Appendix

Connecticut Department of Environmental Protection
Recommendation for $PM_{2.5}$ Designation

Technical Support Document

Appendix K

Connecticut DEP
PM Monitoring Network Plan
7/1/98

New Haven, Stiles Street

New Haven Street Map (State St. & Stiles St. near I-91 & I-95)
Hamden (Millrock Basins)

3.0 Site Information

3.1 Site Identification

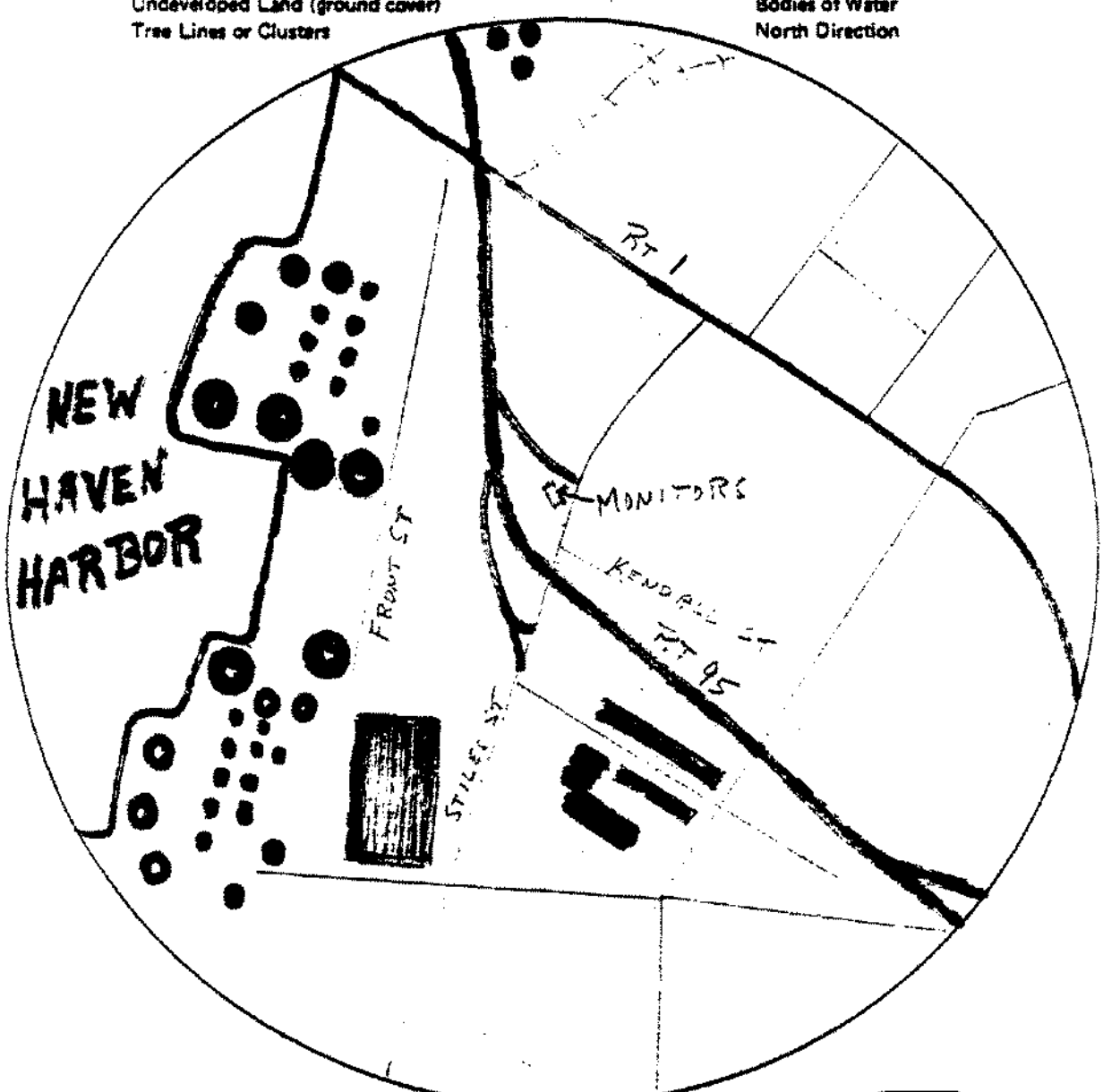
1. State CONNECTICUT
2. City NEW HAVEN
3. Name of Urbanized Area
4. Census Tract No.
5. SAROAD Site Code 07-0700-018
6. AIRS SITE CODE 09-009-0018
7. (Local Agency Site No.)
8. Site Address STILES ST.
9. Names of Nearest Intersecting Streets I 95 SOUTH ENTRANCE RAMP
10a. NAMS Pollutants Monitored at this Site PM 10 4/7/88
eval. 12/9/86 SDN - PM 10 = NAMS 6/88
10b. SLAMS Pollutants Monitored at this Site PM 2.5
11. Name of Report Preparer and Affiliation PAUL NORTON
CTDEP
12. Phone Number 860-724-9615
13. Date 10/28/85 REVISED 7/1/98
14. Outstanding Landmarks Q BRIDGE

15. Sketch a map to document the environment within a ¼ mile radius of the site except for CO microscale, when only immediate area information is needed. Include the following information on the drawing where applicable.

NAMS at Center of Drawing
Roadways with names (paved and unpaved)
Parking Areas (paved and unpaved)
Stationary Sources (NEDS #)
Buildings (number of stories)
Undeveloped Land (ground cover)
Tree Lines or Clusters

N

Residences
Trailer Parks
Recreation Parks
Recreation Fields
Railroad Yards
Bodies of Water
North Direction



16. Attach separate sheet of labeled photographs G

17. UTM Coordinates, Zone 18 East 675730 North 4573308

or latitude and longitude ° G

* - R — Require (shall) be regulation
G — Guidance (should) by regulation, or guidance document
— Blocks are reserved for site evaluation only

3.2 Site Classification

1. Dominating influence of site (indicate pollutant) G [ ]

Point _____

Area _____

Mobile I 95 LEAD & PARTICULATE

2. Land use with ¼ mile radius from the site: G [ ]

	Urban	Distance and Direction from Site
Residential		NE 1/8 to 1/4 mile
Commerical		N 0 to 1/4 mile, NE 0 to 1/8, E 0 - 1/4
Industrial		SE, S, SW 0-1/4mile, W 0-1/8mile, NW 0-3/16
Mobile		SE 0-1/4 mile
Other (describe)	Harbor	W 1/8-1/4 mile, NW 3/16-1/4 mile
	Non-Urban	
Agricultural		
Forest		
Desert		
Industrial		
Mobile		
Other (describe)		

3. Predominant land use by direction, (2 to 3 km from the site) (residential, commerical, industrial, suburban, and urban) G [ ]

N RESIDENTIAL

NE RESIDENTIAL

E FOREST & SUBURBAN

SE RESIDENTIAL

S PARK

SW HARBOR

W INDUSTRIAL

NW COMMERCIAL

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4. A history of stationary source emissions that may influence the site is optional. If the information is available, please include in the following form: G

Sources that Influence Site (attach additional sheet if necessary)

Name of Source and Location	NEDS ID #	Emissions -- Tons/Year						Effectiveness of Control Equipment	Relative Influence on Site	Direction from Site	Distance from Site (M)
		TSP	SO_2	NO_2	CO	O_3	HC				
U.I. #1		35.9						38.3%	SIGN	SSW	524.42
LEX TERM		.7	13.6	4.7	.4		.1		MINOR	SW	994.44

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Mobile Source Worksheet

5. Mobile Sources that may influence the Site: (All pollutants except SO_2)

Type: (check one) G ☐	Names of Roadways (nearest to site first): STILES ST	I-95 ENTRANCE	I-95						
Arterial Highway									
Expressway									
Freeway									
Parkway									
Major Street or Highway									
Through Street or Highway									
Local Street or Road									
Traffic Activity: (complete as applicable) G ☐									
1. *Distance of roadway from air intake(ft)	25	30	48						
2. Direction of roadway from air inlet (8 pts)	E	N	NW SE						
3. Composition of roadway	ASPH	ASPH	ASPH						
4. Number of traffic lanes	2	1	4						
5. Average daily traffic (estimate) (K)	.5	4.2K	100K						
6. Average vehicle speed (estimate, mph)	10	10	55						
7. Traffic is 1 or 2 way (1 or 2)	2	1	2						
8. Number of parking lanes	2	0	0						
9. Are parking lanes used for traffic part of day? (yes,no)	NO	N/A	N/A						
10. Roadway paved (yes, no)	Y	Y	Y						
11. Is dust visibly re-entrained? (yes, no)	N	N	Y						
12. Does roadway have curb? (yes, no)	N	N	Y						
13. Does dust collect near edges? (yes, no)	Y	Y	Y						

*Identify probe, if more than one.

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3.3 Topography

1. The general characteristics of the terrain over a 2 mile radius from the site are (check one):

   _____ Smooth, _____ Rolling, _____ Rough [ ] G

2. Topographic features that influence the site: [ ] G

   (Types – hills, valleys, depressions, bodies of water, ridges, cliffs)

(attach additional sheet if necessary)

Type	Size	Direction from Site	Distance from Site
NEW HAVEN HARBOR	2 miles x 1mile	S.W.	0.5 Km

3.4 Obstructions (See Appendix E)

List obstructions and complete information: [ ] G

(Types – buildings, trees, ridges, cliffs) NONE

Type	Size	Direction from Site	Distance from Site

3.5 Meteorology and Climatology

1. Source of representative meteorological data (check one): [ ] G

_____ National Weather Service

_____ Airport Weather Service

_____ Site Weather Station

__X__ Other (specify) SHED STATE ST.

_____ Not available

2. Describe the annual and seasonal weather patterns that influence the site by summary wind roses or a table of frequency of occurrence for wind speeds and directions. Pollutant roses for the same periods desired if available. Provide attachments. [ ] G

3. UTM Coordinates, Zone 18 East 674.300 North 4575.100

or Latitude and Longitude _____ _____ [ ] G

4. Location of representative meteorological station from monitoring site. [ ] G

Distance 1.5 miles Direction NW

3.6 Probe Siting (See Appendix E)

Information Topic	Pollutants SO_2	PM10	TEOM	PM2.5		
PLATFORM						
1. Location (top of building, ground level, other specify)						
2. If on building, give height (M)		1.5	2.5			
width (M)		4	2			
depth (M)		2.5	2.5			
3. Horizontal distance from supporting structure (M)		0	0			R [ ]
4. Vertical distance above supporting structure (M)		N/A	N/A		N/A	R [ ]
5. Height of probe above ground (M)		3	3.5			R [ ]
6. Distance from trees (M)		16	16			G [ ]
7. Horizontal distance from edge of nearest traffic lane (See Appendix E, Fig. 1 and Tables 1, 2, 3 and 4) (M)	N/A	15	16			R [ ]
8. Horizontal distance from nearest parking lot (M)	N/A	NONE	--			G [ ]
9. Horizontal distance from walls, parapets, penthouses, etc. (M)		N/A	--			R [ ]
10. Distance from obstacles, such as buildings		NONE	NONE			R [ ]
11. Distance from furnace or incineration flues (M)						G [ ]
12. Unrestricted air flow		Y	Y	Y		R [ ]
13. Located in paved area or vegetative ground cover		NRG	NRG	NRG		G [ ]

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3.7 Monitor Information

Documentation of monitoring information [ ] G

	Pollutants SO_2	PM10	PM2.5	PM10	
1. Instrument manufacturer		WEDDING	R & P	R & P	
2. Instrument Model No.		1200	2025	2000	
3. SAROAD Method Code		62		79	
4. Date Sampling Began		10-85	12-31-98		
5. Frequency time interval of measurement		24 HR 6th DAY	24 HR 3rd DAY	HOURLY	
6. Probe material		N/A	S.S.	S.S	
7. Residence time*		N/A	20 SEC	20 SEC	

*If manifold involved, See Section 2.2, Quality Assurance Handbook for Air Pollution, Volume II, May, 1977.

3.8 Site and Data History

[ ] G

Indicate where applicable:

1. Changes in inlet probe _____
2. Changes in manifold _____
3. Instrumental changes _____
4. Breaks in the data record _____
5. Pollutant concentration changes since beginning of data record _____
6. Time periods of invalid data and reason for occurrence

	Dates (month/year)
a. Malfunction of instrument	
b. Maintenance of instrument	
c. Failure to meet quality assurance quality	
d. Vandalism	
e. Other (specify) BRIDGE & RD REPAIR 7/88	

7. Is this NAMS site a previous NASN site? (TSP only)

Yes _____ No _____

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3.9 Site Representativeness

1. Scales of Representativeness [ ] R	Pollutants SO_2	PM10	PM10	: .	PM 2.5
(a) Represents a microscale (several meters - 100 meters)					✓
(b) Represents a middle scale (0.1 - 0.5 km)		✓	✓		
(c) Represents a neighborhood scale (0.5 - 4 km)					
(d) Represents an urban scale (4.0 - 50 km)					
2. Averaging Times [ ] R					
(a) Represents 24-hour average		✓	✓		✓
(b) Represents 8-hour average	N/A	N/A	N/A	N/A	N/A
(c) Represents 1-hour average	N/A	N/A	✓		N/A
(d) Represents annual average		✓	✓		✓
3. Monitoring Objectives [ ] R					
(a) Category (a)					
(1) Represents worst condition		✓	✓		✓
(2) Represents typical condition					
(b) Category (b)					
(1) Represents worst condition					
(2) Represents typical condition					

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3.10 Custody and Control of Data

1. Agency responsible for data collection CTDEP
2. Individual's name (print) ALAN LESTON
3. Phone number 860-424-3027
4. Agency analyzing samples ERI
5. Individual's name (print) CHRIS PERKINS
6. Phone number
7. Reports of data are made to: (agency name) USEPA REGION I
8. Individual's name (print) NORM BELOIN
9. Phone number 781-860-6700

4.0 SITE EVALUATION

4.1 Instructions for NAMS Site Evaluators

The NAMS Hard Copy Information (NHCI) form has been revised to allow its use in the site evaluation process. Each item on this form should have been completed prior to the time of site evaluation. At the time of the site evaluation, copies of the forms will be used during the site evaluations. Each item will be checked for completeness, accuracy and compliance with siting criteria. Then, each block "☐" will be filled in with either YES or NO.

If the siting criteria is met, put YES in the appropriate space. If it is not met, put NO. It will be necessary to provide details pertaining to NO answers in the space below designated for comments and recommendations. Show the section and item number, describe the deficiency, and recommend action required for correction. Estimate the time needed to make the correction on each item found in violation.

Any waivers requested or granted should be indicated.

4.2 Comments and Recommendations

a. Site number _____ page nos. _____ of _____

b. Name of evaluator (print) _____

c. Date of evaluation _____

d. Comments by section and item numbers (use extra pages when needed)

Section _____ Item _____