2 (=*NO + NO2 + PAN + HNO3 + HONO + N2O5 + NO3 + PNA + NTR*), HOX (=*OH + HO2*), VOC (=*2*ALD2 + 2*ETH + FORM + 5*ISOP + 2*OLE + PAR + 7*TOL + 8*XYL*), ISOP, PM2.5 (=*ASO4I + ASO4J + ANO3I + ANO3J + ANH4I + ANH4J + AORGAI + AORGAJ + 1.167*AORGPAI + 1.167*AORGPAJ + AORGBI + AORGBJ + AECI + AECJ + A25I + A25J*), PM_SULF (=*ASO4I + ASO4J*), PM_NITR (=*ANO3I + ANO3J*), PM_AMM (=*ANH4I + ANH4J*), PM_ORG_SA (=*AORGAI + AORGAJ*), PM_ORG_PA (=*1.167*AORGPAI + 1.167*AORGPAJ*), PM_ORG_SB(=*AORGBI + AORGBJ*), PM_ORG_TOT (=*AORGAI + AORGAJ + 1.167*AORGPAI + 1.167*AORGPAJ + AORGBI + AORGBJ*), PM_EC (=*AECI + AECJ*), PM_OTH (=*A25I + A25J*), PM_COARS (=*ACORS + ASEAS + ASOIL*), SO2, HNO3, NH3, H2O2
- Extract all species for all model layers for the last hour of each daily instantaneous concentration output file to enable "hot" restarts of modeling simulations
- Create daily files of hourly running-average 8-hr ozone concentrations with time stamps assigned to the first hour of the averaging interval

The following files are archived on LTO2 computer tapes (each tape holds approximately 200 Gb of data) for each day:

- Aerosol/visibility file
- Layer-1 hourly-average concentration output file (contains 39 species)
- Dry deposition file
- Wet deposition file
- Extracted 16-layer species file
- Restart file (last hour of full 3-D instantaneous concentration file)
- Hourly 8-hr concentration file

Photolysis Rates

One of the inputs to CMAQ is the photolysis rates. In this study, photolysis rate lookup tables were generated for each day of 2002 with the JPROC software that is part of the CMAQ modeling package. This software was obtained from the CMAS modeling center at http://www.cmascenter.org. Rather than using climatological ozone column data, daily ozone column measurements from the NASA Earthprobe TOMS instrument were downloaded from ftp://toms.gsfc.nasa.gov/pub/eptoms/data/ozone/Y2002/ and used as input to the JPROC processor. It should be noted that TOMS data were missing for the time period from August 3 – 11, 2002. The missing period was filled as follows-- TOMS data file for August 2 was used as JPROC input for August 3rd through August 7th, and the TOMS data file for August 12th was used as JPROC input for August 8th through August 11th.

Boundary Conditions (BCs)

The boundary conditions for the 12km grid were extracted from the 36km CMAQ simulation. The 36km simulation utilized boundary conditions that were based on a one-way nest approach to GEOS-CHEM global model outputs (Moon and Byun 2004, Baker 2005). As stated above, the intent of the 36km CMAQ simulation was to provide the BCs for the 12km model that would be more reflective of the emissions and meteorology rather than to use either clean or arbitrary pollutant fields. Also, in this study the CMAQ simulations utilized a 15-day ramp-up period, thereby minimizing the propagation of the boundary fields into the areas of concern. A report on the setup and application of the 36km CMAQ and the extraction of the BCs is available from NYSDEC.

Meteorological data

The meteorological data for this study was based on MM5 modeling (see Meteorological Modeling, 2007). The MM5 fields are then processed by MCIP version 3.0, a utility available as part of the CCTM software from CMAS Modeling Center (see http://www.cmascenter.org) to provide CMAQ model-ready inputs.

Emissions

The emissions data for 2002 were generated by individual states within the OTR and were assembled and processed through the Mid Atlantic Northeast Visibility Union (MANE-VU), a Regional Planning Organization (RPO). These emissions were then processed by NYSDEC using SMOKE processor to provide CMAQ compatible inputs (Anthro-Emissions 2006). The 2002 emissions for the non-OTR areas within the modeling domain were obtained from the corresponding RPOs and were processed using SMOKE, in a manner similar to that of the OTR.emissions. Details of this processing are outlined in the report (Pechan 2007), and the hourly biogenic emissions (Bio-Emissions, 2006)

CMAQ simulations

CMAQ simulations were performed using the one-way nesting approach in which we perform the continental CMAQ simulation at 36km grid spacing. For this simulation we utilized clean initial conditions with boundary conditions extracted from the simulation of GEOS-CHEM global chemical model. The interface program used in this application was developed by University of Huston (Moon and Byun 2004), which was applied to obtain hourly 36km boundary concentrations from GEOS-CHEM outputs. The CMAQ 36km simulation was initiated from December 15, 2001 with the first 15 days as spin up period and terminated on December 31, 2002. The simulation utilized the 2002 emissions data available from the RPOs and 2002 MM5 meteorological fields developed by the University of Maryland (TSD-1a). The hourly boundary fields for the 12km CMAQ domain were obtained by application of BCON program to the 3-D concentration fields generated by the 36km CMAQ simulation.

The 12km simulations for both base and future year were assigned the boundary conditions based on the 36km CMAQ simulation and clean initial conditions. The annual simulation was parsed out between different member states or their contractors of the OTR, so as to expedite the process of completing the simulation in a limited time. The approach used is as follows: The annual simulation was parsed out into five parts and each modeling center identified below initiated and completed the simulation, extracted the outputs which were then combined to provide the annual simulation. There was considerable exchange of information in the setup and execution of the modeling system between the centers using benchmark runs to ensure consistency and uniformity between the centers. The process was followed both for the base year 2002 and for the future year 2009. Details on CMAQ setup and run scripts are available from NYSDEC.

Modeling Center	Simulation period	Analysis period
MDE/UMD	Dec 15, 2001 to Feb 28, 2002	Jan 01, 2002 to Feb 28, 2002
NJDEP/Rutgers	Feb 15, 2002 to May 14, 2002	Mar 01, 2002 to May 14, 2002
NYSDEC	May 01, 2002 to Sep 30, 2002	May 15, 2002 to Sep 30, 2002
VA DEQ	Sep 15, 2002 to Oct 30, 2002	Oct 01, 2002 to Oct 30, 2002
NESCAUM	Oct 15, 2002 to Dec 31, 2002	Nov 01, 2002 to Dec 31, 2002

References

Baker, K.: (2005) http://www.ladco.org/tech/photo/present/ozone.pdf

Moon, N. and D. Byun: (2004) A simple user's guide for "geos2cmaq"code: Linking CMAQ with GEOS-CHEM. Version 1.0. Institute for Multidimensional Air quality Studies (IMAQS), University of Houston, Houston TX.

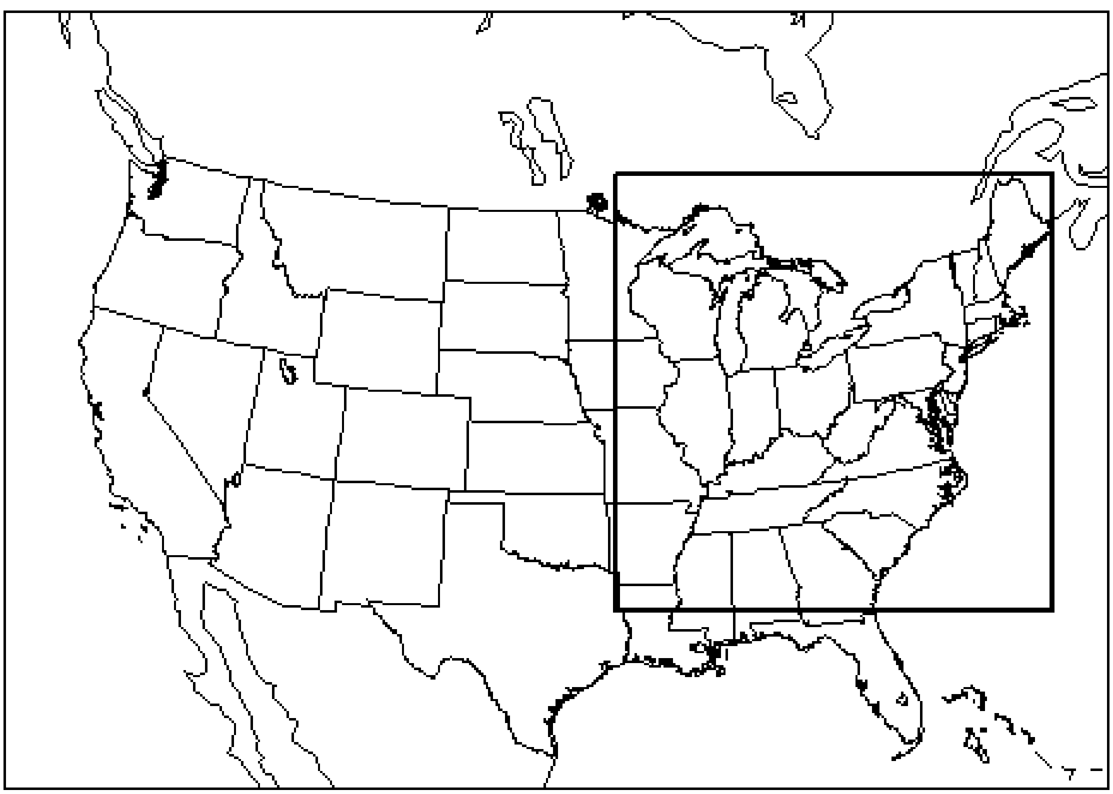
Meteorological Modeling: (2007) Meteorological Modeling of 2002 using Penn State/NCAR 5th Generation Mesoscale Model (MM5). TSD-1a

Pechan: (2006) Technical Support document for 2002 MANE-VU SIP Modeling inventories, version 3. Prepared by E. H. Pechan & Associates, Inc. 3622 Lyckan Parkway, Suite 2005, Durham, NC 27707.

Bio-Emissions: (2006) Processing of Biogenic Emissions for OTC/MANE-VU Modeling. TSD-1b

Anthro-Emissions: (2006) Emission Processing for the Revised 2002 OTC Regional and Urban 12 km Base Case Simulations. TSD-1c

Figure 1 Display of 36- and 12km air quality modeling domains.



TSD- 3a

Analysis of Ambient $PM_{2.5}$ Mass and Speciation for the New York Metropolitan Area through 2006

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December 14, 2007

Introduction

With the promulgation of the annual and daily $PM_{2.5}$ national ambient air quality standards (NAAQS) in 1997, the New York State Department of Environmental Conservation (NYSDEC) initiated monitoring this pollutant on a statewide basis beginning in 1998/1999. A majority of the monitoring efforts to date have involved 24-hour, filter-based Federal Reference Method (FRM) samplers. Most of the FRM samplers operate on a 1-in-3-day schedule, although a few monitors operate on a daily basis. Also, as per network design requirements, several FRM sites have collocated duplicate samplers.

The $PM_{2.5}$ NAAQS is mass-based, but ambient $PM_{2.5}$ has a complex morphology and chemical composition. In order to obtain information on species composition, the NYSDEC also has operated Speciation Trends Network (STN) monitors at several locations across the state. Similar to the FRM network, the STN samplers operate on a 1-in-3-day schedule. The STN program provides for the concentration of major ions, carbon compounds, and trace elements, which generally constitute the bulk of $PM_{2.5}$ mass.

Although time series of ambient $PM_{2.5}$ mass and species are relatively short compared to other criteria pollutants, such as ozone, it is nonetheless important to examine temporal and seasonal trends in the data, in addition to characterize current ambient levels. Here we present such trends on a composite basis over the New York portion of the New York City $PM_{2.5}$ non-attainment area (NYC NAA), corresponding to Bronx, Kings, Nassau, New York, Orange, Queens, Richmond, Suffolk and Westchester Counties. All data used in this analysis are publicly available on the NYSDEC Division of Air Resources' ambient $PM_{2.5}$ monitoring website (please see http://www.dec.ny.gov/chemical/8539.html).

FRM data

Table 1 lists the site locations and sampling periods between 1999-2006 for all FRM monitors in the three NYSDEC sub-regions that cover parts of the NYC NAA: Region 1 (Long Island; 6 sites), Region 2 (New York City; 19 sites), and Region 3 (Lower Hudson River Valley; 3 sites). The analysis included Dutchess County for completeness, even though it is not part of the NYC NAA area. Seven of the Region 2 sites have collocated duplicate monitors. Three of the sites also operated daily for at least part of the time. A map of the FRM locations is shown in Figure 1.

Figure 2 displays the composite average FRM mass by NYSDEC region, using all valid data from 1999-2006. The averages presented in Figure 2 do not represent design values for attainment/regulatory purposes; however, the annual NAAQS of 15 $\mu g\ m^{-3}$ is shown for reference. This figure illustrates that on average, $PM_{2.5}$ is higher in Region 2 than the surrounding areas. Whereas the average levels in New York City range from about 13-15 $\mu g\ m^{-3}$, the average levels in the surrounding counties is about 10-12 $\mu g\ m^{-3}$.

One other feature evident in Figure 2 is that $PM_{2.5}$ levels in the most recent few years are generally lower than levels measured in 1999-2001.

Figure 3 displays the composite seasonal/quarterly variations in FRM mass by NYSDEC region, again using all valid data from 1999-2006. In Regions 1 and 3 there appears to be a warm season maximum; this corresponds to the time of maximum photochemical activity and secondary particulate formation. In Region 2 the $PM_{2.5}$ levels are high in during both the warm and cold seasons. The high levels during the colder months are likely indicative of local sources in the New York City, such as space heating, as well as the effects of large urban emissions being mixed through a shallow atmospheric boundary layer.

Tables 2 and 3 display the annual average and 98th percentiles of FRM mass, respectively, from 2000-2006. Only those years with at least 75% valid samples are included in these tables. Note that some of the values presented in Tables 2 and 3 correspond to years that do not necessarily have four complete quarters. Similar to Figure 2, Table 2 indicates than on an average basis $PM_{2.5}$ levels are generally lower in the most recent years compared to earlier years. In particular, average $PM_{2.5}$ levels in 2006 were generally the lowest in this seven-year period. The 98th percentiles presented in Table 3 are related to the daily $PM_{2.5}$ NAAQS, which consists of the average of the 98th percentile values over three consecutive years. Currently the daily NAAQS is 65 μg m^{-3}, and Table 3 shows that all sites in the New York metropolitan area have been well below this level.

Table 4 lists the linear trends in $PM_{2.5}$ mass at longest-running sites FRM sites in the New York metropolitan area. These sites operated from 1999/2000 through 2006, and the trends reported in Table 4 are based on quarterly average values at each site. Only those quarters with at least 10 valid data points were included in the linear trend estimates. Consistent with the composite averages presented earlier, $PM_{2.5}$ mass appears to be decreasing at each of these longest-running sites, by ~0.1-0.5 μg m^{-3} yr^{-1}.

STN data

Table 5 lists the site locations and sampling periods of the STN monitors. Each of these sites is collocated with an FRM monitor. The STN samplers collect five ions – sulfate (SO_4), nitrate (NO_3), ammonium (NH_4), potassium (K), and sodium (Na) – nearly 50 trace elements, and various carbon species – elemental carbon (EC) and organic carbon (OC). For this analysis, we assume that $PM_{2.5}$ is primarily composed of only SO_4, NO_3, NH_4, EC, OC, and major crustal species (major oxides of Al, Ca, Fe, Si, and Ti; e.g. US EPA, 2007), and hereafter refer to the sum of these species as the "reconstructed mass." Although the $PM_{2.5}$ NAAQS is strictly mass-based, here we attempt to approximate the average species composition of the ambient $PM_{2.5}$ in NYC.

We adjusted the OC value by subtracting a constant, monitor-specific blank, and applying a multiplicative factor of 1.8 to account for the non-carbon composition (O, H, etc.). In various EPA documents, a blank of 1.40 μg m^{-3} for MetOne SASS instruments

(Canal Street Post Office, N.Y. Botanical Gardens) and 0.93 μg m^{-3} for R&P 2300 ACCU instruments (I.S. 52, Queens College II/P.S. 219) is assumed (e.g., http://www.epa.gov/airtrends/aqtrnd03/pdfs/2_chemspecofpm25.pdf). We then calculated the composite average of each of these components across all four STN sites for all valid data points, as well as for just the winter (December-February) and summer (June-August) periods.

Figure 4 displays the annual, wintertime, and summertime average major $PM_{2.5}$ speciation levels. On an overall annual basis, SO_4 and OC account for about 27% and 35%, respectively, of the reconstructed mass in New York City, roughly twice the contribution of NO_3. During the winter months, OC is the largest contributor to the reconstructed mass (34%), while SO_4 and NO_3 also account for about 20%. The relative importance of NO_3 is higher during the winter months because NO_3 volatilization is much lower during the colder months. During the summer months, SO_4 and OC levels are considerably higher than during the winter months, and account for about 70% of the reconstructed mass. The smallest components of reconstructed mass correspond to EC and crustal mass (~4-8%). On average, the reconstructed mass in New York City is about 18.2 μg m^{-3} during the summer months, and about 15.2 μg m^{-3} during the winter months.

Summary

The FRM data collected across the New York metropolitan area over the past seven years suggest that $PM_{2.5}$ levels are generally higher in the core urban areas compared to the surrounding suburban counties. While this is a rather short time period, it appears that $PM_{2.5}$ levels have been decreasing across the entire metropolitan area since the early 2000's. In terms of species composition, SO_4 and OC are the most important species, especially during the summer months, while NO_3 is also an important species during the winter months. It appears that emissions control programs that target precursors of SO_4, NO_3, and OC will be needed to further reduce $PM_{2.5}$ levels across the metropolitan area.

Reference

United States Environmental Protection Agency (US EPA), 2007. Guidance on the use of models and other analyses for demonstrating attainment of air quality goals for ozone, $PM_{2.5}$, and regional haze. Office of Air Quality Planning and Standards, 253 pp., EPA-454/B-07-002.

Table 1. Listing of FRM sites, 1999-2006. Some locations have primary ("P") and duplicate ("D") samplers. Dates with an asterix denote daily sampling for at least part of the period.

NYSDEC Region	Site Name	County	Dates
1	Eisenhower Park	Nassau	1/1999 – 12/1999
1	Hempstead	Nassau	1/1999 – 12/2006
1	Briarcliffe	Nassau	2/2000 – 3/2003
1	Roslyn	Nassau	7/2000 – 3/2003
1	Roslyn Heights	Nassau	1/1999 – 3/2000
1	Babylon	Suffolk	1/1999 – 12/2006
2	Mabel Dean H.S.	New York	1/1999 – 6/2001*
2	J.H.S. 45	New York	P: 1/2000 – 12/2006 D: 1/2006 – 12/2006
2	P.S. 59	New York	P: 1/1999 – 12/2006 D: 1/1999 – 12/2005
2	P.S. 19	New York	10/2001 – 12/2006
2	Canal Street Post Office	New York	P: 1/1999 – 12/2006 D: 8/1999 – 9/2001
2	I.S. 155	Bronx	P: 1/1999 – 7/1999 D: 1/1999 – 7/1999
2	Morrisania II	Bronx	1/1999 – 12/2006
2	N.Y. Botanical Gardens	Bronx	1/1999 – 12/2006
2	I.S. 52	Bronx	P: 9/1999 – 12/2006* D: 9/1999 – 12/2006
2	Greenpoint	Kings	P: 1/1999 – 12/2000 D: 1/1999 – 7/1999
2	P.S. 321	Kings	1/1999 – 3/2003
2	P.S. 314	Kings	4/2000 – 1/2003
2	J.H.S. 126	Kings	1/2001 – 12/2006
2	Queensboro Community College	Queens	1/1999 – 12/2000
2	P.S. 29	Queens	P: 7/1999 – 1/2003 D: 8/1999 – 1/2003
2	P.S. 214	Queens	4/2000 – 3/2003
2	Queens College II/P.S. 219	Queens	1/2001 – 4/2006*
2	Susan Wagner H.S.	Richmond	1/1999 – 12/2006
2	Port Richmond Post Office	Richmond	12/1999 – 12/2006
3	Poughkeepsie	Dutchess	7/1999 – 3/2003
3	Newburgh	Orange	2/2000 – 12/2006
3	Mamaroneck	Westchester	2/2000 – 12/2006

Table 2. Annual average $PM_{2.5}$ levels for sites with at least 75% valid samples in a given year, 2000-2006. Incomplete years are left blank.

Site Name	2000	2001	2002	2003	2004	2005	2006
Hempstead	12.29	12.86	11.35	12.37	11.28	12.38	10.91
Briarcliffe	12.73	12.44	11.27				
Roslyn		12.25	11.28				
Babylon	12.66	13.02	11.43	11.78	10.68	12.09	10.41
Mabel Dean H.S.	16.71						
J.H.S. 45 (P)	15.52	15.18	14.12	14.35	13.12	14.51	12.63
J.H.S. 45 (D)							12.77
P.S. 59 (P)	18.42	17.95	15.88		15.63	16.96	14.60
P.S. 59 (D)	18.38	18.01	16.22		15.76	16.81	
P.S. 19			15.62	15.94	15.10	15.59	13.79
Canal Street Post Office (P)	17.57	17.13	15.42	15.76	14.43	15.45	12.76
Canal Street Post Office (D)	17.36						
Morrisania II	16.73	15.92	15.34	15.58	14.39	16.38	14.40
N.Y. Botanical Gardens	14.30	14.35	13.46	13.35	12.80	13.87	12.72
I.S. 52 (P)	15.10	15.65	14.25	14.76	13.72	13.78	12.84
I.S. 52 (D)	15.35	14.74	14.46	14.82	13.53	14.82	12.88
Greenpoint	16.30						
P.S. 321	14.88	15.06	13.28				
P.S. 314		16.29	13.95				
J.H.S. 126		15.24	14.04	14.19	14.06	15.08	12.97
Queensboro Community College		13.04					
P.S. 29 (P)	14.08	13.52					
P.S. 29 (D)	13.86	13.73					
P.S. 214		14.00	13.11				
Queens College II/P.S. 219			12.78	13.48	12.16	12.18	
Susan Wagner H.S.	12.44	13.00	10.84		11.35	12.15	10.45
Port Richmond Post Office	14.31	14.46	13.83		13.33	14.36	12.03
Poughkeepsie	11.31	11.18	10.73				
Newburgh	11.90	11.58	11.07	11.84	10.48	12.14	9.81
Mamaroneck	12.62	12.93	11.76	12.14	11.33	12.46	11.11

Table 3. The 98th percentile of $PM_{2.5}$ levels for sites with at least 75% valid samples in a given year, 2000-2006. Incomplete years are left blank.

Site Name	2000	2001	2002	2003	2004	2005	2006
Hempstead	32.1	31.2	31.9	39.3	30.8	35.1	33.0
Briarcliffe	34.0	32.5	30.7				
Roslyn		32.2	30.3				
Babylon	31.8	34.1	30.9	38.8	30.9	34.3	31.9
Mabel Dean H.S.	42.9						
J.H.S. 45 (P)	40.8	35.8	35.5	46.2	38.0	36.6	37.6
J.H.S. 45 (D)							37.8
P.S. 59 (P)	41.7	40.4	35.6		41.1	40.1	40.7
P.S. 59 (D)	42.1	39.8	35.5		41.4	39.5	
P.S. 19			35.8	48.5	38.9	36.5	36.8
Canal Street Post Office (P)	41.4	38.2	33.6	46.2	39.1	39.5	35.9
Canal Street Post Office (D)	41.0						
Morrisania II	40.1	36.7	35.2	44.8	38.2	37.7	41.5
N.Y. Botanical Gardens	39.0	35.0	33.4	38.2	31.3	36.6	39.8
I.S. 52 (P)	40.5	38.9	40.6	39.1	33.9	36.8	38.7
I.S. 52 (D)	40.3	35.2	36.8	46.0	38.2	38.0	38.1
Greenpoint	41.7						
P.S. 321	42.0	34.6	31.2				
P.S. 314		36.5	31.9				
J.H.S. 126		34.9	33.8	46.2	36.9	38.1	37.7
Queensboro Community College		32.8					
P.S. 29 (P)	35.7	36.2					
P.S. 29 (D)	38.0	35.8					
P.S. 214		36.8	33.0				
Queens College II/P.S. 219			37.4	39.0	33.4	34.0	
Susan Wagner H.S.	33.0	31.4	24.3		33.5	32.1	32.0
Port Richmond Post Office	39.8	31.9	39.3		31.3	37.2	36.2
Poughkeepsie	30.8	27.6	31.2				
Newburgh	29.8	27.8	30.5	31.3	27.4	29.6	31.7
Mamaroneck	34.9	33.5	32.5	36.8	33.5	32.8	34.4

Table 4. Trends in $PM_{2.5}$ mass at the longest running FRM monitors, based on quarterly averages from 1999-2006, in $\mu g\ m^{-3}\ yr^{-1}$. Only those quarters with at least 10 valid samples are included in this trend estimate.

Site Name	Trend ($\mu g\ m^{-3}\ yr^{-1}$)
Hempstead	-0.12
Babylon	-0.34
J.H.S. 45	-0.42
P.S. 59	-0.30
Canal Street Post Office	-0.50
Morrisania II	-0.27
N.Y. Botanical Gardens	-0.15
I.S. 52 (P)	-0.33
I.S. 52 (D)	-0.23
Susan Wagner H.S.	-0.13
Port Richmond Post Office	-0.20
Newburgh	-0.20
Mamaroneck	-0.20

Table 5. Listing of Speciation Trends Network (STN) sites, 2000-2006. All sites are located in NYSDEC Region 2.

Site Name	County	Dates
Canal Street Post Office	New York	8/2002 – 12/2006
N.Y. Botanical Gardens	Bronx	2/2000 – 12/2005
I.S. 52	Bronx	1/2001 – 12/2006
Queens College II/P.S. 219	Queens	4/2001 – 12/2006

Figure 1. Map of FRM sites.

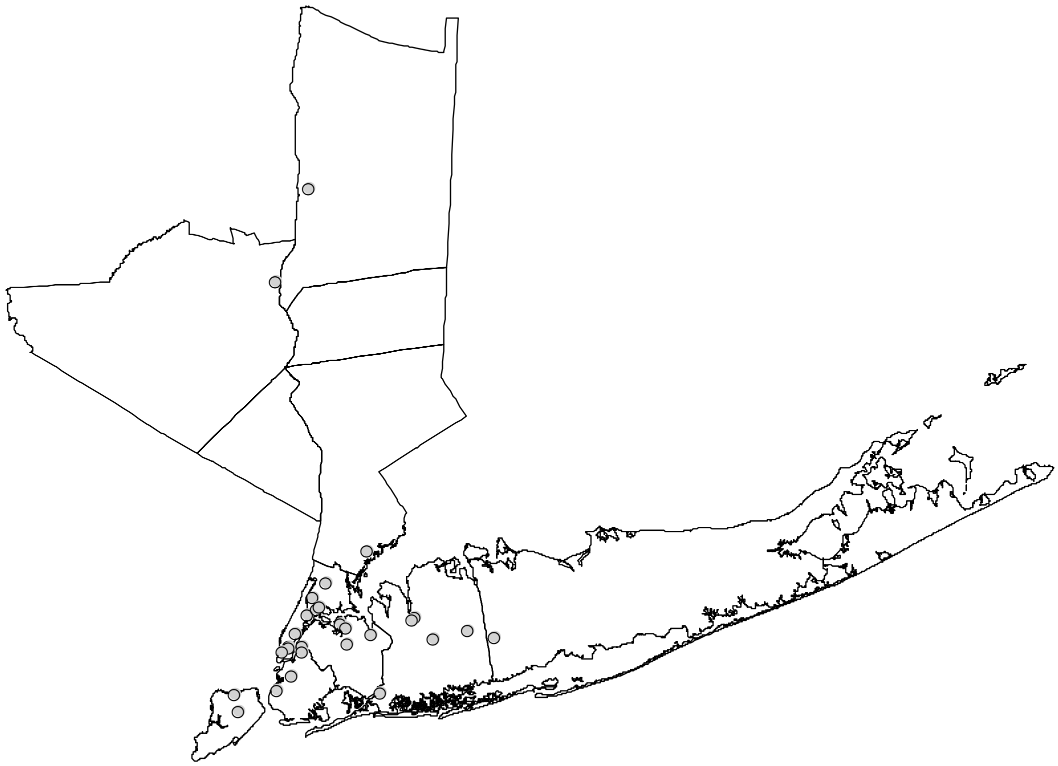


Figure 2. Annual average $PM_{2.5}$ mass at FRM sites by NYSDEC Region.

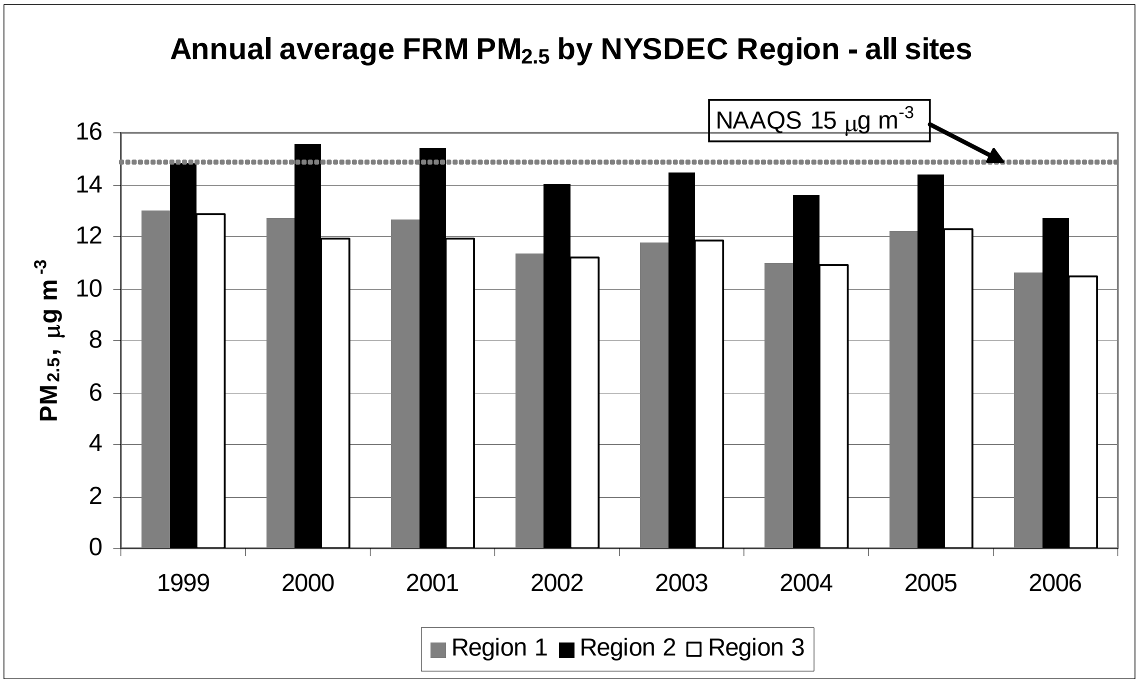


Figure 3. Seasonal variation in $PM_{2.5}$ mass at FRM sites, by NYSDEC Region.

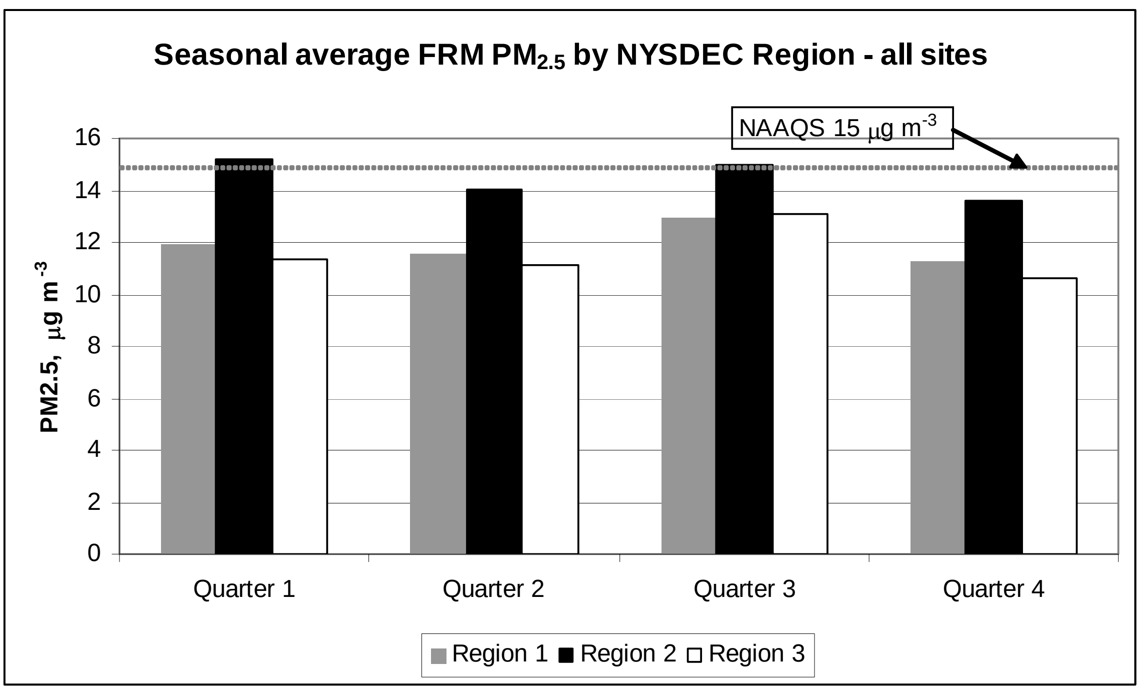
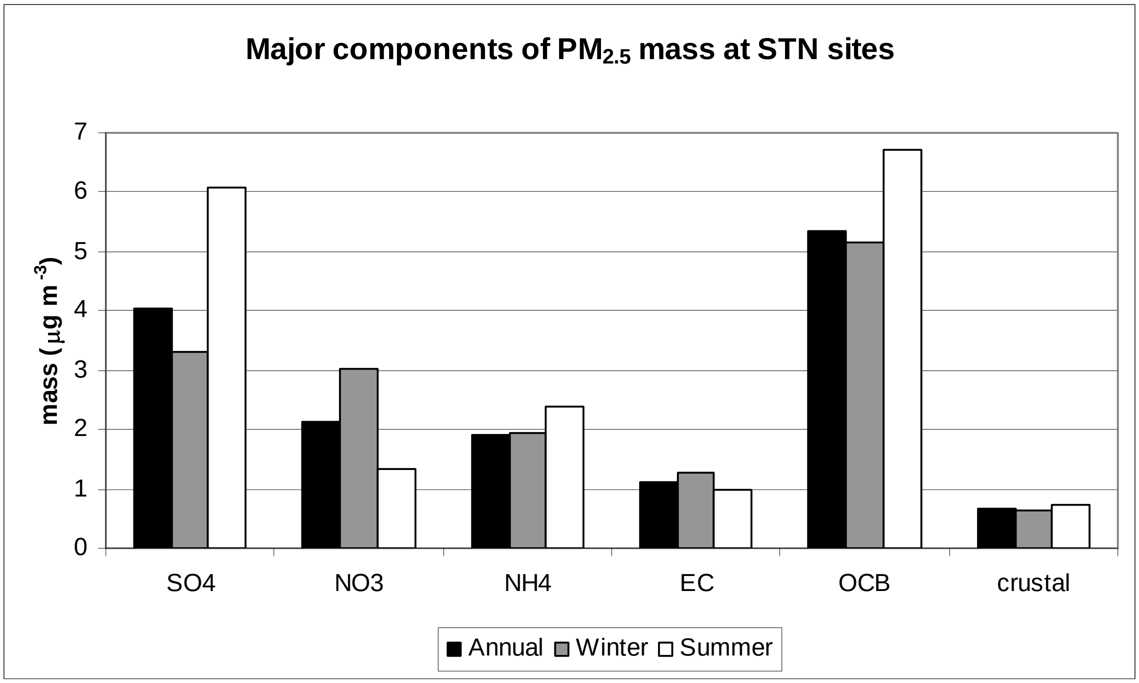


Figure 4. Average $PM_{2.5}$ speciation – annual, winter (DJF), and summer (JJA).



TSD- 3b

Analysis of Ambient $PM_{2.5}$ Mass:

CT and NJ portions of the New York City Metropolitan Non-attainment Area through 2006

Bureau of Air Quality Analysis and Research
Division of Air Resources
New York State Department of Environmental Conservation
Albany, NY 12233

December 27, 2007

Introduction

In this report we provide ambient data analysis for those monitors in Connecticut (two counties) and New Jersey (10 counties) that are part of the New York City non-attainment area (NYC NAA) for $PM_{2.5}$. The analysis presented here supplements TSD-3a (2007), which examined $PM_{2.5}$ air quality for the FRM monitors in New York only.

Database

The analysis is based upon the Federal Reference Method (FRM) data covering the period of 1999 to 2006, which were extracted from the EPA Air Quality System (AQS) data on December 26, 2007. To be consistent with the analysis reported in TSD-3a (2007), we excluded the data from July 6-9, 2002 that was associated with large-scale Canadian forest fires.

Connecticut

The Connecticut portion of the NYC NAA had 14 sites at various times during this period; five of these sites have collocated duplicate monitors and two of the sites had every day sampling for at least a portion of the time. It should be noted that the New Haven/Stiles St. monitor was designated as a "special purpose" monitor, and as such cannot be used to make an attainment or non-attainmment designation. The stations are listed in Table 1 along with their operational dates.

New Jersey

The New Jersey portion of the NYC NAA had 15 monitoring sites at various times during this period; three of these sites have collocated duplicate monitors and two of the sites had every day sampling for at least a portion of the time. Information on these monitors is listed in Table 1.

Analysis

A very cursory analysis was performed on these data, similar to what was done for the NY sites in TSD-3a (2007). The annual average estimates are listed in Table 2. Only those monitors with at least 75% valid samples in a given year are shown in Table 2, and blank cells indicate that either the sampler was not in operation or it did not meet the 75% criteria. In general the CT monitors are below the level of the annual $PM_{2.5}$ National Ambient Air Quality Standard (NAAQS) of 15 $\mu g\ m^{-3}$, with the exception of the New Haven/Stile Street special purpose monitoring site. In the case of NJ, there is obvious year-to-year variation at some of the sites, and a few of the monitors are above the level of the annual $PM_{2.5}$ NAAQS. However, this estimated annual average should not be confused with that based on the regulatory process that requires estimation of the annual average based upon individual quarterly data.

Table 3 lists the 98th percentile of the $PM_{2.5}$ concentration at each of these monitors, and again, only those years that had 75% valid samples are shown. The 24-hour NAAQS for $PM_{2.5}$ is 65µg m^{-3}, and only once did a site exceed 50µg m^{-3} – Elizabeth Lab in 2001.

Trends

We also used these data to estimate the annual trends at the longest-running sites. For this analysis we computed quarterly averages at these sites, and considered quarters to be complete if there were at least 10 valid samples. Table 4 lists the estimated linear trends on an annual basis. All monitors except for the New Haven/Stiles Street special purpose monitor show a downward trend, varying between 0.05µg m^{-3} and 0.49µg m^{-3}, indicating general improvement in $PM_{2.5}$ air quality over the region and consistent with what was reported in TSD-3a (2007) for the NY monitors.

Reference

TSD-3a, 2007. Analysis of Ambient $PM_{2.5}$ Mass and Speciation: New York portion of the New York Metropolitan Nonattainment Area through 2006

Table 1. Listing of FRM sites, 1999-2006. Some locations have primary ("P") and duplicate ("D") samplers. Dates with an asterix denote daily sampling for at least part of the period. The New Haven/Stiles St. monitor was designated as "special purpose," and is included here for completeness only (*in italics*).

State	AQS ID	Site Name	County	Dates
CT	090010010	Bridgeport/Roosevelt School	Fairfield CT	P: 1/1999 – 12/2006 D: 1/1999 – 1/2003
	090010113	Bridgeport/Edison School	Fairfield CT	9/2000 – 12/2003
	090011123	Danbury WCSU	Fairfield CT	1/1999 – 12/2006
	090012124	Stamford H.S.	Fairfield CT	1/1999 – 12/2004
	090013005	Norwalk Health Dept.	Fairfield CT	3/2000 – 12/2006
	090019003	Westport/Sherwood Island	Fairfield CT	1/1999 – 12/2006
	090090018	*New Haven/Stiles St.*	*New Haven CT*	*P: 1/1999 – 9/2005** *D: 1/1999 – 1/2003*
	090090026	New Haven/Woodward Firehouse	New Haven CT	4/2003 – 12/2006
	090090027	New Haven/Criscuolo Park	New Haven CT	P: 1/2004 – 12/2006* D: 2/2005 – 12/2006
	090091123	New Haven/State St.	New Haven CT	P: 1/1999 – 12/2006 D: 1/1999 – 2/2005
	090092008	New Haven/Ag. Center	New Haven CT	4/2003 – 12/2006
	090092123	Waterbury/Bank St.	New Haven CT	P: 1/1999 – 12/2006 D: 1/1999 – 12/2006
	090098003	West Haven Toll	New Haven CT	4/2003 – 12/2004
	090099005	Hamden Mill Basins	New Haven CT	7/1999 – 12/2003
NJ	340030003	Fort Lee Library	Bergen NJ	1/1999 – 12/2006
	340130011	Newark/St. Charles	Essex NJ	1/1999 – 12/1999
	340130015	Newark/Willis Center	Essex NJ	4/1999 – 12/2006
	340130016	Newark Lab	Essex NJ	P: 8/2001 – 5/2003 D: 8/2001 – 5/2003
	340171003	Jersey City Firehouse	Hudson NJ	P: 1/1999 – 12/2006 D: 12/1999 – 12/2006
	340172002	Union City	Hudson NJ	1/1999 – 3/2002, 7/2005 – 12/2006
	340210008	Trenton	Mercer NJ	1/1999 – 12/2006
	340218001	Washington Crossing	Mercer NJ	1/1999 – 12/2006
	340230006	New Brunswick	Middlesex NJ	1/1999 – 12/2006
	340270004	Morristown Ambulance Squad	Morris NJ	5/1999 – 12/2006
	340273001	Chester	Morris NJ	1/1999 – 12/2006
	340310005	Paterson	Passaic NJ	1/1999 – 12/2006
	340390004	Elizabeth Lab	Union NJ	P: 1/1999 – 12/2006* D: 1/1999 – 12/2006
	340390006	Elizabeth/Mitchell Bldg.	Union NJ	1/1999 – 12/2006
	340392003	Rahway	Union NJ	12/1999 – 12/2006*

Table 2. Annual average $PM_{2.5}$ levels for sites with at least 75% valid samples in a given year, 2000-2006. Incomplete years are left blank.

Site Name	2000	2001	2002	2003	2004	2005	2006
Bridgeport/Roosevelt School (P)	13.88	13.71	12.72	12.98	12.92	14.32	12.51
Bridgeport/Roosevelt School (D)	15.63	13.49	11.82				
Bridgeport/Edison School		12.77	12.88	12.27			
Danbury WCSU	12.70	13.22	12.51	13.37	11.25	13.44	12.17
Stamford H.S.	12.90	13.01	12.81	13.51	11.78		
Norwalk Health Dept.	12.86	13.41	12.58	12.96	12.23	13.32	11.77
Westport/Sherwood Island	13.03	12.15	11.49	11.63	11.06	12.18	10.69
New Haven/Stiles St. (P)	*15.94*	*16.88*	*16.00*	*16.91*	*15.40*		
New Haven/Stiles St. (D)	*18.78*	*18.60*	*16.19*				
New Haven/Woodward Firehouse					11.56	13.05	11.72
New Haven/Criscuolo Park (P)					12.21	13.62	12.21
New Haven/Criscuolo Park (D)						14.01	12.81
New Haven/State St. (P)	14.07	14.32	13.03	13.59	12.66	13.88	12.63
New Haven/State St. (D)		14.58	12.38	15.49	12.39		
New Haven/Ag. Center					11.14	11.73	10.76
Waterbury/Bank St. (P)	13.61	13.98	13.23	12.64	12.04	14.00	11.98
Waterbury/Bank St. (D)	14.82	14.21	12.75	14.09	11.97	14.14	12.26
West Haven Toll					12.91		
Hamden Mill Basins	11.49	11.88	11.09	12.29			
Fort Lee Library	14.57	13.85	12.99	13.34	12.05	14.65	11.82
Newark/Willis Center	15.60	13.06	13.16	13.84	13.17	14.35	12.12
Newark Lab (P)			14.12				
Newark Lab (D)			14.05				
Jersey City Firehouse (P)	16.78	14.01	14.34	14.81	13.66	15.10	13.35
Jersey City Firehouse (D)			13.99	16.26	12.93	16.07	14.67
Union City	17.08	15.54					13.83
Trenton	14.71	14.46	12.94	13.41	12.48	12.90	12.19
Washington Crossing	12.05		11.35	12.18	10.96	12.27	10.06
New Brunswick	13.00	12.72	11.12	12.91	11.11	13.33	10.77
Morristown Ambulance Squad	12.88		11.48	12.16	11.27	12.33	10.12
Chester	11.09		10.46	10.77	9.99	10.77	9.01
Paterson	13.56		12.90	13.26	12.60	13.44	11.88
Elizabeth Lab (P)		15.53	14.56	15.96	15.08	15.24	14.16
Elizabeth Lab (D)	18.49	15.42	14.78	16.97	14.19	16.65	14.72
Elizabeth/Mitchell Bldg.	15.20	12.88	13.11	13.97	12.68	14.33	12.36
Rahway	14.10	12.77	12.04	13.24	12.53	13.91	11.92

Table 3. The 98th percentile of $PM_{2.5}$ levels for sites with at least 75% valid samples in a given year, 2000-2006. Incomplete years are left blank.

Site Name	2000	2001	2002	2003	2004	2005	2006
Bridgeport/Roosevelt School (P)	41.5	40.1	32.9	39.6	34.2	38.3	36.7
Bridgeport/Roosevelt School (D)	42.8	40.6	34.0				
Bridgeport/Edison School		32.1	33.2	40.4			
Danbury WCSU	32.9	35.2	30.7	37.3	27.5	33.4	33.8
Stamford H.S.	36.3	37.4	34.5	41.5	32.2		
Norwalk Health Dept.	35.3	35.7	34.3	42.9	35.2	34.9	35.9
Westport/Sherwood Island	33.4	34.5	30.8	44.0	30.9	35.2	31.3
New Haven/Stiles St. (P)	*39.5*	*40.6*	*40.4*	*44.0*	*34.9*		
New Haven/Stiles St. (D)	*44.8*	*43.0*	*34.5*				
New Haven/Woodward Firehouse					31.5	36.4	36.5
New Haven/Criscuolo Park (P)					33.2	38.2	36.7
New Haven/Criscuolo Park (D)						39.1	31.6
New Haven/State St. (P)	37.2	39.5	32.4	40.6	36.2	40.8	38.1
New Haven/State St. (D)		40.6	32.3	38.9	29.9		
New Haven/Ag. Center					32.1	32.8	33.9
Waterbury/Bank St. (P)	34.4	35.4	32.6	37.7	30.4	34.1	35.6
Waterbury/Bank St. (D)	36.0	34.9	33.5	32.8	26.1	35.9	35.2
West Haven Toll					30.8		
Hamden Mill Basins	34.7	32.1	29.4	44.0			
Fort Lee Library	36.4	34.4	33.0	38.9	31.0	40.5	38.2
Newark/Willis Center	41.6	32.1	32.3	39.8	34.9	40.4	39.9
Newark Lab (P)			34.6				
Newark Lab (D)			39.9				
Jersey City Firehouse (P)	39.5	34.1	34.3	46.4	37.4	37.9	41.0
Jersey City Firehouse (D)			36.8	41.1	29.1	38.3	38.9
Union City	39.3	39.5					
Trenton	43.1	35.4	35.4	40.5	33.3	33.6	36.2
Washington Crossing	31.5		32.2	34.9	28.0	33.0	29.5
New Brunswick	34.5	34.1	26.0	45.0	35.5	33.8	32.8
Morristown Ambulance Squad	30.2		29.7	36.8	31.1	32.9	30.4
Chester	29.4		30.0	35.7	29.8	33.4	28.3
Paterson	35.4		34.9	39.8	31.0	40.5	33.4
Elizabeth Lab (P)		39.7	41.7	37.0	40.5	42.5	39.8
Elizabeth Lab (D)	46.6	50.3	39.3	41.2	36.5	39.8	41.9
Elizabeth/Mitchell Bldg.	36.0	33.8	30.0	40.9	33.1	38.6	38.7
Rahway	38.0	30.4	31.1	35.2	36.6	38.2	37.5

Table 4. Trends in $PM_{2.5}$ mass at the longest running FRM monitors, based on quarterly averages from 1999-2006, in $\mu g\ m^{-3}\ yr^{-1}$. Only those quarters with at least 10 valid samples are included in this trend estimate.

Site Name	**Trend ($\mu g\ m^{-3}\ yr^{-1}$)**
Bridgeport/Roosevelt School (P)	-0.07
Danbury WCSU	-0.05
Norwalk Health Dept.	-0.18
Westport/Sherwood Island	-0.19
New Haven/Stiles St. (P)	*+0.02*
New Haven/State St. (P)	-0.19
New Haven/State St. (D)	-0.32
Waterbury/Bank St. (P)	-0.16
Waterbury/Bank St. (D)	-0.13
Fort Lee Library	-0.25
Newark/Willis Center	-0.37
Jersey City Firehouse (P)	-0.34
Jersey City Firehouse (D)	-0.25
Trenton	-0.27
Washington Crossing	-0.14
New Brunswick	-0.11
Morristown Ambulance Squad	-0.49
Chester	-0.21
Paterson	-0.06
Elizabeth Lab (P)	-0.27
Elizabeth Lab (D)	-0.43
Elizabeth/Mitchell Bldg.	-0.30
Rahway	-0.15

TSD-4

Future Year Emissions Inventory for

Regional and Urban Modeling over the OTR

Bureau of Air Quality Analysis and Research

Division of Air Resources

New York State Department of Environmental Conservation

Albany, NY 12233

February 22, 2007

Following the designation of an area as non-attainment for the criteria pollutant Ozone, the Clean Air Act requires submission of an implementation plan, commonly referred to as State Implementation Plan (SIP), demonstrating as to how that area will be meeting the NAAQS in the time period established by the Act. Several areas of the OTR were designated as being in nonattainment for 8-hr ozone (see http://www.epa.gov/ozonedesignations/) with a maximum attainment date of June 2009 and June 2010. However, given that ozone precursors also contribute to $PM_{2.5}$ and other logistics, it was recommended and agreed by the member states that the future year for demonstrating attainment would be 2009. Therefore the OTR states initiated the development of emissions inventories reflecting growth and control from 2002 to 2009 as well as for 2012 and 2018. The 2018 inventory was in response to the need for submission of regional haze SIP, and the 2012 as a next step in the event that attainment for ozone was not feasible in 2009.

Future year emissions inventories within the OTR

The OTR states through MANE-VU contracted MACTEC Federal Programs (called Contractor) develop the 2009, 2012 and 2018 inventories based upon 2002 inventories that the states had previously developed for use in the base year model work. The Contractor in consultation with the states developed the necessary growth and control factors and applied to the 2002 inventory. It should be noted that emissions for mobile sources and the electric energy generating units (EGUs) was not part of the Contractor's effort. The states provided VADEQ and NESCAUM appropriate MOBILE 6 input files along with the projected VMTs, which coupled with the hourly gridded temperature information was used to generate mobile source emissions. As for the emissions from the EGU sector, the inter-RPO work group utilized the Integrated Planning Model (IPM) to develop the state and unit-level emissions. Details on these topics can be found in MACTEC (2007) for non-EGU sectors and in ICF (2005a, 2005b) for the EGU sector. These inventories are identified as 2009 on the way (2009OTW), since they reflect all emission control measures that were promulgated or would become effective on or before 2009.

In addition to these OTW inventories, states have also requested the development of what is termed as beyond on the way (BOTW) inventories for 2009, 2012, and 2018. These inventories are to be based on additional OTC model rules, which would result in reduction in emissions from specific source categories. Details on the development of these controls and the corresponding inventories can be found in MACTEC (2007).

Future year emission inventories outside the OTR

MANE-VU obtained inventories for 2009OTW and 2018OTW as part of the inter-RPO workgroup. However, only MRPO provided emissions for 2012OTW. For the VISTAS region, 2012 emissions were obtained by interpolating area, nonroad, and non-EGU emissions between 2009 and 2018. For mobile sources, VMT were interpolated between 2009 and 2018 and the 2012 emissions were calculated with MOBILE6 using these interpolated VMT and 2012 emission factors. For the CENRAP region, no 2012 emissions were generated, and therefore the 2009 emissions were used in the 2012 CMAQ simulation.

Canadian Emissions

In the case of Canadian emissions, 2010 and 2020 area, non-road, and mobile source emissions were obtained from USEPA (ftp://ftp.epa.gov/EmisInventory/canada_2000inventory/).
Primary $PM_{2.5}$ and PM_{10} emissions for the SCCs listed in http://www.epa.gov/ttn/chief/emch/invent/tf_scc_list2002nei_v2.xls were divided by a factor of 4 to account for the fugitive dust transport fraction correction. EGU point source emissions for 2010 and 2020 were obtained from Environment Canada (Bloomer, 2006), while non-EGU point source emissions were assumed to be the same as those developed for 2002 and described elsewhere (see TSD-1c). The 2010 inventories were used in preparing CMAQ input files for the 2009OTW, 2009BOTW, and 2012BOTW scenarios.

Emissions processing – Application of SMOKE

The 2009OTW, 2009BOTW, and 2012 BOTW inventories were processed by VADEQ and NYSDEC using a template similar to that was used for processing 2002 base year emissions (see TSD-1d, TSD-1j) for the 12 km domain. In particular, all gridding and speciation profiles and cross-reference files as well as all temporal allocation profiles and cross-reference files used in the 2002 processing were also used for future year processing. For each day, the following files were prepared:

2009OTW:

- MANE-VU
  - 2009 OTW V3 area source (VADEQ)
  - 2009 V3 nonroad source (VADEQ)
  - 2009 mobile source (NYSDEC)
  - 2009 OTW V3 non-EGU point source (VADEQ)
  - 2009 IPM2.1.9. EGU point source (VADEQ)
  - 2009 EGU point source, IPM2.1.9. non-fossil fuel units (VADEQ)
- VISTAS
  - 2009 BaseG area source (VADEQ)
  - 2009 BaseG nonroad source (VADEQ)

    - 2009 BaseG non-EGU point source (VADEQ)
    - 2009 IPM2.1.9. EGU point source (incl. post-IPM adjustments) (VADEQ)
    - 2009 BaseG low-level fires (VADEQ)
    - 2009 BaseG elevated source fires (VADEQ)
- MRPO
    - 2009 BaseK area source (NYSDEC)
    - 2009 BaseK area source NH3/dust (NYSDEC)
    - 2009 BaseK nonroad source (NYSDEC)
    - 2009 non-EGU point source (VADEQ)
    - 2009 IPM2.1.9. EGU point source (incl. post-IPM adjustments) (VADEQ)
- CENRAP
    - 2009 BaseB area source (VADEQ)
    - 2009 BaseB nonroad source (VADEQ)
    - 2009 non-EGU point source (VADEQ)
    - 2009 IPM2.1.9. EGU point source (VADEQ)
- VISTAS/MRPO/CENRAP ("non-MANE-VU RPOs")
    - 2009 mobile sources for all non-MANE-VU RPOs as implemented in VISTAS 2009 BaseG processing (VADEQ)
- Canada
    - 2010 area sources (NYSDEC)
    - 2010 nonroad sources (NYSDEC)
    - 2010 mobile sources (NYSDEC)
    - point sources (2002 non-EGU point sources; 2010 EGU point sources from IPM) (NYSDEC)
- Biogenics
    - Same as for 2002 base case, calculated with hourly MM5 meteorological fields for 2002 (NYSDEC)

2009 BOTW:

As above for 2009 OTW, with the following two exceptions:

- MANE-VU
    - 2009 BOTW V3 area source (NYSDEC)
    - 2009 BOTW V3 non-EGU point source (NYSDEC)

2012 BOTW:

- MANE-VU
    - 2012 OTW V3 area source (NYSDEC)
    - 2012 V3 nonroad source (NYSDEC)
    - 2012 mobile source (NYSDEC)
    - 2012 OTW V3 non-EGU point source (NYSDEC)
    - 2012 IPM2.1.9. EGU point source (NYSDEC)
    - 2009 EGU point source, IPM2.1.9. non-fossil fuel units (VADEQ)
- VISTAS

    - 2012 BaseG area source (interpolated between 2009 BaseG and 2018 BaseG) (NYSDEC)
    - 2012 BaseG nonroad source (interpolated between 2009 BaseG and 2018 BaseG) (NYSDEC)
    - 2012 BaseG mobile source (interpolated VMT between 2009 BaseG and 2018 BaseG) (NYSDEC)
    - 2012 BaseG non-EGU point source (interpolated between 2009 BaseG and 2018 BaseG) (NYSDEC)
    - 2012 IPM2.1.9. EGU point source (incl. post-IPM adjustments) (NYSDEC)
    - 2009 BaseG low-level fires (VADEQ)
    - 2009 BaseG elevated source fires (VADEQ)
- MRPO
    - 2012 BaseK area source (NYSDEC)
    - 2012 BaseK area source NH3/dust (NYSDEC)
    - 2012 BaseK nonroad source (NYSDEC)
    - 2012 BaseK nonroad source (NYSDEC)
    - 2012 non-EGU point source (NYSDEC)
    - 2012 IPM2.1.9. EGU point source (incl. post-IPM adjustments) (NYSDEC)
- CENRAP
    - 2009 BaseB area source (VADEQ)
    - 2009 BaseB nonroad source (VADEQ)
    - 2009 mobile source (based on VISTAS 2009 BaseG processing) (NYSDEC)
    - 2009 non-EGU point source (VADEQ)
    - 2009 IPM2.1.9. EGU point source (VADEQ)
- Canada
    - 2010 area sources (NYSDEC)
    - 2010 nonroad sources (NYSDEC)
    - 2010 mobile sources (NYSDEC)
    - point sources (2002 non-EGU point sources; 2010 EGU point sources from IPM) (NYSDEC)
- Biogenics
    - Same as for 2002 base case, calculated with hourly MM5 meteorological fields for 2002

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TSD-1c (2006) Emissions Processing for 2002 OTC Regional and Urban 12km Base year simulation

TSD-1d (2006) 8-h Ozone Modeling using the SMOKE/CMAQ system

TSD-1j (2007) Emission processing for OTC 2009 OTW/OB 12km CMAQ Simulations

TSD-5

Baseline and Future $PM_{2.5}$ Design Values in the New York City Metropolitan Non-Attainment Area

Bureau of Air Quality Analysis and Research
Division of Air Resources
New York State Department of Environmental Conservation
Albany, NY 12233

December 14, 2007

Introduction

Baseline $PM_{2.5}$ design values for a given area are based solely on measured Federal Reference Method (FRM) data, whereas air quality model-based results utilizing emissions from a target future year are needed to project $PM_{2.5}$ design values to determine future attainment status of that area. The modeling guidance (USEPA, 2007a) states that the results from the regulatory applications of air quality models are not to be used in an absolute sense; rather, they are to be used to estimate the effects of changes in emissions on pollutant levels in a relative sense. For a single pollutant like ozone, the future design value at a given location is the product of the current observed value and the ratio of the future-to-current model predictions. The ratio of the future-to-current model prediction is also known as the relative response factor (RRF). Unlike ozone, $PM_{2.5}$ is comprised of a variety of ions, trace elements, and carbon species. To demonstrate future attainment of air quality standards for $PM_{2.5}$, one needs to project how each of the major species changes between the baseline and future model yeasr; that is, it is necessary to estimate speciated RRF values. In this report we present an overview of the calculation of the baseline $PM_{2.5}$ design values and speciated RRFs for monitors in the 22-county New York City non-attainment area (NYC NAA), which when combined yield future year $PM_{2.5}$ design values across the NYC NAA.

Baseline $PM_{2.5}$ design values

The first step in the modeled attainment test for the annual National Ambient Air Quality Standard (NAAQS) is to compute the baseline design values at each FRM site in the NYC NAA. The baseline design value is based on a five-year weighted average of observations from 2000-2004 to straddle the baseline emissions/modeling year of 2002 (EPA, 2007a). This calculation is to be performed utilizing data on a quarterly basis. In other words, for each quarter the baseline concentration is the average of the concentrations from the corresponding quarters of the three year periods of 2000-2002, 2001-2003, and 2002-2004. Table 1 lists the baseline design values, based on the EPA's official quarterly averages (EPA, 2007b), at each FRM site across the NYC NAA having at least two years of sampling data during this five-year period. We note that one monitor – P.S. 59 (360610056) in New York County – had recorded one anomalously high average concentration of 25.2 $\mu g\ m^{-3}$ during the third quarter of 2003. Examination of the data shows that for this quarter there were only five valid data points at the beginning of the quarter, and the monitor was subsequently shut down because of construction activity at the site. Because this short time period is not representative of air quality over the entire quarter, in this analysis this quarter was treated as missing, and this is reflected in Table 1. Attachment 1 provides a more detailed analysis of this particular issue.

Current species concentrations

The next step in the modeled attainment test is to determine the current species composition at each FRM monitor, based on measured species data. The $PM_{2.5}$ species composition is highly complex, but if the goal of air quality management decisions is to reduce $PM_{2.5}$, it is necessary to know the dominant chemical species. Some of FRM monitors in the NYC NAA are collocated with Speciation Trends Network (STN) monitors that collect major ions, including sulfate (SO_4), nitrate (NO_3), and ammonium (NH_4); carbon species, including elemental carbon (EC) and organic carbon (OC); and about 50 trace elements. At sites where both STN and FRM data are available, it is possible to relate the total FRM mass with the mass of individual species; however, during the 2000-2004 period, in the NYC NAA there were only two sites in CT, three in NJ, and four in NY that had collocated STN and FRM monitors. At those FRM sites that do not have collocated STN monitor, we assumed that the speciation data from the nearest STN monitor is sufficient to characterize the FRM site. Table 1 also lists the nearest STN site that is to be associated with the FTM site in the NYC NAA for computing the current species concentrations.

It is known that FRM monitor filters do not retain semi-volatile species such as ammonium nitrate and some organics with high efficiency, particularly during the warmer months. Hence, one cannot simply add up the major species from the STN monitor and expect to relate this identically to the total mass from the FRM monitor. It is necessary to adjust some of the STN data to estimate the species composition of mass measured by the FRM monitor. According to the modeling guidance (USEPA, 2007a) the mass from the FRM monitor can be expressed as:

$PM_{2.5}$ = "retained nitrate mass" + "ammoniated sulfate mass" + "ammonium associated with sulfate and retained nitrate" + "particle-bound water" + "other primary $PM_{2.5}$" + "blank mass" + "carbonaceous mass" [Eq. 1]

where $PM_{2.5}$ refers to the total mass measured at each FRM site; "retained nitrate mass" and "ammonium associated with sulfate and retained nitrate" refer only to the fractions of NO_3 and NH_4, respectively, that are not volatilized; "ammoniated sulfate mass" refers to the SO_4 that is measured by the STN; "particle-bound water" refers to water that is associated with the hygroscopic ammonium sulfate and nitrate, and can be estimated as a polynomial function of retained ammonium, sulfate, and nitrate; "other primary $PM_{2.5}$" refers to unspeciated, inert $PM_{2.5}$ such as soil/crustal elements (here assumed to be the sum of major crustal oxides – Si, Ca, Fe, and Ti); "blank mass" refers to passively collected contamination, assumed to be 0.5 $\mu g\ m^{-3}$; and "carbonaceous mass" refers to EC and an estimate of retained OC. Because of uncertainties in the measured OC, the modeling guidance suggests that organic mass be computed as the difference between the measured FRM mass and the sum of the other species listed above.

To compute the current species concentrations at each FRM site in the NYC NAA, we used the EPA's official database of STN data (EPA, 2007b) covering the period 2002-2004. This database also includes the adjusted speciation data needed to compute the various retained species. For each quarter, the average species composition was computed; this was a simple arithmetic average, not a weighted average like the FRM mass. Table 2 lists the current species composition, as defined in Equation 1 above. Note that in the case of retained NH_4, the actual measured data were not used here, due to uncertainties in its measurement. The modeling guidance suggests that NH_4 can be estimated according to degree of neutralization (DON) of sulfate:

$$NH_4 = DON \times SO_4 + 0.29 \times NO_3r \quad \text{[Eq. 2]}$$

Where NO_3r refers to retained nitrate. As will be shown in a later section, using the DON – which also is included in the official EPA database – will allow the future NH_4 value to depend only on SO_4 and NO_3, since reductions in emissions generally are targeting precursors of SO_4 and NO_3. The formulas for particle-bound water (PBW) and other primary $PM_{2.5}$ (OPP) are listed in the modeling guidance (USEPA, 2007a).

Relative Response Factors

As stated in the Introduction, the air quality modeling results are to be used in a relative sense to compute future $PM_{2.5}$ design values. For each species *i*, the future concentration of each species (CF_i) is the product of the baseline concentration (CB_i) and the corresponding RRF_i:

$$CF_i = CB_i \times RRF_i \qquad \text{[Eq. 3]}$$

As with the measured data to obtain current FRM mass and species composition, the model results are used on a quarterly basis. For each quarter and species, we computed the quarterly average concentration for the base and future year simulations. The RRF is the ratio of the quarterly average future-to-base year values. For this analysis, at each FRM site we considered the average of the surrounding nine grid cells and not just the grid cell that corresponds to that FRM site.

The RRF values for SO_4, NO_3r, OC, EC, and OPP were based on application of CMAQ model (TSD-2c, 2007) for 2002 and 2009. Table 3 lists the appropriate CMAQ variables that were used to estimate the speciated RRF values. For NH_4, we used the future values of SO_4 and NO_3r to obtain the future year value, as per Equation 2. For PBW, we used the future year SO_4, NO_3r, and NH_4 values and the polynomial formulation listed in the modeling guidance (USEPA, 2007a). Finally, the blank concentration of 0.5 $\mu g\ m^{-3}$ is assumed to remain constant in the future year.

Future $PM_{2.5}$ design values

Table 4 lists the baseline and future design values for the annual NAAQS at each FRM location in the NYC NAA. In 2009 all sites except for one – P.S. 59 (360610056) in New York County, NY – are projected to be in attainment of the NAAQS, since the future design values are below 14.5 $\mu g\ m^{-3}$. The P.S. 59 site has a projected future concentration of 15.3 $\mu g\ m^{-3}$, meaning that corroboratory analyses are needed for a weight of evidence (WOE) determination to demonstrate attainment at this monitor. It should be noted that on the average the design values across the NYC NAA were reduced by about 1.6 $\mu g\ m^{-3}$, ranging from 1.2-2.2 $\mu g\ m^{-3}$, in 2009 compared to baseline design values. Attachment 2 details the WOE analyses that support the assertion that the entire NYC NAA is projected to be in attainment of the $PM_{2.5}$ NAAQS by 2009.

References

United States Environmental Protection Agency (USEPA), 2007a. Guidance on the use of models and other analyses for demonstrating attainment of air quality goals for ozone, $PM_{2.5}$, and regional haze. EPA-454/B-07-002, Research Triangle Park, NC.

United States Environmental Protection Agency (USEPA), 2007b. Electronic mail correspondence from Kenneth Fradkin, EPA Region 2, on 17 August, 2007 contains two data files used here to demonstrate attainment of the annual $PM_{2.5}$ NAAQS: Annual-official-FRM-99-06-v1.zip (official quarterly average FRM mass) and STN-only-02-04-R2.zip (daily speciation data).

TSD-2c, 2007. $PM_{2.5}$ modeling using the SMOKE/CMAQ system over the Ozone Transport Region (OTR)

Table 1. Base year $PM_{2.5}$ design values across the NYC NAA based on weighted averages over 2000-2004, and the nearest STN monitor to each FRM monitor. Base year design values listed in bold are above the annual NAAQS.

FRM site	Base year Design Value, $\mu g\ m^{-3}$	Nearest STN monitor
090010010	13.1	090019003
090010113	12.6	090019003
090011123	12.8	090019003
090012124	12.9	090019003
090013005	12.9	090019003
090019003	11.8	090019003
090091123	13.7	090091123
090092123	13.1	090091123
090099005	11.6	090091123
340030003	13.7	360050110
340171003	14.9	360610062
340172002	**16.0**	360610062
340210008	13.9	340230006
340218001	11.9	340230006
340230006	12.5	340230006
340270004	12.4	340273001
340273001	11.1	340273001
340310005	13.2	360050083
340390004	**15.7**	340390004
340390006	13.5	340390004
340392003	13.1	340390004
360050080	**15.8**	360050110
360050083	13.8	360050083
360050110	14.7	360050110
360470052	**15.1**	360610062
360470076	14.2	360610062
360470122	14.8	360610062
360590008	12.2	360810124
360610056	**16.9**	360610062
360610062	**16.3**	360610062
360610079	14.7	360050110
360610128	**15.9**	360610062
360710002	11.5	090019003
360810124	13.3	360810124
360850055	14.0	340390004
360850067	12.1	340390004
361030001	12.1	360810124
361191002	12.3	360050083

Table 2. Current species composition in μg m^{-3} across the NYC NAA, based on speciation data from the nearest STN monitor. "SO_4" is sulfate; "NO_3r" is retained nitrate; "OM" is organic mass; "PBW" is particle-bound water; "NH_4" is ammonium associated with SO_4 and NO_3r; and "OPP" is other primary $PM_{2.5}$, assumed to equal the sum of major crustal oxides (Si, Ca, Fe, and Ti).

FRM site	SO_4	NO_3r	OM	EC	PBW	NH_4	OPP
090010010	3.98	0.61	4.09	0.86	1.18	1.34	0.56
090010113	3.81	0.61	3.93	0.83	1.14	1.29	0.53
090011123	3.85	0.60	3.97	0.84	1.15	1.30	0.54
090012124	3.90	0.59	4.02	0.85	1.16	1.31	0.55
090013005	3.89	0.61	4.00	0.85	1.16	1.31	0.55
090019003	3.56	0.52	3.73	0.76	1.06	1.18	0.50
090091123	4.26	0.69	3.67	1.00	1.46	1.63	0.51
090092123	4.05	0.68	3.52	0.96	1.38	1.55	0.49
090099005	3.62	0.57	3.06	0.84	1.24	1.38	0.43
340030003	4.10	0.95	3.32	1.04	1.37	1.70	0.66
340171003	4.40	1.28	3.38	1.33	1.46	1.92	0.68
340172002	4.71	1.41	3.59	1.43	1.56	2.07	0.73
340210008	4.68	0.85	3.32	0.75	1.52	1.77	0.52
340218001	4.01	0.68	2.86	0.63	1.30	1.50	0.44
340230006	4.19	0.73	2.98	0.66	1.36	1.57	0.46
340270004	4.52	0.62	2.91	0.45	1.44	1.59	0.36
340273001	4.04	0.53	2.61	0.39	1.29	1.41	0.32
340310005	3.80	0.82	3.49	1.26	1.26	1.50	0.61
340390004	4.40	1.02	4.03	1.74	1.47	1.83	0.67
340390006	3.76	0.91	3.46	1.50	1.25	1.58	0.57
340392003	3.67	0.84	3.38	1.46	1.22	1.52	0.56
360050080	4.73	1.17	3.84	1.23	1.57	1.99	0.77
360050083	3.95	0.92	3.61	1.34	1.31	1.57	0.64
360050110	4.39	1.08	3.56	1.14	1.46	1.84	0.71
360470052	4.45	1.28	3.42	1.34	1.47	1.94	0.68
360470076	4.20	1.22	3.20	1.26	1.39	1.83	0.64
360470122	4.36	1.26	3.32	1.31	1.44	1.90	0.67
360590008	3.85	0.82	2.97	0.69	1.29	1.55	0.55
360610056	4.98	1.50	3.81	1.51	1.65	2.19	0.77
360610062	4.81	1.40	3.66	1.45	1.59	2.10	0.74
360610079	4.41	1.05	3.58	1.13	1.47	1.84	0.71
360610128	4.68	1.39	3.59	1.42	1.55	2.05	0.72
360710002	3.46	0.49	3.65	0.74	1.03	1.14	0.49
360810124	4.22	0.92	3.24	0.75	1.41	1.70	0.60
360850055	3.93	0.87	3.62	1.56	1.31	1.63	0.60
360850067	3.39	0.75	3.10	1.34	1.13	1.40	0.51
361030001	3.82	0.81	2.95	0.68	1.28	1.53	0.55
361191002	3.52	0.78	3.23	1.18	1.17	1.39	0.57

Table 3. Model variables from CMAQ used to compute speciated RRF values.

$PM_{2.5}$ species, $\mu g\ m^{-3}$	CMAQ variables, $\mu g\ m^{-3}$
SO_4	ASO4I + ASO4J
NO_3r	ANO3I + ANO3J
OC	AORGPAI + AORGPAJ + AORGAI + AORGAJ + AORGBI + AORGBJ
EC	AECI + AECJ
OPP	A25I + A25J

Table 4. Base year and future (2009) $PM_{2.5}$ design values across the NYC NAA. Concentrations listed in bold are above the annual NAAQS.

FRM site	Base Year Design Value $\mu g\ m^{-3}$	Future $PM_{2.5}$ Design Value $\mu g\ m^{-3}$
090010010	13.1	11.5
090010113	12.6	11.2
090011123	12.8	11.2
090012124	12.9	11.4
090013005	12.9	11.3
090019003	11.8	10.4
090091123	13.7	11.7
090092123	13.1	11.2
090099005	11.6	9.9
340030003	13.7	12.1
340171003	14.9	13.3
340172002	**16.0**	14.3
340210008	13.9	11.8
340218001	11.9	10.1
340230006	12.5	10.4
340270004	12.4	10.4
340273001	11.1	9.3
340310005	13.2	11.4
340390004	**15.7**	13.5
340390006	13.5	11.8
340392003	13.1	11.4
360050080	**15.8**	14.2
360050083	13.8	12.4
360050110	14.7	13.3
360470052	**15.1**	13.6
360470076	14.2	12.8
360470122	14.8	13.3
360590008	12.2	11.0
360610056	**16.9**	**15.3**
360610062	**16.3**	14.4
360610079	14.7	13.3
360610128	**15.9**	14.3
360710002	11.5	10.3
360810124	13.3	12.1
360850055	14.0	12.3
360850067	12.1	10.6
361030001	12.1	10.7
361191002	12.3	10.9

Attachment 1

Analysis of the FRM data at PS 59 in New York (Manhattan) County, NY

New York State DEC
Division of Air Resources

Background

The New York State DEC analyzed the measurements of $PM_{2.5}$ mass data across the New York City metropolitan non-attainment area for use in estimating the future design values, which are based on air quality modeling of the 2002 base and 2009 future years. The EPA Guidance (US EPA, 2007) requires the use of the measured data from the five-year period around the base year (2000-2004) to estimate the current design value (DVc). Although the Modeled Attainment Test Software (MATS) has not yet been released, the New York State DEC has been able to compute preliminary baseline and future $PM_{2.5}$ levels, based on discussions with EPA/OAQPS. These preliminary calculations suggest that, except for one monitor – PS 59 [AQS ID 36-061-0056] in New York (Manhattan) County, NY – the region will be at or below the annual $PM_{2.5}$ NAAQS. If the official FRM data received from OAQPS are used 'as-is,' PS 59 will be *slightly* above the prescribed level of the annual $PM_{2.5}$ NAAQS. This is despite the fact that on average, $PM_{2.5}$ levels have been decreasing at this site by nearly ~0.4-0.5 $\mu g\ m^{-3}\ yr^{-1}$ since 1999. In the following we investigate the cause for this dichotomy, and note that the measurements taken during the third quarter of 2003 play an important role in the estimated $PM_{2.5}$ DVc and the potential future status of nonattainment at this location.

PS 59 monitoring location

The FRM unit is located on the roof of PS 59 in New York County and has been operational since 1999. Appendix A provides the location and description of the monitoring site. The FRM sampler was collocated with a duplicate sampler, as part of the network design requirements. Both monitors were shut down for most of the third quarter of 2003 due to roof repairs. Appendix B provides the correspondence from New York City School Construction Authority indicating the working hours of construction activities at the location with the requirement that the *roof-main work to be completed by August 25, 2003*. Ambient monitoring was resumed at this site in October 2003. So for the third quarter in 2003 there were only the first five samples out of a possible 31 were available.

Duplicate Monitors and Analysis

Appendix C describes the analysis associated with the primary and duplicate measurements, which shows that there is very good agreement between the two monitors, except for one outlier, which is found to be not associated with the period in question – 3rd quarter of 2003. The estimated correlation coefficient (r^2=0.9867) and the almost zero intercept (0.0081) suggest either of the monitors could be used in the analysis. It should also be noted that from a monitoring perspective the site meets the criteria for data completeness in 2003 based on the remainder of the measurements. Yet, examination of the data on a quarterly average basis indicates that an average based on these five data points is not necessarily representative of air quality over the entire quarter at this location in addressing model-based attainment. The reason for examining the data by quarter arises from the modeling guidance (US EPA, 2007) that calls for a weighted five-year running quarterly average to compute baseline concentration levels.

In the following two sections we will present a case that a more appropriate quarterly concentration value be used for this quarter at this site, rather than one based on only the five values, in estimating the DVc.

Observed $PM_{2.5}$ mass in New York County, 2003

Figure 1 displays the time series of $PM_{2.5}$ mass at the four New York County FRM monitors in 2003 – PS 59 (360610056), Canal Street (360610062), JHS 45 (360610079), and PS 19 (360610128). Each site tends to track the others rather well over the entire year. Considering only those days for which valid measurements are available for all four sites, there were a total of 64 days out of a possible 121 days which were used to estimate the annual arithmetic average at each site: PS 59, 17.11 $\mu g\ m^{-3}$; Canal Street, 15.69 $\mu g\ m^{-3}$ JHS 45, 14.75 $\mu g\ m^{-3}$ and PS 19, 16.18 $\mu g\ m^{-3}$. These averages, not to be confused with the regulatory definition, indicate that in 2003 the PS 59 monitor is on avergae about 1 to 2 $\mu g\ m^{-3}$ higher than the other sites.

Figures 2a-d display the quarterly average concentrations covering the five year span of 2000 to 2004 for these four monitors. With the exception of the third quarter of 2003 (Figure 2c) the quarterly average concentrations are quite comparable at these four monitors. As evident from Figure 2c however, the estimated quarterly average for PS 59 is more than 8 $\mu g\ m^{-3}$ higher than the other three sites, whose third quarter averages based on 20 to 29 samples were in the 16-17 $\mu g\ m^{-3}$ range.

Current and baseline $PM_{2.5}$ levels at PS 59

To compute baseline $PM_{2.5}$ levels at this site, we started with the data file that was provided to the New York State DEC by Region 2 on August 17, 2007. The file labeled "Annual-official-FRM-99-06-v1.csv" lists the EPA's official quarterly averages at each FRM site across the country for the period 1999-2006, as well as the corresponding attainment status and completion codes.

Base year $PM_{2.5}$ levels were computed three ways. The first method (method A) includes the FRM data from the anomalous third quarter of 2003. The other two methods involve data substitution; method B substitutes the third quarter average (16.70 $\mu g\ m^{-3}$) from a nearby site (PS 19, ~3.5 km south of PS 59), while method C substitutes the average of the third quarter values from the other years (16.51 $\mu g\ m^{-3}$; 2000-2002 and 2004). The third quarter of 2003 at PS 19 and the average of the third quarters from the other years at PS 59 are considered complete for attainment/non-attainment purposes and are more likely to reflect the average air quality at or near this site.

If method A is used the base DVc is 17.37 μg m^{-3}, while the methods B and C result in a DVc of 16.90 μg m^{-3} and 16.89 μg m^{-3}, respectively. Hence, if the 'anomalous quarter' from 2003 is used in this calculation (method A), the base year DVc is about 0.5 μg m^{-3} higher than the other methods that used substitution. Preliminary calculations of the future 2009 design value are estimated to be about 15.7 μg m^{-3} using method A, and about 15.3 μg m^{-3} based on either method B or C.

Summary

The above analysis has demonstrated that the use of quarterly average based on the measured data 'as-is' has significant consequences for $PM_{2.5}$ non-attainment status at the PS 59 monitor. A quarterly average that covers only five days for the third quarter of 2003 is not consistent with the measurements available at other monitor locations in New York County. It is recommended that this quarterly average be re-calculated using either the substitution of a third quarter concentration from a nearby monitor such as PS 19, or the substitution of the composite average of the third quarters from the other years at that monitor.

Reference

US EPA, 2007. Guidance on the use of models and other analyses for demonstrating attainment of air quality goals for ozone, $PM_{2.5}$, and regional haze. Office of Air Quality Planning and Standards, 253 pp., EPA-454/B-07-002.

Figure 1. Time series of $PM_{2.5}$ mass at the four FRM sites in New York County in 2003.

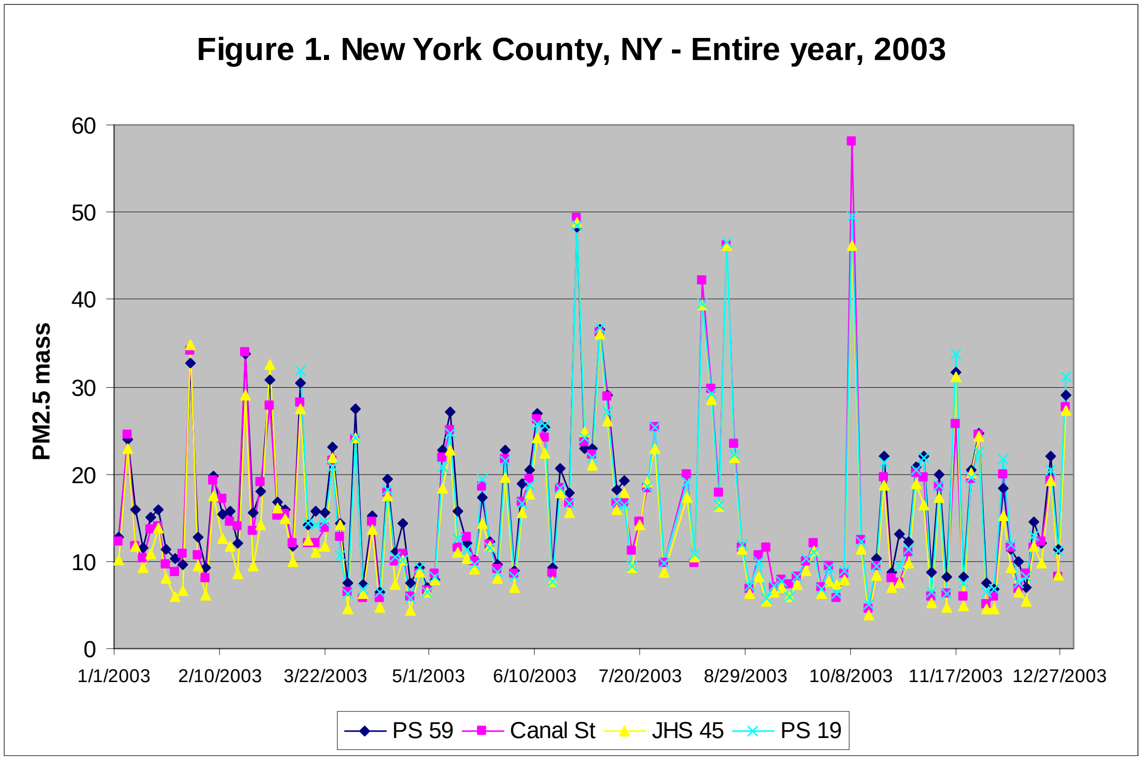
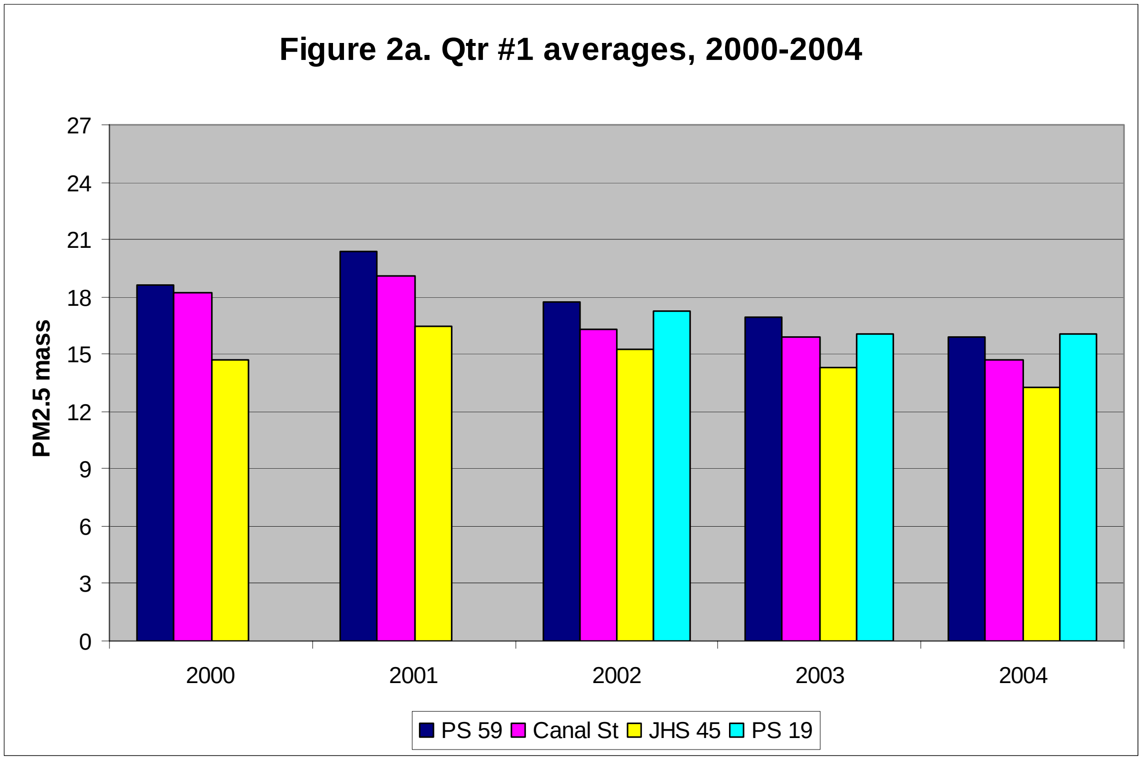


Figure 2. Comparison of quarterly averages at the four FRM monitors in New York County, 2000-2004. (a) Quarter #1, (b) Quarter #2, (c) Quarter #3, and (d) Quarter #4.



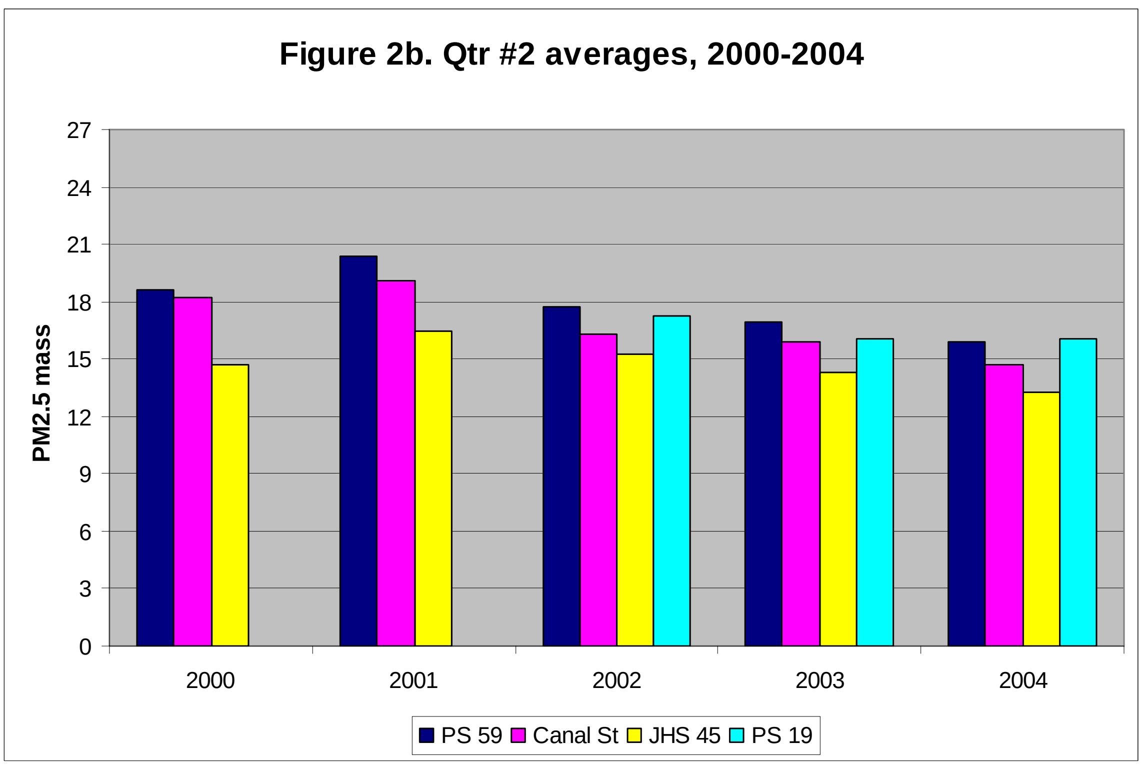
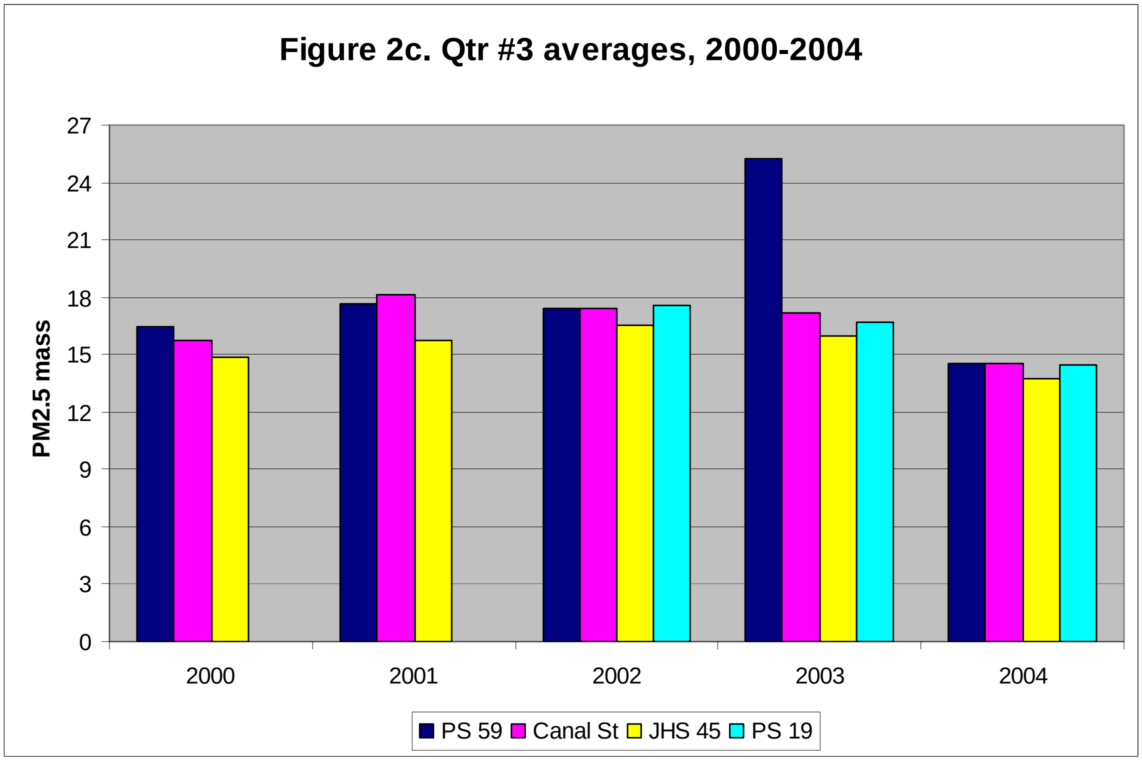
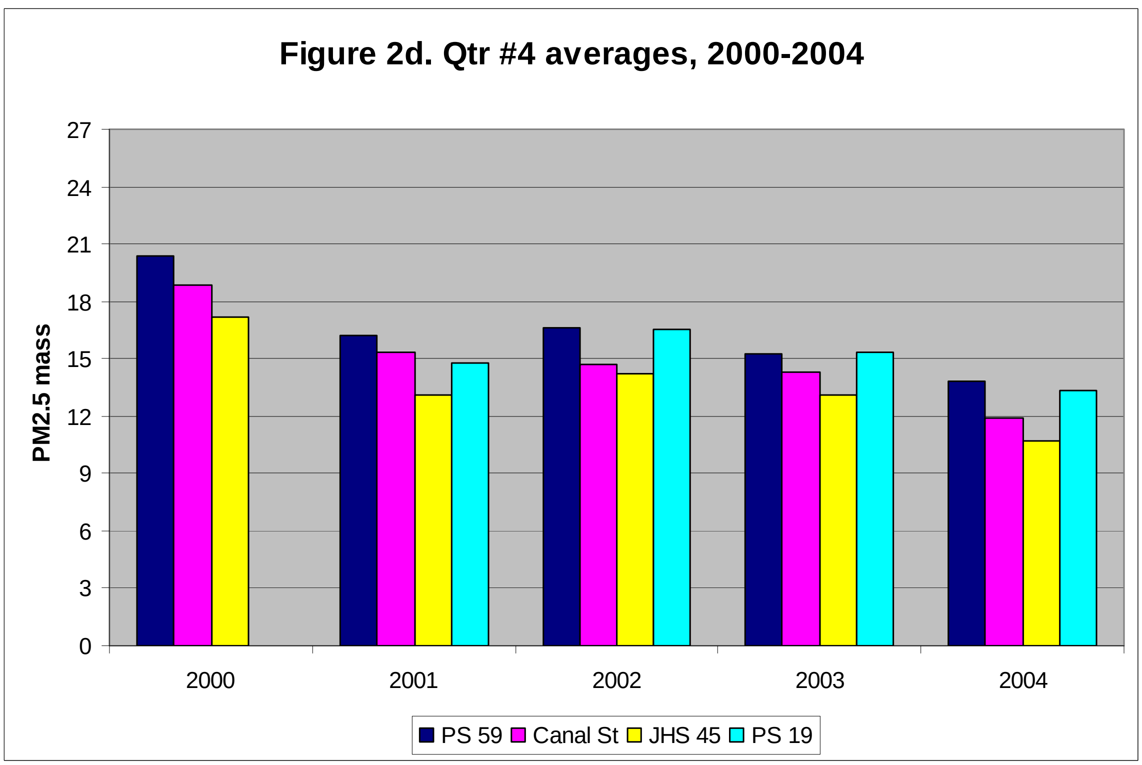


Figure 2 (continued).





PS 59
36-061-0056

New York City Department of Education
Public School 59
228 East 57th Street
New York, NY 10022

PS 59

Address: New York City Department of Education
Public School 59
228 East 57th Street
New York, NY 10022

AQS Number: 36-061-0056
DEC Number: 7093-10
County: New York
Statistical Area: New York City Metropolitan Area
Coordinates: 40.7591 N 73.9666 W

PS 59 was established in midtown Manhattan in July 1985. In 1999 duplicate Federal Reference Method fine particulate samplers were added. In December 2005, one of the $PM_{2.5}$ samplers was changed to a FRM PM_{10} sampler at the request of EPA to evaluate midtown Manhattan PM_{10} levels. The collocated $PM_{2.5}$ sampler was moved to JHS 45 (36-061-0079) at the same time.

The parameters monitored are indicated in the following table:

Parameter	Sampling Method	Analysis Method	Schedule
Sulfur Dioxide	Pulsed Fluorescence TEI 43C Method 060		Continuous
Oxides of Nitrogen	Gas Phase Chemiluminescence TEI 42C Method 074		Continuous
Carbon Monoxide	Gas Filter Correlation TEI 48C Method 054		Continuous
$PM_{2.5}$	R&P 2025 Method 118	Gravimetric RTI Laboratory	1 day in 3
PM_{10}	R&P 2025 Method 127	Gravimetric RTI Laboratory	1 day in 3
Toxics	Summa Canister	GC/MS	1 day in 6

Appendix B

NEW YORK CITY SCHOOL
CONSTRUCTION AUTHORITY

PS59M
3/25/03

March 25, 2003
Revised

Ms. Leslie Zackman, Principal
P.S.59M
228 East 57th Street
New York, NY

Re: Phasing Letter for the Upcoming Project:
LLW# 023607, Design# 006802 Roof Replacements

Dear Ms. Zackman:

As discussed with me, the following items pertaining to the Construction and Phasing Plan were reviewed:

1. **School Hours**

- Normally School hours are Monday through Friday from 8:20 AM to 3:00 PM.
- After School program from 3:00PM to 6:00PM.
- No Saturday or Sunday classes.
- School will not be in session during the Summer of 2003.

2. **Standardized Testing Period**

- The Contractor must allow fifteen non-sequential days during each School year for testing during normal School time during which no work will be allowed.
- The Contractor's work schedule shall account for these days and under no circumstances will the Contractor be granted an extension of time for the completion of this project.

3. **Work Hours for the Project**

- All physical work can be performed weekdays from 6:00 PM to 7:00 AM. Non-disturbing work will be allowed to commence at 3: 00 PM. On Saturdays and Sundays, working hours shall be 8:00 AM to 10:00 PM. The Contractor shall obtain and pay for all Custodial and Dept. of Building Permits required to perform work during non-school hours. These permit requests shall be made a minimum of 5 days in advance of the work period.

30 - 30 Thomson Avenue
Long Island City, NY 11101-3045
TEL 718 472-8000
FAX 718 472-8840
Web Site: www.nycsca.org

RDN
KT2

- Contractor must **not** perform ACM (Asbestos) removals, hot tar roofing, demolition, unloading of materials & equipment, and any operation that may impact the educational process of the School facility or any part of it, between the School hours of 8:00 AM to 6:00 PM. Work requiring shutdown of the School facility or any part of it must be preceded by two (2) week notice, and must be performed during non-school hours.

4. Use of School Stairs/Entrances

- The East 57th St. main entrance west door and stairway for the Contractor's use will be permitted for construction purposes. Only one entrance & stairway shall be used depending where the work is being performed, and for any changes prior approval is to be obtained from the Custodian.

5. Employee Identification

- All the employees working at this project must wear visible photo identification badges that identifies name of the employee, name of the company.. All workers are required to sign in and out in the School's security log book.

6. Use of School Facilities

- The Contractor's employees shall not use any School facilities except as follows:
- The Contractor will not be allowed to use any bathrooms, and shall furnish temporary toilet facilities for his usage. Temporary water can be obtained from existing hose bibs that may be operable. Temporary electric will be properly taken from the appropriate School power panels.
- No loitering in the School will be allowed.
- Absolutely no School equipment is to be used.
- There is no available space in the Basement for construction personnel offices and storage.
- Storage of materials and equipment will be permitted in the Children Playground only within fenced in areas within erected sidewalk sheds.

7. Use of Dumpster

- Custodian and Project Officer will review and approve the location of dumpsters in the adjacent street roadways. Proper DOT permits to be obtained by the Contractor.

8. Construction Trailers

- The Contractor will locate at least two (2) office trailers on E.56th St. One of which will be for the Project Officer.

9. Security Guards

- A minimum of 0ne(1) uniformed security guard must be present on the site at all times, seven (7) days per week. Security guards must have access to electronic communication with their headquarters and/or with the police department to address any emergencies.

10. **Site Safety Plan and Permits**

- An approved Site Safety Plan will be posted before construction will commence.
- All Construction Permits will be posted, and copies will be given to the Custodian.

11. **Phasing**

JTZ
RBS
* INCLUDES 2ND FL TERRACE PLAYGROUND.

- All construction work scheduling to be coordinated in tandem with roofing work at HS of Art & Design.
- The Contractor is to phase his "Scope of Work" to insure that the * School can be used during school hours. Our intent is to first commence work at both the main roof and existing play terrace roof at the 2nd floor In case of unusual conditions the Contractor will give at least two (2) weeks advanced notice, and must receive approval from the Authority and Principal for the closing of any part of the School.
- Job progress meetings will be held every two (2) weeks for coordinating purposes. Written minutes of these meetings will be distributed to the Principal and Custodian.

JTZ
RBS
• ROOF-MAIN TO BE COMPLETED BY AUG. 25, 2003 WITH 2ND FL TERRACE PLAYGROUND SHORTLY THERE AFTER. ** SAFE ACCESS TO BE MAINTAINED INTO AND OUT OF THE SCHOOL AT ALL TIMES.

Sincerely,

** INCLUDES VSE ALSO.

Robert B. Spear

Robert B. Spear
Project Officer

Concur: Leslie Zackman Date: 3/26/03
Leslie Zackman, Principal

Concur:_______________________ Date:____________
Shelley Harwayne, District 2 Superintendent

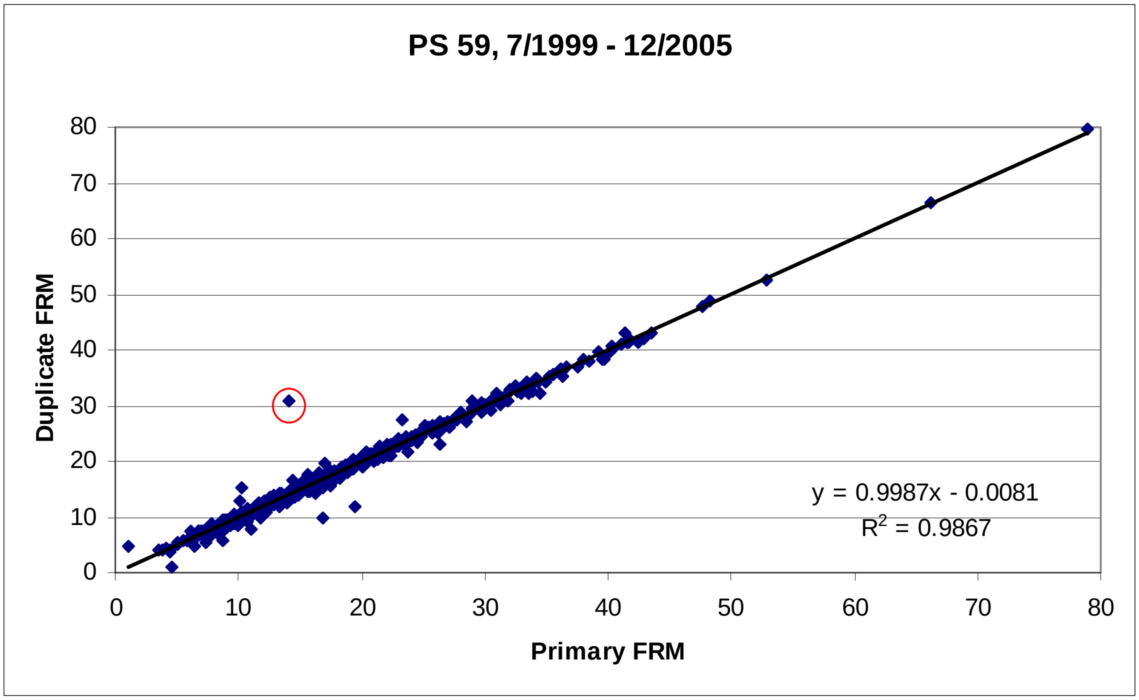
Cf: Dan Reddan, VPPM&O, Silviu Herscher, Sr. Dir., Christopher Mitchell, SPO Michael Mirisola, PSM, Kevin Zodi, Custodian/Engineer

RBS

Appendix C

Comparison of data from the primary and duplicate FRM monitors at PS 59

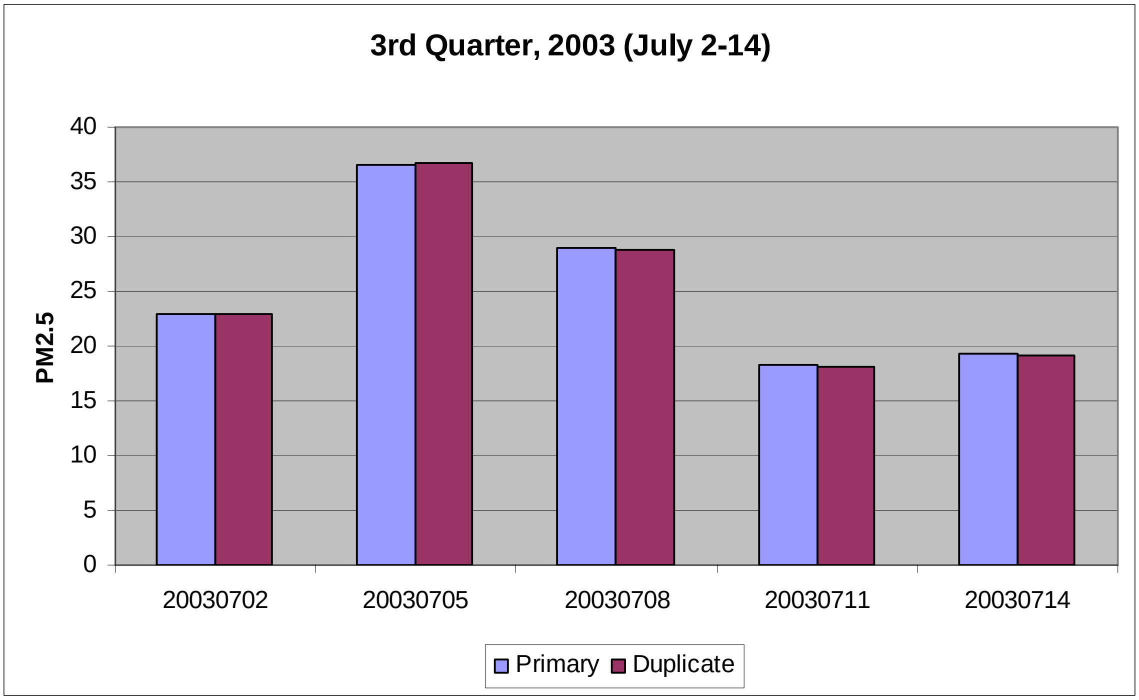
- Both sites started in July 1999; the primary monitor continues to operate but the duplicate monitor was shut down at the end of 2005
- Data were extracted from AQS on December 3, 2007
- There are 644 days during this 6.5 year period with both sets of data available



The overall arithmetic average at the primary monitor is 17.07 μg m^{-3}, while at the duplicate monitor it is 17.04 μg m^{-3}. The average difference ("primary-duplicate") is 0.03 μg m^{-3} and the standard deviation of the difference is 1.05 μg m^{-3}. The central 95% of the differences between the two monitors ranges from -1.2 μg m^{-3} to +1.5 μg m^{-3}. Of the 644 days, there appears to be only one day for which the two monitors differed substantially - January 31, 2001 with the primary and duplicate monitors reporting 14.1 μg m^{-3}, and 30.8 μg m^{-3}, respectively.

Two time periods of interest are considered to highlight the comparability between the two monitors -- July 6-9, 2002 period (very high values due to the Canadian wildfires), and the third quarter of 2003 (only the first five samples were available). On July 7, 2002 – the only FRM sampling day during the wildfire period – the primary FRM recorded 79.0 μg m^{-3}, while the duplicate FRM recorded 79.8 μg m^{-3}. Hence, even on this very high loading day the monitors were within 0.8 μg m^{-3} (1%) of each other.

As per the 3rd quarter of 2003, the following plot displays the data for both monitors that were operational only for five sampling days. Recall that the monitors were shut down for the rest of the quarter. On each of these days the two monitors agree to within 0.2 μg m^{-3}. The averages over these five days were 25.22 μg m^{-3} (primary) and 25.16 μg m^{-3} (duplicate).



Attachment 2

Weight of evidence (WOE) in support of modeled attainment of the $PM_{2.5}$ NAAQS in the New York City non-attainment area

The EPA modeling guidance (US EPA, 2007), in conjunction with ambient Federal Reference Method (FRM) $PM_{2.5}$ mass data from 2000-2004 and baseline and future air quality modeling results, has been applied to determine the attainment status of the New York City non-attainment area (NYC NAA) with respect to the annual National Ambient Air Quality Standard (NAAQS). The application of the EPA guidance for estimating the future design values based on the use of relative response factor (RRF) has resulted in one monitor – P.S. 59 (360610056), located in New York County, NY – to exceed the annual $PM_{2.5}$ NAAQS level of 15 μg m^{-3}. The estimated future $PM_{2.5}$ design value at this monitor, based on this procedure, is 15.3μg m^{-3}. This value falls within the uncertainty range of ±0.5 μg m^{-3} of the annual $PM_{2.5}$ NAAQS, and supplemental analyses are needed for this monitor be considered to be in attainment. In the following sections we provide information to suggest that there is high degree of potential that estimated future design value will be below the annual NAAQS.

Monitoring network in New York County and surroundings

For most of the 2000-2004 period New York County, NY had 4 FRM monitors, but only one Speciation Trends Network (STN) monitor collocated with the FRM at the Canal Street site (360610062) to provide information on composition of the baseline $PM_{2.5}$ species. Figure 1 displays the location of the four monitors as well as monitors in the surrounding counties. Table 1 lists the dates of operation of the FRM monitors in New York County; the base year design value for 2002, which is a weighted average of the measurements in the 2000 to 2004 period; and the nearest STN monitor. It should be noted that not all monitors in New York County were assigned the same STN monitor, because the approach selected was to use the nearest neighborhood monitor to link the FRM and STN. In the case of the J.H.S.45 (36061007) FRM monitor in New York County, the nearest STN monitor is the Bronx County I.S.52 site (360050110), and this site is also included in Table 1.

The current speciation levels estimated at these monitors are listed in Table 2. Only two of these sites – Canal Street and I.S.52 – have collocated STN monitors, while the species composition at the other FRM sites are only estimates based on the speciation data from a nearby monitor. Examination of the speciation data at Canal Street and I.S.52 suggests that there may be fairly substantial gradients in $PM_{2.5}$ species composition over the non-attainment area, on the order of several tenths of a μg m^{-3}. Thus the estimates listed for the other monitors should only be considered approximate, and in some cases may not necessarily be representative of species composition at these monitors. This is certainly a limitation that needs to be taken into consideration when projecting the future design values using the model results and the current speciation levels.

Although the air quality modeling results are to be used in a relative sense, it is instructive to examine the changes in $PM_{2.5}$ mass that the model predicts in an absolute sense to see the direct impacts of emissions reductions. We examined the CMAQ-predicted average $PM_{2.5}$ mass over the nine-grid cells that surround each of these FRM monitors (see Table 3) in the base (2002) and future (2009) years. Note that CMAQ predicts a consistent reduction of about 16% over each FRM monitor in New York County. Although not shown here, future $PM_{2.5}$ concentrations at each FRM location across the 22-county NYC NAA are predicted by CMAQ to decrease by 12-18%.

Estimate of future design values

Table 4 lists the base year and projected future design values based on the EPA Guidance. The only monitor that is projected to be above 15μg m^{-3} in 2009 is P.S.59 (360610056). In fact, none of the other monitors in the 22-county metropolitan non-attainment area is projected to exceed the lower end of the margin of safety range of 14.5μg m^{-3}. This suggests that on an overall basis the planned emissions reductions are projected to improve the $PM_{2.5}$ air quality over the NYC NAA.

Noting that there is only one other monitor (360610062) that is above 16μg m^{-3} besides 360610056, and that it is collocated with STN providing an estimated future design value of 14.4μg m^{-3} that is below the annual $PM_{2.5}$ NAAQS. If a simple linear extrapolation is used to compare these two monitors, then the projected future design value for P.S.59 would be 14.9μg m^{-3} and thus below the annual $PM_{2.5}$ NAAQS. Also, the change estimated based on the guidance between 2009 and 2002 at 360610062 is 1.9μg m^{-3}, whereas at 360610056 the decrease is only 1.6μg m^{-3}.

Other data analysis

A recent study by Qin et al. (2006) suggest that sum of sulfate and nitrate comprise about 40% or more of the $PM_{2.5}$ mass in the NYC metropolitan area, and that 70% or more of the $PM_{2.5}$ measured in NYC results from transport into the region. Based on results from source apportionment modeling using Positive Matrix Factorization (PMF), the authors determined that the largest single source factor affecting NYC is "secondary sulfate" associated with SO_2 emissions from upwind regions. It is clear that emission reductions in upwind states will be needed to further reduce $PM_{2.5}$ in the NYC NAA.

In an earlier chapter (TSD-3a), we showed that $PM_{2.5}$ levels appear to be decreasing across the NYC NAA. Although the data records for $PM_{2.5}$ are somewhat short, we estimated that $PM_{2.5}$ mass is decreasing by about 0.1-0.5μg m^{-3} yr^{-1}. At the P.S.59 site $PM_{2.5}$ mass measurements are decreasing by about 0.3μg m^{-3} yr^{-1} during 1999-2006. In addition to $PM_{2.5}$ mass, several criteria pollutants are also measured at the P.S.59 site. We examine the trends in SO_2 and NO_2 from 1993 to 2006 using the seasonal Kendall test, and found that ambient levels are declining at rates of 3.4% yr^{-1} and 1.7% yr^{-1}, respectively. This again points to the potential that this area would be meeting the annual NAAQS, given that there are various measures under consideration that are aimed at decreasing the emissions of $PM_{2.5}$ precursors.

Summary

In summary, the above analysis shows that, based upon the EPA guidance only one monitor in the New York $PM_{2.5}$ nonattainment area falls slightly above the level of the annual NAAQS, but still within the framework of uncertainty. The analysis suggests that lack of collocated speciation monitors and use of speciation information from the nearest neighborhood monitor may have contributed to the estimate of $PM_{2.5}$ being above the level of NAAQS at the P.S.59 monitor. Examining the trends in precursors as well as measured $PM_{2.5}$ at P.S.59 suggests a downward path and that coupled with the observation that the contribution to the secondary species is from upwind regions rather than local, favors strongly that this monitor will also be in attainment similar to the rest of them in the region. Analysis based on the only other monitor (360610062) with similar $PM_{2.5}$ concentrations is projected to be below the level of the annual NAAQS, suggests that P.S.59 (360610056) would also be similarly be below the level of the annual NAAQS.

Reference

Qin, Y., Kim., E., Hopke, P. K., 2006. The concentrations and sources of $PM_{2.5}$ in metropolitan New York City. Atmospheric Environment 40, S312-S332.

TSD-3a (2007) Analysis of Ambient $PM_{2.5}$ Mass and Speciation for the New York metropolitan area through 2006. NYSDEC, Division of Air Resources, Albany, NY 12233.

United States Environmental Protection Agency (US EPA), 2007. Guidance on the use of models and other analyses for demonstrating attainment of air quality goals for ozone, $PM_{2.5}$, and regional haze. Office of Air Quality Planning and Standards, 253 pp., EPA-454/B-07-002.

Table 1. Information for the five FRM monitors considered in this analysis: site name and ID, dates of operation during 2000-2004, base year $PM_{2.5}$ design value, and the nearest STN monitor.

Site Name	FRM site	Operational periods during 2000-2004	Base year Design Value, $\mu g\ m^{-3}$	Nearest STN monitor
P.S.59	360610056	1st qtr 2000 – 4th qtr 2004	16.9	360610062
Canal St	360610062	1st qtr 2000 – 4th qtr 2004	16.3	360610062
J.H.S.45	360610079	1st qtr 2000 – 4th qtr 2004	14.7	360050110
P.S.19	360610128	3rd qtr 2001 – 4th qtr 2004	15.9	360610062
I.S.52	360050110	1st qtr 2000 – 4th qtr 2004	14.7	360050110

Table 2. Current $PM_{2.5}$ species composition at each site: sulfate (SO_4), retained nitrate (NO_3r), organic carbon (OC), elemental carbon (EC), particle-bound water (PBW), retained ammonium (NH_4), and other primary $PM_{2.5}$ (OPP).

FRM site	SO_4	NO_3r	OC	EC	PBW	NH_4	OPP
360610056	4.98	1.50	3.81	1.51	1.65	2.19	0.77
360610062*	4.81	1.40	3.66	1.45	1.59	2.10	0.74
360610079	4.41	1.05	3.58	1.13	1.47	1.84	0.71
360610128	4.68	1.39	3.59	1.42	1.55	2.05	0.72
360050110*	4.39	1.08	3.56	1.14	1.46	1.84	0.71

* FRM Monitor with collocated STN

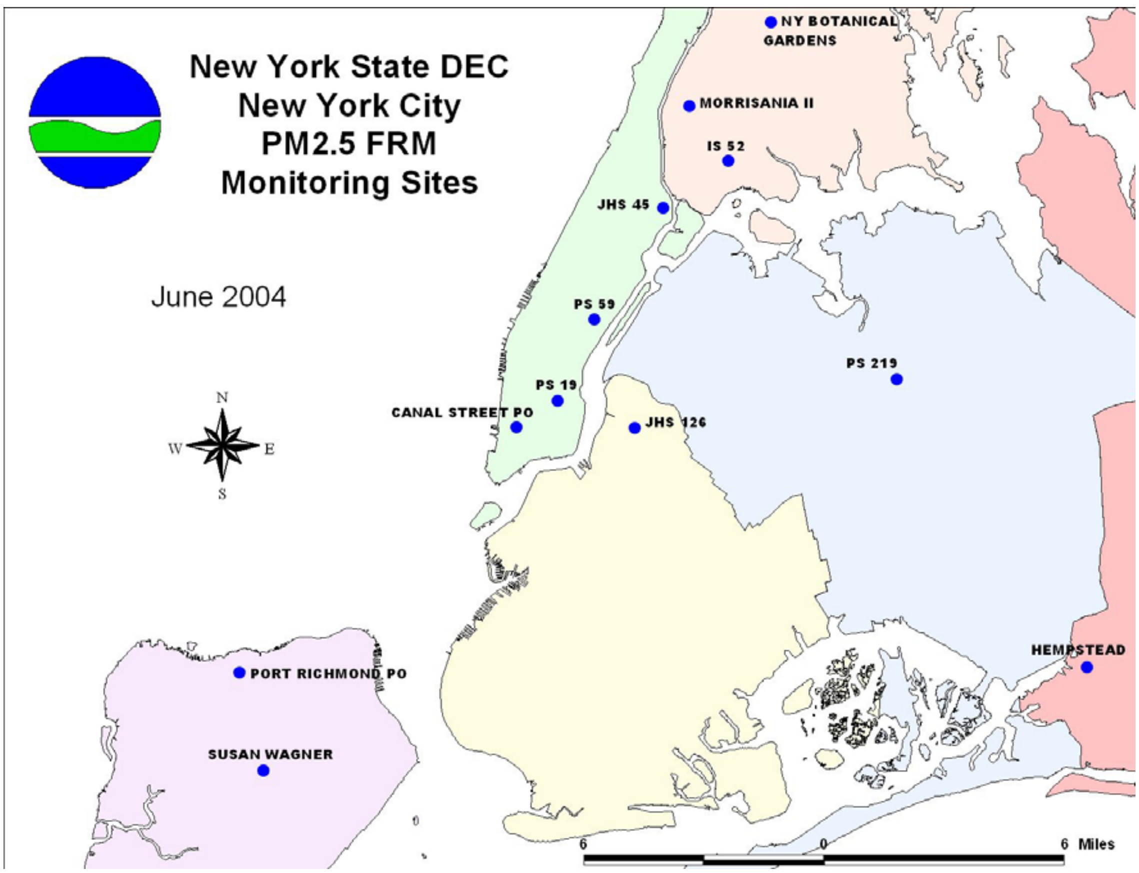
Table 3. Annual average $PM_{2.5}$ mass over the nine grid cells surrounding each monitor from the base year (2002) and future year (2009) CMAQ simulations, as well as the absolute and percent reductions.

FRM site	2002 avg., $\mu g\ m^{-3}$	2009 avg., $\mu g\ m^{-3}$	Change ($\mu g\ m^{-3}$)	Change (%)
360610056	24.28	20.51	-3.77	-15.5
360610062	23.70	19.80	-3.90	-16.5
360610079	24.28	20.51	-3.77	-15.5
360610128	23.66	20.01	-3.65	-15.4
360050110	24.28	20.51	-3.77	-15.5

Table 4. Base and future year $PM_{2.5}$ design values.

FRM site	Base Year Design Value, $\mu g\ m^{-3}$	Future $PM_{2.5}$ Design Value, $\mu g\ m^{-3}$
360610056	16.9	15.3
360610062	16.3	14.4
360610079	14.7	13.3
360610128	15.9	14.3
360050110	14.7	13.3

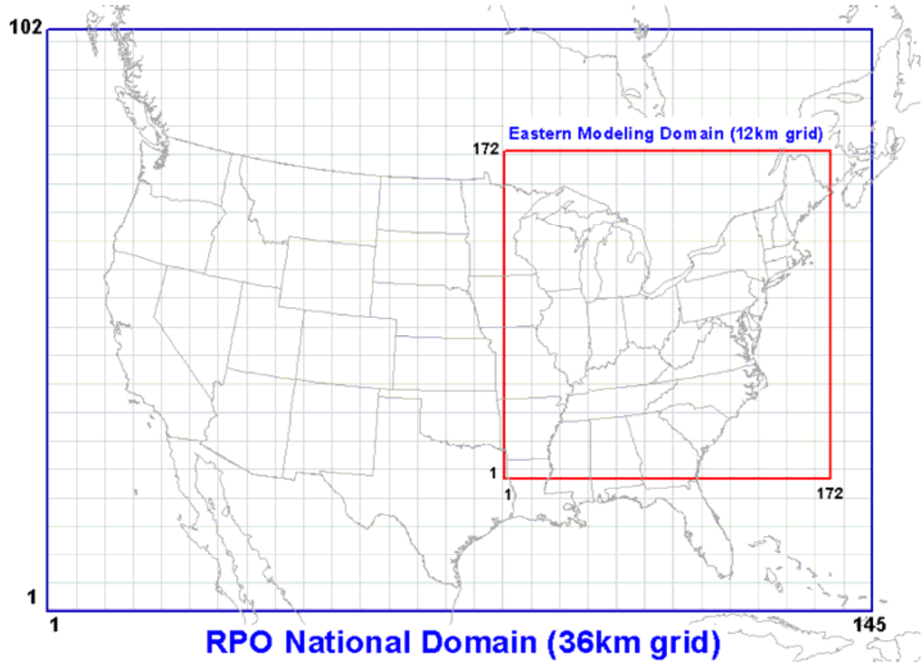
Figure 1.



Appendix 8E

OTC Modeling
Grid Configurations

Developed by NYDEC


102
172
Eastern Modeling Domain (12km grid)
1
1
172
1
1
145
RPO National Domain (36km grid)

OTC Grid Definitions for MM5 and CMAQ

Model	Columns Dot (nx)	Rows Dot (ny)	X-Origin (km)	Y-Origin (km)
MM5 36-km	149	129	-2664	-2304
CMAQ 36-km	145	102	-2628	-1728
MM5 12-km	175	175	252	-900
CMAQ 12-km	172	172	264	-888

NYDEC, June 2005

OTC MM5/SMOKE/CMAQ Modeling System Grid Configurations

OTC MM5/SMOKE/CMAQ modeling system for 2002 annual simulation is applied with a Lambert Conformal Conic projection with parallels at 33N and 45N. A spherical earth radius of 6370km is used in these programs.

MM5 Setup

MM5 was run with two-way nesting at 36 and 12km horizontal grid spacing and with 29 vertical layers. The top is at 50 mb.

For 36km domain, the center is at 97W and 40N. There are 149 grids (dot-points) in east-west direction and 129 grids (dot-points) in north-south direction. The south-west corner is at (-2664km, -2304km) and the north-east corner is at (2664km, 2304km)

For 12km domain, there are 175 grids in east-west direction and 175 grids in north-south direction. The south-west corner is at (252km, -900km) and the north-east corner is at (2340km, 1188km)

The 30 sigma-levels for the 29 vertical layers are:

1.0000, 0.9974, 0.9940, 0.9890, 0.9820, 0.9720, 0.9590, 0.9430, 0.9230, 0.8990, 0.8710, 0.8390, 0.8030, 0.7630, 0.7180, 0.6680, 0.6180, 0.5680, 0.5180, 0.4680, 0.4180, 0.3680, 0.3180, 0.2680, 0.2180, 0.1680, 0.1230, 0.0800, 0.0400, 0.0000

CMAQ Setup

CMAQ 36km modeling domain has 145 cells in east-west direction and 102 cells in north-south direction. The south-west corner is at (-2628km, -1728km) and the north-east corner is at (2592km, 1944km)

CMAQ 12km modeling domain has 172 cells in east-west directions and 172 cells in north-south direction. The south-west corner is at (264km, -888km) and the north-east corner is at (2328km, 1176km)

There are 22 vertical layers for CMAQ. The sigma-levels for these 22 layers are:

1.0000, 0.9974, 0.9940, 0.9890, 0.9820, 0.9720, 0.9590, 0.9430, 0.9230, 0.8990, 0.8710, 0.8390, 0.8030, 0.7630, 0.7180, 0.6680, 0.5680, 0.4680, 0.3680, 0.2680, 0.1680, 0.0800, 0.0000

SMOKE Setup

SMOKE modeling domains are same as CMAQ, except that the emissions are limited to the lower 16 CMAQ layers.

OTC Vertical Layer Definition for MM5 Simulations and Approach For Reducing CMAQ Layers By Collapsing Multiple MM5 Layers

MM5					CMAQ				
Layer	Sigma	Pres(mb)	Height(m)	Depth(m)	Layer	Sigma	Pres(mb)	Height(m)	Depth(m)
29	0.000	50	18600	2145	23	0.000	50	18600	4290
28	0.040	88.5	16450	2145					
27	0.080	127.1	14300	1460	21	0.080	127.1	14300	2920
26	0.123	168.5	12800	1460					
25	0.168	211.8	11400	1200	20	0.168	211.8	11400	2390
24	0.218	260.0	10200	1200					
23	0.268	308.1	8990	934	19	0.268	308.1	8990	1870
22	0.318	356.3	8060	934					
21	0.368	404.5	7120	772	18	0.368	404.5	7120	1540
20	0.418	452.6	6350	772					
19	0.468	500.8	5580	662	17	0.468	500.8	5580	1320
18	0.518	549.0	4920	662					
17	0.568	597.1	4250	581	16	0.568	597.1	4250	1160
16	0.618	645.3	3670	581					
15	0.668	693.4	3090	532	15	0.668	693.4	3090	532
14	0.718	741.6	2560	455	14	0.781	741.6	2560	455
13	0.763	785.0	2110	388	13	0.763	785.0	2110	388
12	0.803	823.5	1720	337	12	0.803	823.5	1720	337
11	0.839	858.2	1380	290	11	0.839	858.2	1380	290
10	0.871	889.0	1090	247	10	0.871	889.0	1090	247
9	0.899	916.0	844	207	9	0.899	916.0	844	207
8	0.923	939.1	637	169	8	0.923	939.1	637	169
7	0.943	958.3	468	133	7	0.943	958.3	468	133
6	0.959	973.7	334	107	6	0.959	973.7	334	107
5	0.972	986.3	227	82	5	0.972	986.3	227	82
4	0.982	995.9	145	57	4	0.982	995.9	145	57
3	0.989	1002.6	89	40	3	0.989	1002.6	89	40
2	0.994	1007.5	48	27	2	0.994	1007.5	48	27
1	0.9974	1010.7	21	21	1	0.9974	1010.7	21	21
0	1.000	1013.24	0	0	0	1.000	1013.24	0	0

Note: Layer-top pressures assume a surface pressure of 1013.24 hPa. Layer-top heights are determined by averaging MM5 (CMAQ)-calculated layer-top heights over time (August 2002) and space (the entire 172x172 domain).

Appendix 8F

Emission Processing for the Revised 2002 OTC Regional and Urban 12 km Base Case Simulations

Emission Processing for the Revised 2002 OTC Regional and Urban 12 km Base Case Simulations

Bureau of Air Quality Analysis and Research
Division of Air Resources
New York State Department of Environmental Conservation

September 19, 2006

1. Overview

All emissions processing for the revised 2002 OTC regional and urban 12 km base case simulations was performed with SMOKE2.1 compiled on a Red Hat 9.0 Linux operating system with the Portland group fortran compiler version 5.1. The emissions processing was performed on a month-by-month and RPO-by-RPO basis, i.e. SMOKE processing was performed for each month for each of the RPOs (MANE-VU, VISTAS, CENRAP, MRPO) individually as well as for Canada. For each month/RPO combination, a separate SMOKE ASSIGNS file was created, and the length of the episode in each of these ASSIGNS files was set to the entire month. Also, as discussed in Section 3, there was no difference between "episode-average" temperatures and "monthly-average" temperatures for the Mobile6 simulations that used the option of temperature averaging.

This document is structured as follows: A listing of all emission inventories is given in Section 2, organized by RPO and source category. Section 3 discusses the Mobile6 processing approach employed for the different RPOs, while Section 4 describes the processing of biogenic emissions with BEIS3.12. Finally, Sections 5 through7 describe the temporal allocation, speciation, and spatial allocation of the emissions inventories, respectively.

2. Emission Inventories

2.1 MANE-VU

Version 3 of the MANE_VU inventory was utilized to generate CMAQ-ready emissions. This emissions inventory data were obtained from the MANEVU archive in April 2006.

2.1.1 Area Sources

- Files: MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt and MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt prepared by PECHAN, downloaded from **ftp.marama.org** (username mane-vu, password exchange)
- Fugitive dust correction: This was applied as county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing

2.1.2 Nonroad Sources

- File: MANEVU_NRD2002_SMOKE_030306 prepared by PECHAN; downloaded from **ftp.marama.org** (username mane-vu, password exchange)

2.1.3 Mobile Sources

- VMT/Speed: MANEVU_2002_mbinv_02022006_addCT.txt prepared by PECHAN and NESCAUM; downloaded from http://bronze.nescaum.org/Private/junghun/MANE-VU/onroad_ver3_update/MANEVU_V3_update.tar

2.1.4 Point Sources

- Files: MANEVU_Point_SMOKE_INPUT_ANNUAL_SUMMERDAY_041006.txt and MANEVU_Point_SMOKE_INPUT_ANNUAL_WINTERDAY_041006.txt prepared by PECHAN were downloaded from **ftp.marama.org** (username mane-vu, password exchange)
- Fugitive dust correction: This was applied as county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing
- Corrected the omission of 2,100 tons/year VOC emissions from several point sources in NJ. NJDEP provided updated IDA files on June 30 that were used for modeling.

2.2 CENRAP

The inventory data were obtained from the CENRAP ftp site in March 2006 and reflect version BaseB of the CENRAP inventory.

2.2.1 Area Sources

- Files:
  - CENRAP_AREA_SMOKE_INPUT_ANN_STATES_081705.txt
  - CENRAP_AREA_MISC_SMOKE_INPUT_ANN_STATE_071905.txt
  - CENRAP_AREA_BURNING_SMOKE_INPUT_ANN_TX_ NELI_071905.txt
  - CENRAP_AREA_MISC_SMOKE_INPUT_NH3_MONTH_{MMM} _072805.txt where {MMM} is JAN, FEB, … DEC
  - CENRAP_AREA_SMOKE_INPUT_NH3_MONTH_{MMM} _071905.txt where {MMM} is JAN, FEB, … DEC
- Fugitive dust correction: This was applied as county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing
- Note about area and nonroad source SMOKE processing for the CENRAP region: All area source inventories (both annual and month-specific) were processed in

one step through SMOKE. SMK_AVEDAY_YN was set to N, so seasonal profiles were used to apportion the annual inventories numbers by month. This setting was also used for the nonroad processing performed in a separate step. This was necessary since the month-specific files had zero in their 'average-day' column and the annual total column reflects the "monthly emissions as annual totals" as per header line. Therefore, seasonal profiles are used to apportion both the annual and month-specific files. As described below, we utilized the temporal profiles and cross-reference files generated by CENRAP. However, we did not verify that this approach indeed leads to the intended monthly allocation of ammonia and nonroad emissions.

2.2.2 Nonroad Sources

- Files:
    - CENRAP_NONROAD_SMOKE_INPUT_ANN_071305.txt
    - CENRAP_NONROAD_SMOKE_INPUT_MONTH_{MMM}_071305.txt where {MMM} is JAN, FEB, … DEC

2.2.3 Mobile Sources

- VMT/Speed files:
    - mbinv02_vmt_cenrap_ce.ida
    - mbinv02_vmt_cenrap_no.ida
    - mbinv02_vmt_cenrap_so.ida
    - mbinv02_vmt_cenrap_we.ida

2.2.4 Point Sources

- File: CENRAP_POINT_SMOKE_INPUT_ANNUAL_DAILY_072505.txt
- Fugitive dust correction: This was applied as county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing.

2.3 VISTAS

All VISTAS emission files were obtained from the Alpine Geophysics ftp site. They reflect version BaseG of the VISTAS inventory with the exception of fire emissions which reflect BaseF and BaseD. These files were downloaded between February and August, 2006.

2.3.1 Area Sources

- Files:
  - arinv_vistas_2002g_2453922_w_pmfac.txt
  - ida_ar_fire_2002_vistaonly_basef.ida
- Note: the header lines of these files indicate that the fugitive dust correction was already applied, so no further correction was performed.

2.3.2 Nonroad Sources

- Files:
  - nrinv_vistas_2002g_2453908.txt
  - marinv_vistas_2002g_2453972.txt

2.3.3 Mobile Sources

- VMT/Speed file: mbinv_vistas_02g_vmt_12jun06.txt

2.3.4 Point Sources

- Files:
  - Annual:
    - egu_ptinv_vistas_2002typ_baseg_2453909.txt
    - negu_ptinv_vistas_2002typ_baseg_2453909.txt
    - ptinv_fires_{MM}_typ.vistas.ida where {MM} is 01, 02, 03, etc. depending on the month; these annual point fire files were generated as part of the VISTAS BaseD inventory and were obtained in January 2005
  - Hour-specific:
    - pthour_2002typ_baseg_{MMM}_28jun2006.ems where {MMM} is jan, feb, mar, etc.
    - pthour_fires_{MM}_typ.vistas.ida where {MM} is 01, 02, 03, etc. depending on the month; these hourly point fire files were generated as part of the VISTAS BaseD inventory and were obtained in January 2005
- Note: No fugitive dust correction was performed for these files.

2.4 MRPO

MRPO emissions for SMOKE modeling were generated by Alpine Geophysics through a contract from MARAMA to convert the MRPO BaseK inventory from NIF to IDA format. The files were downloaded from the MARAMA ftp site **ftp.marama.org** (username mane-vu, password exchange) between April and June 2006.

2.4.1 Area Sources

- Files:
    - Annual:
        - arinv_mar_mrpok_2002_27apr2006.txt
        - arinv_other_mrpok_2002_20jun2006.txt
    - Month-specific:
        - arinv_nh3_2002_mrpok_{mmm}_3may2006.txt where {mmm} is jan, feb, etc.
        - dustinv_2002_mrpok_{mmm}_23may2006.txt where {mmm} is jan, feb, etc.
- Fugitive dust correction: This correction was performed only to the arinv_other_mrpok_2002_20jun2006.txt file using county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing.
- Note about area source SMOKE processing: SMOKE processing was performed separately for the annual and month-specific files. For the annual inventory processing, SMK_AVEDAY_YN was set to N, so seasonal profiles were used to apportion the annual inventories numbers by month. For the month-specific inventory processing, this variable was set to Y so that no seasonal profiles would be applied and the inventory numbers in the 'average day' column would be used. To save a SMOKE processing step, the annual "marine" inventory "arinv_mar_mrpok_2002_27apr2006.txt" was processed together with the annual "other area source" inventory "arinv_other_mrpok_2002_20jun2006.txt" even though it technically is part of the nonroad inventory.

2.4.2 Nonroad Sources

- Files: nrinv_2002_mrpok_{mmm}_3may2006.txt where {mmm} is jan, feb, etc.

2.4.3 Mobile Sources

- VMT/Speed file: mbinv_mrpo_02f_vmt_02may06.txt

2.4.4 Point Sources

- Files: ptinv_egu_negu_2002_mrpok_1may2006.txt
- Fugitive dust correction: This correction was performed only to the arinv_other_mrpok_2002_20jun2006.txt file using county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was

performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing.

2.5 Canada

2.5.1 Area Sources

- File: AS2000_SMOKEready.txt obtained from ftp://ftp.epa.gov/EmisInventory/canada_2000inventory
- Fugitive dust correction: We applied "divide-by-four" correction for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; this adjustment was performed outside SMOKE with in-house Fortran programs. No county/province-specific correction factors were available for Canada

2.5.2 Nonroad Sources

- File: NONROAD2000_SMOKEready.txt obtained from ftp://ftp.epa.gov/EmisInventory/canada_2000inventory

2.5.3 Mobile Sources

- File: MOBILE2000_SMOKEready.txt obtained from ftp://ftp.epa.gov/EmisInventory/canada_2000inventory
- Fugitive dust correction: applied "divide-by-four" correction for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; this adjustment was performed outside of SMOKE with in-house Fortran programs. No county/province-specific correction factors were available for Canada.

2.5.4 Point Sources

There has long been difficulty in obtaining an up-to-date Canadian criteria emissions inventory for point sources. This is due largely to confidentiality rights afforded to Canadian facilities. Thus far, the most recent inventory of Canadian point sources is rooted in the 1985 NAPAP data and is close to two decades old. Because there are a number of high emitting industrial facilities in southern Canada it is of particular importance to have a reasonably accurate inventory of these sources especially when modeling air quality over the Northeast and Midwest United States. Toward this end, an effort was made to obtain more recent Canadian point source data and incorporate it into an inventory database, which could then be used for the 2002 OTC air quality modeling.

Perhaps the most accurate and publicly accessible source of Canadian pollutant data is now available from the National Pollutant Release Inventory (NPRI) database. This database contains 268 substances. Facilities that manufacture, process or otherwise use one of these substances and that meet reporting thresholds are required to report these emissions to Environment Canada on an annual basis. The NPRI data are available at Environment Canada's website and can be found at the link http://www.ec.gc.ca/pdb/npri/npri_home_e.cfm. The page hosts an on-line search engine where one can locate emissions by pollutant or location. In addition, the entire database is available for download as an MS Access or Excel file. The NPRI database contains numerous pages with a rather comprehensive list of information. Detailed information is available about each facility, including location, activity and annual emissions. In addition, facilities having stacks with a height of 50 meters or more are required to report stack parameters.

Unfortunately, one of the limitations of the NPRI database for modeling purposes is that the data are only available at the facility level. Emissions models require process level information, so in order to use this data, a few generalizations had to be made. Each facility has a Standard Industrial Classification (SIC) code associated with it; however, emissions models require Source Classification Codes (SCC's). SCC's are of critical importance as the emissions models use these codes for assignment of temporal and speciation profiles. SIC codes describe the general activity of a facility while SCC codes describe specific processes taking place at each facility. While no direct relationship exists between these two codes, a general albeit subjective association can be made.

For the purposes of creating a model-ready inventory file it was necessary to obtain the whole NPRI database. After merging all the necessary components from the NPRI database required in the SMOKE inventory file, the SIC code from each facility was examined and assigned an SCC code. In most cases, only a SCC3 level code was assigned with confidence. While this is admittedly a less than desirable process, it does allow for the use of the most recent emissions from the NPRI database to be used in modeling. Furthermore, having some level of SCC associated with these emissions will ensure that they will be assigned a temporal and speciation profile by the model, other than the default. Once the model-ready inventory file was developed, it was processed through SMOKE.

3. Mobile6 Processing

3.1 MANE-VU

3.1.1 Mobile6 input files

- Month-specific input files were prepared by PECHAN and NESCAUM and were downloaded from http://bronze.nescaum.org/Private/junghun/MANE-VU/onroad_ver3_update/MANEVU_V3_update.tar
- Added the line "REBUILD EFFECTS   :0.10" to each file before the SCENARIO record to override the Mobile6 default setting of 0.9 (90%) for the "chip reflash" effectiveness

3.1.2 SMOKE/Mobile6 auxiliary files

- SMOKE/Mobile6 auxiliary files were prepared by PECHAN and NESCAUM and were downloaded from http://bronze.nescaum.org/Private/junghun/MANE-VU/onroad_ver3_update/MANEVU_V3_update.tar

3.1.3 Temperature averaging

- Following the setting in the MANEVU_2002_mvref.txt files, the following procedures were used by SMOKE for temporal and spatial temperature averaging in the calculation of emission factors:
    - Spatial averaging: temperatures were averaged over all counties that share a common reference county (i.e. Mobile6 input file)
    - Temporal averaging for May – September emissions processing: no temporal averaging was used, i.e. day-specific temperatures were used to calculate emission factors for each day.
    - Temporal averaging for non-summer-months emissions processing: Temporal averaging over the duration of the episode (i.e. the entire month, see introduction) was used, i.e. monthly average temperatures were used to calculate the emission factors.

3.2 CENRAP

3.2.1 Mobile6 input files

- Mobile6 input files for the CENRAP region for January and July were contained in the files central_M6_{MMM}.zip, north_M6_{MMM}.zip, south_M6_{MMM}.zip, west_M6_{MMM}.zip where {MMM} is either jan or jul. July input files were used for April – September processing, while January input files were used for the remaining months
- All files were downloaded from the CENRAP ftp site in March 2006.

3.2.2 SMOKE/Mobile6 auxiliary files

- SMOKE/Mobile6 auxiliary files were contained in the files central_M6_RD.zip, north_M6_RD.zip, south_M6_RD.zip, and west_M6_RD.zip. The SMOKE MCREF, MVREF, and MCODES files were contained in the file MOBILESMOKE_Inputs.zip. The MCREF and MVREF files were combined for the different regions (“central”, “east”, “west”, “north”)
- All files were downloaded from the CENRAP ftp site in March 2006.

3.2.3 Temperature averaging

- The following procedures were used by SMOKE for temporal and spatial temperature averaging in the calculation of emission factors according to the setting in the mvref files:

- Spatial averaging: no spatial averaging of temperatures, i.e. the temperatures for the reference county is used to calculate emission factors for all counties that share this reference county (i.e. Mobile6 input file)
- Temporal averaging: Temporal averaging over the duration of the episode (i.e. the entire month, see introduction) was used, i.e. monthly average temperatures were used to calculate the emission factors.

3.3 VISTAS

3.3.1 Mobile6 input files

- Month-specific Mobile6 input files were obtained from the Alpine Geophysics ftp site in July 2006. They reflect version BaseG of the VISTAS inventory.

3.3.2 SMOKE/Mobile6 auxiliary files

- SMOKE/Mobile6 auxiliary files utilized were obtained from the Alpine Geophysics ftp site in July 2006. They reflect version BaseG of the VISTAS inventory.

3.3.3 Temperature averaging

- The following procedures were used by SMOKE for the temporal and spatial temperature averaging in the calculation of emission factors according to the setting in the mvref_baseg.36k.ag.txt file:
  - Spatial averaging: temperatures averaged over all counties that share a common reference county (i.e. Mobile6 input file)
  - Temporal averaging: Temporal averaging over the duration of the episode (i.e. the entire month, see introduction) was used, i.e. monthly average temperatures were used to calculate the emission factors.

3.4 MRPO

3.4.1 Mobile6 input files

- Month-specific Mobile6 input files for SMOKE modeling were generated by Alpine Geophysics through a contract from MARAMA. They are based on version BaseK of the MRPO inventory. The files were downloaded from the MARAMA ftp site **ftp.marama.org** (username mane-vu, password exchange) in May 2006.

3.4.2 SMOKE/Mobile6 auxiliary files

- SMOKE/Mobile6 auxiliary files for SMOKE modeling were generated by Alpine Geophysics through a contract from MARAMA. They are based on version BaseK of the MRPO inventory. The files were downloaded from the MARAMA ftp site **ftp.marama.org** (username mane-vu, password exchange) in May 2006.

3.4.3 Temperature averaging

- The following procedures were used by SMOKE for the temporal and spatial temperature averaging in the calculation of emission factors according to the setting in the mvreg_mrpo_basek.txt file:
    - Spatial averaging: temperatures averaged over all counties that share a common reference county (i.e. Mobile6 input file)
    - Temporal averaging: Temporal averaging over the duration of the episode (i.e. the entire month, see introduction) was used, i.e. monthly average temperatures were used to calculate the emission factors.

4. Biogenic Emission Processing

Hourly gridded biogenic emissions for the 12 km and 36 km modeling domains were calculated by BEIS3.12 through SMOKE, using MCIP-processed MM5 fields for temperature ("TA", layer-1 temperature), solar radiation ("RGRND"), surface pressure ("PRES"), and precipitation ("RN" and "RC"). A 'seasonal switch' file was generated by the SMOKE utility metscan to determine whether winter or summer emission factors should be used for any given grid cell on any given day. Winter emission factors are used from January 1st through the date of the last frost and again from the data of the first frost in fall through December 31st. Summer emission factors are used for the time period in between. This calculation is performed separately for each grid cell.

5. Temporal Allocation

5.1 MANE-VU

5.1.1 Area and nonroad sources

- Generated as part of the MANE-VU version 1 inventory
- amptpro.m3.us+can.manevu.030205.txt
- amptref.m3.manevu.012405.txt
- downloaded from **ftp.marama.org** (username mane-vu, password exchange) in January 2005

5.1.2 Mobile sources

- MANEVU_2002_mtpro_02022006_addCT.txt
- MANEVU_2002_mtref_02022006_addCT.txt
- prepared by PECHAN and NESCAUM and downloaded from http://bronze.nescaum.org/Private/junghun/MANE-VU/onroad_ver3_update/MANEVU_V3_update.tar

5.1.3 Point Sources

- Based on the same files as for the MANE-VU area and nonroad temporal files listed above, but added the CEM-based 2002 state-specific temporal profiles and

cross-references for EGU sources for the MANE-VU states that were generated by VISTAS for their BaseD modeling and obtained in February 2005.
- No CEM-based hour-specific EGU emissions were utilized

5.2 CENRAP

The following temporal profiles and cross-reference files were used:
- Area and nonroad sources:
  - amptpro.m3.us+can.cenrap.010605_incl_nrd.txt
  - amptref.m3.cenrap.010605_add_nh3_and_nrd.txt
- Mobile sources:
  - mtpro.cenrap.v3.txt
  - mtref.cenrap.v3.txt
- Point sources:
  - ptpro.{QQ}.cenrap_egus_cem.00-03avg.121205.txt where {QQ} is Q1 for January/February/March, Q2 for April/May/June, etc.
  - ptref.{QQ}.cenrap_egus_cem.00-03avg.121205.txt where {QQ} is Q1 for January/February/March, Q2 for April/May/June, etc.
- All files were downloaded from the CENRAP ftp site in March 2006.

5.3 VISTAS

The following month-specific temporal profiles and cross-reference files were used:
- Area and nonroad sources:
  - atpro_vistas_basef_15jul05.txt
  - atref_vistas_basef_15jul05.txt
- Mobile sources:
  - mtpro_vistas_basef_04jul05.txt
  - mtref_us_can_vistas_basef_04jul05.txt
- Point sources:
  - ptpro_typ_{MMM}_vistasg_28jun2006.txt where {MMM} is jan, feb, mar, etc.
  - ptref_typ_vistas_baseg_28jun2006.txt
- These files were obtained from the Alpine Geophysics ftp site. They reflect version BaseG of the VISTAS inventory for the point source allocation files and version BaseF for the area, nonroad, and mobile source allocation files. These files were downloaded between February and July, 2006.

5.4 MRPO

The following month-specific temporal profiles and cross-reference files were used for all source categories:
- amptpro_typ_us_can_{MMM}_vistas_27nov04.txt where {MMM} is jan, feb, mar, etc.
- amptref_2002_us_can_vistas_17dec04.txt

- These files were obtained from VISTAS in January 2005 and reflect their BaseD modeling. No updated temporal profiles or cross-reference files were developed for use with the MRPO BaseK inventory.

5.5 Canada

For Canada, the SMOKE2.1 default temporal profiles and cross-reference files (amptpro.m3.us+can.txt and amptref.m3.us+can.txt) were utilized.

6. Speciation

The same speciation profiles (gspro.cmaq.cb4p25.txt) and cross-references (gsref.cmaq.cb4p25.txt) were utilized for all regions and all source categories. Different versions of these files were obtained (SMOKE2.1 default, EPA-CAIR modeling, VISTAS, CENRAP and MANE-VU) and compared. After comparing the creation dates and header lines of these files, it was determined that the EPA-CAIR and MANE-VU files had the most recent updates, and consequently the final speciation profile and cross-reference files used for all regions and source categories was based on the EPA-CAIR files with the addition of MANE-VU specific updates.

7. Spatial Allocation

7.1 U.S.

The spatial surrogates for the 12 km domain were extracted from the national grid 12 km U.S. gridding surrogates posted at EPA's website at
http://www.epa.gov/ttn/chief/emch/spatial/newsurrogate.html
The gridding cross-references were also obtained from this website, but for the processing of MANE-VU area source emissions, MANE-VU specific cross-reference entries posted on the MARAMA ftp site were added.

7.2 Canada

The spatial surrogates for Canadian emissions for the 12 km domain were extracted from the national grid 12 km Canadian gridding surrogates posted at EPA's website at
http://www.epa.gov/ttn/chief/emch/spatial/newsurrogate.html
The gridding cross-references were also obtained from this website.

Appendix 8F

Emission Processing for the Revised 2002 OTC Regional and Urban 12 km Base Case Simulations

Emission Processing for the Revised 2002 OTC Regional and Urban 12 km Base Case Simulations

Bureau of Air Quality Analysis and Research
Division of Air Resources
New York State Department of Environmental Conservation

September 19, 2006

1. Overview

All emissions processing for the revised 2002 OTC regional and urban 12 km base case simulations was performed with SMOKE2.1 compiled on a Red Hat 9.0 Linux operating system with the Portland group fortran compiler version 5.1. The emissions processing was performed on a month-by-month and RPO-by-RPO basis, i.e. SMOKE processing was performed for each month for each of the RPOs (MANE-VU, VISTAS, CENRAP, MRPO) individually as well as for Canada. For each month/RPO combination, a separate SMOKE ASSIGNS file was created, and the length of the episode in each of these ASSIGNS files was set to the entire month. Also, as discussed in Section 3, there was no difference between "episode-average" temperatures and "monthly-average" temperatures for the Mobile6 simulations that used the option of temperature averaging.

This document is structured as follows: A listing of all emission inventories is given in Section 2, organized by RPO and source category. Section 3 discusses the Mobile6 processing approach employed for the different RPOs, while Section 4 describes the processing of biogenic emissions with BEIS3.12. Finally, Sections 5 through7 describe the temporal allocation, speciation, and spatial allocation of the emissions inventories, respectively.

2. Emission Inventories

2.1 MANE-VU

Version 3 of the MANE_VU inventory was utilized to generate CMAQ-ready emissions. This emissions inventory data were obtained from the MANEVU archive in April 2006.

2.1.1 Area Sources

- Files: MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt and MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt prepared by PECHAN, downloaded from **ftp.marama.org** (username mane-vu, password exchange)
- Fugitive dust correction: This was applied as county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing

2.1.2 Nonroad Sources

- File: MANEVU_NRD2002_SMOKE_030306 prepared by PECHAN; downloaded from **ftp.marama.org** (username mane-vu, password exchange)

2.1.3 Mobile Sources

- VMT/Speed: MANEVU_2002_mbinv_02022006_addCT.txt prepared by PECHAN and NESCAUM; downloaded from http://bronze.nescaum.org/Private/junghun/MANE-VU/onroad_ver3_update/MANEVU_V3_update.tar

2.1.4 Point Sources

- Files: MANEVU_Point_SMOKE_INPUT_ANNUAL_SUMMERDAY_041006.txt and MANEVU_Point_SMOKE_INPUT_ANNUAL_WINTERDAY_041006.txt prepared by PECHAN were downloaded from **ftp.marama.org** (username mane-vu, password exchange)
- Fugitive dust correction: This was applied as county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing
- Corrected the omission of 2,100 tons/year VOC emissions from several point sources in NJ. NJDEP provided updated IDA files on June 30 that were used for modeling.

2.2 CENRAP

The inventory data were obtained from the CENRAP ftp site in March 2006 and reflect version BaseB of the CENRAP inventory.

2.2.1 Area Sources

- Files:
  - CENRAP_AREA_SMOKE_INPUT_ANN_STATES_081705.txt
  - CENRAP_AREA_MISC_SMOKE_INPUT_ANN_STATE_071905.txt
  - CENRAP_AREA_BURNING_SMOKE_INPUT_ANN_TX_ NELI_071905.txt
  - CENRAP_AREA_MISC_SMOKE_INPUT_NH3_MONTH_{MMM} _072805.txt where {MMM} is JAN, FEB, … DEC
  - CENRAP_AREA_SMOKE_INPUT_NH3_MONTH_{MMM} _071905.txt where {MMM} is JAN, FEB, … DEC
- Fugitive dust correction: This was applied as county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing
- Note about area and nonroad source SMOKE processing for the CENRAP region: All area source inventories (both annual and month-specific) were processed in

one step through SMOKE. SMK_AVEDAY_YN was set to N, so seasonal profiles were used to apportion the annual inventories numbers by month. This setting was also used for the nonroad processing performed in a separate step. This was necessary since the month-specific files had zero in their ‘average-day’ column and the annual total column reflects the “monthly emissions as annual totals” as per header line. Therefore, seasonal profiles are used to apportion both the annual and month-specific files. As described below, we utilized the temporal profiles and cross-reference files generated by CENRAP. However, we did not verify that this approach indeed leads to the intended monthly allocation of ammonia and nonroad emissions.

2.2.2 Nonroad Sources

- Files:
  - CENRAP_NONROAD_SMOKE_INPUT_ANN_071305.txt
  - CENRAP_NONROAD_SMOKE_INPUT_MONTH_{MMM}_071305.txt where {MMM} is JAN, FEB, … DEC

2.2.3 Mobile Sources

- VMT/Speed files:
  - mbinv02_vmt_cenrap_ce.ida
  - mbinv02_vmt_cenrap_no.ida
  - mbinv02_vmt_cenrap_so.ida
  - mbinv02_vmt_cenrap_we.ida

2.2.4 Point Sources

- File: CENRAP_POINT_SMOKE_INPUT_ANNUAL_DAILY_072505.txt
- Fugitive dust correction: This was applied as county-specific correction factors for SCC’s listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA’s CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing.

2.3 VISTAS

All VISTAS emission files were obtained from the Alpine Geophysics ftp site. They reflect version BaseG of the VISTAS inventory with the exception of fire emissions which reflect BaseF and BaseD. These files were downloaded between February and August, 2006.

2.3.1 Area Sources

- Files:
  - arinv_vistas_2002g_2453922_w_pmfac.txt
  - ida_ar_fire_2002_vistaonly_basef.ida
- Note: the header lines of these files indicate that the fugitive dust correction was already applied, so no further correction was performed.

2.3.2 Nonroad Sources

- Files:
  - nrinv_vistas_2002g_2453908.txt
  - marinv_vistas_2002g_2453972.txt

2.3.3 Mobile Sources

- VMT/Speed file: mbinv_vistas_02g_vmt_12jun06.txt

2.3.4 Point Sources

- Files:
  - Annual:
    - egu_ptinv_vistas_2002typ_baseg_2453909.txt
    - negu_ptinv_vistas_2002typ_baseg_2453909.txt
    - ptinv_fires_{MM}_typ.vistas.ida where {MM} is 01, 02, 03, etc. depending on the month; these annual point fire files were generated as part of the VISTAS BaseD inventory and were obtained in January 2005
  - Hour-specific:
    - pthour_2002typ_baseg_{MMM}_28jun2006.ems where {MMM} is jan, feb, mar, etc.
    - pthour_fires_{MM}_typ.vistas.ida where {MM} is 01, 02, 03, etc. depending on the month; these hourly point fire files were generated as part of the VISTAS BaseD inventory and were obtained in January 2005
- Note: No fugitive dust correction was performed for these files.

2.4 MRPO

MRPO emissions for SMOKE modeling were generated by Alpine Geophysics through a contract from MARAMA to convert the MRPO BaseK inventory from NIF to IDA format. The files were downloaded from the MARAMA ftp site **ftp.marama.org** (username mane-vu, password exchange) between April and June 2006.

2.4.1 Area Sources

- Files:
  - Annual:
    - arinv_mar_mrpok_2002_27apr2006.txt
    - arinv_other_mrpok_2002_20jun2006.txt
  - Month-specific:
    - arinv_nh3_2002_mrpok_{mmm}_3may2006.txt where {mmm} is jan, feb, etc.
    - dustinv_2002_mrpok_{mmm}_23may2006.txt where {mmm} is jan, feb, etc.
- Fugitive dust correction: This correction was performed only to the arinv_other_mrpok_2002_20jun2006.txt file using county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing.
- Note about area source SMOKE processing: SMOKE processing was performed separately for the annual and month-specific files. For the annual inventory processing, SMK_AVEDAY_YN was set to N, so seasonal profiles were used to apportion the annual inventories numbers by month. For the month-specific inventory processing, this variable was set to Y so that no seasonal profiles would be applied and the inventory numbers in the 'average day' column would be used. To save a SMOKE processing step, the annual "marine" inventory "arinv_mar_mrpok_2002_27apr2006.txt" was processed together with the annual "other area source" inventory "arinv_other_mrpok_2002_20jun2006.txt" even though it technically is part of the nonroad inventory.

2.4.2 Nonroad Sources

- Files: nrinv_2002_mrpok_{mmm}_3may2006.txt where {mmm} is jan, feb, etc.

2.4.3 Mobile Sources

- VMT/Speed file: mbinv_mrpo_02f_vmt_02may06.txt

2.4.4 Point Sources

- Files: ptinv_egu_negu_2002_mrpok_1may2006.txt
- Fugitive dust correction: This correction was performed only to the arinv_other_mrpok_2002_20jun2006.txt file using county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was

performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing.

2.5 Canada

2.5.1 Area Sources

- File: AS2000_SMOKEready.txt obtained from ftp://ftp.epa.gov/EmisInventory/canada_2000inventory
- Fugitive dust correction: We applied "divide-by-four" correction for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; this adjustment was performed outside SMOKE with in-house Fortran programs. No county/province-specific correction factors were available for Canada

2.5.2 Nonroad Sources

- File: NONROAD2000_SMOKEready.txt obtained from ftp://ftp.epa.gov/EmisInventory/canada_2000inventory

2.5.3 Mobile Sources

- File: MOBILE2000_SMOKEready.txt obtained from ftp://ftp.epa.gov/EmisInventory/canada_2000inventory
- Fugitive dust correction: applied "divide-by-four" correction for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; this adjustment was performed outside of SMOKE with in-house Fortran programs. No county/province-specific correction factors were available for Canada.

2.5.4 Point Sources

There has long been difficulty in obtaining an up-to-date Canadian criteria emissions inventory for point sources. This is due largely to confidentiality rights afforded to Canadian facilities. Thus far, the most recent inventory of Canadian point sources is rooted in the 1985 NAPAP data and is close to two decades old. Because there are a number of high emitting industrial facilities in southern Canada it is of particular importance to have a reasonably accurate inventory of these sources especially when modeling air quality over the Northeast and Midwest United States. Toward this end, an effort was made to obtain more recent Canadian point source data and incorporate it into an inventory database, which could then be used for the 2002 OTC air quality modeling.

Perhaps the most accurate and publicly accessible source of Canadian pollutant data is now available from the National Pollutant Release Inventory (NPRI) database. This database contains 268 substances. Facilities that manufacture, process or otherwise use one of these substances and that meet reporting thresholds are required to report these emissions to Environment Canada on an annual basis. The NPRI data are available at Environment Canada's website and can be found at the link http://www.ec.gc.ca/pdb/npri/npri_home_e.cfm. The page hosts an on-line search engine where one can locate emissions by pollutant or location. In addition, the entire database is available for download as an MS Access or Excel file. The NPRI database contains numerous pages with a rather comprehensive list of information. Detailed information is available about each facility, including location, activity and annual emissions. In addition, facilities having stacks with a height of 50 meters or more are required to report stack parameters.

Unfortunately, one of the limitations of the NPRI database for modeling purposes is that the data are only available at the facility level. Emissions models require process level information, so in order to use this data, a few generalizations had to be made. Each facility has a Standard Industrial Classification (SIC) code associated with it; however, emissions models require Source Classification Codes (SCC's). SCC's are of critical importance as the emissions models use these codes for assignment of temporal and speciation profiles. SIC codes describe the general activity of a facility while SCC codes describe specific processes taking place at each facility. While no direct relationship exists between these two codes, a general albeit subjective association can be made.

For the purposes of creating a model-ready inventory file it was necessary to obtain the whole NPRI database. After merging all the necessary components from the NPRI database required in the SMOKE inventory file, the SIC code from each facility was examined and assigned an SCC code. In most cases, only a SCC3 level code was assigned with confidence. While this is admittedly a less than desirable process, it does allow for the use of the most recent emissions from the NPRI database to be used in modeling. Furthermore, having some level of SCC associated with these emissions will ensure that they will be assigned a temporal and speciation profile by the model, other than the default. Once the model-ready inventory file was developed, it was processed through SMOKE.

3. Mobile6 Processing

3.1 MANE-VU

3.1.1 Mobile6 input files

- Month-specific input files were prepared by PECHAN and NESCAUM and were downloaded from http://bronze.nescaum.org/Private/junghun/MANE-VU/onroad_ver3_update/MANEVU_V3_update.tar
- Added the line "REBUILD EFFECTS   :0.10" to each file before the SCENARIO record to override the Mobile6 default setting of 0.9 (90%) for the "chip reflash" effectiveness

3.1.2 SMOKE/Mobile6 auxiliary files

- SMOKE/Mobile6 auxiliary files were prepared by PECHAN and NESCAUM and were downloaded from http://bronze.nescaum.org/Private/junghun/MANE-VU/onroad_ver3_update/MANEVU_V3_update.tar

3.1.3 Temperature averaging

- Following the setting in the MANEVU_2002_mvref.txt files, the following procedures were used by SMOKE for temporal and spatial temperature averaging in the calculation of emission factors:
    - Spatial averaging: temperatures were averaged over all counties that share a common reference county (i.e. Mobile6 input file)
    - Temporal averaging for May – September emissions processing: no temporal averaging was used, i.e. day-specific temperatures were used to calculate emission factors for each day.
    - Temporal averaging for non-summer-months emissions processing: Temporal averaging over the duration of the episode (i.e. the entire month, see introduction) was used, i.e. monthly average temperatures were used to calculate the emission factors.

3.2 CENRAP

3.2.1 Mobile6 input files

- Mobile6 input files for the CENRAP region for January and July were contained in the files central_M6_{MMM}.zip, north_M6_{MMM}.zip, south_M6_{MMM}.zip, west_M6_{MMM}.zip where {MMM} is either jan or jul. July input files were used for April – September processing, while January input files were used for the remaining months
- All files were downloaded from the CENRAP ftp site in March 2006.

3.2.2 SMOKE/Mobile6 auxiliary files

- SMOKE/Mobile6 auxiliary files were contained in the files central_M6_RD.zip, north_M6_RD.zip, south_M6_RD.zip, and west_M6_RD.zip. The SMOKE MCREF, MVREF, and MCODES files were contained in the file MOBILESMOKE_Inputs.zip. The MCREF and MVREF files were combined for the different regions (“central”, “east”, “west”, “north”)
- All files were downloaded from the CENRAP ftp site in March 2006.

3.2.3 Temperature averaging

- The following procedures were used by SMOKE for temporal and spatial temperature averaging in the calculation of emission factors according to the setting in the mvref files:

  - Spatial averaging: no spatial averaging of temperatures, i.e. the temperatures for the reference county is used to calculate emission factors for all counties that share this reference county (i.e. Mobile6 input file)
  - Temporal averaging: Temporal averaging over the duration of the episode (i.e. the entire month, see introduction) was used, i.e. monthly average temperatures were used to calculate the emission factors.

3.3 VISTAS

3.3.1 Mobile6 input files

- Month-specific Mobile6 input files were obtained from the Alpine Geophysics ftp site in July 2006. They reflect version BaseG of the VISTAS inventory.

3.3.2 SMOKE/Mobile6 auxiliary files

- SMOKE/Mobile6 auxiliary files utilized were obtained from the Alpine Geophysics ftp site in July 2006. They reflect version BaseG of the VISTAS inventory.

3.3.3 Temperature averaging

- The following procedures were used by SMOKE for the temporal and spatial temperature averaging in the calculation of emission factors according to the setting in the mvref_baseg.36k.ag.txt file:
  - Spatial averaging: temperatures averaged over all counties that share a common reference county (i.e. Mobile6 input file)
  - Temporal averaging: Temporal averaging over the duration of the episode (i.e. the entire month, see introduction) was used, i.e. monthly average temperatures were used to calculate the emission factors.

3.4 MRPO

3.4.1 Mobile6 input files

- Month-specific Mobile6 input files for SMOKE modeling were generated by Alpine Geophysics through a contract from MARAMA. They are based on version BaseK of the MRPO inventory. The files were downloaded from the MARAMA ftp site **ftp.marama.org** (username mane-vu, password exchange) in May 2006.

3.4.2 SMOKE/Mobile6 auxiliary files

- SMOKE/Mobile6 auxiliary files for SMOKE modeling were generated by Alpine Geophysics through a contract from MARAMA. They are based on version BaseK of the MRPO inventory. The files were downloaded from the MARAMA ftp site **ftp.marama.org** (username mane-vu, password exchange) in May 2006.

3.4.3 Temperature averaging

- The following procedures were used by SMOKE for the temporal and spatial temperature averaging in the calculation of emission factors according to the setting in the mvreg_mrpo_basek.txt file:
  - Spatial averaging: temperatures averaged over all counties that share a common reference county (i.e. Mobile6 input file)
  - Temporal averaging: Temporal averaging over the duration of the episode (i.e. the entire month, see introduction) was used, i.e. monthly average temperatures were used to calculate the emission factors.

4. Biogenic Emission Processing

Hourly gridded biogenic emissions for the 12 km and 36 km modeling domains were calculated by BEIS3.12 through SMOKE, using MCIP-processed MM5 fields for temperature ("TA", layer-1 temperature), solar radiation ("RGRND"), surface pressure ("PRES"), and precipitation ("RN" and "RC"). A 'seasonal switch' file was generated by the SMOKE utility metscan to determine whether winter or summer emission factors should be used for any given grid cell on any given day. Winter emission factors are used from January 1st through the date of the last frost and again from the data of the first frost in fall through December 31st. Summer emission factors are used for the time period in between. This calculation is performed separately for each grid cell.

5. Temporal Allocation

5.1 MANE-VU

5.1.1 Area and nonroad sources

- Generated as part of the MANE-VU version 1 inventory
- amptpro.m3.us+can.manevu.030205.txt
- amptref.m3.manevu.012405.txt
- downloaded from **ftp.marama.org** (username mane-vu, password exchange) in January 2005

5.1.2 Mobile sources

- MANEVU_2002_mtpro_02022006_addCT.txt
- MANEVU_2002_mtref_02022006_addCT.txt
- prepared by PECHAN and NESCAUM and downloaded from http://bronze.nescaum.org/Private/junghun/MANE-VU/onroad_ver3_update/MANEVU_V3_update.tar

5.1.3 Point Sources

- Based on the same files as for the MANE-VU area and nonroad temporal files listed above, but added the CEM-based 2002 state-specific temporal profiles and

cross-references for EGU sources for the MANE-VU states that were generated by VISTAS for their BaseD modeling and obtained in February 2005.
- No CEM-based hour-specific EGU emissions were utilized

5.2 CENRAP

The following temporal profiles and cross-reference files were used:
- Area and nonroad sources:
  - amptpro.m3.us+can.cenrap.010605_incl_nrd.txt
  - amptref.m3.cenrap.010605_add_nh3_and_nrd.txt
- Mobile sources:
  - mtpro.cenrap.v3.txt
  - mtref.cenrap.v3.txt
- Point sources:
  - ptpro.{QQ}.cenrap_egus_cem.00-03avg.121205.txt where {QQ} is Q1 for January/February/March, Q2 for April/May/June, etc.
  - ptref.{QQ}.cenrap_egus_cem.00-03avg.121205.txt where {QQ} is Q1 for January/February/March, Q2 for April/May/June, etc.
- All files were downloaded from the CENRAP ftp site in March 2006.

5.3 VISTAS

The following month-specific temporal profiles and cross-reference files were used:
- Area and nonroad sources:
  - atpro_vistas_basef_15jul05.txt
  - atref_vistas_basef_15jul05.txt
- Mobile sources:
  - mtpro_vistas_basef_04jul05.txt
  - mtref_us_can_vistas_basef_04jul05.txt
- Point sources:
  - ptpro_typ_{MMM}_vistasg_28jun2006.txt where {MMM} is jan, feb, mar, etc.
  - ptref_typ_vistas_baseg_28jun2006.txt
- These files were obtained from the Alpine Geophysics ftp site. They reflect version BaseG of the VISTAS inventory for the point source allocation files and version BaseF for the area, nonroad, and mobile source allocation files. These files were downloaded between February and July, 2006.

5.4 MRPO

The following month-specific temporal profiles and cross-reference files were used for all source categories:
- amptpro_typ_us_can_{MMM}_vistas_27nov04.txt where {MMM} is jan, feb, mar, etc.
- amptref_2002_us_can_vistas_17dec04.txt

- These files were obtained from VISTAS in January 2005 and reflect their BaseD modeling. No updated temporal profiles or cross-reference files were developed for use with the MRPO BaseK inventory.

5.5 Canada

For Canada, the SMOKE2.1 default temporal profiles and cross-reference files (amptpro.m3.us+can.txt and amptref.m3.us+can.txt) were utilized.

6. Speciation

The same speciation profiles (gspro.cmaq.cb4p25.txt) and cross-references (gsref.cmaq.cb4p25.txt) were utilized for all regions and all source categories. Different versions of these files were obtained (SMOKE2.1 default, EPA-CAIR modeling, VISTAS, CENRAP and MANE-VU) and compared. After comparing the creation dates and header lines of these files, it was determined that the EPA-CAIR and MANE-VU files had the most recent updates, and consequently the final speciation profile and cross-reference files used for all regions and source categories was based on the EPA-CAIR files with the addition of MANE-VU specific updates.

7. Spatial Allocation

7.1 U.S.

The spatial surrogates for the 12 km domain were extracted from the national grid 12 km U.S. gridding surrogates posted at EPA's website at
http://www.epa.gov/ttn/chief/emch/spatial/newsurrogate.html
The gridding cross-references were also obtained from this website, but for the processing of MANE-VU area source emissions, MANE-VU specific cross-reference entries posted on the MARAMA ftp site were added.

7.2 Canada

The spatial surrogates for Canadian emissions for the 12 km domain were extracted from the national grid 12 km Canadian gridding surrogates posted at EPA's website at
http://www.epa.gov/ttn/chief/emch/spatial/newsurrogate.html
The gridding cross-references were also obtained from this website.

Appendix 8G

Emission Processing for OTC 2009 OTW/OTB 12km CMAQ Simulations

Emission Processing for OTC 2009 OTW/OTB 12km CMAQ Simulations

Office of Air Data Analysis
Air Division
Virginia Department of Environmental Quality

February, 2007

Overview

The OTC 2009 OTW/OTB emission modeling was conducted at the Virginia Department of Environmental Quality (DEQ). The modeling followed and retained the framework of the previous (original) OTC 2002/2009 emission modeling done by the New York State Department of Environmental Conservation (NYSDEC). Several changes and corrections had been made throughout the entire modeling period. Virginia DEQ was in close contact with NYSDEC which provided many premerged netCDF files for inclusion in the merging process to obtain final SMOKE outputs for CMAQ simulations.

Emissions for all source categories were processed by SMOKE2.1. The SMOKE programs downloaded from Community Modeling and Analysis System (CMAS) website have been compiled for LINUX system and ready for usage. If existing compiled codes returned errors, such as in the case of large MCIP files, compiled versions provided by NYSDEC and available at Ozone Research Center's (ORC) ftp sites were used instead.

Data Sources

The majority of raw input data files were provided to DEQ by Greg Stella of AlpineGeophysics through its ftp site at alpinegeophysics.com. Different versions of 2009 SMOKE emission modeling have been conducted over the years by AlpineGeophysics. The version of input data files used for OTC 2009 OTW/OTB emission modeling was labeled as BaseG of the AlpineGeophysics.

In some source categories, primarily in MANEVU and Canada regions, several changes and corrections in emissions were made at various stage of SMOKE modeling, causing the outputs using AlpineGeophysics files to be discarded. SMOKE modeling of those categories (described below) was performed by NYSDEC which made netCDF outputs available at Ozone Research Center's ftp site at ozoneresearch.org. In such cases, DEQ used the premerged netCDF files directly for final merging.

SMOKE Processing

The OTC 12km regional and urban scale modeling domain encompasses four RPOs: VISTAS, MANEVU, CENRAP, and MRPO. Part of Canada also falls in the modeling domain.

The OTC 2009 OTW/OTB emissions were processed roughly on a month-by-month and RPO-by-RPO basis. SMOKE modeling was conducted for each month for each of the four individual RPOs as well as for Canada (completed by NYSDEC), except for mobile source category, which was done by two sub-RPOs: one for MANEVU and the other for the combination of VISTAS, CENRAP, and MRPO. A separate SMOKE ASSIGNS file was created for each RPO and/or source category. The episode length in the ASSIGNS files varies from one month to the entire year.

Five major emission source categories (listed below) were included in the OTC 2009 OTW/OTB SMOKE modeling. Sub-categories were lumped into the major categories here for presentation purpose but were treated as separate categories in processing. For example, low-level wildfire was treated as area source, whereas high-level wildfire was modeled as point source. In addition, point source category was further divided into EGU and non-EGU. Minor sources such as non-fossil fuels and marine vassel were processed as well. Table 1 summarizes input files and other relevant information for each of the RPOs and Canada.

(1). Area (including low-level wildfire and NH_3);
(2). Nonroad (including marine vassel);
(3). Point (including EGU, Non-EGU, non-fossil fuels and wildfires);
(4). Mobile;
(5). Biogenic.

For VISTAS region (only), AlpineGeophysics has developed annual, daily, or hourly emissions data for EGU and high-level wildfire source categories. SMOKE run script parameters of DAY_SPECIFIC_YN and/or HOUR_SPECIFIC_YN were turned on (to Y) and month-specific temporal profiles of BaseG were applied to make sure those more detailed inventory files were used to override annual emissions.

Mobile source emissions were divided into two groups for processing. The original input file (mbinv_vistas_09g_vmt_12jun06.txt) provided by AlpineGeophysics contains VMT data for all four RPOs. The MANEVU portion was first removed from the original file and the revised file (otherRPOs.mb.vmt.emis) which contains VMT data for the remaining three RPOs (VISTAS, CENRAP, MRPO) was then used as the input inventory for processing. The MANEVU portion removed from the original file was processed separately on its own as another group.

MOBILE6 Processing

As described above, mobile source emissions for three RPOs — VISTAS, CENRAP, and MRPO — were grouped and processed together. To estimate vehicle emission factors in MOBILE6, temperature averaging of space and time were specified in input file of mvref_vistas_2009g_26aug06.txt as follows:

(1). Spatial averaging: temperatures were averaged over all counties that share a common reference county;

(2). Temporal averaging: temperatures were averaged over the duration of the episode, which in present case is one month.

The averaging described above is consistent with the original OTC 2002/2009 emission processing done by NYSDEC. DEQ also processed MANEVU portion of mobile source. However, due to the inconsistency of temporal profile and cross-reference file used between DEQ's run and the original 2002/2009 run by NYSDEC, those outputs were discarded. NYSDEC re-processed the MANEVU portion and provided netCDF files to DEQ for final merging. The re-processed MANEVU run by NYSDEC reflects updated mobile source information in New Jersey and Connecticut.

Speciations, Temporal and Spatial Allocations

For consistency, the OTC 2009 OTW/OTB input profiles for speciations, temporal, and spatial allocations remained the same as the original OTC 2002/2009 emission modeling done by NYSDEC, even though more up-to-date profiles (such as those marked with BaseG or later) were available at the AlpineGeophysics. No attempt was made to examine the effects of different versions of profiles on daily emissions.

Fugitive Dust Corrections

Fugitive dust emissions were corrected in SMOKE by two-step process. First, SMKINVEN and CNTLMAT were executed with two separate input files: (1) the original inventory file, and (2) a controlled matrix file of 2009 dust projection factors. A new inventory file containing adjusted emissions was created in SMKINVEN/CNTLMAT run. The new file was then used as the inventory input for regular SMOKE processing of SMKINVEN, SPCMAT, GRDMAT, TEMPORAL, LAYPOINT (for point source), and SMKMERGE. The source categories which went through this two-step process included non-EGU for VISTAS, MANEVU, CENRAP, and MRPO, and area sources for MANEVU and CENRAP.

Canadian and Biogenic Emissions

Canadian emissions of all four source categories (area, nonroad, point, mobile) and domain-wide biogenic emissions were processed by NYSDEC. Details on how emission modeling of these categories was conducted have been documented in "Emission Processing for the Revised 2002 OTC Regional and Urban 12 km Base Case Simulations" by NYSDEC. DEQ obtained premerged netCDF files for these source categories from ORC ftp site and used them directly for final merging.

Premerged netCDF Files

In December 2006, NYSDEC made further adjustments to ammonia and dust emissions of MRPO region and ran through SMOKE with the adjusted emissions. Three of MRPO's source categories were affected: area, nonroad, and NH_3. As a result, outputs generated by DEQ for the three affected MRPO's categories were discarded. Canadian emissions of all four source categories (area, nonroad, point and mobile) were also re-processed by NYSDEC with updated information. Seven newer versions, three for MRPO and four for Canada, of premerged netCDF files reflecting the adjustments were made available at ORC ftp site. The updated premerged netCDF files were used to replace earlier versions in the final merging process..

SMOKE Merging

A total of twenty-seven netCDF files were merged together to produce daily total emissions for use as inputs to CMAQ:

(1). Six for VISTAS (excluding mobile);
(2). Five for MANEVU (excluding mobile);
(3). Four for CENRAP (excluding mobile);
(4). Five for MRPO (excluding mobile);
(5). Two for mobile source emissions;
(6). Four for Canadian emissions;
(7). One for domain-wide biogenic emissions.

Table 1 lists the categories (indicated by sequential numbers) which were combined in the merging process.

BOTW Emissions

The differences between 2009 BOTW and 2009 OTW/OTB emissions lie in the area and non-EGU sources of MANEVU region where more controlled emissions are in effect for BOTW than for OTW/OTB. NYSDEC generated premerged netCDF files for BOTW run. To obtain 2009 OTC BOTW emissions, the two affected MANEVU source categories for OTW/OTB run were substituted and replaced by the new BOTW premerged files in the final merging process.

Table 1. 2009 OTW/OTB Emissions Processing Summary

	Category	Files	Files Source	Notes
		VISTAS		
(1)	**Area**	arinv_vistas_2009g_2453922_w_pmfac.txt	AlpineGeophysics	
(2)	**Nonroad**	nrinv_vistas_2009g_2453908.txt	AlpineGeophysics	
		marinv_vistas_2009g_2453972.txt	AlpineGeophysics	marine vessel emissions
(3)	**Non-EGU**	negu_ptinv_vistas_2009_baseg_2453957.txt	AlpineGeophysics	
(4)	**EGU**	egu_ptinv_vistas_2009_baseg_2453990.txt	AlpineGeophysics	annual emissions
		pthour_2009_baseg_mon_2453990.ems	AlpineGeophysics	hourly emissions, mon=may,jun,...
(5)	**Low Fire**	area_level_fires_vistas2002_baseg.ida	AlpineGeophysics	treated as area sources
(6)	**High Fire**	ptinv.plume.vistasbaseg09.num.ida	AlpineGeophysics	treated as point sources; annual data
		ptday.plume.vistasbaseg09.num.ida	AlpineGeophysics	daily data; num=1,2,...
		pthour.plume.vistasbaseg09.num.ida	AlpineGeophysics	hourly data; num=1,2,...
(7)	**Mobile**	otherRPOs.mb.vmt.emis	revised from AlpineG	contains VISTAS/CENRAP/MRPO
		MANEVU		
(8)	**Area**	MANEVU2009OTBAreaV3_1_woodburn.incl.IDA.txt	AlpineGeophysics	if BOTW, premerged netCDF for merging
(9)	**Nonroad**	2009MANEVUNRNIFV3_0_NonRoad_IDA.NJfix.txt	AlpineGeophysics	
(10)	**Non-EGU**	manevu2009noneguv3_0_point_ida.txt	AlpineGeophysics	if BOTW, premerged netCDF for merging
(11)	**EGU**	ptinv_egu_2009_manevu_10aug2006.txt	AlpineGeophysics	annual emissions
(12)	**Non-Fossile**	manevu_nonfossil_2009_19sept2006.txt	AlpineGeophysics	non-fossil fuel emissions
(13)	**Mobile**	netCDF file	NYSDEC	netCDF used for merging

Table 1. 2009 OTW/OTB Emissions Processing Summary (cont.)

	Category	Files	Files Source	Notes
		CENRAP		
(14)	**Area**	cenrap_area_burning_smoke_2009_input_ann_tx_neli_071905_2453959.txt	AlpineGeophysics	
		cenrap_area_misc_2009_smoke_input_ann_state_071905_2453959.txt	AlpineGeophysics	
		cenrap_area_misc_2009_smoke_output_nh3_annual_072805_rev_2453959.txt	AlpineGeophysics	
		arinv.cenrap_2009_09_xfact.ida.txt	AlpineGeophysics	
		cenrap_area_smoke_2009_output_nh3_annual_071905_rev_2453959.txt	AlpineGeophysics	
(15)	**Nonroad**	cenrap_nonroad_smoke_2009_output_annual_071305_rev.txt	AlpineGeophysics	
(16)	**Non-EGU**	ptinv_negu_cenrap2009_25aug2006.ida	AlpineGeophysics	
(17)	**EGU**	ptinv_egu_2009_cenrap_10aug2006.txt	AlpineGeophysics	annual emissions
	Mobile	otherRPOs.mb.vmt.emis	revised from AlpineG	VISTAS/CENRAP/MRPO
		MRPO		
(18)	**Area**	arinv_other_mrpok_2009_10aug2006.txt	AlpineGeophysics	dust correction; premerged netCDF
		dustinv_mrpo_basef4_2009_10nov05.ida	AlpineGeophysics	
(19)	**NH3**	nh3inv_2009_mrpok_ann_10aug2006.txt	AlpineGeophysics	dust correction; premerged netCDF
(20)	**Nonroad**	nrinv_mrpo_g_09_2453958_adj.txt	AlpineGeophysics	dust correction; premerged netCDF
		arinv_mar_mrpok_2009_7aug2006.txt	AlpineGeophysics	
(21)	**Non-EGU**	ptinv_negu_2009_mrpok_10aug2006.txt	AlpineGeophysics	
(22)	**EGU**	ptinv_egu_2009_mrpok_10aug2006.txt	AlpineGeophysics	annual emissions
	Mobile	otherRPOs.mb.vmt.emis	revised from AlpineG	VISTAS/CENRAP/MRPO

Table 1. 2009 OTW/OTB Emissions Processing Summary (cont.)

	Category	Files	Files Source	Notes
			CANADA	
(23)	**Area**	netCDF file	NYSDEC; downloaded from OTC ftp site	premerged netCDF for merging
(24)	**Nonroad**	netCDF file	NYSDEC; downloaded from OTC ftp site	premerged netCDF for merging
(25)	**Point**	netCDF file	NYSDEC; downloaded from OTC ftp site	premerged netCDF for merging
(26)	**Mobile**	netCDF file	NYSDEC; downloaded from OTC ftp site	premerged netCDF for merging
			BIOGENIC	
(27)	**biogenic**	netCDF file	NYSDEC; downloaded from OTC ftp site	domain-wide emissions; premerged netCDF for merging

Appendix 8H

Description of New York City's PlaNYC
and Other Initiatives that Will Improve Air Quality

(Provided by NYDEC, February 2008)

PlaNYC

In December of 2006, New York City announced the intent to develop a strategy to deal with growth, infrastructure, sustainability and the need for environmental improvement. The resulting plan, known as PlaNYC, contains measures that New York City has, or will, institute or promote to address these issues between now and 2030. Many of these will become effective in the near term, however. From the environmental perspective, PlaNYC deals with land issues, water and air quality, energy, transportation and climate change. Though some of the initiatives it includes will not take place for some time, PlaNYC will effect a continuous improvement in all environmental media over more than the next two decades..

The portion of PlaNYC that concerns air quality encompasses a comprehensive program for addressing pollution that originates from residential units, motor vehicles, buses, truck and other diesel equipment, as well as utility operations throughout New York City, which is the core of the nonattainment area. Many of these program elements will result in a reduction of particulate matter and its precursors. These elements include:

- Improving the benefits derive from the area transportation plan by implementing congestion pricing. This would assess Manhattan drivers an $8 charge between 6am and 6pm in designated zones. The imposition of such a fee would result in a 6.3% reduction of vehicles miles traveled in the area, which could yield a 3.7% reduction in VOC, a 2.8% reduction in NOX, and a 2.8% reduction in carbon monoxide emissions across the city.

- Improving the fuel efficiency of private cars by promoting the use of new technologies, cleaner cars and hybrid vehicles, reducing the emissions of both criteria pollutants and CO2. Actions under PlaNYC would encourage the purchase of the cleanest, most efficient cars through measures such as waiving New York City's sales tax on the cleanest, most efficient vehicles in a five-year pilot program. If the city's gas vehicles were comprised of 10% fuel efficient hybrids, citywide CO2 emissions would be reduced by 1%, and, by 2030, could result in more than a 3% PM 2.5 emissions reduction. New York City itself has begun utilizing hybrid technologies where possible. Over 1,700 hybrids have been added to the City's vehicle fleet in the past five years and, by 2006, hybrids represented nearly 7% of the City's total fleet, compared with less than 1% of the private vehicles registered in the City. The development of plug-in hybrids is also being tracked. A hydrogen fueling station and pilot six hydrogen vehicles, which emit little more than water vapor upon combustion and are essentially zero-emission vehicles, are planned starting in 2008.

- Reducing emissions from taxis, black cars, and for-hire vehicles by reducing idling and increasing fleet fuel efficiency. PlaNYC notes that taxis account for

4% of all ground transportation CO_2 emissions and 1% of all city CO_2 emissions. The City's efforts will reduce citywide CO_2 emissions by 0.5% while also improving air quality. Many of the city's yellow taxis and black cars spend significant time idling in order to maintain access to their air conditioning and heating. In 2007, the City planned to complete an evaluation of different anti-idling technologies with the black and yellow car industries and select the best option. Implementation of the $6 million program is planned between 2008 and 2010. The City's efforts are also expected to result in the entire fleet being converted to more fuel-efficient vehicles within eight to 10 years. By 2010, the City will require that new cars achieve double the fuel efficiency of today's non-hybrid vehicles. The results of the City's commitment would result in the entire black car fleet being converted to cleaner vehicles within five years. This should yield a 50% decrease in CO_2 emissions from this sector and reduce the emissions of other pollutants.

- Replacement, retrofit, and refuel diesel trucks. According to PlaNYC, a 2002 study concluded that 25% to 50% of the city's local overall criteria pollutant emissions can be traced to heavy duty diesel-trucks. With the new Federal diesel regulations that went into effect in 2007, all new trucks will release 90% fewer emissions. However, existing diesel vehicles will operate for many years into the future. New York City's strategies for reducing these emissions include retrofitting trucks with diesel oxidation catalysts (DOC) or diesel particulate filters (DPF), upgrading engines, using cleaner fuels such as ultra low sulfur diesel fuel, and reducing idling. Emission reductions of 85 to 90% are possible. Biodiesel will also be adopted as fuel in its heavy duty fleet, and many vehicles are being purchased by city agencies that are fueled by compressed natural gas (CNG). Altogether, the City will work with the State and other parties to create a fund to support costs for retrofits and anti-idling technologies for at least 1,200 more vehicles in the City over five years.

- Decreasing school bus emissions through earlier retirements and retrofits. New York City Local Law 42 mandates the use of ULSD and Best Available Technologies (BATs) in school bus transportation in approximately 3,800 buses, and the City is currently working with private companies to retrofit all full-size school buses. Buses will install DPFs, DOCs, and other filtration systems to meet these requirements. Several thousand smaller school buses, the majority of which (approximately 2,700 of over 3,000 buses) are diesels, were not subject to this local law. New York State DOT and the City will provide the funding. The City will also require that all buses operated by private owners retire earlier than the present 19 year time frame.

- Retrofitting ferries and promoting the use of cleaner fuels, retrofits and engine replacements. Staten Island ferries operate diesel-fueled boats each contain two or three engines that emit significant quantities of $PM_{2.5}$, NO_x, VOCs, and sulfur. The Port Authority is presently providing funding for the replacement or retrofits of engines. This will reduce the eight-boat fleet's total NOx emissions by an estimated 40%, or 570 tons per year. Though the replacement/retrofit program will also have a positive effect on PM2.5, the City will also install DOCs on each engine, at a cost of $75,000 to $90,000 per engine. Beyond this, the use of ultra low sulfur fuel will reduce emissions even more. The city also plans on working with private ferries to reduce their emissions. With funding from a federal program, each of the 41 private ferry boats that serve New York City have agreed to install DOCs in 2007. The City will propose a conversion of these ferries to ultra low sulfur fuel that will reduce PM2.5 by 5% to 10% beyond those reductions expected from the 2007 installation of DOCs.

- Seeking to work with the Port Authority to reduce emissions from Port vehicles, vessels and facilities. Airports and port-related equipment contribute significantly to the emissions, including 11% of particulate matter and 23% of our locally-generated NOx, according to PlaNYC. These facilities and the associated equipment are largely under the control of the Port Authority. The City plans to work with the Port Authority to develop a comprehensive air quality and greenhouse gas emissions plan. Possible improvements at airports may include the use of electric plug-ins at gate ports, clean auxiliary power units, or towing to move planes to and from the gate.

- Reducing emissions from construction vehicles through the use of add-on controls. The City plans to implement measures to reduce construction-related emissions. Construction equipment contributes significantly to emissions, accounting for as much as 13% of NOx and 30% of PM from off-road vehicles. Enacted in 2003, Local Law 77 requires that City construction projects use the best available technologies on-site to reduce emissions, such as DPFs, DOCs, and emerging plug-in technologies that allow vehicles to run on electricity instead of burning fuel. Approximately 800 City-owned vehicles and 115 pieces of leased equipment are subject to the law. Emissions are also reduced when upgraded equipment is used on private projects. Additionally, City contracts will require certain on-road vehicles involved with City projects, such as trucks that remove debris, to meet the same standards. These requirements can be met either through retrofits or through new vehicle purchases.

- Reduce emissions improving energy efficiency in buildings by decreasing fuel consumption, promoting the use of cleaner burning heating fuels, expanding on-site generation, and facilitating the repowering, replacement, and retirement of the out-of-date equipment at older power plants,

- PlaNYC indicates that buildings and industry are responsible for roughly 55% of the city's PM2.5 emissions. Emission reductions are planned in the City's energy and carbon goals will result in a 15% decrease in PM2.5 for this sector, for a reduction of approximately 6% of overall city PM2.5 emissions. This will be done by reduce fuel sulfur limits for No.2 heating oil to 500 ppm, which is projected to result in 85% reductions of SO2 and roughly 50% reductions in PM 2.5. This alone will reduce overall PM 2.5 emissions in the city by 5%. In addition, reductions will be enabled by the switch to natural gas-fired power plants or biodiesel blends along with the clean fuel efforts that will result in an additional 17% reduction in PM2.5.

- PlaNYC's goal is to see that every New York street is fully lined with trees by 2030. This will be implemented by revising the zoning code to require new construction and major redevelopment projects to plant one street tree for every 25 feet of street frontage. The City will also plant an additional 12,500 per year, prioritizing plantings in neighborhoods with the greatest air quality concerns.

- The City will expand efforts to reforest approximately 2,000 acres of parkland by 2017.

- PlaNYC will strive to reduce the heating effect of asphalt parking lots. Many would be required to provide perimeter plantings and lots over 12,000 square feet would be required to provide a specified number of canopy trees in planting islands within each lot. This effort not only promotes clean air, but also mitigates the visual impact of large asphalt lots and more effectively managing storm water runoff.

- Launching a collaborative local air quality study in 2008 to monitor, model, map, and track local pollution and local adverse impacts across New York City, and to assess the impact of possible mitigation measures. The City will begin to study, monitor, model, map, and track local pollution and local adverse impact across New York City, with an emphasis on traffic-related emissions. The effort would involve:

    - Measuring the variation in air quality across all neighborhoods over time,
    - Assessing the impact of development, infrastructure changes, traffic variations, and traffic mitigation measures, and
    - Providing guidance for future efforts to improve neighborhood air quality

  This study's findings will help to identify priority neighborhoods for improvement and will provide baseline data to track the impact of development, policy, and transit changes.

  With the exception of the federally-mandated diesel emission reductions mentioned under the discussion of PlaNYC, none of the initiatives mentioned above were considered in the attainment modeling in this document. As such, there will be improvements in the level of PM2.5 beyond those predicted that will help to ensure compliance with the annual standard by 2010 as a result of air quality improvement efforts under PlaNYC.

Summary of PlaNYC Effort

Initiative	Brief Description	Emissions	Reductions Expected Prior to Jan 1, 2010?
1. Implement Congestion Pricing	Assess Manhattan drivers $8 between 6am and 6pm resulting in a 6.3% reduction in VMT, plus providing for a 66% discount for new diesel trucks that meet 2007 emission standards (i.e. $7 not $21)	6.3% reduction in VMT, which could yield a 3.7% reduction in VOC, a 2.8% reduction in NOx, and a 2.8% reduction in CO emissions across the city.	If the legislature approves, will have to be in place by 3/31/09
2. Improve the fuel efficiency of private cars	Promote the use of new technologies, cleaner cars and hybrid vehicles, and sales tax waiver on hybrids.	If the city's gas vehicles were comprised of 10% fuel efficient hybrids, citywide CO2 emissions would be reduced by 1%, and, by 2030, could result in more than a 3% PM 2.5 emissions reduction.	Ongoing through and beyond 2010
3. Reduce emissions from taxis, black cars, and for-hire vehicles	Reduce idling and increasing fleet fuel efficiency. By 2010, the City will require that new cars achieve double the fuel efficiency of today's non-hybrid vehicles.	PlaNYC notes that taxis account for 4% of all ground transportation CO2 emissions and 1% of all city CO2 emissions. The City's efforts will reduce citywide CO2 emissions by 0.5% while also improving air quality for other pollutants	New yellow cars will have to be 25 mpg by 10/08, 30 by 10/09. Black cars to be on a schedule that is a little later Anti-idling expected by 12/2009 at the latest
4. Replace, retrofit, and refuel diesel trucks	Aside from the federal requirement, retrofitting of trucks with diesel oxidation catalysts (DOC) or diesel particulate filters (DPF), upgrading engines, using cleaner fuels such as ultra low sulfur diesel fuel, and reducing idling.	Emission reductions of 85 to 90% are possible.	CMAQ grants are issued every year, are implemented on a rolling basis. Biodiesel in city heavy truck fleet – nearly all use B5 now, some have started B20
5. Reduce school bus emissions	New York City Local Law 42 mandates the use of ULSD and Best Available Technologies (BATs) in school bus transportation in approximately 3,800 buses. Also, work with private companies to retrofit all full-size school buses	ULSD and Best Available Technologies (BATs) in approximately 3,800 buses, and the City is currently working with private companies to retrofit all full-size school buses. Buses will install DPFs, DOCs, and other filtration systems to meet these requirements.	The City has complied with this law, may go beyond

Initiative	Brief Description	Emissions	Reductions Expected Prior to Jan 1, 2010?
6. Retrofitting ferries, promote the use of cleaner fuels, and engine replacements.	The Port Authority is presently providing funding for the replacement or retrofits of engines. Though the replacement/retrofit program will also have a positive effect on PM2.5, the City will also install DOCs on each engine, at a cost of $75,000 to $90,000 per engine. Beyond this, the use of ultra low sulfur fuel will reduce emissions as well. The City also plans on working with private ferries to reduce their emissions. With funding from a federal program, each of the 41 private ferry boats that serve New York City have agreed to install DOCs in 2007.	The eight-boat fleet's total NOx emissions by an estimated 40%, or 570 tons per year. Also, each of the 41 private ferry boats that serve New York City have agreed to install DOCs in 2007. The City will propose a conversion of these ferries to ultra low sulfur fuel that will reduce PM2.5 by 5% to 10% beyond those reductions expected from the 2007 installation of DOCs.	Retrofits will be partially installed on public ferries before 2010, and private ferries will be an ongoing effort Before 2010, ferries are going to be using ULSD plus 5% biodiesel
7. Work with the Port Authority to reduce emissions from vehicles, vessels and facilities.	The City plans to work with the Port Authority to develop a comprehensive air quality and greenhouse gas emissions plan. Possible improvements at airports may include the use of electric plug-ins at gate ports, clean auxiliary power units, or towing to move planes to and from the gate.	To be determined	Ongoing, long term project
8. Reduce emissions from construction vehicles through the use of add-on controls.	Enacted in 2003, Local Law 77 requires that City construction projects use the best available technologies on-site to reduce emissions, such as DPFs, DOCs, and emerging plug-in technologies that allow vehicles to run on electricity instead of burning fuel.	Construction equipment accounts for as much as 13% of NOx and 30% of PM from off-road vehicles. Equipment used in city construction projects must have the best available technologies on-site to reduce emissions. Approximately 800 City-owned vehicles and 115 pieces of leased equipment are subject to the law.	Yes
9 Reduce fuel consumption in buildings, promote cleaner heating fuels, retirement of equipment at older power plants	Reduce emissions by improving energy efficiency in buildings and decreasing fuel consumption, promoting the use of cleaner burning heating fuels, expanding on-site generation, and facilitating the repowering, replacement, and retirement of the out-of-date equipment at older power plants.	To be determined	Yes

Initiative	Brief Description	Emissions	Reductions Expected Prior to Jan 1, 2010?
10. Reduce fuel sulfur limits for No.2 heating oil to 500 ppm, switch to natural gas-fired power plants or biodiesel blends	Reduce fuel sulfur limits for No.2 heating oil to 500 ppm. In addition, reductions will be enabled by the switch to natural gas-fired power plants or biodiesel blends, bill to put in place schedule for increasing biodiesel blends of heating oil, may phase out No. 4 and 6 oil, convert 100+ school boilers from No. 4/6 to natural gas or No. 2	This effort will result in a 15% decrease in PM2.5 for this sector, for a reduction of approximately 6% of overall city PM2.5 emissions. Fuel sulfur limits for No.2 heating oil to 500 ppm are projected to result in 85% reductions of SO2 and roughly 50% reductions in PM 2.5. This alone will reduce overall PM 2.5 emissions in the city by 5%. Reductions will also be enabled by the switch to natural gas-fired power plants or biodiesel blends along with the clean fuel efforts that will result in an additional 17% reduction in PM2.5.	NYC is relying on the state for reduced sulfur requirements. In the meantime, the City is promoting biofuel

11. PlaNYC proposes that every New York street is fully lined with trees by 2030 through the implementation of building code revisions, and an additional 12,500 plantings per year, prioritizing in neighborhoods with the greatest air quality concerns.
12. The City will expand efforts to reforest approximately 2,000 acres of parkland by 2017.
13. The heating effect of asphalt parking lots will be reduced through perimeter plantings and requiring the provisions of canopy trees in planting islands.
14. Institute a local air quality study in 2008 to monitor, model, map, and track local pollution and local adverse impacts across New York City, and to assess the impact of possible mitigation measures.

Canadian Emission Reductions

Some of the particulate matter present in the air in the northern United States originates in Canada. The source of this contamination are the industrial and commercial operation, fossil fuel and wood burning and especially the emissions of particulate matter and its precursors from coal-fired power plants A number of initiatives have been put in place in Canada that will reduce emissions and have a positive effect in the air quality in the northeast United States.

The first of these are the Canada-Wide Standards for Mercury Emissions from Coal-Fired Electric Power Generation Plants. Under these provisions, a reduction of approximately 52% to 58% in mercury emissions are expected nationally by 2010. The Ontario Power Authority (OPA) has been directed to replace Ontario's coal-fired generation facilities by cleaner sources "in the earliest practical time frame that ensures adequate generating capacity and electricity system reliability in Ontario." The reduction in mercury emissions is expected to have the co-benefit of the reduction of the emission of other pollutants as well, including particulate and its precursors (SO2 and NOx), organics, metals and greenhouse gases. The replacement of coal-fired units in Ontario, which are most likely to affect New York's air quality, will have a significant effect on ambient particulate concentrations and haze.

The second initiative in Canada that will affect New York's air quality is the promulgation of air quality standards for PM2.5 and ozone at a level of 30ug/m3 on a 24-hour basis and 65 ppb on and 8-hour basis, respectively. The intention is to meet these standards by 2010, and the result of which will have a positive effect on New York's air quality as well. Quebec's five year report on their reduction efforts to date discuss the measures taken from 2001 to 2005[1]. The control measures instituted by Canada are aimed at reducing industrial emissions. Specifically, regulations like Quebec's "Regulation respecting the quality of the atmosphere"[2] contain control measures for new and existing sources of VOC's similar to those in New York and other states, and set ambient air quality standards. VOC controls address surface coating processes, automotive painting operations, printing, dry cleaning, formaldehyde from panelboard mills, pulp and paper operations, styrene from composite material manufacturing (fiberglass and resins), and transportation. Particulate emissions measures include the control of fugitive emissions from mining and sandblasting, granaries, mills, distilleries, breweries, powder milk plants, fertilizer mixing plants, concrete plants, vitreous enamel operations, earthenware and ceramic products plant, polyvinyl chloride production or processing plant, wood processing plants, and aluminum manufacturing. Programs also control particulate and NOx emissions from combustion operations (boilers, turbines, and internal combustion), as well as fuel sulfur content (2.0% by weight for "heavy oil," 1.0%

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[1]http://www.menv.gouv.qc.ca/air/particules_ozone/rapport_quin-en.pdf
[2]http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=3&file=/Q_2/Q2R20_A.htm

by weight for "intermediate oil," 0.5% by weight for "light oil," and 2.0% in weight for coal). Many other categories are covered as well woodburning, smelting, charcoal kilns, incinerators, refineries, storage tanks, metallic processing plants, as well as other industrial processes.

Additional measures are planned in the next five years to achieve their goals by 2010, including reducing emissions from residential wood heating, establishing and inspection and maintenance program for light vehicles, and implementing "other measures in the transportation, energy and climate change sectors."

The above measures are efforts by the Canadian or Provincial governments to improve air quality. They were not included in the present attainment demonstration and will not be enforceable by New York or the federal government. However, give the proximity to New York State, air quality improvements in Canada will certainly impact New York and the northeastern United States.

New York State's "15 by 15" Program

New York Governor Spitzer has initiated a clean energy plan with the goal of reducing New York's energy demand by 15% by 2015. The plan, known as "15 by 15," focuses on energy efficiency, conservation, and investment in renewable energy sources as the keys to achieving economic and environmental goals. The specific goals and highlights of the plan include:

- Reduce electricity use by 15 percent from forecasted levels by the year 2015 through new energy efficiency programs in industry and government;
- Eliminate incentives in the marketplace that discourages utilities from conserving energy by requiring annual adjustments to rates to make utilities whole for lost revenues caused by energy efficiency programs.
- The approval of 21 contract awards by state agencies for clean, renewable power plants upstate that will replace older plants.
- Establish new appliance efficiency standards and set more rigorous energy building codes;
- Invest $295 million for renewable energy projects throughout the state; and
- Propose power plant siting legislation that creates an expedited review process for new wind power projects, re-powering projects that reduce emissions, and other power plants that have very low levels of carbon dioxide emissions.

The benefits of this plan for New York and for the environment include a reduction in the electricity that must be purchased, the creation of new jobs, and a reduction in emissions as a result of the need to produce less power and the substitution of clean power sources for those already in operation. The emission reductions for the "15 by 15" plan are also estimated to result in an annual carbon dioxide reduction of about 12.8 million tons, which is the equivalent of removing 2.5 million cars from the road.

The Department is not committing to the inclusion of any of these measures as part of the SIP at this time, The Department will evaluate each measure resulting from this initiative individually to determine if it is appropriate to be included in the SIP. The Department will need to consider among other things whether the measure is quantifiable, enforceable, and include emissions reductions that are additional to other adopted SIP measures.

Appendix 8I

New York City's PlaNYC

- PlaNYC Air Quality Chapter

  View the PlaNYC full report at:
  http://www.nyc.gov/html/planyc2030/downloads/pdf/full_report.pdf

  View the PlaNYC home web page at:
  http://www.nyc.gov/html/planyc2030/html/home/home.shtml

- 2008 PlaNYC 2008 Air Quality Progress Report

  View the full PlaNYC 2008 Progress Report at:
  http://www.nyc.gov/html/planyc2030/downloads/pdf/planyc_progress_report_2008.pdf

Despite decades of improvement, New York City still fails to meet Federal air quality standards—and we have no way of measuring the air quality in individual neighborhoods.

That's why we will create a comprehensive program to reduce emissions from a variety of sources within the city, including vehicles, power plants, and buildings. Natural solutions such as planting one million trees will bring us the rest of the way towards cleaner air for all New Yorkers. To track our progress and target our solutions to the areas of greatest need, we will launch the largest local air quality study in the United States.

Together, these initiatives will enable every New Yorker to breathe the cleanest air of any big city in America.

Air

Air Quality

Achieve the cleanest air quality of any big U.S. city

Air Quality

Credit: © Rob Howard/Corbis

Achieve the cleanest air quality of any big U.S. city

Trucks begin entering the Hunts Point neighborhood hours before sunrise. They arrive by the hundreds under expressways, over highways.

By sunset, more than 15,000 trucks have driven through the peninsula, virtually all powered by diesel fuel. The trucks rattle down alternate routes, of 10 slipping down side streets, past houses and apartment buildings, as they search out the Produce Market, the Fulton Fish Center, the meat market.

Fifteen million people eat food distributed through the center every day. Facilities like the Produce Market were built in the 1960s, when the demand for produce was significantly less. Now there is not enough storage space to meet the need. The trucks help solve this problem. Up to 1,000 act as refrigerators every day, engines gunning for hours to keep the cool air pumping into the back so the produce can stay fresh in its stacked boxes.

Trucks are a fraction of the traffic through the South Bronx. More than 77,000 vehicles pass through the neighborhood daily, spewing exhaust and gasoline fumes. The area is served by only one bus route and the nearest subway can be a significant walk. But with the work of the Hunt's Point Task Force, the opportunity for change is beginning to be realized.

Not so long ago, incinerators, industrial factories, and the rise of traffic and diesel fuels lent most images of our city a blurred, gray edge. The pollution from these sources hurt our city's air quality—and had harmful consequences for the health of New Yorkers.

That has changed. Over the past two decades, Federal, State, and local governments have recognized the need for action. In addition to the Federal Clean Air Act, the City has lobbied—and, when necessary, litigated—all levels of government to strengthen these standards. Within the five boroughs, local programs and legislation—such as the retrofit program for City school buses and Metropolitan Transportation Authority (MTA) buses, the City's purchase of hybrid and Compressed Natural Gas (CNG) vehicles, and new construction standards—have all combined to give New York its cleanest air in half a century.

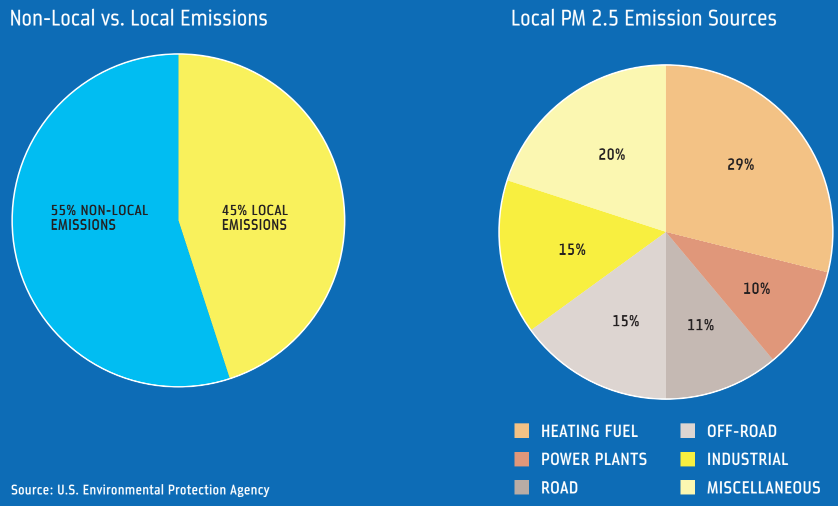
Still, the improvements that have occurred citywide are not felt equally among our neighborhoods. In some communities, the impacts of exposure to local air emissions have likely contributed to higher asthma rates and other diseases. Citywide, air quality fails to meet all of the Federal standards, in large part because of air pollutants that travel here from other states.

The New York City metropolitan area has not yet fully attained Federal air quality standards for two of six ambient air pollutants designated by the Environmental Protection Agency (EPA): ozone, and soot (PM 2.5). This puts us behind all but one of the largest cities in America.

Despite our progress, there is more to be done.

View over Central Park

PM 2.5 Emissions in New York City



Source: U.S. Environmental Protection Agency

In the 37 years since the passage of the Clean Air Act, our understanding and awareness of pollution has continued to increase. As our knowledge has evolved, the focus of air quality efforts has shifted. Three main considerations have shaped our approach to improving air quality in every neighborhood.

First, it is becoming clearer where the real dangers lie. Although the EPA tracks six criteria pollutants, among the most dangerous is PM 2.5—more commonly known as soot. Its small size lets it drift deeper into the lungs, where it can cause inflammation and other damage. According to the EPA, exceedances of the PM 2.5 standard cause up to 15,000 premature deaths annually. Estimates from the City's Department of Health and Mental Hygiene show that a 10% decrease of current levels in New York City would result in hundreds fewer deaths annually.

PM 2.5 is a by-product of burning fuel in trucks and buses, factories and power plants, and boilers. Other criteria pollutants—sulfur dioxide (SO_2), nitrogen dioxide (NO_X), and volatile organic compounds (VOC)—form additional PM 2.5 through chemical reactions. In fact, according to the State's Department of Environmental Conservation (DEC), somewhere between 45% and 60% of PM 2.5 levels in New York City comes from sulfate transformed in the atmosphere from SO_2 emissions. *(See charts above: PM 2.5 Emissions in New York City)*

Second, we have also learned what we do not control. More than 50% of New York's PM 2.5 originates outside the city. Some pollution drifts in from other states, mostly from mid-western power plants and factories; more is expelled from airplanes. The wind catches exhaust from the west and carries it into the city. Depending on the time of year, up to 70% of particulate matter measured in the city comes from somewhere else.

Some of these polluters can be held accountable. In 2003, the City joined several states and municipalities in a successful lawsuit challenging the EPA's plans to change regulations to enable older, more polluting facilities to increase air pollution emissions, which would have impacted New York City's air quality. The City also joined a number of states in a public nuisance action designed to force the five largest United States power plant CO_2 polluters to reduce their emissions.

Finally, it is clear we need to re-examine the methods we use for measuring pollutants to more accurately reflect their local impact.

The EPA began addressing regional air pollution issues as part of a broad, interstate approach. The EPA and DEC deliberately placed most monitoring systems away from highways, power plants, and heavily-trafficked roads so that their emissions wouldn't skew the results. The intent was not to record the output of an individual smoke stack, but to understand how that smoke affected the region.

Today, the EPA still largely measures its success by looking at overall area concentrations; the cumulative pollution gathered over a given region. But implicit in that decision is the acknowledgement that the closer one gets to an actual polluter, the greater the exposure to that pollution. In cities like New York, where roads, power plants and highways are interwoven through communities, the ambient measurements are inadequate indicators of actual exposure. Virtually all of us live, work, or walk near heavily trafficked streets. And we are learning that those are the highest risk zones.

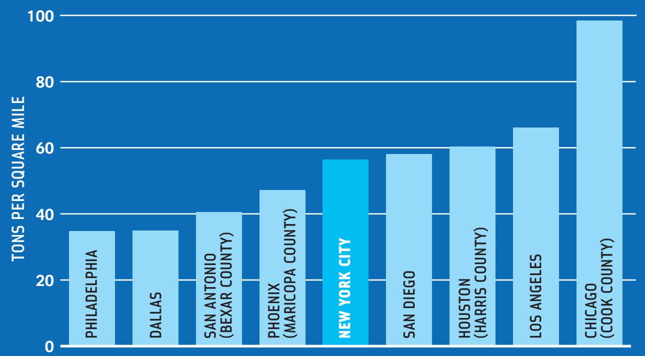
Recent studies have begun to measure local pollution exposure correlated with health impacts of the surrounding communities. This is the next front of air quality science. It is also an area where the City can have an enormous impact. When the issue is solving regional ambient air quality, the impact on any neighborhood is uncertain. But when the focus is on local exposure and community health, there are various opportunities to decrease environmental disparities.

In the South Bronx, where asthma rates are particularly high, the City has worked with local communities to begin installing a network of parks. We are exploring an alternative fuel station for drivers, a program to retrofit and upgrade trucks, and conversion of entire fleets to Compressed Natural Gas, which has 90% lower carbon monoxide and particulate matter emissions than diesel. And there's a lot more we can do.

The findings of these local exposure studies are compelling. We must build on these efforts to gain an accurate understanding of the air quality variations across New York City. Meanwhile, we can begin moving forward on policies designed to reduce our biggest known polluting sources—diesel fuels, gasoline exhaust, building heating oil, and aging power plants with outmoded technology—while promoting natural solutions like trees.

We will also support an air quality plan being developed by New York State to meet Federal standards. This plan will be released in 2008.

PM 2.5 in U.S. Cities*



Source: U.S. Environmental Protection Agency

*In cases where city-level data is unavailable, county-level data is provided

PM 2.5 Air Quality Improvement Plan

CATEGORY OF EMISSION SOURCES	PM 2.5 EMISSION IMPROVEMENT
On-road Vehicles	9%
Off-road Vehicles	7%
Electricity And Heating Fuels	23%
Natural Strategies	≈1%
TOTAL	**40%**

Source: NYC Mayor's Office of Long-Term Planning and Sustainability
Calculations based on U.S. Environmental Protection Agency 2001 National Emissions Inventory

Our Plan

We must continue pressuring the states and Federal government to reduce air emissions nationwide. But even as we seek to hold others more accountable, we can begin targeting the sources in New York City even more aggressively. *(See charts above: PM 2.5 in U.S. Cities and PM 2.5 Air Quality Improvement Plan)*

Based on current emissions levels, we will need to reduce our local PM 2.5 by 39% per square mile to achieve the cleanest air of any big city in America. But as other cities take steps to improve, we must keep pace. That means we must be continually re-evaluating our goal and benchmarking it against other cities.

We have chosen PM 2.5 as our standard because of its significant impacts—and because we lag behind our peer cities in stemming its release into the air. But other pollutants such as SO_2, NO_X, and VOCs also contribute to our PM 2.5 levels, so achieving further reductions in those emissions will also be essential.

In order to achieve this goal, we have developed a four-pronged strategy. Transportation accounts for more than 50% of our criteria pollutant emissions. That's why we will reduce emissions from cars, trucks, and buses by promoting fuel efficiency, cleaner fuels, and cleaner or upgraded engines. We will also increase the use of exhaust filters and reduce the added pollution caused by congested streets and idling.

Second, we will apply similar strategies to off-road vehicles, including ferries, construction equipment, and planes. By partnering with the Port Authority, the MTA, New Jersey Transit, and private operators, we can achieve substantial reductions across all transportation sectors.

Third, the electricity and heating fuels used to power and heat our buildings accounts for over a third of emissions. As described in our energy plan, we must tackle old, outdated power plants and exchange them for modern, more efficient models; we must also switch to cleaner burning fuels and remove polluting boilers from schools, prioritizing sites where children suffer from higher rates of asthma and other diseases.

And finally, we must increase natural areas within the city to act as filters to further improve air quality. Trees, plantings, and landscaping serve multiple environmental and aesthetic ends—improving water quality, reducing carbon emissions, and enhancing quality of life in neighborhoods.

But we have an opportunity to do even more. In addition to improving air quality across the city, we can begin understanding how air quality impacts the health of New Yorkers in every neighborhood. That's why we will launch the largest local air quality study ever in the United States and develop an approach for tracking local emission levels. By advancing efforts to understand the real scope of the problem, we can direct our resources to the areas of greatest need.

Through these strategies, we will accelerate air quality improvements so that every New Yorker can depend on the promise that they are breathing the cleanest air of any big city in America.

Our plan for air quality:

Reduce road vehicle emissions

1 Capture the air quality benefits of our transportation plan
2 Improve fuel efficiency of private cars
3 Reduce emissions from taxis, black cars, and for-hire vehicles
4 Replace, retrofit, and refuel diesel trucks
5 Decrease school bus emissions

Reduce other transportation emissions

6 Retrofit ferries and promote use of cleaner fuels
7 Seek to partner with the Port Authority to reduce emissions from Port facilities
8 Reduce emissions from construction vehicles

Reduce emissions from buildings

9 Capture the air quality benefits of our energy plan
10 Promote the use of cleaner burning heating fuels

Pursue natural solutions to improve air quality

11 Capture the benefits of our open space plan
12 Reforest targeted areas of our parkland
13 Increase tree plantings on lots

Understand the scope of the challenge

14 Launch collaborative local air quality study

Reduce road vehicle emissions

In 2005, vehicles traveled 18.6 billion miles throughout the five boroughs, approximately 48 million miles per day. Each year, these trips generate about 11% of our local PM 2.5 emissions, as well as 52% of NO_X and 32% of VOC emissions, both of which contribute to PM 2.5 levels.

There are four main ways to reduce transportation-related emissions: use fewer vehicles by shifting to mass transit; decrease the amount of time vehicles spend stuck in congestion and idling; use less and cleaner fuels; and filter exhaust before it is released into the air.

To fund these efforts, a variety of sources exist: the Port Authority, the Federal Transit Administration (FTA), and the Congestion Mitigation and Air Quality (CMAQ) program. CMAQ grants are awarded in areas that currently or recently failed to meet Federal standards. They are funded by Congress through Federal highway funds and are intended to mitigate any impacts associated with road development.

All of these are necessary to **reduce overall PM 2.5 emissions across the city by 9% by 2017.**

INITIATIVE 1

Capture the air quality benefits of our transportation plan

We will address a significant source of harmful emissions by promoting the use of mass transit

The most effective way to use less fuel is to reduce the number of cars on the road. But this has not been easy over the past 25 years. Although our subway system improved dramatically, the percentage of drivers has remained essentially unchanged. It is clear that improvements to mass transit will not be enough to achieve a significant mode shift among New York drivers, an imperative for our economy and public health. Without intervention, traffic conditions will continue to deteriorate. By 2030, rush hour could last 12 hours every day.

That's why we will seek to implement congestion pricing, a system that charges drivers to enter a city's central business district. Already used in London, Stockholm, and Singapore, New York City's system will assess Manhattan drivers in the designated zone an $8 charge between 6am and 6pm. This charge will result in a 6.3% reduction of vehicles miles traveled in the area, which could yield a 3.7% reduction in VOC, a 2.8% reduction in NO_X, and a 2.8% reduction in carbon monoxide emissions across the city. *(See case study on facing page: Congestion Pricing's Air Quality Impact)*

INITIATIVE 2

Improve fuel efficiency of private cars

We will promote wider use of clean vehicles

In addition to using fewer vehicles, we can also make the ones we have more efficient. Already, New York State has adopted some of the newer vehicle emission standards enacted by California. This alone will reduce New York City's total CO_2 emissions by over 6% by 2030. But there is still room to be more ambitious; we will encourage the state to follow new fuel standards established by California that would reduce carbon emissions from all gasoline sold in New York State.

The City can also do more to reduce emissions of both criteria pollutants and CO_2 by encouraging the purchase of the cleanest, most efficient cars, and increasing the efficiency of taxis and for-hire vehicles.

We will waive New York City's sales tax on the cleanest, most efficient vehicles

In a five-year pilot program, the City will waive its portion of the New York State sales tax on the purchase of the cleanest and most efficient vehicles, including hybrids, according to the highest performance ratings in criteria set by the EPA.

On average, qualifying vehicles attain roughly twice the fuel efficiency and reduce air emissions by half. If 10% of the city's gas vehicles were efficient hybrids, it would reduce our citywide CO_2 emissions by 1%, and by 2030, if market trends accelerate, this will result in more than a 3% PM 2.5 emissions reduction citywide.

We will work with the MTA, the Port Authority, and the State Department of Transportation (State DOT) to promote hybrid and other clean vehicles

In other cities, toll discounts, preferential lane access, and other privileges have been granted to owners of hybrid cars to encourage people to buy them. Such incentives must be applied cautiously; for maximum effect, a single, region-wide approach would need to be adopted. The City will work with the other operators of the region's transportation network to identify approaches for promoting the most efficient vehicles that would make sense for New York.

We will pilot new technologies and fuels, including hydrogen and plug-in hybrid vehicles

The City was an early convert to hybrid vehicles and helped build a broader market for this technology. Over 1,700 hybrids have been added to the City's vehicle fleet in the past five years. By 2006, hybrids represented nearly 7% of the City's total fleet, as compared with less than 1% of the private vehicles registered in New York City.

To maintain our position as a leader in clean transportation technologies, the City will construct a hydrogen fueling station and pilot six hydrogen vehicles starting in 2008. Hydrogen cars emit little more than water vapor upon combustion. As a result, they are essentially zero emissions vehicles.

The three-year demonstration project will introduce the city to the possibilities and potential challenges of this technology. Through this pilot, we will establish a permitting process for hydrogen refueling and vehicle operation within the city and partner with the New York City Fire Department to develop safety standards for operating and refueling. By testing and refining these procedures, we will be able to accelerate a broader transition to hydrogen as soon as the technology becomes more readily available.

The fueling station will be owned and operated by Shell Hydrogen, a division of the Shell Group. Two sites in the Bronx and Staten Island are currently under consideration to be the first hydrogen fueling location in the city. To fund the $820,000 project, the City has applied to the New York State Energy Research and Development Authority (NYSERDA) for a grant.

In addition to hydrogen, we are carefully tracking the development of plug-in hybrid technology. A plug-in hybrid functions like a regular hybrid, but its battery can be charged by plugging into a standard outlet, instead of relying exclusively on the car's gasoline-fueled engine. Drivers can run on the electric mode to achieve 100 miles per gallon, consuming significantly less petroleum and emitting fewer air pollutants and greenhouse gases.

INITIATIVE 3

Reduce emissions from taxis, black cars, and for-hire vehicles

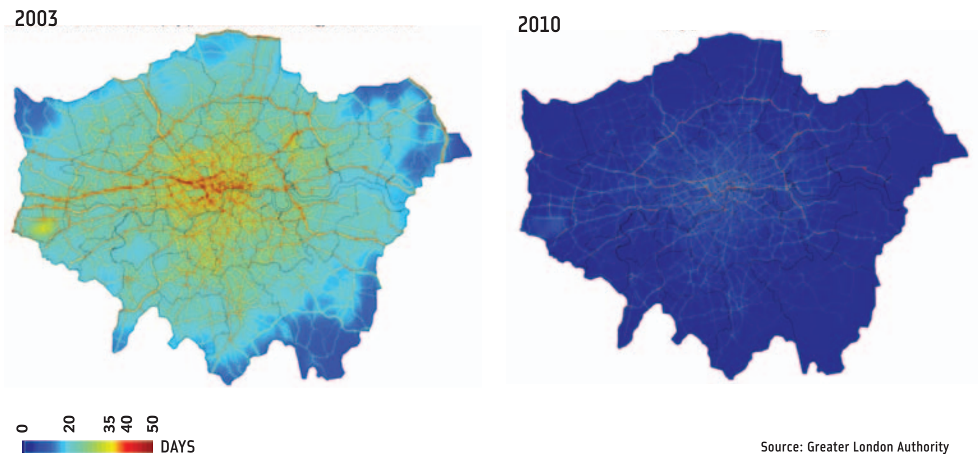
In New York City, there are currently over 13,000 yellow taxi cabs, 10,000 black cars, and 25,000 for-hire vehicles. Because taxis travel tens of thousands of miles per year and the current fleet is so fuel inefficient, taxis account for a substantial share of city emissions: 4% of all ground transportation CO_2 emissions and 1% of all city CO_2 emissions. This initiative will reduce citywide CO_2 emissions by 0.5% while also improving air quality.

We will reduce taxi and limousine idling

Idling is the continuous operation of a vehicle's engine while it is stopped. Many of the city's yellow taxis and black cars spend significant time idling in order to maintain access to their air conditioning and heating. Although there is currently no way to keep air conditioners reliably running with the engines off, emerging technologies have it made it possible to keep a car heated without idling.

In 2007, the City will complete an evaluation of different anti-idling technologies with the black and yellow car industries and select the best option. We will implement this $6 million program between 2008 and 2010 to equip cars with the chosen anti-idling solution, bolstered by a $4.8 million CMAQ grant. We will also launch a citywide anti-idling campaign to reduce idling of all vehicles even more.

Days in London and Surrounding Areas with Excessive PM 10 Levels



Source: Greater London Authority

Models based on 2003 meterology and London atmospheric Emissions Inventory. The daily mean PM 10 is set to an objective level of 50 micrograms per cubic meter, allowed to be exceeded up to 35 days a year.

CASE STUDY

Congestion Pricing's Air Quality Impact

In addition to Buckingham Palace and Trafalgar Square, visitors to London can now take advantage of a new attraction: cleaner air.

As a result of an ambitious congestion pricing experiment aimed at reducing traffic in the city's central business district, congestion fell by 30% and bus use rose by 38% during the morning peak in the first year—this, in a section of the city once infamous for its maddening bumper-to-bumper traffic. And the program is literally a breath of fresh air.

Smog-causing nitrogen oxide emissions and soot in the city have declined by 12%. In addition, carbon dioxide emissions are estimated to have declined by 20%, along with fossil fuel consumption. Region-wide concentrations of particulate matter are also falling.

Congestion pricing programs, which also have been implemented globally in places like Stockholm and Singapore, charge motorists a fee to drive into the densest business districts, providing an incentive for drivers to find other methods of transportation or to carpool.

Wherever they have been implemented, these programs have had similarly positive results on both traffic and air quality.

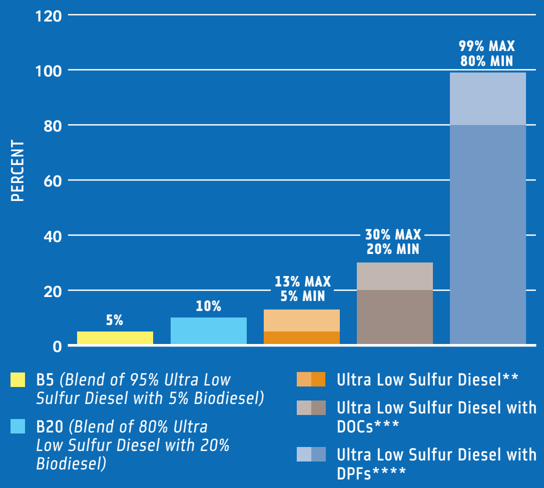
For example, Singapore has seen a 176,400 pounds-per-day reduction in carbon dioxide emissions and a 22-pound reduction in soot.

These pollutants have been linked to increased rates of asthma, emphysema, cancer and heart disease—a fact that has not gone unnoticed in New York City, where child hospitalization rates for asthma are more than twice the national average. In the South Bronx, where more than 77,000 vehicles pass through each day, it is almost four times as high.

"The fumes from those cars and trucks make asthma-triggering pollution commonplace," said Andy Darrell, New York Regional Director for Environmental Defense.

"London already has used congestion pricing to reduce traffic congestion by 30% and pollution by 12% to 20%," said Darrell. "There's no reason why New York—the greatest city in the world—can't do it."

Diesel Fuel Emission Reductions in Particulate Matter
Relative to Low Sulfur Diesel*



*Low Sulfur Diesel is the pre-2006 highway diesel standard, with sulfur content capped at 500ppm (parts per million)

**Ultra Low Sulfur Diesel is the post-2006 highway standard, with sulfur content capped at 15ppm

***Diesel Oxidation Catalysts are devices that use a chemical process to break down pollutants in the exhaust stream into less harmful components

****Diesel Particulate Filters, devices that collect and trap particulate matter from the exhaust stream so it is not released into the air

Source: U.S. Environmental Protection Agency

We will work with the Taxi and Limousine Commission (TLC) and the taxicab industry to double the taxi fleet's efficiency

The dominant taxi vehicle today achieves only 10 to 15 miles per gallon (mpg). More fuel-efficient vehicles are used in limited numbers today, including hybrid-electrics and even a lithium-ion battery powered vehicle. These vehicles are in the first years of use and questions regarding their durability as 24-hour, seven-day-a-week vehicles have yet to be fully answered. We will aim to double the efficiency of new taxis by 2012. Achieving the stated goal will require aggressive work on the part of the TLC to push the automotive industry and the taxicab industry towards answering these questions and ensuring that the vehicles used as taxicabs meet the high safety, service, and sustainability standards of New Yorkers.

This Plan could result in the entire fleet being converted to more fuel-efficient vehicles within eight to 10 years.

We will work with stakeholders to double the fuel efficiency of black cars and for-hire vehicles

In addition, we will work with the TLC to set new standards for additions to the fleet. By 2010, we will require that new cars achieve double the fuel efficiency of today's non-hybrid vehicles. The city's black car industry includes generally late-model luxury sedans that serve a largely corporate clientele through long-term contracts. After several years of use, many of these cars are transitioned to use as community car service vehicles. There are more than 25,000 for-hire vehicles in the city, and many are recycled black cars or law enforcement vehicles. Therefore, cleaner black cars today means cleaner community car service vehicles tomorrow.

This commitment would result in the entire black car fleet being converted to cleaner vehicles within five years, with a 50% decrease in CO_2e emissions from this sector, or 0.8% of the city's overall CO_2e emissions, while also improving air quality.

In addition, TLC will begin working with the community car services, vehicle owners, and lenders to improve awareness of the public benefits and cost savings of running clean vehicles with good gas mileage over old vehicles with poor gas mileage. This will help us work towards a goal of reducing CO_2e emissions from these fleets by 50% by 2017.

INITIATIVE 4

Replace, retrofit, and refuel diesel trucks

We will reduce diesel emissions through City investment and incentives

A substantial amount of the pollution from on-road vehicles is concentrated in one mode; according to a 2002 study, 25% to 50% of the city's local overall criteria pollutant emissions can be traced to heavy duty diesel-trucks.

Significantly reducing emissions from diesel vehicles requires either buying new trucks or employing a range of alternate strategies to improve performance. With the new Federal diesel regulations that went into effect in 2007, all new trucks will release 90% fewer emissions. But diesel vehicles tend to operate for many years; as a result, immediate air quality benefits will require improving the performance of older vehicles. Strategies include retrofitting trucks with diesel oxidation catalysts (DOC) or diesel particulate filters (DPF), upgrading engines, using cleaner fuels, and reducing idling.

A DOC is installed on the tailpipe of the truck to convert CO (carbon monoxide) and HC (hydrocarbons) to H_2O (water) and CO_2. DOCs are often used when equipment is too old to accept the modern retrofits, and range from $2,000 to $5,000 each. A DPF includes the DOC converter but also incorporates a ceramic honeycomb-like structure to capture additional diesel soot or small particles. That means that it can capture a substantially higher amount of PM 2.5, but can be three times as expensive. The cost of a DPF ranges from $10,000 to $15,000, depending on the type and age of the vehicle on which it is installed.

In conjunction with Ultra Low Sulfur Diesel (ULSD), it is possible to reduce PM 2.5 emissions from a single truck by 85% to 90% using these strategies.

We will introduce biodiesel into the City's truck fleet, go beyond compliance with local laws, and further reduce emissions

In 2005, the City Council required the retrofit or replacement of most heavy-duty City highway vehicles with the "best available retrofit technology" and the use of ULSD by 2012. *(See chart: Diesel Fuel Emission Reductions in Particulate Matter)*

The City is in the process of retrofitting its heavy duty vehicles to achieve and exceed compliance thresholds. While compliance can be reached through the use of DOCs or DPFs, some agencies are going above and beyond the requirement with purchases of new compressed natural gas (CNG) trucks. For example, the Department of Sanitation (DSNY) will purchase 10 new CNG trucks in 2007. Similarly, the Department of Parks & Recreation (DPR) purchased 20 CNG sedans this fiscal year and plans to purchase 20 more in the next fiscal year.

With alternative fuels, we will go beyond the legislative requirements and explore even more ambitious options. Biodiesel is an alternative diesel fuel that is produced from animal fats or vegetable oils (including recycled restaurant oils). It can be used alone, but is more commonly mixed with regular diesel. B5 fuel combines 5% biodiesel with 95% regular diesel, while B20 mixes 20% biodiesel with 80% diesel.

Biodiesel has significantly lower emissions than petroleum diesel. DSNY and DPR have already established B5 biodiesel fueling stations for their heavy duty vehicles. During the summer, DPR uses B20 when the fuel is not at risk of gelling from the cold weather.

The City will introduce biodiesel throughout its heavy-duty vehicle fleet. For example, in spring 2007, the City's Department of Transportation (DOT) will begin using B5 biodiesel. The City will gradually increase the percentage of B20 biodiesel as the higher mixtures are proven to work under different conditions and there is an adequate and reasonably priced supply.

We will accelerate emissions reductions of private fleets through existing CMAQ programs

In addition to the City's efforts to improve the environmental performance of its own fleet, we will also work to reduce emissions from private fleets. Private delivery fleets log thousands of miles a year on New York roadways. Since 2000, we have worked with NYSERDA to manage a Federal CMAQ-funded initiative that helps private sector companies and non-profit entities retrofit their vehicles or switch to alternative fuels. Program participants can convert to either CNG or hybrid vehicles or retrofit their diesel vehicles. To date, the City has reached approximately 90 trucks, spending roughly $4 million. And we will do more. *(See case study: FedEx)*

Over the next five years, we will significantly expand this program through $20 million in CMAQ funding. Depending on the type of upgrade and the vehicle, this will allow us to possibly reach more than 450 trucks.

We will work with stakeholders and the State to create incentives for the adoption of vehicle emission control and efficiency strategies

To achieve our air quality goal, we need to reduce emissions from an even greater number of diesel vehicles. The City will work with the State and other stakeholders to create a fund to support costs for retrofits and anti-idling technologies for at least 1,200 more vehicles in the city over five years.

California has developed a program that can serve as a strong model for New York State. The California Carl Moyer Program offers over $140 million a year to fund retrofits to diesel trucks. Over the first six years, the fund has resulted in retrofits of about 7,000 vehicles and emission reductions of 14 tons of NO_X and over one ton of PM per day. In addition, this program has lead to wide-scale adoption of tailpipe controls and the use of lower carbon fuels such as ethanol, biodiesel or natural gas. Another state with a similar programs is Texas, while Massachusetts and Pennsylvania will be unveiling rebate programs by the end of 2007. It is time for New York State to join them.

We will improve compliance of existing anti-idling laws through a targeted educational campaign

Idling releases pollutants into the air, increases engine operating costs for fleets, and shortens engine life. The best anti-idling strategies include a mixture of incentives for retrofits, laws and enforcement of those laws, and education. The CMAQ-funded program and the proposed State incentive mentioned above will play a significant role in reducing emissions from truck idling. But there is even more we can do locally.

Anti-idling technologies are already explored and implemented when feasible, including cold plating (allowing the vehicle to stay refrigerated when the engine is turned off for short periods of time). The City is evaluating these technologies as solutions for our local refrigerated delivery and long-distance trucking fleets. Once the most effective strategies have been identified, we will use CMAQ funding to incentivize owners to incorporate the technologies.

New York also limits the amount of time a vehicle can idle. New York City has a three-minute idling limit that targets all vehicles, including trucks and buses. New York State established an anti-idling law in 1990 that set a five-minute idling limit for heavy-duty diesel vehicles, excluding marine vehicles.

To achieve the widest compliance, the City will partner with community organizations and businesses to launch a series of public service announcements, signage, and other marketing strategies in 2008 to educate the public on the anti-idling laws and the environmental and economic benefits of reduced idling. In addition, the city and its partners will employ a more targeted outreach to drivers, business owners, fleet operators, and unions. A similar program launched by Toronto cost $100,000 to $300,000 and, in some specific locations, resulted in more than a 60% reduction in idling.

CASE STUDY
FedEx

For 36 years, a battalion of diesel-powered FedEx trucks have made their way through our city's streets.

That began to change, though, in 2004, when FedEx began delivering cleaner air as part of a City initiative to reduce emissions from private fleets. Since then, the company has rolled out 48 low-emission, hybrid electric trucks in New York City.

Emblazoned with FedEx's ubiquitous logo, the environmentally-friendly vehicles decrease particulate emissions by 96% and travel 57% farther on a gallon of fuel, reducing fuel costs by over a third.

The project began when FedEx applied for Congestion Mitigation and Air Quality (CMAQ) funds administered by the City's Department of Transportation and New York State Energy Research and Development Authority (NYSERDA). The funds, which are targeted to fleets that will see the greatest emissions and fuel reductions, allowed FedEx to purchase newly-designed vehicles that blended conventional and electric technology.

"New York City is a dynamic economy with many trucks on its streets essential to keep commerce moving," said John Formissano, FedEx's Vice President of Global Vehicles. "It is important that we continue to develop innovative solutions to reduce vehicle emissions."

Indeed, if 10,000 hybrid electric vehicles were on the road rather than current standard vehicles, annual smog-causing emissions would be reduced by 1,700 tons—the equivalent of taking all passenger cars off our roads for 25 days. Carbon dioxide emissions would be reduced by 83,000 tons—the same as planting two million trees. And diesel fuel usage would be cut by 7.2 million gallons, which requires one million barrels of crude oil to produce.

INITIATIVE 5

Decrease school bus emissions

We will retrofit both large and small school buses and reduce their required retirement age

In 2005, the City Council passed Local Law 42, which mandated the use of ULSD and Best Available Technologies (BATs) in school bus transportation. Approximately 3,800 buses are subject to the law. The Department of Education (DOE) is currently working with private school bus companies to retrofit all full-size school buses. To meet BAT requirements, buses will receive DPFs, DOCs, and other filtration systems.

But several thousand smaller school buses were not considered under this local law. The majority of these buses (approximately 2,700 of over 3,000 buses) are diesels.

The City will retrofit all buses with the best available retrofit technology, including DPFs. DPFs would eliminate at least 85% of the small particulate matter. State DOT, which controls the CMAQ funds, has stated that it is willing to provide $20 million for this project and the City will fund the remaining $5 million.

In addition, in the new or extended contracts with the private bus owners, DOE will require that all buses are retired earlier than the existing 19 year limit. Over the next several months, the City will evaluate the appropriate retirement age based on cost and environmental performance.

While private school buses are not covered by the local law, the City will challenge private schools to encourage similar environmental performance.

Reduce other transportation emissions

The EPA separates vehicles that drive on roads and other forms of transportation into two separate categories of study. These “off-road” vehicles include airplanes, trains, ferries, outdoor power equipment, and construction machinery such as dozers, loaders and cranes.

With a growing ferry network and a construction boom, these off-road vehicles contribute almost 15% of the city’s PM 2.5 emissions.

The methods to reduce emissions from some of these vehicles are similar to those used for on-road vehicles: improve efficiency, burn cleaner fuels, and filter emissions. By employing these strategies, we will reduce citywide PM 2.5 emissions by 7%.

INITIATIVE 6

Retrofit ferries and promote use of cleaner fuels

We will retrofit the Staten Island Ferry fleet to reduce emissions

Staten Island ferries carry over 19 million passengers annually on a 25-minute, five-mile ride. But these diesel-fueled boats each contain two or three propulsion engines that release significant emissions of PM 2.5, NO_X, hydrocarbons, and sulfur.

The Port Authority is currently funding replacement or retrofits of engines, reducing the eight-boat fleet’s total NO_X emissions by an estimated 40%, or 570 tons per year. The replacement/retrofit program will also have a positive effect on PM 2.5. But to further target the PM emissions, the City will install DOCs on each propulsion engine, at a cost of $75,000 to $90,000 per engine.

The City will reduce emissions from the ferries even more with the use of Ultra Low Sulfur Diesel 2 (ULSD2), once a usable form is locally available.

We will work with private ferries to reduce their emissions

Already, we have been working with regional private ferry companies to reduce their emissions. All 41 private ferry boats that serve New York City have agreed to install DOCs in 2007, under a fully-funded Federal program.

But there is an opportunity for even greater reductions. Because they use a different type of engine than the Staten Island Ferries, the private ferry engines are able to operate on Ultra Low Sulfur Diesel 1 (ULSD1), which is available in the region. Although this will increase fuel costs by a few cents per gallon, the emissions reduction is substantial. Therefore, the City will join with the City Council in proposing this conversion. The use of ULSD1 would reduce PM 2.5 by 5% to 10% beyond the reductions expected when DOCs are installed on the city’s 41 private ferries in 2007.

INITIATIVE 7

Seek to partner with the Port Authority to reduce emissions from Port facilities

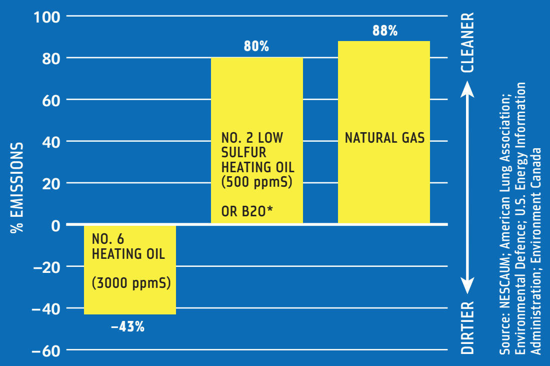
We will seek to work with the Port Authority to reduce emissions from the Port’s marine vehicles, port facilities, and airports

Airports and port-related equipment contribute substantially to our local emissions: 11% of particulate matter and 23% of our locally-generated NO_X come from these sources.

This infrastructure is largely controlled by the Port Authority. We will seek to partner with them to position the region’s ports as environmental leaders by developing a comprehensive air quality and greenhouse gas emissions plan.

Possibilities for improvements at airports include the use of electric plug-ins at gate ports, clean auxiliary power units, or towing to move planes to and from the gate. The Federal Aviation Administration operates a program to reduce emissions at airports and could be a source of funding for these initiatives.

Comparison of Heating Fuel Emissions
Percentage Reduction in Particulate Matter Emissions Relative to No. 2 heating oil (2000–2500 parts per million Sulfur)



*B20 is a blend of 80% No.2 Low Sulfur Heating Oil with 20% Biodiesel

INITIATIVE 8

Reduce emissions from construction vehicles

We will accelerate adoption of technologies to reduce construction-related emissions

Construction equipment significantly impacts local emissions, accounting for as much as 13% of NO_X and 30% of PM from off-road vehicles. In 2003, Local Law 77 required that City construction projects use the best available technologies on-site to reduce emissions, such as DPFs, DOCs, and emerging plug-in technologies that allow vehicles to run on electricity instead of combusting fuel. More than 800 City-owned vehicles are subject to the law, along with an additional 115 pieces of leased equipment. Upgrades by City contractors will also impact emissions in private development projects, as the contractors use these new tools for other projects.

The City will accelerate compliance with the law by requiring a consultant to work with all City agencies on implementation. That includes cataloguing every piece of relevant equipment, analyzing possible technologies, and developing standards for construction sites. The consultant will help agencies navigate this process and avoid duplication of effort.

In addition, in City Requests-for-Proposals and the resulting contracts, we will go beyond Local Law 77 and require certain on-road vehicles involved with City projects, such as trucks that remove debris, to meet the same standards. City contractors will be able to meet the terms of the contracts either through retrofits or through new vehicle purchases.

Reduce emissions from buildings

Buildings and industry are responsible for roughly 55% of our PM 2.5 emissions. Improvements in efficiency, as targeted for our energy and carbon goals, will result in a 15% reduction in PM 2.5 for this sector, for a reduction of approximately 6% of overall city PM 2.5 emissions. Further reductions in these sectors will require the use of cleaner fuels. The switch to more natural gas burning power plants or biodiesel blends along with the clean fuel initiatives outlined below will result in an additional 17% reduction in PM 2.5.

INITIATIVE 9

Capture the air quality benefits of our energy plan

We will reduce energy-related emissions by cutting energy consumption and cleaning our energy supply

As described in the energy chapter, there are currently 23 large power plants in New York City; the oldest was constructed in 1951. By 2030, more than 50% of our power plants will be more than 70 years old. These older plants can use as much as 50% more fuel than new technologies such as combined cycle gas turbines (CCGT). In addition, the fuel in older plants tends to be dirtier than the natural gas used in newer plants or the biodeiesel recently piloted by NYPA.

As part of our comprehensive energy plan, we will aggressively improve the energy efficiency of our buildings to reduce electricity and heating fuel consumption. We will also facilitate the repowering, replacement, and retirement of the out-of-date turbines of older plants through long-term contracts for new, clean energy supply. Finally, we will expand clean on-site generation and incorporate more renewable energy. All three strategies reduce the emissions of pollutants and, at the same time, they cut CO_2.

INITIATIVE 10

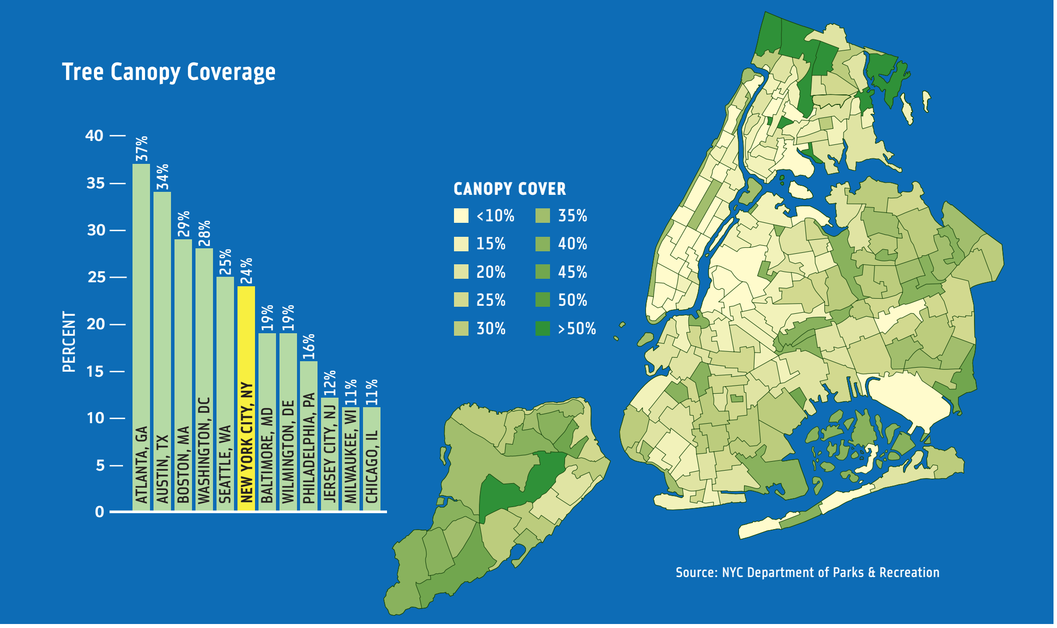
Promote the use of cleaner burning heating fuels

We will pursue multiple strategies to reduce heating fuel usage and enforce stricter emission standards in buildings

Our energy strategy aims to reduce greenhouse gas emissions from heating fuel by 17% through promoting efficiency and improving building insulation. This will also lead to significant reduction in SO_2, NO_X, and PM 2.5 emissions. But we can reduce these emissions further by improving the environmental performance of the fuels we use. *(See chart above: Comparison of Heating Fuel Emissions)*

Heating oil is classified into six types, numbered one through six, based on its boiling temperature, composition, and purpose. The higher numbers are heavier, more viscous, and tend to emit more pollutants when burned. They are also the least expensive. Fuel oils No. 1, No. 2, and No. 3 tend to burn more cleanly and are more costly to purchase. Each of these fuels can have higher or lower concentrations of sulfur, which also impacts the pollution they produce.

Currently, buildings have the option of using either a standard home heating oil—No. 2 fuel with 2,000 sulfur parts per million (ppm)—or a heavier No. 6 fuel. Other cleaner fuel options exist, including natural gas bio-diesel, and cleaner grades of heating oil.



We will lower the maximum sulfur content in heating fuel from 2,000 ppm to 500 ppm.

Currently the sulfur content in No. 2 heating oil—the most commonly used heating oil in the city—is capped at 2,000 ppm. Lowering that cap to 500 ppm, a grade also known as "low-sulfur" that until recently was used for on-road diesel, would result in significant reductions in criteria emissions, with little impact on fuel cost. The City will work with the State to lower the maximum sulfur content permitted in No. 2 fuel used for heating buildings to 500 ppm, creating significant air quality improvements with a modest increase in fuel cost. This grade is readily available and is the current standard in much of New England.

This reduction in the maximum sulfur content in No. 2 heating oil will result in 85% reductions of SO_2 and roughly 50% reductions in PM 2.5. This alone will reduce overall PM 2.5 emissions in the city by 5%. This change will also improve burner efficiency, thereby reducing the amount of fuel consumed. In addition, furnaces burning cleaner fuel do not have to be serviced as frequently. This will reduce operating costs for the customer, generating savings that outweigh the increased cost of the fuel.

We will reduce emissions from boilers in 100 city public schools

Currently, 478 city schools burn No. 4 or No. 6 heating oil; many of these are in neighborhoods where the asthma rates are over three times higher than the national average. By 2017, the City will modify the boiler systems of 100 of these schools, to enable the boilers to burn a cleaner fuel. Schools located in neighborhoods with the highest asthma hospitalization rates—generally rates greater than seven per 1000—will be prioritized in order to achieve the maximum local benefits. These neighborhoods are concentrated in the Bronx, Harlem, Central Brooklyn, and along Jamaica Bay. On average, boiler replacement will cost \$5.7 million per school. The cleaner burning boilers will emit 44% less PM 2.5 emissions. Additional benefits will be lower maintenance expenses and CO_2 reductions in the range of 50% because of fuel switching and increased efficiencies, as well as reduced maintenance expenses.

Pursue natural solutions to improve air quality

Trees and other natural areas confer tremendous benefits on the city, including improvements to air and water quality, retention of greenhouse gases, reduced energy costs, and a more inviting streetscape. Trees in particular are effective at cleansing the air. They do this by absorbing pollutants—sulfur dioxide, nitrogen dioxide, and carbon monoxide—through their leaves and intercepting airborne particulate matter on leaf surfaces. Every year, New York City trees remove an estimated 2,200 tons of criteria pollutants from the air. They also take in 42,300 tons of carbon each year. *(See graphic above: Tree Canopy Coverage)*

Indirectly, trees further reduce air pollution by shading buildings, thereby reducing the need for air conditioning during the peak electricity demand periods. In addition, shaded streets have lower temperatures in the summer, slowing the formation of ground-level ozone from NO_X and VOCs. Trees also block wind in the winter, slightly reducing the need for heating. Finally, trees make neighborhoods more beautiful and have been shown to raise property values.

The city's 5.2 million trees cover 24% of the city, 3% below the average for major American cities. Approximately half those trees are located within City-owned parks and along our streets; the other half are largely located on private property. By 2030, we will add an additional one million trees to the city. To achieve this goal we will pursue three main strategies.

INITIATIVE 11

Capture the benefits of our open space plan

We will rely on accelerated tree plantings to help remove harmful emissions as we improve the public realm

As mentioned in our public realm plan, we will ensure that every New York street is fully lined with trees by 2030. Achieving 100% "stocking" for these street trees will require almost tripling the number of trees planted every year in the city.

To achieve this accelerated tree planting schedule, we will revise the zoning code to require new construction and major redevelopment projects to plant one street tree for every 25 feet of street frontage. Private development is projected to provide 3,000 to 5,000 trees a year, with an additional 3,000 per year generated through major capital construction projects.

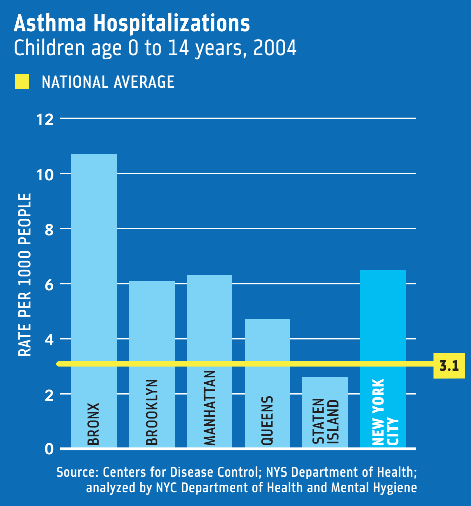
The City will also plant an additional 12,500 per year at an annual cost of \$17 million. We will prioritize plantings in neighborhoods with the lowest stocking levels and highest air quality concerns.

INITIATIVE 12

Reforest targeted areas of our parkland

We will reforest 2,000 acres of parkland

The City will expand efforts to reforest approximately 2,000 acres of parkland by 2017, without compromising space for existing ballfields. Reforestation will take place in Fresh Kills Park in Staten Island, Cunningham Park in Queens, Van Cortlandt in the Bronx, Highbridge in Manhattan, and other parks around the city at a cost of \$118 million.



INITIATIVE 13

Increase tree plantings on lots

We will clean our air while we safeguard our water quality

To increase our tree canopy cover, we must increase coverage beyond our parks and sidewalks. That will require more trees on public and private lots, including parking lots, private housing, institutional properties such as schools and university campuses, and City-owned land.

We will capture the benefits of our water quality strategy

According to the Department of City Planning, parking lots comprise almost 2,000 acres or approximately 1% of the city's land area. The dark asphalt pavement contributes to the heating of the urban area on hot, sunny days, which accelerates the formation of ground-level ozone. In addition, the hard, smooth surfaces contribute to rain runoff that inundates sewer systems during storms. Currently, 10% of the land area of parking facilities in New York City is covered by tree canopy.

The proposed zoning regulations will require perimeter landscaping of commercial and community facility parking lots over 6,000 square feet as well as street tree planting on the adjacent sidewalks. Parking lots over 12,000 square feet would also be required to provide a specified number of canopy trees in planting islands within each lot. This change will not only support cleaner air, it will also mitigate the visual impact of large asphalt lots while more effectively managing storm water runoff and the urban heat island effect.

We will partner with stakeholders to help plant one million trees by 2017

The City will work with community, non-profit, and corporate partners on a 10-year goal to plant trees on private residential, institutional, and vacant land properties in order to achieve our goal to plant one million trees. The City and its partners will focus on areas whose natural environments have borne the brunt of past City policies, and neighborhoods with few green spaces.

Understand the scope of the challenge

The existing air quality monitoring network is designed to track concentrations of the EPA's six criteria pollutants over large geographic areas. This is helpful for identifying broad trends, but does not let us understand the exposure New Yorkers experience every day in their neighborhoods.

That's because there are only 24 monitors for the entire city—and they are located on roof tops, away from the traffic, people, and sidewalks. As a result, we cannot focus our reduction efforts on the areas of greatest need—or track our successes with any precision.

To develop a comprehensive plan that will protect the health of New Yorkers in every neighborhood, we must develop new tools to understand the real nature of the challenge we face.

INITIATIVE 14

Launch collaborative local air quality study

We will monitor and model neighborhood-level air quality across New York City

Over the next 12 months, the City will work with experts in the academic, medical, and private sectors to develop one of the largest local air quality studies ever in the United States. Starting in 2008, the City will begin to study, monitor, model, map, and track local pollution and local adverse impact across New York City, with an emphasis on traffic-related emissions. *(See chart above: Asthma Hospitalizations)*

This enhanced monitoring system in New York will:

- Measure the variation in air quality across all neighborhoods over time
- Assess the impact of development, infrastructure changes, traffic changes, and traffic mitigation measures in our communities
- Provide guidance for future efforts to improve neighborhood air quality

Although a study of this scale is almost unprecedented, our effort will build on recent successful projects to track local emissions. For example, exposure to certain pollutants at schools in the South Bronx have been correlated with hourly truck traffic on nearby highways, and students with asthma had more symptoms on high traffic pollution days.

This research has employed a variety of cost-effective approaches that we can adapt for understanding air quality in all 188 neighborhoods. Strategies will include periodic monitoring at a range of sites and developing statistical models that correlate the impact of traffic and land-use patterns with air quality.

The study findings will establish priority neighborhoods for improvement and provide baseline data to track the impact of development, policy, and transit changes over the coming decades.

Conclusion

These initiatives are designed to provide everyone in our city with healthier air to breathe. We should expect no less than the cleanest air of any big city in America, given the track record we have set in becoming the country's safest large city.

By working to reduce emissions both nationally and locally, we can surpass the air quality of the nation's other largest cities, including Los Angeles, San Antonio, Phoenix, San Diego, Dallas, Chicago, Philadelphia, and Houston.

But these cities will not stop trying to achieve cleaner air for their citizens—and we won't either. That's why we will pioneer a process to track changing pollution levels in every New York neighborhood. As our knowledge improves, we will be able to target our efforts more precisely, and calibrate them to achieve the greatest gains for public health and environmental justice.

Achieve the cleanest air quality of any big U.S. city

Despite improvements since the passage of the Clean Air Act of 1970, New York City's air quality still fails to meet federal standards. Trucks and cars, boilers, power plants, and construction equipment continue to emit pollutants that trigger asthma attacks and contribute to disease. New York City is second only to Los Angeles among U.S. cities for the poor quality of its air.

Our plan for the future of air quality includes the following initiatives:

Reduce road vehicle emissions

1 Capture the air quality benefits of our transportation plan

2 Improve fuel efficiency of private cars

3 Reduce emissions from taxis, black cars, and for-hire vehicles

4 Replace, retrofit, and refuel diesel trucks

5 Decrease school bus emissions

Reduce other transportation emissions

6 Retrofit ferries and promote use of cleaner fuels

7 Seek to partner with the Port Authority to reduce emissions from Port facilities

8 Reduce emissions from construction vehicles

Reduce emissions from buildings

9 Capture the air quality benefits of our energy plan

10 Promote the use of cleaner-burning heating fuels

Pursue natural solutions to improve air quality

11 Capture the benefits of our open space plan

12 Reforest targeted areas of our parkland

13 Increase tree plantings on lots

Understand the scope of the challenge

14 Launch collaborative local air quality study

Air Quality

OUR PROGRESS

Imposed higher standards on taxis and ferries and pursued cleaner-burning fuels

The PlaNYC initiatives we launched this year start us toward the goal of cleaner air. We have adopted policies to convert all yellow taxis to clean vehicles, proposed similar improvements to black cars, began retrofitting on the Staten Island Ferry fleet, continued retrofitting private trucks, invested in energy efficiency upgrades for City-owned buildings, and began to switch to cleaner-burning fuels. We have planned a local air quality study that will measure the variation in street-level air quality across different neighborhoods. This year, we will focus on approaches to reduce school bus emissions even more, expand cleaner vehicles to the livery fleet, and cut pollutants from construction equipment.

Reduce road vehicle emissions

Road vehicle emissions are one of the three main local sources of air pollution. They generate about 11 percent of our local direct emissions of PM 2.5, as well as 52 percent of nitrogen oxide emissions and 32 percent of volatile organic compound (VOC) emissions, both of which contribute to ozone and PM 2.5. Reducing emissions from cars, trucks, and buses requires several strategies: fuel efficiency, cleaner fuels, cleaner or upgraded engines, and the retrofit of diesel exhaust systems with filters and catalysts. The City has been a leader in these approaches; even before PlaNYC, we owned the largest single fleet of hybrid cars in the United States, and were exploring alternative fuels such as Compressed Natural Gas (CNG) and biodiesel in the City's fleet of over 6,800 heavy-duty vehicles.

Over the past year, the City has expanded its use of sulfur-free biodiesel, CNG, diesel-electric hybrid, and other alternative technologies for its vehicles. As part of its effort to reduce the greenhouse gas emissions of City opera-


The John F. Kennedy Staten Island Ferry awaits retrofit

Credit: NYC Department of Transportation

tions by 30 percent by 2017, the City has launched an extensive study of its fleet operations to look at lower-emission, higher mileage vehicles and operational changes to reduce the City's use of vehicles.

The largest fleet of automobiles on New York City roads is the more than 48,000 taxis, black cars, livery cabs, and limousines regulated by the Taxi and Limousine Commission (TLC). PlaNYC included an initiative to require high-efficiency vehicles in those fleets, and TLC unanimously passed landmark regulations in December 2007 to require all new yellow taxis to be high-efficiency vehicles starting in October 2008. In February 2008, Mayor Bloomberg proposed a similar set of requirements for the black cars. *(See case study: Efficient Yellow Taxicabs and Black Cars)*

While fewer than half of all New York City households own an automobile, New Yorkers still own nearly 2 million vehicles. To encourage those buying new cars to choose hybrid vehicles, PlaNYC proposed to exempt hybrids from the 4 percent City sales tax. Although the State Legislature failed to adopt this proposal in 2007, it has been reintroduced by State Senator Andrew J. Lanza and Assembly Member Adriano Espaillat as Senate Bill 7023/ Assembly Bill 042581A, and the City will be working with the State Legislature to support its passage.

Reduce other transportation emissions

We have partnered with the Port Authority of New York and New Jersey (PANYNJ) to reduce emissions from the eight Staten Island ferries by upgrading engines, installing exhaust control devices, and switching to ultra-low-sulfur diesel fuel. Two small boats will receive a catalyst for soot reduction and a selective catalytic reduction system that is highly effective for reducing nitrogen oxide. Larger boats will

"From reducing traffic and asthma-inducing pollution and improving public transportation options…the mayor's plan will put New York City on a path to an even greener and greater future." Bronx Borough President Adolfo Carrión, June 15, 2007

receive upgrades to their engines so that they meet the current EPA standard. Newer boats will be upgraded to meet more stringent EPA Tier 2 standards.

These measures will reduce the eight-boat fleet's total nitrogen oxide emissions by an estimated 40 percent, and will also reduce direct PM 2.5 emissions on each vessel by 79 percent. We are also working with the New York State Energy Research and Development Authority (NYSERDA) to reduce exhaust emissions from private ferries operating in New York Harbor. This program involves testing technologies on boats owned by several operators and installing catalysts to reduce their impact on local air quality.

Reduce emissions from buildings

The use of heating fuel contributes 29 percent of the local emissions of PM 2.5—due to our dependence on heating oil in apartment buildings, and the use in some large buildings of cheaper grades of oil that are highly polluting. One reduction approach is to use sulfur-free biodiesel. In 2007, Mayor Bloomberg announced that the City would burn blends of 5 percent biodiesel in its boilers that use lighter and cleaner distillate (No. 2) heating oil. This commitment will produce air quality benefits and will allow the City to assess whether the blends will cause any operational problems. The City is also planning pilot projects to test the feasibility of using blends of 20 percent biodiesel in some of its No. 2 boilers, as well as in some of its boilers that use heavier and dirtier residual (No. 6) oil. We are also assessing potential citywide requirements for biodiesel and other cleaner fuels, taking into account local health benefits, greenhouse gases, land use, and global food prices.

We committed $285 million, which would qualify for a State machinery matching grant, to convert more than 100 school boilers from high-sulfur No. 6 oil to cleaner fuels. Over the past year, we launched a study of conversions to clean up the most boilers in neighborhoods with the worst asthma rates. Two school boilers are currently under construction, three have been put out for bid, three others are in design, and the determination of scope is underway for nine more.

Pursue natural solutions to improve air quality

Trees clean the air. The MillionTreesNYC campaign, launched last October, has already planted 33,501 trees on sidewalks, parkland, and private property. Our effort will ramp up even further in 2008, to reach the rates required to expand New York City's tree population from five million to six million by 2017. (*See case study: MillionTreesNYC on page 10*)

Understand the scope of the challenge

Because existing routine air monitoring focuses on region-wide trends and does not capture street-level data or air quality variation among neighborhoods, we are launching a local air quality study. Each season over the next two years, the City will collect air samples at over 130 locations throughout the five boroughs. The locations represent a wide range of traffic and local environments. This baseline data will be used to establish priority neighborhoods for improvement and track changes over time as development, policy, and transit initiatives proceed.

Next Steps

To cut road transportation pollution emissions, we plan to pilot hydrogen fuel cell and battery all-electric vehicles in the City fleet, and implement recommendations from the ongoing City fleet study to achieve the lowest level of vehicle use feasible. We will work to introduce cleaner vehicles into the livery cab fleet. We will work to encourage private auto buyers to choose hybrids by passing Senate Bill 7023/Asembly Bill 042581A. And we will launch the anti-idling campaign promised in PlaNYC.

We will continue to address non-road pollution emissions, including piloting technologies to clean up private ferries, and to develop new approaches to reduce emissions from construction vehicles. We will also seek out partnerships with the PANYNJ, the Metropolitan Transit Authority, New Jersey Transit, and private operators to identify and implement policies for additional reductions in airplane, locomotive, and marine sources.

Over the past year, our efforts to enact a broader oil heating policy were deferred as we learned of concerns about the lifecycle and secondary land impacts of certain biofuels, as well as certain operational concerns. But we will lay the groundwork for a comprehensive heating oil policy in the next year.

Credit: Mayor's Office

Mayor Bloomberg, Council Member Yassky, and Yahoo VP Marketing Patrick Crane introduce new hybrid taxis

Credit: Mayor's Office

TLC Commissioner Matthew W. Daus introduces a hybrid black car

CASE STUDY: EFFICIENT YELLOW TAXICABS AND BLACK CARS WILL BRING CLEANER AIR AND A 0.75 PERCENT REDUCTION IN CITYWIDE CO_2 EMISSIONS

In December, the Taxi and Limousine Commission (TLC) unanimously passed regulations requiring new yellow taxicabs to achieve a city mileage rating of 25 miles per gallon (mpg) in October 2008, except for handicap-accessible taxicabs. In October 2009, the standard will rise to 30 mpg. Almost 380 hybrids were on the road when the proposal was announced in May; now, as owners convert ahead of schedule, we have over 800. They have proven their reliability during the three annual inspections, and the first 18 hybrids in the fleet have already logged over 200,000 miles each. The regulations will save $11,000 per car, each year, in gasoline, for industry-wide savings of roughly $140 million per year. By 2012, when the entire fleet has converted to the 30 mpg standard, it will clean the air and reduce the City's greenhouse gas emissions by 296,000 tons annually, or by 0.5 percent.

In February 2008, the Mayor proposed that TLC require new black cars—those that serve corporate clients—to meet fuel efficiency standards of 25 mpg in 2009 and 30 mpg in 2010. The proposal also mandates vehicle retirement and provides protection for black car operators against competitors who operate non-clean vehicles. To help drivers, the City has worked with the financial sector, auto dealers, and black car fleets to develop solutions that will finance the higher down payment. By 2013, nearly all black cars will meet the new standards, improving air quality and reducing carbon emissions by 136,000 tons annually, or 0.25 percent. Mayor Bloomberg indicated the City's intention to complete the PlaNYC clean taxi initiative by working with the livery industry, again taking into account the unique aspects of that industry.

Air Quality Progress

	INITIATIVE	LAUNCHED*	PROGRESS SINCE APRIL 22, 2007	IMPLEMENTATION MILESTONE FOR DECEMBER 2009
1	**CAPTURE THE AIR QUALITY BENEFITS OF OUR TRANSPORTATION PLAN (SEE TRANSPORTATION INITIATIVES, PAGE 25)**			
2	**IMPROVE FUEL EFFICIENCY OF PRIVATE CARS**			
	Waive New York City's sales tax on the cleanest, most efficient vehicles	✓	On February 27, State Senator Lanza and Assemblyman Espaillat introduced the hybrid sales tax legislation to the State Assembly. The City will seek approval by the end of June	Offer incentive
	Work with the MTA, the Port Authority, and the State DOT to promote hybrid and other clean vehicles		Started to explore expansion of the State's Clean Vehicle Pass program. City will initiate meetings with PANYNJ and the MTA to discuss this and other options for providing incentives to promote hybrid and other clean vehicles	Release assessment of policy options and begin implementation
	Pilot new technologies and fuels, including hydrogen and plug-in hybrid vehicles	✓	In October, Shell Hydrogen, City, and General Motors reached an agreement to locate 2 pilot hydrogen fueling stations in the city. Shell is finalizing a lease agreement with DSNY and then will submit the stations for review	Have an operational hydrogen station in New York City
3	**REDUCE EMISSIONS FROM TAXIS, BLACK CARS, AND FOR-HIRE VEHICLES**			
	Reduce taxi and limousine idling		The Taxi and Limousine Commission (TLC) and DOT to offer rebates through State funding to black car and for-hire vehicle owners who install anti-idling technologies. Anti-idling technologies allow drivers to heat their vehicles when stopped without running the engine. Will begin piloting potential anti-idling technologies in spring 2008	Equip participating yellow taxis and black cars with anti-idling equipment
	Work with TLC and the taxicab industry to double the taxi fleet's efficiency	✓	On December 11,TLC unanimously passed regulations requiring all yellow taxicabs coming into service as of October 1, 2008 to achieve a city mileage rating of 25 miles per gallon (mpg), with the exception of accessible taxicabs: in October 2009 standard increases to 30 mpg	Work toward completing new standards for taxis
	Work with stakeholders to double the fuel efficiency of black cars and for-hire vehicles	✓	On February 27, Mayor Bloomberg proposed resolutions to require new licensed black cars to achieve a fuel efficiency standard of 25 mpg in 2009 and 30 mpg in 2010. Includes a requirement for vehicle retirement	Work toward completing new standards for for-hire vehicles by 2010
4	**REPLACE, RETROFIT, AND REFUEL DIESEL TRUCKS**			
	Introduce biodiesel into the City's truck fleet, go beyond compliance with local laws, and further reduce emissions	✓	In March, DPR expanded use of B20 to 10 fuel sites and to 800 operated vehicles and equipment. DSNY expanded B5 and piloted B20 at one depot. In July, DOT introduced B5 to heavy trucks. In November, DEP introduced B5 to maintenance fleet and has expanded the use of B5 to 9 other sites	Dispense a biodiesel blend at all city-owned diesel fueling stations
	Accelerate emissions reductions of private fleets through existing Congestion Mitigation and Air Quality (CMAQ) programs	✓	NYSERDA awarded $3.2 million to private fleets in New York City in summer 2007. New round of funding totalling $6 million will be released by mid-2008	Upgrade additional vehicles
	Work with stakeholders and the State to create incentives for the adoption of vehicle emission control and efficiency strategies		NYS DEC released the State Implementation Plan (SIP) for fine particulates and credited PlaNYC initiatives for helping to achieve air quality standards. However, the SIP does not propose the creation of a statewide retrofit fund	Draft proposed parameters of fund
	Improve compliance of existing anti-idling laws through targeted educational campaign	✓	Partnered with NYSDEC and DEP to carry out an enforcement action to address urban air pollution in East Harlem, culminating in a press conference on November 16. Convening agencies to address enforcement challenges and barriers and beginning discussions with potential partners to plan a comprehensive public education campaign	Launch anti-idling campaign
5	**DECREASE SCHOOL BUS EMISSIONS**			
	Retrofit both large and small school buses and reduce their required retirement age	✓	DOE installed a combination of DOCs and crankcase filters on 2,300 large buses, and 750 large special education buses. In 2007, DOE began testing active and passive diesel particulate filters (DPFs) on 9 buses. In January 2008, DOT and DOE applied for $29 million in CMAQ funds for DPFs and an accelerated retirement program for school bus fleet	Begin retrofits on smaller school buses
6	**RETROFIT FERRIES AND PROMOTE USE OF CLEANER FUELS**			
	Retrofit the Staten Island Ferry fleet to reduce emissions	✓	Retrofitted engines on three ferries with pollution control equipment and the JFK went into dry dock on October 10. Retrofit plan incorporated into LL 3, signed in February 2008. Due to delays at Port Authority, JFK not yet upgraded. Upgrade of JFK and Molinari expected in 2008. January 2008, fueled fleet with ULSD and B5	Complete engine upgrades to Staten Island Ferry fleet
	Work with private ferries to reduce their emissions	✓	DOT reached preliminary agreement with NY Waterway to retrofit one ferry in the next few months, with an agreement to retrofit the whole fleet once operational concerns are met	Install DOCs in ferries; pass legislation promoting the use of ULSD
7	**PARTNER WITH THE PORT AUTHORITY TO REDUCE EMISSIONS FROM PORT FACILITIES**			
	Seek to work with the Port Authority (PANYNJ) to reduce emissions from its marine vehicles, port facilities, and airports	✓	Met with EPA to explore nationwide Port Initiative, funding sources, and opportunities for reducing PANYNJ's emissions. Teamed up with EPA and PANYNJ to bring a national conference called Faster Freight Cleaner Air to New York City on July 8–9, 2008, to explore options for reducing pollution for ports and their related activities	Begin creating a plan
8	**REDUCE EMISSIONS FROM CONSTRUCTION VEHICLES**			
	Accelerate adoption of technologies to reduce construction-related emissions	✓	The City has amended its rules for selecting Best Available Technology for construction equipment in order to allow contractors to use a wider range of technology that can eliminate even more pollution	Require, through contracts, applicable on-road vehicles used in city construction projects to follow requirements of Local Law 77
9	**CAPTURE THE AIR QUALITY BENEFITS OF OUR ENERGY PLAN (SEE ENERGY INITIATIVES, PAGE 29)**			
10	**PROMOTE THE USE OF CLEANER-BURNING HEATING FUELS**			
	Lower the maximum sulfur content in heating fuel from 2,000 parts per million (ppm) to 500 ppm	✓	On June 11, Mayor Bloomberg announced a commitment to introduce B5 into the heating oil for City boilers. Contract has been released. The City is also formulating a broader policy to reduce harmful air pollution from heating fuel, by analyzing the most cost-effective methods for reducing pollution	Draft new sulfur content requirements for State Code
	Reduce emissions from boilers in 100 City public schools	✓	With PlaNYC funds, the SCA has begun construction on two boilers. Three have been put out to bid, three are in design, and nine are in scope development phase. The SCA is working with the City to develop a strategy to target additional schools toward the goal of converting 100 boilers in City schools	Begin replacing boilers
11	**CAPTURE THE AIR QUALITY BENEFITS OF OUR OPEN SPACE PLAN (SEE OPEN SPACE INITIATIVES, PAGE 11)**			
12	**REFOREST TARGETED AREAS OF OUR PARKLAND**			
	Reforest 2,000 acres of parkland	✓	On October 20, the City added 10,000 new trees on Its My Park Day and planted almost 30,000 trees in the fall planting season. Convened an Urban Reforestation Advisory Conference in November 2007 to enhance reforestation efforts and secured consultant design services for future planting. April 2008 will see over 20,000 trees planted	Begin reforesting 2,000 acres of parkland
13	**INCREASE TREE PLANTINGS ON LOTS**			
	Partner with stakeholders to help plant one million trees by 2017	✓	On October 9, the City launched the MillionTreesNYC Initiative in partnership with the New York Restoration Project, and since then has planted over 33,501 trees. An Advisory Committee has been convened to coordinate a strategic plan. Conducted extensive community outreach and launched a website (www.milliontreesNYC.org)	Launch partnership and begin planting trees
14	**LAUNCH COLLABORATIVE LOCAL AIR QUALITY STUDY**			
	Monitor and model neighborhood-level air quality across New York City	✓	DOHMH, with Queens College and other partners, finalized a design for the New York City Community Air Survey (NYCCAS), to include measurements at a minimum of 130 locations in each season each year. Building and testing of monitoring instruments will continue through spring 2008. NYCCAS to begin first air sampling campaign in summer 2008	Launch Study

* Initiative begun by City, including planning or advocacy stages

Extended version of Progress updates and full list of acronyms available online at www.nyc.gov/PlaNYC2030

8I - 17

Appendix 10A

EPA Guidance Related to Clean Air Act Section 110(a) Infrastructure SIPs

1) **Guidance on SIP Elements Required Under Sections 110(a)(l) and (2) for the 1997 8-hour Ozone and PM2.S National Ambient Air Quality Standards.** William T. Harnett, Director, Air Quality Policy Division, Office of Air Quality Planning and Standards. October 2, 2007.

2) **Emergency Episode Plan Requirements EPA memo.** March 24, 2008.

3) **PM2.5 Infrastructure SIPs.** Email from Anne Arnold, EPA Region 1. March 28, 2008.

4) **Implementation of New Source Review Requirements in PM-2.5 Nonattainment Areas.** Stephen D. Page, Director, Office of Air Quality Planning and Standards. April 5, 2005.

5) **Interim Implementation of New Source Review Requirements for PM2.5.** John S. Seitz, Director, Office of Air Quality Planning & Standards. October 23, 1997.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

OCT 2 2007

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

MEMORANDUM

SUBJECT: Guidance on SIP Elements Required Under Sections 110(a)(1) and (2) for the 1997 8-hour Ozone and $PM_{2.5}$ National Ambient Air Quality Standards

FROM: for William T. Harnett, Director
Air Quality Policy Division (C539-01)

TO: Air Division Directors, Regions I-X

The purpose of this memorandum is to provide guidance on the "infrastructure" elements for State Implementation Plans (SIPs) required under section 110(a)(1) and (2) of the Clean Air Act (CAA) for the 1997 8-hour ozone and fine particulate matter ($PM_{2.5}$) national ambient air quality standards (NAAQS). Attachment A to this memo provides a list of the basic elements that States must include in their SIPs. To the extent that existing SIPs for ozone and particulate matter already meet these requirements, States need only certify that fact to the Environmental Protection Agency (EPA). To the extent that existing SIPs for ozone and particulate matter fail to address any of these requirements for purposes of the 1997 8-hour ozone or $PM_{2.5}$ NAAQS, States need to make timely SIP submissions to EPA to address these requirements. We anticipate that States will already have approved SIPs in place for ozone that meet the basic requirements of sections 110(a)(1) and (2). For $PM_{2.5}$, however, we anticipate that many States may need to make SIP revisions to ensure that their existing SIPs for prior particulate matter NAAQS are revised to include the new particle size indicator.

Background

On July 18, 1997, the EPA promulgated new and revised NAAQS for ozone and particulate matter. For ozone, EPA revised the NAAQS to provide an 8-hour averaging period (versus a 1-hour averaging period for the pre-existing NAAQS), and set the level of the standard at 0.08 ppm (versus 0.12 ppm for the pre-existing NAAQS). For PM, EPA promulgated a new 24-hour and a new annual NAAQS for $PM_{2.5}$ (particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers).[1]

Under sections 110(a)(1) and (2) of the CAA, all States are required to submit plans to provide for the implementation, maintenance, and enforcement of the 8-hour ozone and $PM_{2.5}$ standards. Sections 110(a)(1) and (2) require States to address basic SIP requirements, including emissions inventories, monitoring, and modeling to assure attainment and maintenance of the standards. By statute, SIPs meeting the requirements of sections 110(a)(1) and (2) are to be submitted by States within 3 years after promulgation of a new or revised standard. This being the case, States were required to submit such SIPs for the 1997 standards to EPA no later than July 2000. However, intervening litigation over the 1997 8-hour ozone and $PM_{2.5}$ NAAQS, created uncertainty about how to proceed and, to date, States have not submitted SIPs to meet the basic or infrastructure requirements enumerated in sections 110(a)(1) and (2).

In March of 2004, Earth Justice initiated a lawsuit against EPA for failure to take action against States that had not made SIP submissions to meet the requirements of sections 110(a)(1) and (2), i.e., failure to make a "finding of failure to submit." On March 10, 2005, EPA entered into a Consent Decree with Earth Justice that obligates EPA to make official findings whether States have made required SIP submissions by dates certain. The Consent Decree obligates EPA to determine whether States have made SIP submissions required to meet CAA section 110(a)(2)(D)(i) relating to interstate transport by no later than March 15, 2005. The Consent Decree also obligates EPA to make a determination whether States have made submissions necessary to meet the remaining 110(a)(1) and (2) requirements by December 15, 2007, for the 8-hour ozone NAAQS, and by October 5, 2008, for the $PM_{2.5}$ NAAQS.[2] It should be noted that the latter determinations pertain only to whether the submissions are complete, pursuant to section 110(k)(1)(A), and do not constitute EPA approval or disapproval of such submissions. In addition, the determinations required by the Consent Decree explicitly exclude any determinations regarding: (i)

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[1] More recently, on December 18, 2006, EPA again revised the standards for particulate matter, tightening the 24-hour $PM_{2.5}$ standard from 65 micrograms per cubic meter ($\mu g/m^3$) to 35 $\mu g/m,^3$ and retaining the current annual fine particle standard at 15 $\mu g/m^3$. EPA also decided to retain the existing 24-hour PM_{10} standard of 150 $\mu g/m^3$ and to revoke the annual PM_{10}. This guidance document applies only to the SIP submission requirements for the 1997 8-hour Ozone and $PM_{2.5}$ NAAQS. EPA will address SIP requirements for the 2006 NAAQS separately, although the Agency notes that the statutory requirements for SIPs for new or revised NAAQS are comparable.

[2] The dates specified in the Consent Decree reflect the anticipated dates for submission of nonattainment area SIPs for each NAAQS, plus six months for EPA evaluation. EPA presumed that States would make SIP submissions meeting the basic requirements of sections 110(a)(1) and (2) for each NAAQS contemporaneously with, or not later than, SIPs meeting the nonattainment area plan requirements. EPA notes that recent decisions by the U.S. Court of Appeals for the District of Columbia concerning the implementation rule for the 8-hour Ozone NAAQS have affected certain nonattainment area SIP requirements. These judicial decisions do not, however, affect States' obligations under the CAA or EPA's obligations under the Consent Decree concerning the infrastructure SIP requirements of sections 110(a)(1) and (2).

submissions required by section 110(a)(2)(C) to the extent that subsection pertains to a nonattainment area new source permit program in part D Title I of the CAA; and (ii) submissions required by section 110(a)(2)(I) for Part D Title I nonattainment area plans.

In accordance with the Consent Decree, EPA has already published a finding that all States had failed to submit new SIPs addressing interstate transport for the 8-hour ozone and $PM_{2.5}$ NAAQS, as required by section 110(a)(2)(D)(i) of the CAA (70 FR 21147, April 25, 2005). That finding initiated a 2-year deadline for the promulgation of a Federal Implementation Plan (FIP) by EPA for each such State unless, prior to that time, each State makes a submission to meet the requirements of Section 110(a)(2)(D)(i) and EPA approves such submission. On May 12, 2005, EPA published the Clean Air Interstate Rule (CAIR) which identifies the degree to which emissions of SO_2 and NO_x in certain States significantly contribute to nonattainment of, or interfere with maintenance of, the 1997 8-hour ozone and $PM_{2.5}$ NAAQS in downwind States, and the reductions that must be achieved in those States to eliminate such contributions.

On August 15, 2006, EPA issued guidance entitled "Guidance for State Implementation Plan (SIP) Submissions to Meet Current Outstanding Obligations Under Section 110(a)(2)(D)(i) for the 8-hour Ozone and $PM_{2.5}$ National Ambient Air Quality Standards." The section 110(a)(2)(D)(i) guidance indicates that States within the CAIR region can satisfy 110(a)(2)(D) by satisfying the requirements of the CAIR, and addresses what other States that are outside of the CAIR region should consider doing to meet the "significant contribution" and "interfere with maintenance" requirements of section 110(a)(2)(D)(i) for the 1997 standards. The section 110(a)(2)(D)(i) guidance also addresses what all States (whether inside or outside of the CAIR region) should consider in making SIP submissions to meet the "prevention of significant deterioration" and "protect visibility" requirements of section 110(a)(2)(D)(i). The SIP submissions addressed by the section 110(a)(2)(D)(i) guidance are those that are necessary to rectify the finding of failure to submit that EPA has already issued for all States for section 110(a)(2)(D)(i).

The guidance contained in this memorandum is intended as a reminder that States must have SIPs for the 1997 8-hour ozone and $PM_{2.5}$ NAAQS that meet all of the requirements of sections 110(a)(1) and (2). Pursuant to the Consent Decree, EPA has an obligation to take action to determine whether States have made such submissions by the dates noted above. Because States should currently be in the process of submitting nonattainment SIPs for the 8-hour ozone standard and working on nonattainment area SIPs for the $PM_{2.5}$ standard, we want to alert them to be sure that their SIPs also meet the basic requirements of sections 110(a)(1) and (2).

Guidance

The EPA believes that the currently-approved section 110 SIPs for ozone may already be adequate in most cases to implement the 8-hour ozone NAAQS. Many of the required section 110(a)(1) and (2) SIP elements relate to the general information and authorities that constitute the "infrastructure" of the ozone air quality management program, and these have been in place since the initial SIPs were submitted in response to the 1970 Clean Air Act. For particulate matter, however, EPA believes that some States may need to adopt language specific to the $PM_{2.5}$ NAAQS to ensure that they have adequate SIP provisions to implement the $PM_{2.5}$ NAAQS, e.g., existing State laws may refer to PM_{10} specifically or to particulate matter more generally, rather than to $PM_{2.5}$. We believe that with one exception, the infrastructure requirements of sections 110(a)(1) and (2) are relatively self explanatory, and past experience with SIPs for other NAAQS should enable States to meet these requirements with assistance from EPA Regions. The one exception is section 110(a)(2)(G) relating to emergency episodes, for which EPA intends to take additional regulatory action to provide necessary numerical limits and concentration levels for emergency episode action plans for $PM_{2.5}$.

States should review and revise, as appropriate, their existing ozone and particulate matter SIPs to ensure that they are adequate to address the 8-hour ozone and $PM_{2.5}$ NAAQS. If a State determines that its existing SIP is adequate, then the State needs to certify, via a letter to the Agency from the Governor or his/her designee, that the existing SIPs contain provisions that address the requirements for the 8-hour ozone and $PM_{2.5}$ NAAQS. If a State determines that its existing ozone or particulate matter SIPs are inadequate, however, then the State needs to submit a SIP revision to make the appropriate changes.

With respect to $PM_{2.5}$, States may find it more advantageous to revise the language in their SIPs to identify "particulate matter" as the pollutant being implemented and define the size fractions as "those that EPA has currently set for the NAAQS" to the extent such an approach would be authorized by State law. This will ensure that the provisions remain adequate in the event that future changes occur to the particulate matter standards. States could also specify both PM_{10} and $PM_{2.5}$ as the size fractions if a State prefers to be more specific.

As an aid to the States in addressing the $PM_{2.5}$ related requirements of Section 110(a)(2)(G) pertaining to emergency episode provisions, EPA intends to take action to revise 40 CFR, Part 51, subpart H (sections 51.150). The rule changes will establish the priority classifications which determine the emergency episode plan requirements for each area and establish a significant harm level (SHL) for $PM_{2.5}$. Until these changes are final, EPA recommends that States rely on relevant information contained in upcoming EPA rule proposals or other EPA-issued interim guidance to satisfy the section 110(a)(2)(G) requirements for $PM_{2.5}$. After EPA issues final rules, EPA will work with States to revise SIP submissions that were based on interim information, as appropriate. States may wish to take advantage of the parallel processing mechanism for making their section 110(a)(2)(G) submittal in the interim while EPA completes rulemakings on the SHL and the emergency episode plan requirements under 40 CFR 51.150.

The SHL for the 8-hour ozone NAAQS will remain unchanged as 0.60 ppm ozone, 2-hr average, as indicated in 40 CFR Part 51.151. EPA believes that the existing ozone-related provisions of 40 CFR Subpart H remain appropriate. Therefore, EPA expects that for purposes of the 1997 8-hour ozone NAAQS, States need only to confirm that they have existing emergency episode plan provisions consistent with EPA's existing regulatory requirements.

By statute, States are required to make SIP submissions to meet the basic requirements of CAA sections 110(a)(1) and (2) within 3 years after promulgation of any new or revised standards. For the 1997 8-hour ozone and $PM_{2.5}$ standards, this deadline was July 2000. By Consent Decree, as noted above, EPA has agreed to make a determination whether or not States have submitted SIPs to meet these requirements by a date certain. In the case of 8-hour ozone SIPs, this date is December 15, 2007. For $PM_{2.5}$ SIPs, this date is October 15, 2008. In order for EPA to evaluate the submissions adequately, EPA requests that States make their certifications of SIP adequacy or SIP revisions as soon as possible and to the extent feasible sufficiently in advance of these dates to allow EPA time to determine whether complete submissions have been made.

If you have any questions concerning this guidance, please contact Mr. David Sanders at (919) 541-3356. Please ensure that the appropriate air agency officials for States in your Region are made aware of this guidance.

Attachments

cc: Margo Oge, OTAQ
Steve Page, OAQPS
Brian McLean, OAP
Richard Wayland, OAQPS
Lydia Wegman, OAQPS
Peter Tsirigotis, OAQPS

Attachment A: Required Section 110 SIP Elements

The SIP elements listed below are required under section 110(a)(1) and (2). Section 110(a)(1) provides the procedural and timing requirements for SIPs. Section 110(a)(2) lists the basic or "infrastructure" elements that all SIPs must contain. We note that this list is not intended to constitute an interpretation of these provisions, or a change of past practice with respect to these provisions, merely a brief description of the required SIP elements.

Emission limits and other control measures: Section 110(a)(2)(A) requires SIPs to include enforceable emission limits and other control measures, means or techniques, schedules for compliance and other related matters. EPA notes that the specific nonattainment area plan requirements of section 110(a)(2)(I) are subject to the timing requirement of section 172, not the timing requirement of section 110(a)(1), and also that SIPs to meet this section are not covered by the Consent Decree.

Ambient air quality monitoring/data system: Section 110(a)(2)(B) requires SIPs to include provisions to provide for establishment and operation of ambient air quality monitors, collecting and analyzing ambient air quality data, and making these data available to EPA upon request.

Program for enforcement of control measures: Section 110(a)(2)(C) requires States to include a program providing for enforcement of all SIP measures and the regulation of construction of new or modified stationary sources to meet prevention of significant deterioration (PSD) and nonattainment NSR requirements.

Interstate transport: Section 110(a)(2)(D) requires SIPs to include provisions prohibiting any source or other type of emissions activity in one State from contributing significantly to nonattainment, or interfering with maintenance, of the NAAQs in another State, or from interfering with measures required to prevent significant deterioration of air quality or to protect visibility in another State. EPA has already issued CAIR to assist States in developing SIPs to meet this requirement for purposes of the 8-hour Ozone and $PM_{2.5}$ NAAQS, and has issued separate guidance to all States on how to comply with each prong of this statutory provision.

Adequate resources: Section 110(a)(2)(E) requires States to provide for adequate personnel, funding, and legal authority under State law to carry out its SIP, and related issues.

Stationary source monitoring system: Section 110(a)(2)(F) requires States to establish a system to monitor emissions from stationary sources and to submit periodic emissions reports.

Emergency power: Section 110(a)(2)(G) requires States to provide for authority to address activities causing imminent and substantial endangerment to public health, including contingency plans to implement the emergency episode provisions in their SIPs.

Future SIP revisions: Section 110(a)(2)(H) requires States to have the authority to revise their SIPs in response to changes in the NAAQS, availability of improved methods for attaining the NAAQS, or in response to an EPA finding that the SIP is substantially inadequate.

Consultation with government officials: Section 110(a)(2)(J) requires States to provide a process for consultation with local governments and Federal Land Managers carrying out NAAQS implementation requirements pursuant to section 121 relating to consultation.

Public notification: Section 110(a)(2)(J) further requires States to notify the public if NAAQS are exceeded in an area and to enhance public awareness of measures that can be taken to prevent exceedances.

PSD and visibility protection: Section 110(a)(2)(J) also requires States to meet applicable requirements of part C related to prevention of significant deterioration and visibility protection.

Air quality modeling/data: Section 110(a)(2)(K) requires that SIPs provide for performing air quality modeling for predicting effects on air quality of emissions from any NAAQS pollutant and submission of such data to EPA upon request.

Permitting fees: Section 110(a)(2)(L) requires SIPs to require each major stationary source to pay permitting fees to cover the cost of reviewing, approving, implementing and enforcing a permit.

Consultation/participation by affected local entities: Section 110(a)(2)(M) requires States to provide for consultation and participation in SIP development by local political subdivisions affected by the SIP.

March 24, 2008
Emergency Episode Plan Requirements

I. Background On Emergency Episode Plan Requirements:

- Section 303 of the Act (the emergency powers provision), authorizes the Administrator to take emergency actions if pollution levels in an area constitute "an imminent and substantial endangerment to public health or welfare, or to the environment."

- Section 110(a)(2)(G) of the Act requires States to provide for similar authority to that contained in section 303 of the Act in their section 110(a)(1) SIPs, and to provide adequate emergency episode contingency plans to implement those requirements.

- EPA promulgated regulations in 1971 that established Significant Harm Levels (SHL) for five criteria pollutants (PM, CO, SO2, NO2, and Ozone) to accompany the SHLs. In 1986 EPA developed comprehensive regulations to govern the development of emergency episode plans, codified at 40 CFR part 51, Subpart H.

- States were required to submit emergency episode contingency plans for the 1997 NAAQS for 8-hour ozone and PM-2.5 by July 2000 (3 years following the promulgation of the NAAQS). States did not submit these SIPs and EPA has not issued findings of failure to submit the emergency episode plan, as well as the remaining SIP elements under section 110(a)(1).

- Earth Justice issued a notice of intent to sue in March 2004. On March 10, 2005, EPA entered into a Consent Decree with Earth Justice, which called for States to submit SIPs to address the emergency episode plan requirements as well as the remaining section 110(a)(1) requirements by December 2007 for ozone and by October 2008 for PM-2.5. Under the terms of the Consent Decree, if States miss these submittal deadlines, EPA must issue findings of failure to submit.

- On October 2, 2007, OAQPS issued a guidance memo indicating that EPA would propose rules on the emergency episode plan requirements, as well as the SHL for PM-2.5, which States should use to develop their emergency episode plan submittals.

II. 40 CFR part 51, Subpart H, "Prevention of Air Pollution Emergency Episode" Requirements:

Section 51.150: Address the classification of episode plan Air Quality Control Regions (regions).

- The classification of these areas is based on historical ambient air quality levels and is usually tied to the Air Quality Index (AQI).
- Each county in the country is assigned a classification by region.

- Areas that are classified as Priority I, IA, or II are required to develop an emergency episode contingency plan. Areas that are classified as Priority III are not required to develop an emergency episode plan

Section 51.151: Defines SHLs for five criteria pollutants (PM, CO, SO2, NO2, and Ozone). In a separate rulemaking action, EPA is proposing to set the SHL for PM-2.5.

- Each emergency episode contingency plan for Priority I regions must at a minimum provide for taking necessary actions to prevent ambient concentrations at any location within the affected region from reaching the SHL**.**

Section 51.152: Lists the requirements for developing emergency episode contingency plans.

- States with areas that are classified as Priority I/IA, or II must develop emergency episode contingency plans that specify two or more stages of the emergency episode criteria.
- Priority I areas must include control action plans that trigger actions that must be taken at each emergency stage (Alert, Warning, and Emergency).
- Priority IA and II areas are required, at a minimum, to have communication and public notification procedures, but these areas are not required to have emissions action plans.
- EPA developed an example emergency episode contingency plan regulation codified in Appendix L of part 51 that specifies the criteria for each emergency episode stage. **(States however, are not required to adopt the examples identified in Appendix L)**

Section 51.153: Requires States to re-evaluate the Priority classifications on a periodic basis. If a Priority III area changes classification to either a Priority I/IA or II area, the State must develop an emergency episode contingency plan as expeditiously as practicable.

III. The Proposed Rulemaking on the Emergency Episode Plan Requirements:

- We propose to add Priority region classifications for the 24-hour PM-2.5 NAAQS in section 51.151 of Subpart H.

- We propose to revise the current PM Priority region classifications to identify PM-10 as the pollutant of concern (as opposed to “PM”), and to remove the classifications based on the recently revoked annual standard for PM-10.

- We plan to propose suggested “Alert”, “Warning”, and “Emergency” action levels for PM-2.5 in the example regulations in Appendix L of Part 51.

- Changes to section 51.151 to establish the SHLs for PM-2.5. as well as changes to the AQI will be addressed in a separate rulemaking action

IV. Proposed Priority Region Classification Levels:

Current AQI			**Proposed AQI 24-hour ug/m3**	**Proposed EEP Priority Region Classifications (Under Section 51.150) ***
Category	Index Values	24-hour average ug/m3		
Unhealthy for Sensitive Groups	101-150	40.5-65.4 ug/m3	35.5-55.4 ug/m3	
Unhealthy	151-200	65.5-150.4 ug/m3	55.5-140.4 ug/m3	
Very Unhealthy	201-300	150.5-250.4 ug/m3	140.5-210.4 ug/m3	Priority Level II
Hazardous 1	301-400	250.5-350.4 ug/m3	210.5-280.4 ug/m3	Priority Level I and IA
Hazardous 2	401-500	350.5-500 ug/m3	280.5- 350.4 ug/m3	
SHL	500 and above	500 ug/m3	350.5 ug/m3	

*** Note: Based on historical incidence of 24-hour average concentrations using the most recent 3 calendar years of data.**

V. Proposed Action Levels for Appendix L:

AQI Category	**Index Values**	**Proposed AQI 24 hour ug/m3**	**Suggested EEP Action Levels for Appendix L**
Unhealthy for Sensitive Groups	101-150	35.5-55.4 ug/m3	

Unhealthy	151-200	55.5-140.4 ug/m3	
Very Unhealthy	201-300	140.5-210.4 ug/m3	Alert
Hazardous 1	301-400	210.5-280.4 ug/m3	Warning
Hazardous 2	401-500	280.5-350.4 ug/m3	Emergency
SHL	500 and above	500 ug/m3	

VI. Example Emergency Episode Contingency Plan: Action Plan Requirements (Montana, June 2004):

- **Stage 1: “Alert” Level:**

  1. Curtail open burning of waste/debris.

  2. Switch from wood/coal fuels to alternative fuels for heating home and commercial buildings; if equipped.

  3. Fossil fuel fired EGUs/boilers must switch to low ash/sulfur fuel.

  4. Specified manufacturers or sources must curtail, postpone, or defer production and other operations.

- **Stage 2: “Warning” level:**

  1. Use of incinerators is prohibited.

  2. Fossil fuel fired EGU must curtail operation.

  3. Specified manufactures: Assume reasonable economic hardships to postpone production without causing injury to persons or damage to equipment.

- **Stage 3: “Emergency” Level:**

  1. Widespread shutdown of non-essential functions.

From: arnold.anne@epamail.epa.gov [mailto:arnold.anne@epamail.epa.gov]
Sent: Friday, March 28, 2008 11:36 AM
To: Eileen.Hiney@state.ma.us; Wackter, David; junderhill@des.state.nh.us; jeff.s.crawford@maine.gov; paul.wishinski@state.vt.us; barbara.morin@dem.ri.gov
Cc: simcox.alison@epamail.epa.gov; mcwilliams.anne@epamail.epa.gov; Brown.Dan@epamail.epa.gov; Conroy.Dave@epamail.epa.gov
Subject: PM2.5 infrastructure SIPs

Hello All:

Here is some new guidance related to the PM2.5 infrastructure SIPs.

Emergency Episode Plans
Section 110(a)(2)(G) addresses emergency episode plans. In the infrastructure SIP guidance memo issued on October 2, 2007, EPA indicated that it would propose rules on the emergency episode plan requirements, as well as the significant harm level, for PM-2.5, which States should use to develop their emergency episode plan submittals.
EPA has not yet issued this proposal. However, the document below released by HQ this week outlines the requirements EPA is planning to propose and should be used as guidance for states in submitting the infrastructure SIPs for PM2.5.

The requirement for a state to submit an emergency episode plan is based on a priority region classification. The classification scheme that EPA is planning to propose would require states with a 24 -hour PM2.5 concentration above 140.5 ug/m3, in the most recent three years of data, to develop an emergency episode plan. States which do not meet this threshold would be classified as Priority III and would not be required to develop an emergency episode plan for PM2.5.

Our review of the data indicates that none of the New England states have recorded a 24 - hour PM2.5 concentration greater than 140.5 ug/m3, in the most recent three years of data. So, all of the New England states would be classified as Priority III regions and emergency episode plans would not be required. Therefore, under the 110(a)(2)(G) element of the PM2.5 infrastructure submittal, states should reference any authorities the state has for calling air pollution emergencies for PM2.5, however, states should also reference that, based on the guidance below and PM2.5 levels recorded in the state, PM2.5 emergency episode plans would not be required.
(See attached file: 1 LDW EEPR Briefing 3 24 08 SM.doc)

NSR/PSD
EPA has not yet issued the final NSR/PSD rule for PM2.5. Therefore, it is acceptable for states in their PM2.5 infrastructure submittals to contain a statement that the State is following EPA's PM10 surrogate guidance documents (where this is case), specifically, the April 5, 2005, Steven D. Page memorandum entitled “Implementation of New Source Review Requirements in PM-2.5 Nonattainment Areas,” and the October 23, 2997, John S. Seitz memorandum entitled “Interim Implementation of New Source Review Requirements for PM2.5,” referenced therein.

PM2.5 standards
We have noticed that several New England states have ambient air quality standards regulations that are outdated in regard to PM2.5, and in some cases the term PM2.5 is not defined in definition regulations. These regulations should be updated. However, if necessary due to timing constraints, it would be sufficient for purposes of meeting the PM2.5 infrastructure requirements to state that no other regulatory requirements are keyed off of the outdated regulations, if that is the case.

Anne Arnold, Manager
Air Quality Planning Unit
EPA New England
617-918-1047

MEMORANDUM

SUBJECT: Implementation of New Source Review Requirements in PM-2.5 Nonattainment Areas

FROM: Stephen D. Page
Director

TO: See Addressees

What is the purpose of this memorandum?

This memorandum provides guidance on the implementation of the major New Source Review (NSR) provisions under title 1, Part D of the Clean Air Act (Act) in fine particulate (PM-2.5) nonattainment areas in the interim period between the effective date of the PM-2.5 National Ambient Air Quality Standard (NAAQS) designations (April 5, 2005) and when we promulgate regulations to implement nonattainment major NSR for the PM-2.5 NAAQS. This memorandum also re-affirms the Memorandum from John S. Seitz, Director Office of Air Quality Planning and Standards, to Regional Air Directors, *Interim Implementation of New Source Review for PM2.5* (Oct. 23, 1997) that applies in Prevention of Significant Deterioration of Air Quality (PSD) programs for PM-2.5 attainment and unclassifiable areas.

Why are we issuing this memorandum?

On January 5, 2005, we promulgated nonattainment designations for the PM-2.5 NAAQS. These designations become effective on April 5, 2005. *See* 70 FR 944. Under Section 172(b) of the Clean Air Act (Act), the Administrator may provide States up to 3 years from the effective date of designations to submit State Implementation Plan (SIP) revisions meeting the applicable nonattainment requirements. In the near future, we plan to issue a proposed and final rule setting forth the schedule for these plan submissions. We also plan to establish the requirements that State and local agencies (States) and Tribes must meet in their implementation plans for attainment of the PM-2.5 NAAQS including provisions to address the major NSR requirements of title I, Part D of the Act (nonattainment major NSR program). Notwithstanding the absence of these implementing regulations, we interpret Section 172(c)(5) of the Act to require States to issue major New Source Review (NSR) permits for the construction and major modifications of major stationary sources located in any nonattainment area. Accordingly, once nonattainment designations for PM-2.5 become effective on April 5, 2005, States must issue major NSR permits that address the Section 173, nonattainment major NSR requirements for PM-2.5. We are issuing this memorandum to address how States should implement major NSR for PM-2.5 until we promulgate the PM-2.5 implementation rule.

<u>**What applies in PM-2.5 nonattainment areas?**</u>

During the SIP development period, EPA generally requires States to issue major NSR permits using the authority of States' approved nonattainment major NSR programs (to the extent these provisions apply automatically to the pollutant) or using the authority of 40 CFR Part 51, Appendix S (where a State lacks a nonattainment major NSR program covering the pollutant.) [1] However, in this case, the absence of a final PM-2.5 implementation rule makes administering a PM-2.5 nonattainment major NSR program infeasible. Accordingly, until we promulgate the PM-2.5 major NSR regulations, States should use a PM-10 nonattainment major NSR program as a surrogate to address the requirements of nonattainment major NSR for the PM-2.5 NAAQS. By applying a PM-10 nonattainment major NSR program in the interim period, States will effectively mitigate increases in PM-2.5 emissions and protect air quality because PM-2.5 is a subset of PM-10 emissions.

Using the surrogate PM-2.5 nonattainment major NSR program, States should assume that a major stationary source's PM-10 emissions represent PM-2.5 emissions and regulate these emissions using either Appendix S or the State's SIP-approved nonattainment major NSR program for PM-10. In most cases, we believe that States will need to rely on Appendix S for authority to issue permits during this interim period, because their existing State programs are not designed to accommodate the surrogate PM-2.5 nonattainment major NSR program.[2] Moreover, we expect that most States will need to implement a transitional PM-2.5 nonattainment major NSR program under Appendix S even after we finalize the PM-2.5 implementation rule until EPA approves changes to the States' SIP programs.

<u>**What is the major stationary source threshold and offset ratio under the surrogate PM-2.5 nonattainment major NSR program?**</u>

Section 302(j) defines a major stationary source as any source that emits or has the potential to emit 100 tpy of any regulated pollutant, and Section 173(c) of the Act requires major stationary sources to offset emissions increases resulting from construction or major modifications in a ratio of at least 1 to 1. Appendix S and the majority of SIP-approved PM-10 nonattainment major NSR programs apply this major source threshold and corresponding offset requirement. Accordingly, these provisions should be used to define the major stationary source threshold and offset ratio for the surrogate PM-2.5 nonattainment major NSR program. This means that during the interim period, a source is major for PM-2.5 if it emits or has the potential

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[1]The terms of 40 CFR 52.24(k), Appendix S of Part 51 provide provisions for a transitional nonattainment major NSR program until we approve a State's Part D major NSR program into the SIP.

[2]If a State lacks authority to issue a major NSR permit consistent with these requirements, then EPA will issue the permit under the authority of 40 CFR 52.24(k) and Appendix S.

to emit 100 tpy of PM-10.[3] A State that uses its SIP-approved PM-10 program as a surrogate PM-2.5 program need not apply the separate major stationary source level for serious PM-10 nonattainment areas in the surrogate PM-2.5 program. We do not interpret the specific PM-10 requirements of Part D, Subpart 4 of the Clean Air Act to apply to PM-2.5 and do not believe they should be applied under a surrogate PM-2.5 nonattainment major NSR program.

For any major stationary source whose particulate emissions are predominantly coarse particulate (particulate matter that ranges in size between PM-10 and PM-2.5), assuming that all of the source's PM-10 emissions represent the source's PM-2.5 emissions could inappropriately trigger nonattainment major NSR for PM-2.5. To avoid such an outcome, a source may quantify its PM-2.5 fraction. One approach is to apply two test methods in series - Conditional Test Method 40 (which adds a PM-2.5 cyclone separator between the Method 201A cyclone and filter) followed by the Method 202 sampler to collect condensible materials. The sum of the PM mass in these two fractions (i.e., the Conditional Test Method 40 filterable mass plus the Method 202 condensible mass) represents the primary PM-2.5 emissions from the source for the test period. Under appropriate circumstances (e.g., construction of a new unit, where it is not possible to conduct testing prior to start up), testing of similar existing units can be an appropriate means of obtaining relevant emissions data. Also, other approaches for quantifying PM-2.5 emissions besides the testing methods described above would be considered where they can be shown to produce reliable data.

If the source demonstrates that it is not a major stationary source for PM-2.5, then the nonattainment major NSR provisions for PM-2.5 need not be applied to the source. Conversely, if a source is major for PM-10 and does not quantify its PM-2.5 emissions, then States should presume that the source is major for PM-2.5 and subject it to the surrogate PM-2.5 nonattainment major NSR program if it constructs a major stationary source or undergoes a major modification.

What is the significant emissions rate for the surrogate PM-2.5 nonattainment major NSR program?

On July 1, 1987, we established a significant emissions rate for PM-10 of 15 tpy. *See* 52 FR 24683. States should use this rate for the surrogate PM-2.5 program. At the time we established the 15 tpy significant emissions rate, we amended only our PSD regulations to incorporate the PM-10 value because the PM-10 NAAQS did not yet apply to nonattainment areas. Nonetheless, we established the PM-10 significant emissions rate through notice and

[3] The definition of PM-10 includes condensible particulate matter. For a detailed discussion of condensible particulate matter, see the General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990 (April 16, 1992, 57 FR 13542).

comment rulemaking; and, accordingly, the same value should apply for PM-10 under Appendix S and State SIP-approved programs in the interim period.[4]

<u>Will any precursors be regulated under the surrogate PM-2.5 nonattainment major NSR program?</u>

Not at this time. Section 302 (g) includes precursors to the formation of any air pollutant within the term "air pollutant" to the extent the Administrator identifies the precursors for the particular purpose for which the term "air pollutant" is used. To date, the Administrator has not identified any precursors to the formation of PM-2.5 for purposes of the major NSR program. On November 5, 2003, the Administrator proposed to require that regional emissions analysis for the purposes of transportation conformity under Section 176(c) of the Act include certain precursors (68 FR 62690). In the Clean Air Interstate Rule, we require states to reduce emissions of NOx and SO2 on the grounds that they are precursors for PM-2.5. However, several novel issues need to be resolved before the NSR program can be applied to PM-2.5 precursors (e.g., how many SO2 or NOx offsets will be needed to accommodate the fine particles formed by these constituents; can SO2 emissions reductions be used to offset NOx emissions, and vice versa). We plan to request comment on regulating these pollutants and other potential PM-2.5 precursors for purposes of major NSR in the PM-2.5 implementation rule.

<u>What major NSR requirements apply in PM-2.5 attainment and unclassifiable areas?</u>

The revised NAAQS for particulate matter, which include the revised NAAQS for PM-10 and new NAAQS for PM-2.5, became effective on September 16, 1997. On October, 23, 1997, we issued a memorandum addressing the interim use of PM-10 as a surrogate for PM-2.5 in meeting Prevention of Significant Deterioration of Air Quality Program (PSD) provisions for PM-2.5 as required by title 1, Part C of the Act. *See* Memorandum from John S. Seitz, Director Office of Air Quality Planning and Standards, to Regional Air Directors, *Interim Implementation of New Source Review for PM2.5* (Oct. 23, 1997). This memorandum referenced provisions of Part C of the Act which we interpret to require PSD permits for PM-2.5 upon the effective date of the PM-2.5 NAAQS, and identified significant technical difficulties with implementing PSD for PM-2.5 because of limitations in ambient monitoring and modeling capabilities. Because we have not promulgated the PM-2.5 implementation rule, administration of a PM-2.5 PSD program remains impractical. Accordingly, States should continue to follow the October 23, 1997, guidance for PSD requirements.

This memorandum presents EPA's policy on the implementation of major NSR requirements until EPA promulgates a final PM-2.5 implementation rule. The statements in this policy guidance do not bind State and local governments and the public as a matter of law.

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[4] We intend to issue a final rule adding a PM-10 significant emissions rate of 15 tpy to Appendix S in a forthcoming rulemaking.

If you have any questions concerning this memorandum, please contact Raj Rao at (919) 541-5344, or Lynn Hutchinson at (919) 541-5795.

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MEMORANDUM

SUBJECT: Interim Implementation of New Source Review Requirements for PM2.5

FROM: John S. Seitz, Director Office of Air Quality Planning & Standards (MD-10)

TO: See Addressees

This memorandum addresses the interim use of PM10 as a surrogate for PM2.5 in meeting new source review (NSR) requirements under the Clean Air Act (Act), including the permit programs for prevention of significant deterioration of air quality (PSD). The revised national ambient air quality standards (NAAQS) for particulate matter, which include the revised NAAQS for PM10 and new NAAQS for PM2.5, became effective on September 16, 1997. In view of the significant technical difficulties that now exist with respect to PM2.5 monitoring, emissions estimation, and modeling (described below), EPA believes that PM10 may properly be used as a surrogate for PM2.5 in meeting NSR requirements until these difficulties are resolved. The EPA's views on implementing the ozone and PM10 NAAQS during the interim period following the effective date of the new 8-hour ozone and revised PM10 NAAQS will be set forth in a separate EPA memorandum.

Section 165(a)(1) of the Act provides that no new or modified major source may be constructed without a PSD permit. Moreover, section 165(a)(3) provides that the emissions from any such source may not cause or contribute to a violation of any NAAQS. Also, section 165(a)(4) requires best available control technology for each pollutant subject to regulation under the Act. The EPA's recent promulgation of the primary and secondary standards for PM2.5 marks the first time that EPA has specifically regulated fine particles--less than 2.5 microns in diameter--as a discrete indicator for particulate matter. Hence, this memorandum addresses how to implement PSD for PM2.5 in light of significant technical difficulties which presently exist.

Of specific concern is the lack of necessary tools to calculate emissions of PM2.5 and related precursors and project ambient air quality impacts so that sources and permitting authorities can adequately meet the NSR requirements for PM2.5. Any comprehensive system for regulating PM2.5 must take into account not only the fine particles emitted directly by stationary sources but also the various precursors, emitted by certain sources, which result in secondarily-formed fine particles through chemical reactions in the atmosphere. Recent studies suggest that secondary particulate matter may account for over half of total ambient PM2.5 nationwide. Emissions factors for the fine particles emitted directly by stationary sources, and for some important precursors (e.g., ammonia), are largely unavailable at the present time.

The EPA is in the process of developing a comprehensive modeling system which will be designed to include precursor emissions and account for secondary fine particle formation. The modeling system will also incorporate a method for nesting small local impacts from individual point sources within a greater modeling domain. Before this can be completed, it will be necessary to collect sufficient monitoring data to verify and validate protocol modeling results.

Ambient monitoring for PSD purposes must be collected from appropriately designed monitors. Sufficient quantities of such monitors will not be available specifically for PSD monitoring purposes in the near future. Initially, as these monitors become available, they will be needed to establish the new monitoring stations for the national network of PM2.5 sites, including the required core PM2.5 State and local air monitoring stations. A high priority has been placed on the establishment of the necessary PM2.5 monitoring sites nationwide so that the information from these sites can be analyzed and evaluated in order to establish plans and priorities for implementing the PM2.5 NAAQS, including the promulgation of section 107 designations.

For the reasons stated above, EPA believes that it is administratively impracticable at this time to require sources and State permitting authorities to attempt to implement PSD permitting for PM2.5 . The EPA has projects underway that will address the current technical and informational deficiencies, but it will take 3-5 years to complete these projects. Until these deficiencies are corrected, EPA believes that sources should continue to meet PSD and NSR program requirements for controlling PM10 emissions (and, in the case of PM10 nonattainment areas, offsetting emissions) and for analyzing impacts on PM10 air quality. Meeting these measures in the interim will serve as a surrogate approach for reducing PM2.5 emissions and protecting air quality.

This memorandum presents EPA's views on the issues associated with implementation of the new PM2.5 NAAQS under Federal, State and local NSR programs. The statements do not bind State and local governments and the public as a matter of law. When the technical difficulties are resolved, EPA will amend the PSD regulations under 40 CFR 51.166 and 52.21 to establish a PM2.5 significant emissions rate, and EPA will also promulgate other appropriate regulatory measures pertinent to PM2.5 and its precursors. Because the earliest date on which PM2.5 nonattainment areas will be designated is in 2002, and nonattainment NSR does not apply until after nonattainment designations are made, implementation of the nonattainment NSR requirements under part D of title I of the Act need not be addressed at this time.

If you have any questions concerning this memorandum or wish to address any issues raised herein, please contact Dan deRoeck at (919) 541-5593.

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