

STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION



April 29, 2010

H. Curtis Spalding, Regional Administrator
U.S. Environmental Protection Agency
EPA New England Regional Office
5 Post Office Square – Suite 100
Boston, MA 02109-3912

**Re: Reasonably Available Control Technology Update to Address
Control Techniques Guidelines Issued in 2006, 2007 and 2008**

Dear Administrator Spalding:

On February 1, 2008, the Connecticut Department of Environmental Protection (CTDEP) submitted to the U.S. Environmental Protection Agency (EPA) an attainment demonstration for the 1997 8-hour ozone national ambient air quality standard (NAAQS). That attainment demonstration includes an analysis of how Connecticut complies with the reasonably available control measures and reasonably available control technology (RACT) requirements of the federal Clean Air Act. This letter is intended as a revision to the State Implementation Plan (SIP) concerning the RACT requirements for volatile organic compounds (VOC), given EPA's adoption of eleven control techniques guidelines (CTGs) in 2006 through 2008. Pursuant to 40 CFR 51, Appendix V, Section 2.1(a), a copy of the final regulation implementing six of the CTGs and documentation of the public hearing is provided. For three other CTGs, this submission includes negative declaration statements, and, for one CTG, this submission includes a statement of equivalent level of control.

Negative Declarations

CTDEP hereby submits negative declarations for the three source categories identified in Table 1. For these three source categories, CTDEP has determined that there are no sources or no sources that meet the applicability threshold of the applicable CTG in Connecticut.

CTDEP staff reviewed the inventory of sources for facilities with North American Industrial Classification System codes that correspond to the 2006 through 2008 CTG categories; interviewed its field staff; and searched telephone directories and Internet web pages (including other state government databases) to determine if any sources meeting the applicability requirements for the 2006 through 2008 CTGs are located in the state. Staff has determined that there are no sources or no sources that meet the applicability thresholds for each of the three CTGs listed in Table 1.

Table 1. CTG Categories for Negative Declaration.

<i>Source category</i>	<i>CTG document</i>	<i>Document number</i>
Flat wood paneling coating	Control techniques guidelines for flat wood paneling coatings	EPA-453/R-06-004 2006/09
Fiberglass boat manufacturing	Control techniques guidelines for fiberglass boat manufacturing materials	EPA-453/R-08-004 2008/09
Automobile and light-duty truck assembly coating	Control techniques guidelines for automobile and light-duty truck assembly coatings	EPA-453/R-08-006 2008/09

Equivalent Level of Control

For the *Control Techniques Guidelines for Miscellaneous Industrial Adhesives* (EPA 453/R-08-005 2008/09), CTDEP has determined that an equivalent level of control is satisfied with an existing air quality regulation, Regulations of Connecticut State Agencies (RCSA) section 22a-174-44. RCSA section 22a-174-44, concerning adhesives and sealants, was adopted on October 3, 2008 and submitted to EPA on November 18, 2008 as an appendix to the Annual Fine Particulate Matter Attainment Demonstration. RCSA section 22a-174-44 is based on a model rule of the Ozone Transport Commission (OTC). The OTC model rule is, in turn, based on a reasonably available control technology determination prepared by the California Air Resources Board in 1998 and regulations adopted in the California local air pollution control districts.

RCSA section 22a-174-44 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 operations. In addition to the VOC content limits and use requirements, this section includes requirements for cleanup and preparation solvents and allows for compliance through the use of add-on air pollution control equipment.

RCSA section 22a-174-44 includes all of the CTG-recommended approaches to controlling VOC emissions from the application and cleanup of miscellaneous industrial adhesives (adhesive VOC content limits, cleaning solvent VOC content limits, work practices, optional air pollution control equipment requirements, surface preparation, spray gun cleaning) and exceeds the recommendations of the CTG by establishing VOC content limits for sealants and sealant primers and by regulating sellers and manufacturers, not just applicators, of regulated adhesives, adhesive primers and sealants. The exemptions of RCSA section 22a-174-44 are similar to those recommended in the CTG. While there are minor differences in the named adhesive categories regulated in the CTG and RCSA section 22a-174-44,¹ those differences are inconsequential compared to the inclusion of a number of categories of sealants and sealant primers in RCSA section 22a-174-44, which are not included in the CTG, and the broader applicability of RCSA section 22a-174-44. CTDEP does not believe any RACT deficiency exists.

CTG Requirements Undergoing Regulatory Adoption

CTDEP determined that regulatory revisions would be needed to address the requirements of the seven CTGs listed in Table 2, and CTDEP has completed the adoption of regulatory requirements consistent with six of the seven CTGs. Table 2 identifies the regulatory citation associated with each CTG. CTDEP will continue to pursue adoption of requirements consistent with the remaining CTG and, upon completion of the process, will submit the revised regulation to EPA as a revision to the SIP.

¹ RCSA section 22a-174-44 does not include a general adhesive-to-wood VOC content limit and thus would regulate such adhesives at a higher VOC content than recommended in the CTG. RCSA section 22a-174-44 does not include motor vehicle adhesives or motor vehicle weatherstrip adhesives, although comparable categories of adhesives are regulated in RCSA section 22a-174-40, concerning consumer products.

Table 2. CTG Categories Requiring a Regulatory Update

<i>CTG document</i>	<i>CTG document number</i>	<i>Regulatory citation</i>	<i>Status of regulatory revision</i>
Control techniques guidelines for industrial cleaning solvents	EPA-453/R-06-001 2006/09	RCSA section 22a-174-20, new subsection (ii)	April 6, 2010
Control techniques guidelines for offset lithographic printing and letterpress printing	EPA-453/R-06-002 2006/09	RCSA section 22a-174-20, new subsection (gg)	April 6, 2010
Control techniques guidelines for flexible package printing	EPA-453/R-06-003 2006/09	RCSA section 22a-174-20, new subsection (ff)	April 6, 2010
Control techniques guidelines for paper, film and foil coatings	EPA-453/R-07-003 2007/09	RCSA section 22a-174-20, revised subsection (q)	April 6, 2010
Control techniques guidelines for large appliance coatings	EPA-453/R-07-004 2007/09	RCSA section 22a-174-20, new subsection (hh)	April 6, 2010
Control techniques guidelines for metal furniture coatings	EPA-453/R-07-005 2007/09	RCSA section 22a-174-20, revised subsection (p)	April 6, 2010
Control techniques guidelines for miscellaneous metal and plastic parts coatings	EPA-453/R-08-003 2008/09	RCSA section 22a-174-20, revision of subsection (s)	Draft prepared; undergoing pre-publication review

Administrative Materials

Two sets of public participation documents are included in this submission: one for the adoption of the enforceable mechanism through an amendment to RCSA section 22a-174-20 and one for the RACT update statement.

Enforceable Mechanism

The six adopted CTGs are now included in RCSA section 22a-174-20, either in amended or new subsections. The amendments and new requirements were processed through the administrative regulatory adoption process as a single project, and all required state and federal procedures for public participation were followed as evidenced in the attachments listed below. Such attachments are included in satisfaction of the requirements of 40 CFR 51, Appendix V, Section 2. The public notice and certification of public hearing demonstrate that CTDEP held a public hearing in accordance with the public notice and that CTDEP followed appropriate state and federal procedures for public participation. The hearing report provided for each new subsection or amendment includes a summary of comments received and a description of changes made as a result of the comments. The submitted attachments include the following:

Attachment A: RCSA section 22a-174-20(p), (q), (ff), (gg), (hh) and (ii)

- A-1. Notice of public hearing.
- A-2. Certification of public hearing.
- A-3. Hearing report.

Page 4
Curtis Spalding
April 29, 2010

Please note that sections 8 and 9 of the formal, legal-sized version of the amendment (pages 29-30) consist of revisions to RCSA sections 22a-174-32(b)(3) and 22a-174-33(f)(6), which are not being submitted for SIP approval.

RACT Update Statement

The RACT update, consisting of the statements of negative declaration and equivalency, was also subject to public notice, hearing and opportunity for comment, which is documented in Attachment B, as follows:

Attachment B: RACT Update Statement

- B-1. Notice of public hearing.
- B-2. Certification of public hearing.
- B-3. Hearing report.

To the extent quantifiable, CTDEP plans to incorporate expected VOC emission reductions from these regulatory changes into the next round of revisions to the SIP for ozone.

We look forward to working with EPA as a critical partner in our continuing mission to conserve, improve and protect the environment and public health for the citizens of Connecticut. If you require additional information or have any questions about this submission, please get in touch with Ric Pirolli, Assistant Director, Engineering and Enforcement Division of the Bureau of Air Management.

Sincerely yours,



Anne R. Gobin
Chief, Bureau of Air Management

cc: Anne Arnold, EPA Region 1
Robert McConnell, EPA Region 1
Ric Pirolli, CTDEP

Attachment A: RCSA section 22a-174-20(p), (q), (ff), (gg), (hh) and (ii)

- A-1. Notice of public hearing.
- A-2. Certification of public hearing.
- A-3. Hearing report.



Office of Secretary of the State
 State of Connecticut
 P.O. Box 150470, Hartford, CT 06115-0470

Susan Bysiewicz
 Secretary of the State

Lesley D. Mara
 Deputy Secretary of the State

RECEIVED

APR 15 2010

DEPT. OF ENVIRONMENTAL PROTECTION
 OFFICE OF THE COMMISSIONER

April 9, 2010

Amey W. Marrella, Commissioner
 Department of Environmental Protection
 79 Elm Street
 Hartford, CT 06105

Re: Agency Regulation Concerning:
Amendment of Sections 22a-174-20, 22a-174-32(b)(3) and 22a-174-33(f)(6) (Abatement of Air Pollution)
 Regulation Review Committee Docket Number: 2010-003
 Secretary of the State File: 5965

Dear Commissioner Marrella:

This is to acknowledge receipt of two certified copies of the above referenced regulation issued by the Department of Environmental Protection. One of the two copies has been forwarded to the Commission on Official Legal Publications as required by law.

Said regulation was received and filed in this office on April 6, 2010. The effective date of this regulation is April 6, 2010.

We request that you please forward the original or a copy of this acknowledgement letter to your agency's legal services department, and/or to the agency department responsible for adopting the regulation, for its files.

Sincerely,

Barbara Sladek
 RLS Assistant Coordinator
 860-509-6147

CC: Commission on Official Legal Publications (Letter and Copy of Regulation)

File

IMPORTANT: Read Instructions on bottom of Certification Page before completing this form. Failure to comply with instructions may cause disapproval of proposed Regulations.

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Concerning

Amendment of Sections 22a-174-20, 22a-174-32(b)(3) and 22a-174-33(f)(6) of the Regulations of Connecticut State Agencies (RCSA)

Sections 1-3

2010 APR - 6 PM 3:17
SECRETARY OF THE STATE
LEGISLATION & ELECTIONS
ADMINISTRATION DIVISION

Section 1. Subsection (f)(9) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

- (9) The provisions of subsection (f) shall not apply to:
- (A) The use of equipment for which other requirements are specified by [subsections] any one of the following subsections of this section: (a) through (e), (k) through (y) or (ff) through (jj); [22a-174-20(a) through (e) inclusive, subsections 22a-174-20(k) through (y) inclusive,] or for which [“]reasonably available control technology[”] is required by [subsection 22a-174-20(ee).] section 22a-174-32 of the Regulations of Connecticut State Agencies;
 - (B) The spraying or other employment of insecticides, pesticides, or herbicides[.] ; or
 - (C) The “emission” of “organic compounds” from coating operations where the “volatile organic compound” portion of the coating solvent is 20 per cent or less by weight.

Sec. 2. Subsection (g) of section 22a-174-20 of the Regulations of Connecticut State Agencies are amended to read as follows:

(g) [“Architectural coatings.”

(g)(1) On or after January 1, 1974, no “person” shall sell or offer for sale to the final user in containers greater than 1-quart (0.95 liter) capacity any “architectural coating” or solvent for the purpose of thinning or diluting any “architectural coating” unless the solvent composition is are nonhighly photochemically reactive, as defined in subdivision (i)(4) of this section.

(g)(2) On or after January 1, 1975, no “person” shall employ, apply, evaporate, or dry any “architectural coating” purchased in containers of greater than 1- quart (0.95 liter) capacity unless the solvent composition is nonhighly photochemically reactive, as defined in subdivision (i)(4) of this section.

(g)(3) On or after January 1, 1975, no “person” shall thin or dilute for application any “architectural coating” with a highly photochemically reactive solvent as defined in subdivisions (i)(1) and (i)(2) of this section, purchased in containers of greater than 1-quart (0.95 liter) capacity.] **Reserved.**

Sec 3. Subdivisions (1) and (2) of subsection (l) of section 22a-174-20 of the Regulations of Connecticut State Agencies are amended to read as follows:

(l)(1) Definitions. For the purposes of this subsection:

- (A) “Air knife system” means “air knife system” as defined in 40 CFR 63.461.
- (B) “Cold cleaning” means the batch process that involves spraying, brushing, flushing or immersion to clean and remove [of cleaning and removing] soils from metal surfaces [by spraying, brushing or flushing with or immersing in an unheated] using a degreasing solvent maintained at a temperature less than the boiling point of the solvent. [Wipe] Neither wipe cleaning nor spray application equipment cleaning is [not] included in this definition.

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 3 (continued)

- (C) "Continuous web cleaning machine" means "continuous web cleaning machine" as defined in 40 CFR 63.461.
- (D) "Conveyorized degreasing" means the continuous process of cleaning and removing soils from metal surfaces by operating with either cold or vaporized degreasing solvents.
- (E) "Degreasing solvent" means any volatile organic compound used for metal cleaning.
- (F) "Freeboard height" means, for a cold cleaner, the distance from the liquid solvent in the degreaser tank to the lip of the tank. For an open top vapor degreaser it is the distance from the solvent vapor level in the tank during idling to the lip of the tank. For a vapor conveyorized degreaser, it is the distance from the vapor level to the bottom of the entrance or exit opening whichever is lower. For a cold conveyorized degreaser, it is the distance from the liquid solvent level to the bottom of the entrance or exit opening whichever is lower.
- (G) "Freeboard ratio" means the freeboard height divided by the smaller interior dimension (length, width or diameter) of the degreaser.
- (H) "Open top vapor degreasing" means the batch process of cleaning and removing soils from metal surfaces by condensing hot degreasing solvent vapor on the colder metal parts.
- (I) "Metal cleaning" means the process of cleaning soils from metal surfaces by cold cleaning or open top vapor degreasing or conveyorized degreasing.
- (J) "Refrigerated chiller" means a device, mounted above the water jacket and the primary condenser coils, that consists of secondary coils which carry a refrigerant to provide a chilled air blanket above the solvent vapor to reduce emissions from the degreaser bath. The chilled air blanket temperature, measured at the centroid of the degreaser at the coldest point, shall be no greater than [thirty (30) percent] 30% of the solvent's boiling point in degrees Fahrenheit.
- (K) "Special and extreme solvent metal cleaning" means the use of a cold cleaning unit to clean metal parts where such metal parts are used:
- (i) In the research, development, manufacture and rework of electronic parts, assemblies, boxes, wiring harnesses, sensors and connectors used in aerospace service,
 - (ii) In [the research, development, manufacture and rework of] manufacturing ozone, nitrous oxide, fluorine, chlorine, bromine, halogenated compounds or oxygen in concentrations greater than [twenty-three percent (23%)] 23%,
 - (iii) In the research, development, manufacture and rework of high precision products for which contamination must be minimized in accordance with a customer or other specification, or
 - (iv) In a manner that exposes such metal parts to ozone, nitrous oxide, fluorine, chlorine, bromine, halogenated compounds or oxygen in concentrations greater than [twenty-three percent (23%)] 23%.
- (L) "Squeegee system" means "squeegee system" as defined in 40 CFR 63.461.

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 3-4

(l)(2) The provisions of this subsection apply with the following exceptions[.] :

- (A) Open top vapor degreasers with an open area smaller than one [(1)] square meter (10.8 square feet) are exempt from the provisions of [parts] clauses (ii), (iv) and (v) of subparagraph [(l)(4)(C)] (C) of subdivision (4) of subsection (l) of this section;
- (B) ConveyORIZED degreasers with a solvent/air interface smaller than two [(2)] square meters (21.6 square feet) are exempt from the provisions of subparagraph [(l)(5)(C)] (C) of subdivision (5) of subsection (l) of this section; and
- (C) Metal cleaning equipment which uses 1,1,1 trichloroethane, methylene-chloride, or trichlorotrifluoroethane.

Sec 4. Subsections (p) and (q) of section 22a-174-20 of the Regulations of Connecticut State Agencies are amended to read as follows:

(p) Metal furniture coating.

(1) Definitions. For the purpose of this [section] subsection:

["Application area" means the area where the coating is applied by spraying, dipping or flowcoating techniques.

"Metal furniture coating" means the surface coating of any furniture made of metal or any metal part which will be assembled with other metal, wood, fabric, plastic or glass parts to form a furniture piece.]

- (A) "Air-dried" means cured at a temperature below 90° C (194°F);
- (B) "As-applied" means the composition of coating at the time it is applied to a substrate, including any solvent, catalyst or other substance added to the coating as supplied by the manufacturer;
- (C) "Baked" means cured at a temperature at or above 90° C (194°F);
- (D) "Capture efficiency" means the ratio of VOC emissions delivered to the control device to the total VOC emissions resulting from metal furniture coating and related cleaning, expressed as a percentage;
- (E) "Control device efficiency" means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;
- (F) "Coating" means a material that is applied to a surface and that forms a continuous film in order to beautify or protect such surface;
- (G) "Coating unit" means a series of one or more coating applicators and any associated drying area or oven wherein a coating is applied, dried or cured, including any drying area or oven where a coating is applied, dried or cured prior to any subsequent application of a different coating. A "coating unit" does not include any point other than the point where the coating is dried or cured;
- (H) "Dip coating" means a method of applying a coating to a surface by submersion into and removal from a coating bath;

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 4 (continued)

- (I) “Electric-insulating and thermal-conducting coating” means a coating that displays an electrical insulation of at least 1000 volts DC per mil on a flat test plate and an average thermal conductivity of at least 0.27 BTU per hour-foot-degree-Fahrenheit;
- (J) “Electrostatic application” means a method of applying coating particles or coating droplets to a grounded surface by electrically charging such particles or droplets;
- (K) “Extreme high gloss coating” means a coating that, when tested by the most recent active version of the American Society for Testing Material Test Method D523, shows a reflectance of 75 or more on a 60 degree meter;
- (L) “Extreme performance coating” means a coating used on a metal surface where the coated surface is, in its intended use, subject to one of the following conditions:
- (i) Chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures or solution,
 - (ii) Repeated exposure to temperatures in excess of 121.1° C (250° F), or
 - (iii) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleaners or scouring agents;
- (M) “Flow coating” means a non-atomized technique of applying coating to a substrate using a fluid nozzle in a fan pattern with no air supplied to the nozzle;
- (N) “Heat-resistant coating” means a coating that is required to withstand a temperature of at least 204.5° C (400 ° F) during normal use;
- (O) “HVLP spray application” means to apply a coating using a high-volume, low-pressure spray application system that is designed to operate at air pressures between 0.1 and 10 pounds per square inch gauge, measured dynamically at the center of the air cap and the air horns;
- (P) “Metal furniture coating” means the application of a surface coating to any furniture made of metal or any metal part that will be assembled with other metal, wood, fabric, plastic or glass parts to form a furniture piece;
- (Q) “Metallic coating” means a coating that contains more than five grams of metal particle per liter of coating, as-applied;
- (R) “Multi-component coating” means a coating requiring the addition of a separate reactive resin, such as a catalyst or hardener, before application to form an acceptable dry film;
- (S) “One-component coating” means a coating that is ready for application as packaged for sale, except for the addition of a thinner to reduce the viscosity;
- (T) “Overall control efficiency” means the product of the capture efficiency and the control device efficiency;
- (U) “Pretreatment coating” means a coating, containing no more than 12% solids by weight and at least one-half percent acid by weight, applied directly to metal surfaces to provide surface etching, adhesion and ease when stripping;

STATE OF CONNECTICUT
REGULATION
 OF
 NAME OF AGENCY
 Environmental Protection

Sec. 4 (continued)

- (V) “Repair coating” means a coating used to recoat portions of a product that has sustained mechanical damage to the coating following normal painting operations;
- (W) “Roll coating” means a coating method using a machine that applies coating to a substrate by continuously transferring coating through a set of oppositely rotating rollers;
- (X) “Safety-indicating coating” means a coating that changes in a physical characteristic, such as color, to indicate unsafe conditions;
- (Y) “Solar-absorbent coating” means a coating that has as its prime purpose the absorption of solar radiation;
- (Z) “Solid-film lubricant” means a very thin coating consisting of a binder system containing as its chief pigment material one or more of molybdenum disulfide, graphite, polytetrafluoroethylene or other solids that act as a dry lubricant between faying surfaces; and
- (AA) “Stencil coating” means an ink or a coating that is rolled or brushed onto a template or stamp to add identifying letters or numbers to metal parts or products.

[(2) The owner or operator of a metal furniture coating line shall not cause or permit the discharge into the atmosphere of any volatile organic compounds from any coating in excess of 0.36 kilograms per liter of coating (3.0 pounds per gallon), excluding water and exempt volatile organic compounds listed in 40 CFR 51.100(s) as amended from time to time, delivered to the coating applicator from prime and topcoat or single coat operations.]

[(3)] (2) Applicability.

(A) The provisions of this subsection apply to:

- (i) An owner or operator of any premises that has actual emissions of VOC of at least [fifteen (15)] pounds per day [or more in any one day] from metal furniture [operations] coating and related cleaning, prior to the use of controls, or
- (ii) An owner or operator that became subject to this subsection on and after October 1, 1989. [After October 1, 1989 any premises, which is or becomes subject to the provisions of this subsection, shall remain subject to the provisions of this subsection regardless of the daily actual emissions. Notwithstanding the above, the owner or operator of any piece of equipment that was not required to meet control requirements by this subsection prior to October 1, 1989, shall have until October 1, 1990, to comply with the control requirements of this subsection for that piece of equipment.]

(B) Any owner or operator conducting metal furniture coating shall:

- (i) Comply with the requirements of this subsection no later than January 1, 2011, and
- (ii) Remain subject to this subsection regardless of actual daily VOC emissions.

STATE OF CONNECTICUT
REGULATION
 OF
 NAME OF AGENCY
 Environmental Protection

Sec. 4 (continued)

(3) Exemptions and exceptions.

(A) The requirements of this subsection shall not apply to the following coatings or lubricant:

- (i) Stencil coating.
- (ii) Safety-indicating coating.
- (iii) Solid-film lubricant.
- (iv) Electric-insulating and thermal-conducting coating.
- (v) Repair coating, or
- (vi) Coating applied with a hand-held aerosol can.

(B) An owner or operator of a metal furniture coating unit operating in accordance with subdivision (5) of this subsection is exempt from any obligation to comply with subsection (bb) of this section.

(C) The requirements of subdivision (4) of this subsection shall not apply to a person using air pollution control equipment to comply with subdivision (5) of this subsection.

(D) An owner or operator of a metal furniture coating unit operating under a valid order issued pursuant to subsection (cc)(2) of this section or a valid permit issued pursuant to subsection (cc)(3) of this section shall operate as required in such order or permit, regardless of the requirements of this subsection.

(4) Application methods. A person shall not apply a VOC-containing coating to any metal furniture or metal furniture part unless the coating is applied by one of the following methods using equipment operated in accordance with the specifications of the equipment manufacturer:

- (A) Electrostatic application;
- (B) Flow coating;
- (C) Dip coating;
- (D) Roll coating;
- (E) HVLP spray application;
- (F) Hand application; or
- (G) Any other coating application method capable of achieving a transfer efficiency equivalent to or better than that provided by HVLP spray application.

(5) Compliance options. Except as provided in subdivision (3) of this subsection, no owner or operator of a metal furniture coating unit shall apply any coating, inclusive of any VOC-containing materials added to the original coating supplied by the manufacturer, unless the owner or operator uses one of the following methods to limit emissions of VOCs:

- (A) Use only coatings with an as-applied VOC content no greater than the level specified in Table 20(p)-1, according to coating category and drying method. The VOC content limits of Table 20(p)-1 apply to the volume of coating as-applied, less water and less exempt VOC;

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 4 (continued)

- (B) Install, operate and maintain according to the manufacturer's recommendations air pollution control equipment that reduces uncontrolled VOC emissions to the atmosphere from a coating unit by an overall control efficiency of at least 90%; or
- (C) An alternative emission reduction plan that achieves a level of control equivalent to the levels described in subparagraph (A) or (B) of this subdivision and that is requested from and approved by the commissioner in accordance with subsection (cc) of this section.
- (6) Work practices. Each owner or operator shall use the following work practices:
- (A) New and used VOC-containing coating or cleaning solvent, including a coating mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
- (B) Spills and leaks of VOC-containing coating or cleaning solvent shall be minimized. Any leaked or spilled VOC-containing coating or cleaning solvent shall be absorbed and removed immediately;
- (C) Absorbent applicators, such as cloth and paper, which are moistened with VOC-containing coatings or cleaning solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling; and
- (D) VOC-containing coating or cleaning solvent shall be conveyed from one location to another in a closed container or pipe.

Table 20(p)-1. As-Applied VOC Content Limits Per Volume of Coating (Excluding Water and Exempt VOC) per Coating Category, Specific to the Drying Process

Coating Category	Baked		Air Dried	
	g/L	lb/gal	g/L	lb/gal
General, one component	<u>275</u>	<u>2.3</u>	<u>275</u>	<u>2.3</u>
General, multi-component	<u>275</u>	<u>2.3</u>	<u>340</u>	<u>2.8</u>
Extreme high gloss	<u>360</u>	<u>3.0</u>	<u>340</u>	<u>2.8</u>
Extreme performance	<u>360</u>	<u>3.0</u>	<u>420</u>	<u>3.5</u>
Heat-resistant	<u>360</u>	<u>3.0</u>	<u>420</u>	<u>3.5</u>
Metallic	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
Pretreatment	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
Solar-absorbent	<u>360</u>	<u>3.0</u>	<u>420</u>	<u>3.5</u>

(7) Records. An owner or operator shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection. All records shall be:

- (A) Made available to the commissioner to inspect and copy upon request;
- (B) Maintained for five years from the date such record is created; and
- (C) Maintained in compliance with subsection (aa)(1) through (9) of this section.
- (g) [Paper coating.] Paper, film and foil coating.
- (1) Definitions. For the purpose of this subsection:

["Knife coating" means the application of a coating material to a substrate by means of drawing the substrate beneath a knife that spreads the coating evenly over the full width of the substrate.

STATE OF CONNECTICUT
REGULATION
 OF
 NAME OF AGENCY
 Environmental Protection

Sec. 4 (continued)

“Paper coating” means coatings put on paper and pressure sensitive tapes regardless of substrate by knife, roll or rotogravure coating. Related web coating processes on plastic film and decorative, protective or functional coatings on metal foil are included in this definition.

“Roll coating” means the application of a coating material to a substrate across the entire width of a web by means of hard rubber or steel rolls.

“Rotogravure coating” means the application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate.

(2) The owner or operator of a paper coating facility shall not cause or permit the discharge into the atmosphere of any volatile organic compounds from any coating in excess of 0.35 kilograms per liter of coating (2.9 pounds per gallon), excluding water and exempt volatile organic compounds listed in 40 CFR 51.100(s) as amended from time to time, delivered to the coating applicator from a paper coating line.]

- (A) “As-applied” means the composition of coating at the time it is applied to a substrate, including any solvent, catalyst or other substance added to the coating as supplied by the manufacturer;
 - (B) “Capture efficiency” means the ratio of VOC emissions delivered to the control device to the total VOC emissions resulting from paper, film and foil coating and related cleaning, expressed as a percentage;
 - (C) “Coating” means a material applied onto or impregnated into a substrate for decorative, protective, or functional purposes. “Coating” does not include any material used to form an unsupported substrate, such as vinyl sheeting, blown film, cast film or extruded film.
 - (D) “Coating line” means a series of coating applicators, flash-off areas, and any associated curing or drying equipment between one or more unwind or feed stations and one or more rewind or cutting stations;
 - (E) “Control device efficiency” means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;
 - (F) “Overall control efficiency” means the product of the capture efficiency and the control device efficiency;
 - (G) “Paper, film and foil coating” means the application of a continuous layer of coating across the width or any portion of the width of a paper, film or foil substrate to: (i) Create a functional or protective layer; (ii) saturate a substrate for lamination; or (iii) provide adhesion between two substrates for lamination;
 - (H) “Pressure sensitive adhesive” means adhesive that forms a bond when pressure is applied, without activation via solvent, water or heat; and
 - (I) “Pressure sensitive tape and label coating” means the application of a pressure sensitive adhesive to a paper, film or foil substrate.
- [(3)] (2) Applicability.
- (A) The provisions of this subsection apply to:

STATE OF CONNECTICUT

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 4 (continued)

(i) An owner or operator of any premises that has actual emissions of VOC of at least [fifteen (15)] 15 pounds (6.8 kilograms) per day [or more in any one day] from paper, film and foil coating and related cleaning [operations], prior to the use of controls, or

(ii) An owner or operator conducting paper, film and foil coating that became subject to this subsection on and after October 1, 1989. [After October 1, 1989 any premises that is or becomes subject to the provisions of this subsection shall remain subject to the provisions of this subsection regardless of the daily actual emissions. Notwithstanding the above, the owner or operator of any piece of equipment that was not required to meet control requirements by this subsection prior to October 1, 1989, shall have until October 1, 1990, to comply with the control requirements of this subsection for that piece of equipment.]

(B) Any owner or operator conducting paper, film and foil coating shall:

(i) Comply with the requirements of this subsection no later than January 1, 2011, and

(ii) Remain subject to this subsection regardless of actual daily VOC emissions.

[(4) The provisions of this subsection do not apply to any coating line with a continuous web that has both paper coating and printing stations and that is subject to the requirements of section 22a-174-20(v) of the Regulations of Connecticut State Agencies.]

(3) Exemptions and exceptions.

(A) The provisions of this subsection shall not apply to the following activities:

(i) Coating performed on any coating line that has both paper coating and printing stations and that is conducted pursuant to subsection (v) of this section.

(ii) The application of sizing or water-based clays in association with the use of a papermaking machine, or

(iii) The application of inks, coatings or adhesives in association with flexible package printing conducted pursuant to subsection (ff) of this section or offset lithographic or letterpress printing conducted pursuant to subsection (gg) of this section.

(B) An owner or operator of any paper, film and foil coating line operating in compliance with subdivisions (4) and (5) of this subsection is exempt from any obligation to comply with subsection (bb) of this section.

(C) An owner or operator of a paper, film and foil coating line operating under a valid order issued pursuant to subsection (cc)(2) of this section or a valid permit issued pursuant to subsection (cc)(3) of this section shall operate as required in such order or permit, regardless of the requirements of this subsection.

(4) Except as provided in subdivision (3) or (5) of this subsection, only coatings with an as-applied VOC content less than or equal to 350 grams per liter of coating, excluding the volume of any water and exempt compounds, shall be used for paper, film and foil coating.

STATE OF CONNECTICUT
REGULATION
OF
NAME OF AGENCY
Environmental Protection

Sec. 4 (continued)

(5) Additional requirements. The owner and operator of any paper, film and foil coating line with a potential to emit greater than 25 tons of VOCs per year, prior to the use of controls, shall use one of the following methods to control emissions of VOCs:

(A) Use only coatings that individually meet the applicable VOC emission limit of clauses (i) or (ii) of this subparagraph, as applicable, or use only coatings so that the daily weighted average of the VOC content of all coatings used on a single coating line meets the VOC emission limit of clause (i) of this subparagraph:

(i) For all coatings except pressure sensitive tape and label coatings, use only coatings that result in VOC emissions no greater than 0.35 kilograms of VOC per kilogram of coating solids applied, or

(ii) For pressure sensitive tape and label coatings, use only coatings that result in VOC emissions no greater than 0.20 kilograms of VOC per kilogram of coating solids applied;

(B) Install, operate and maintain according to the manufacturer's recommendations air pollution control equipment that reduces uncontrolled VOC emissions to the atmosphere from a coating line by an overall control efficiency of at least 90%; or

(C) An alternative emission reduction plan that achieves a level of control equivalent to the level described in subparagraph (A) of this subdivision and that is requested from and approved by the commissioner in accordance with subsection (cc) of this section.

(6) Work practices. Each owner or operator shall use the following work practices:

(A) New and used VOC-containing coating or cleaning solvent, including a coating mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;

(B) Spills and leaks of VOC-containing coating or cleaning solvent shall be minimized. Any leaked or spilled VOC-containing coating or cleaning solvent shall be absorbed and removed immediately;

(C) Absorbent applicators, such as cloth and paper, which are moistened with VOC-containing coating or cleaning solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling; and

(D) VOC-containing coating or cleaning solvent shall be conveyed from one location to another in a closed container or pipe.

(7) Records. An owner or operator shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection. All records shall be:

(A) Made available to the commissioner to inspect and copy upon request;

(B) Maintained for five years from the date such record is created; and

(C) Maintained in compliance with subsection (aa)(1) through (9) of this section.

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 5-7

Sec 5. Subdivision (2)(B) of subsection (s) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

- (B) Miscellaneous metal parts and products excludes the following items:
- (i) automobiles and light duty trucks,
 - (ii) metal cans,
 - (iii) flat metal sheets and strips in the form of rolls or coils,
 - (iv) plastic and glass objects,
 - (v) magnet wire for use in electrical machinery,
 - (vi) metal furniture,
 - (vii) the exterior surface of assembled aircraft,
 - (viii) automobile refinishing,
 - (ix) customized top coating of automobiles and trucks, if production is less than 5 vehicles per day, [and]
 - (x) the exterior surface of assembled marine vessels[.] , and
 - (xi) large appliance parts subject to subsection (hh) of this section.

Sec 6. Subsection (ee) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

(ee) Reasonably Available Control Technology for large sources. The owner or operator of any premises with potential emissions of volatile organic compounds shall use Reasonably Available Control Technology in accordance with the provisions of section 22a-174-32 of the Regulations of Connecticut State Agencies on each source to limit the discharge of volatile organic compounds unless all the sources emitting volatile organic compounds at such premises are regulated by:

- (1) [subsections (a), (b) or (l) through (y), inclusive, of section 22a-174-20 of the Regulations of Connecticut State Agencies;] any one of the following subsections of section 22a-174-20 of the Regulations of Connecticut State Agencies: (a), (b), (l) through (y) or (ff) through (jj);
- (2) section 22a-174-30 of the Regulations of Connecticut State Agencies; or
- (3) an order to implement reasonably available control technology issued by the Commissioner pursuant to this subsection prior to November 15, 1992 and approved by the Administrator prior to May 31, 1995. An order or permit to limit potential emissions of volatile organic compounds to less than 100 tons per year for any twelve (12) consecutive months shall not be considered an order to implement Reasonably Available Control Technology.

Sec. 7. Section 22a-174-20 of the Regulations of Connecticut State Agencies is amended by adding subsections (ff), (gg), (hh), (ii) and (jj), as follows:

(NEW)

(ff) Flexible package printing.

- (1) Definitions. For the purpose of this subsection:

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 7 (continued)

- (A) "Capture efficiency" means the ratio of VOC emissions delivered to the control device to the total VOC emissions resulting from operation of a flexible package printing press and related cleaning, expressed as a percentage;
- (B) "Cleaning" means, with respect to a flexible package printing press or presses, cleaning of a press or press parts or the removal of dried ink from areas around the press. "Cleaning" does not include cleaning of electronic components, cleaning in platemaking or binding operations, housekeeping activity near a press or the use of a parts washer or cold cleaner;
- (C) "Control device efficiency" means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;
- (D) "Flexible package" means any package or part of a package the shape of which may be readily changed. A "flexible package" includes any bag, pouch, liner or wrap made of paper, plastic, film, aluminum foil, or metalized or coated film or paper, alone or in combination. "Flexible package" does not include any folding carton, self-adhesive labels, gift wrap, wall covering, vinyl products, decorative laminates, floor coverings or tissue products;
- (E) "Flexographic print station" means a work station on which a flexographic printing operation is conducted, which includes a flexographic printing plate and an image carrier made of rubber or other elastomeric material and where the image to be printed is raised above the printing plate;
- (F) "Installation date" means an unchanging date that is the first date on which a piece of equipment is in place and prepared to operate;
- (G) "Overall control efficiency" means the product of the capture efficiency and the control device efficiency;
- (H) "Press" means a printing production assembly that is composed of one or more work stations, one or more of which is a flexographic or rotogravure print station, and that produces a printed product;
- (I) "Rotogravure print station" means a work station on which a rotogravure printing operation is conducted. A rotogravure print station includes a cylinder and ink supply, and the image to be printed is etched or engraved below the surface of the cylinder;
- (J) "Work station" means a unit on a press where material is deposited onto a substrate; and
- (K) "As-applied VOC content" means the VOC content of an ink, coating, adhesive or cleaning solvent at the time of application to a substrate, including any solvent, catalyst or other substance added to the as-supplied ink, coating, adhesive or cleaning solvent. "As-applied VOC content" is determined using an EPA reference method, a California Air Resources Board reference method or other method approved by the commissioner.

(2) Applicability.

- (A) The provisions of this subsection apply to the owner or operator of any flexible package printing press who purchases for the printing operation at least 855 gallons of coatings, adhesives, cleaning solvents and solvent-based inks in aggregate per any rolling 12-month period. Any owner or operator of a flexible package printing press shall:
- (i) Comply with the requirements of this subsection no later than January 1, 2011, and
- (ii) Remain subject to this subsection; and

STATE OF CONNECTICUT
REGULATION
 OF
 NAME OF AGENCY
 Environmental Protection

Sec. 7 (continued)

- (B) Any flexible package printing press operated pursuant to this subsection shall not be subject to subsection (v) of this section.
- (3) Work practices. Each owner or operator shall use the following work practices:
- (A) New and used VOC-containing ink, coating, adhesive or cleaning solvent, including ink or coating mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
- (B) Spills and leaks of VOC-containing ink, coating, adhesive or cleaning solvent shall be minimized. Any leaked or spilled VOC-containing ink, coating or cleaning solvent shall be absorbed and removed immediately;
- (C) Absorbent applicators, such as cloth and paper, which are moistened with VOC-containing ink, coating, adhesive or solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling; and
- (D) VOC-containing ink, coating, adhesive and cleaning solvent shall be conveyed from one location to another in a closed container or pipe.
- (4) Additional requirements. The owner or operator of a flexible package printing press that has the potential to emit from the dryer, prior to controls, of at least 25 tons per year of VOC from the use of inks, coatings and adhesives combined shall, in addition to complying with the requirements of subdivision (3) of this subsection, use one of the following methods to control VOC emissions from such a press:
- (A) Use only individual inks, coatings and adhesives with an as-applied VOC content that does not exceed 0.8 kg VOC/kg of solids (0.8 lb VOC/lb of solids) or 0.16 kg VOC/kg of materials (0.16 lb VOC/lb of materials);
- (B) Use only inks, coatings and adhesives so that the daily weighted average of the VOC content of the inks, coatings and adhesives used in a single printing line does not exceed 0.8 kg VOC/kg of solids (0.8 lb VOC/lb of solids) or 0.16 kg VOC/kg of materials (0.16 lb VOC/lb of materials); or
- (C) Install, operate and maintain in accordance with the manufacturer's recommendations, a capture and a control device that produce the overall control efficiency identified in Table 20(ff)-1, according to the date of installation of the press being controlled and the installation date of the air pollution control equipment.
- (5) Records.
- (A) An owner or operator of any flexible package printing press shall maintain records of the information described in subparagraph (B) of this subdivision. All such records shall be:
- (i) Made available to the commissioner to inspect and copy upon request, and
- (ii) Maintained for five years from the date such record is created.
- (B) An owner or operator of a flexible package printing press shall maintain daily records of all inks, coatings, adhesives or cleaning solvents used, as follows:
- (i) Name and description of each ink, coating, adhesive or cleaning solvent,

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 7 (continued)

- (ii) VOC content of each ink, coating, adhesive or cleaning solvent, as-applied, and the associated calculations,
 - (iii) VOC content of each ink, coating, adhesive or cleaning solvent, as supplied,
 - (iv) The amount of each ink, coating, adhesive or cleaning solvent,
 - (v) A Material Safety Data Sheet for each ink, coating, adhesive or cleaning solvent,
 - (vi) Documentation of control device efficiency and capture efficiency, if applicable, using an applicable EPA reference method or alternate method as approved by the commissioner, and
 - (vii) Date and type of maintenance performed on air pollution control equipment, if applicable.
- (C) Any owner or operator of any flexible package printing press who is not otherwise subject to the provisions of this subsection shall maintain material purchase records to verify that the provisions of this subsection do not apply to such owner or operator.

Table 20(ff)-1. Overall control efficiency levels

<i>Installation date of press</i>	<i>Installation date of the air pollution control device</i>	<i>Overall control efficiency (%)</i>
Prior to March 14, 1995	Prior to January 1, 2011	65
Prior to March 14, 1995	On or after January 1, 2011	70
On or after March 14, 1995	Prior to January 1, 2011	75
On or after March 14, 1995	On or after January 1, 2011	80

(gg) Offset lithographic printing and letterpress printing**(1) Definitions.** For the purpose of this subsection:

- (A) "Capture efficiency" means the ratio of VOC emissions delivered to the control device to the total VOC emissions resulting from offset lithographic or letterpress printing and related cleaning, expressed as a percentage;
- (B) "Cleaning solvent" means a VOC-containing liquid used to remove ink and debris from the operating surfaces of the printing press and its parts;
- (C) "Coldset" or "non-heatset" means a printing process in which the ink dries on the substrate through ordinary evaporation and absorption;
- (D) "Control device efficiency" means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;
- (E) "Fountain solution" means, with respect to offset lithographic printing, a water-based solution that contains small amounts of gum Arabic or synthetic resins, acids, buffer salts and a wetting agent or dampening aid applied to the image plate to reduce the surface tension of the solution;
- (F) "Heatset" means a printing process in which ink is set by the evaporation of ink solvents or oils in a hot air dryer;

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 7 (continued)

- (G) "Letterpress printing" means a printing process in which the image area is raised relative to the non-image area, and the paste ink is transferred to the substrate directly from the image surface;
- (H) "Lithographic printing" means a printing process in which the image and non-image areas are chemically differentiated, *i.e.*, the image area is oil receptive and the non-image area is water receptive;
- (I) "Offset lithographic printing" means a type of lithographic printing in which an ink film is applied to a lithographic plate and then transferred to an intermediary surface or blanket, and the image on the blanket is then transferred to a substrate, typically paper or paperboard;
- (J) "Overall control efficiency" means the product of the capture efficiency and the control device efficiency;
- (K) "Press" means a printing production assembly composed of one or more units used to produce a printed substrate including any associated coating, spray powder application or infrared heating units;
- (L) "Sheet-fed printing" means, with respect to offset lithographic printing, a process in which individual sheets of paper or other substrate are fed to the press;
- (M) "VOC composite partial vapor pressure" means the sum of the partial pressure of the compounds defined as VOCs;
- (N) "Web printing" means, with respect to offset lithographic printing, a process where continuous rolls of substrate material are fed to the press and rewound or cut to size after printing; and
- (O) "As-applied VOC content" means the VOC content of cleaning solvent, fountain solution or solvent-based ink at the time of application to a substrate, including any solvent, catalyst or other substance added to the as-supplied cleaning solvent, fountain solution or solvent-based ink. "As-applied VOC content" is determined using an EPA reference method, a California Air Resources Board reference method or other method approved by the commissioner.

(2) Applicability. The provisions of this subsection apply to the owner or operator of any offset lithographic or letterpress printing press who purchases for the printing operation at least 855 gallons of cleaning solvents, fountain solution additives and solvent-based inks in aggregate per any rolling 12-month period. Any owner or operator of an offset lithographic or a letterpress printing press shall:

- (A) Comply with the requirements of this subsection no later than January 1, 2011; and
- (B) Remain subject to this subsection.

(3) Fountain solutions.

- (A) The owner or operator of a heatset web offset lithographic printing press with a fountain solution reservoir of at least one gallon in capacity shall:
 - (i) Limit the as-applied VOC content of the fountain solution to 1.6% by weight or less,
 - (ii) If the fountain solution is refrigerated to below 60°F, limit the as-applied VOC content of the fountain solution to 3% by weight or less, or
 - (iii) Use fountain solution that contains no alcohol and limit the alcohol substitute content of the fountain solution to 5% by weight or less.

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 7 (continued)

(B) The owner of a sheet-fed offset lithographic printing press with a minimum sheet size of greater than 11x17 inches and a fountain solution reservoir greater than one gallon in capacity shall:

- (i) Limit the as-applied VOC content of the fountain solution to 5% by weight or less,
- (ii) If the fountain solution is refrigerated to below 60°F, limit the as-applied VOC content of the fountain solution to 8.5% or less, or
- (iii) Use fountain solution that contains no alcohol and limit the alcohol substitute content of the fountain solution to 5% by weight or less.

(C) The owner of a coldset web offset lithographic printing press with a fountain solution reservoir of at least one gallon in capacity shall use a fountain solution that contains no alcohol and that has an alcohol substitute content of 5% by weight or less.

(4) Heatset web offset lithographic printing or heatset letterpress printing. Except heatset presses for book printing or heatset presses with a web width of 22 inches or less, the owner or operator of a heatset web offset lithographic or heatset letterpress printing press with the potential to emit at least 25 tons per year of VOC emissions from all dryers, prior to controls, shall operate air pollution control equipment to:

- (A) Achieve a 90% overall control efficiency if the air pollution control equipment is installed prior to January 1, 2011;
- (B) Achieve a 95% overall control efficiency if the air pollution control equipment is installed on or after January 1, 2011; or
- (C) Reduce the control device outlet concentration to 20 parts per million as hexane on a dry basis if the inlet VOC concentration is so low that the control efficiency specified in subparagraph (A) or (B) of this subdivision cannot be achieved.

(5) Cleaning solvents. The owner or operator of an offset lithographic printing press or letterpress printing press:

- (A) Shall use cleaning solvents that:
 - (i) Have composite vapor pressure less than 10 mmHg at 20°C, or
 - (ii) Have a VOC content less than 70% by weight.

(B) May in any twelve-month period use no more than 110 gallons of cleaning solvent that does not comply with subparagraph (A) of this subdivision.

(6) Work practices. Each owner or operator shall use the following work practices:

- (A) New and used VOC-containing ink, fountain solution and cleaning solvent, including solvents mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
- (B) Spills and leaks of VOC-containing ink, fountain solution and cleaning solvent shall be minimized. Any leaked or spilled VOC-containing ink, fountain solution or cleaning solvent shall be absorbed and removed immediately;

STATE OF CONNECTICUT
REGULATION
OF
NAME OF AGENCY
Environmental Protection

Sec. 7 (continued)

- (C) Absorbent applicators, such as cloth and paper, which are moistened with VOC-containing ink, fountain solution or cleaning solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling; and
 - (D) VOC-containing ink, fountain solution and cleaning solvents shall be conveyed from one location to another in a closed container or pipe.
- (7) Records.
- (A) An owner or operator of any offset lithographic or letterpress printing press shall maintain records of the information described in subparagraph (B) of this subdivision. Such records shall be:
 - (i) Made available to the commissioner to inspect and copy upon request, and
 - (ii) Maintained for five years from the date such record is created.
 - (B) An owner or operator of an offset lithographic or a letterpress printing press shall maintain daily records of all cleaning solvents, fountain solution additives or solvent-based inks used, as follows:
 - (i) Name and description of each cleaning solvent, fountain solution additive or solvent-based ink,
 - (ii) VOC content of each cleaning solvent, fountain solution additive or solvent-based ink, as-applied, and the associated calculations,
 - (iii) VOC content of each cleaning solvent, fountain solution additive or solvent-based ink, as supplied,
 - (iv) The amount of each cleaning solvent, fountain solution additive or solvent-based ink,
 - (v) A Material Safety Data Sheet for each cleaning solvent, fountain solution additive or solvent-based ink,
 - (vi) Documentation of control device efficiency and capture efficiency, if applicable, using an applicable EPA reference method or alternate method as approved by the commissioner, and
 - (vii) Date and type of maintenance performed on air pollution control equipment, if applicable.
 - (C) Any owner or operator of any offset lithographic or letterpress printing press who is not otherwise subject to the provisions of this subsection shall maintain material purchase records to verify that the provisions of this subsection do not apply to such owner or operator.

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 7 (continued)

(hh) Large appliance coatings.(1) Definitions. For the purpose of this subsection:

- (A) "Air dried" means cured at a temperature below 90° C (194°F);
- (B) "As-applied" means the composition of coating at the time it is applied to a surface, including any solvent, catalyst or other substance added to the coating as supplied by the manufacturer;
- (C) "Baked" means cured at a temperature at or above 90°C (194°F);
- (D) "Capture efficiency" means the ratio of VOC emissions delivered to control device to the total VOC emissions resulting from large appliance coating and related cleaning, expressed as a percentage;
- (E) "Cleaning solvent" means any VOC-containing liquid used in cleaning a large appliance coating operation;
- (F) "Coating" means a material that is applied to a surface and that forms a continuous film in order to beautify or protect such surface;
- (G) "Coating unit" means a series of one or more coating applicators and any associated drying area or oven wherein a coating is applied, dried or cured, including any drying area or oven where a coating is applied, dried or cured prior to any subsequent application of a different coating. A "coating unit" does not include any point other than the point where the coating is dried or cured;
- (H) "Control device efficiency" means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;
- (I) "Dip coating" means a method of applying a coating to a surface by submersion into and removal from a coating bath;
- (J) "Electrostatic application" means a method of applying coating particles or coating droplets to a grounded surface by electrically charging such particles or droplets;
- (K) "Extreme high gloss coating" means a coating that, when tested by the most recent active version of the American Society for Testing Material Test Method D523, shows a reflectance of 75 or more on a 60 degree meter;
- (L) "Extreme performance coating" means a coating used on a metal surface where the coated surface is, in its intended use, subject to one of the following conditions:
 - (i) Chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures or solution,
 - (ii) Repeated exposure to temperatures in excess of 121.1°C (250°F), or
 - (iii) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleaners or scouring agents;
- (M) "Flow coating" means a non-atomized technique of applying coating to a substrate using a fluid nozzle in a fan pattern with no air supplied to the nozzle;
- (N) "Heat-resistant coating" means a coating that must withstand a temperature of at least 400° F during normal use;

STATE OF CONNECTICUT
REGULATION

OF
NAME OF AGENCY

Environmental Protection

Sec. 7 (continued)

- (O) "HVLP spray application" means to apply a coating using a high-volume, low-pressure application system that is designed to operate at air pressures between 0.1 and 10 pounds per square inch gauge, measured dynamically at the center of the air cap and the air horns;
- (P) "Large appliance coating" means the application of a coating to a large appliance part or product during manufacture;
- (Q) "Large appliance part" means any surface-coated metal lid, door, casing, panel or other interior or exterior metal part or accessory that is assembled to form a large appliance product;
- (R) "Large appliance product" means any surface-coated large appliance including, but not limited to, a metal range, oven, microwave oven, refrigerator, freezer, washer, dryer, dishwasher, water heater or trash compactor manufactured for household, commercial or recreational use;
- (S) "Metallic coating" means a coating that contains more than five grams of metal particle per liter of coating, as-applied;
- (T) "Multi-component coating" means a coating requiring the addition of a separate reactive resin, such as a catalyst or hardener, before application to form an acceptable dry film;
- (U) "One-component coating" means a coating that is ready for application as packaged for sale, except for the addition of a thinner to reduce the viscosity;
- (V) "Overall control efficiency" means the product of the capture efficiency and the control device efficiency;
- (W) "Pretreatment coating" means a coating, containing no more than 12% solids by weight and at least one-half percent acid by weight, applied directly to metal surfaces to provide surface etching, adhesion and ease when stripping;
- (X) "Repair coating" means a coating used to recoat portions of a product that has sustained mechanical damage to the coating following normal painting operations;
- (Y) "Roll coating" means a coating method using a machine that applies coating to a substrate by continuously transferring coating through a set of oppositely rotating rollers;
- (Z) "Stencil coating" means an ink or a coating that is rolled or brushed onto a template or stamp to add identifying letters or numbers to metal parts or products;
- (AA) "Solar-absorbent coating" means a coating which has, as its primary purpose, the absorption of solar radiation;
- (BB) "Touch-up coating" means a coating used to cover minor coating imperfections appearing after the main coating operation; and
- (CC) "As-applied VOC content" means the VOC content of cleaning solvent or coating at the time of application to a substrate, including any solvent, catalyst or other substance added to the as-supplied cleaning solvent or coating. "As-applied VOC content" is determined using an EPA reference method, a California Air Resources Board reference method or other method approved by the commissioner.
- (2) Applicability. Except as provided in subdivision (3) of this subsection, the provisions of this subsection apply to an owner or operator of any large appliance coating unit who purchases for the coating operation at least 855 gallons of coatings and cleaning solvents in aggregate per any rolling 12-month period. Any such owner or operator shall:
- (A) Comply with the requirements of this subsection no later than January 1, 2011; and
- (B) Remain subject to this subsection.

STATE OF CONNECTICUT
REGULATION
 OF
 NAME OF AGENCY
 Environmental Protection

Sec. 7 (continued)

(3) Exemptions and exceptions.

- (A) The requirements of subdivision (5) of this subsection shall not apply to the following:
- (i) Stencil coating,
 - (ii) Safety-indicating coating, as defined in subdivision (1) of subsection (p) of this section,
 - (iii) Solid-film lubricant, as defined in subdivision (1) of subsection (p) of this section,
 - (iv) Electric-insulating and thermal-conducting coating, as defined in subdivision (1) of subsection (p) of this section,
 - (v) Touch-up coating,
 - (vi) Repair coating, or
 - (vii) Coating applied with a hand-held aerosol can.
- (B) The requirements of subdivision (4) of this subsection shall not apply to a person using air pollution control equipment, as specified in subdivision (5)(B) of this subsection, to comply with the requirements of this subsection.

(4) Application methods. A person shall not apply a VOC-containing coating to any large appliance part or product unless the coating is applied by one of the following methods using equipment operated in accordance with the specifications of the equipment manufacturer:

- (A) Electrostatic application;
- (B) Flow coating;
- (C) Dip coating;
- (D) Roll coating;
- (E) HVLP spray application;
- (F) Hand application; or
- (G) Any other coating application method capable of achieving a transfer efficiency equivalent to or better than that provided by HVLP spray application. Any owner or operator using an application method pursuant to this subparagraph shall maintain records demonstrating the transfer efficiency achieved.

(5) Compliance options. Except as provided in subdivision (3) of this subsection, on and after January 2011, no owner or operator conducting large appliance coating shall apply any coating, inclusive of any VOC-containing materials added to the original coating supplied by the manufacturer, unless the owner or operator uses one of the following methods to control emissions of VOCs:

- (A) Use only coatings with an as-applied VOC content no greater than the levels specified in Table 20(hh)-1, according to coating category and drying method, where:
- (i) The VOC content limits of Table 20(hh)-1 apply to the volume of coating as-applied, less water and less exempt VOC, and
 - (ii) The VOC content limits of Table 20(hh)-1 may be met by averaging the VOC content of materials used on a single large appliance coating unit per a single day;

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 7 (continued)

- (B) Install, operate and maintain in accordance with the manufacturer's recommendations, a capture and a control device that produce an overall control efficiency of 90%; or
- (C) With the approval of the commissioner and the EPA Administrator, use an alternative means to achieve a level of control equivalent to that required in subparagraph (A) or (B) of this subdivision. An owner or operator shall submit a request to the commissioner and the EPA Administrator to use an alternative means of compliance, and such request shall include:
 - (i) A description of the method,
 - (ii) A demonstration of the level of emissions control achieved, and
 - (iii) Any other information requested by the commissioner or the EPA Administrator.

(6) Work practices. Each owner or operator shall use the following work practices:

- (A) New and used VOC-containing coating or cleaning solvent, including a coating mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
- (B) Spills and leaks of VOC-containing coating or cleaning solvent shall be minimized. Any leaked or spilled VOC-containing coating or cleaning solvent shall be absorbed and removed immediately;
- (C) Absorbent applicators, such as cloth and paper, which are moistened with a VOC-containing coating or cleaning solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling; and
- (D) VOC-containing coating and cleaning solvent shall be conveyed from one location to another in a closed container or pipe.

Table 20(hh)-1. As-Applied VOC Content Limits Per Volume of Coating (Excluding Water and Exempt VOCs) per Coating Category, Specific to the Drying Process

Coating Category	Baked		Air Dried	
	g/L	lb/gal	g/L	lb/gal
General, one component	275	2.3	275	2.3
General, multi-component	275	2.3	340	2.8
Extreme high gloss	360	3.0	340	2.8
Extreme performance	360	3.0	420	3.5
Heat-resistant	360	3.0	420	3.5
Metallic	420	3.5	420	3.5
Pretreatment	420	3.5	420	3.5
Solar-absorbent	360	3.0	420	3.5

STATE OF CONNECTICUT
REGULATION
OF
NAME OF AGENCY
Environmental Protection

Sec. 7 (continued)

(7) Records.

- (A) An owner or operator of any large appliance coating unit shall maintain records of the information described in subparagraph (B) of this subdivision. Such records shall be:
- (i) Made available to the commissioner to inspect and copy upon request, and
 - (ii) Maintained for five years from the date such record is created.
- (B) An owner or operator of a large appliance coating unit shall maintain daily records of all coatings and cleaning solvents used, as follows:
- (i) Name and description of each coating or cleaning solvent,
 - (ii) VOC content of each coating or cleaning solvent, as-applied, and the associated calculations,
 - (iii) VOC content of each coating or cleaning solvent, as supplied,
 - (iv) The amount of each coating or cleaning solvent,
 - (v) A Material Safety Data Sheet for each coating or cleaning solvent,
 - (vi) Documentation of control device efficiency and capture efficiency, if applicable, using an applicable EPA reference method or alternate method as approved by the commissioner; and
 - (vii) Date and type of maintenance performed on air pollution control equipment, if applicable.
- (C) Any owner or operator of any large appliance coating unit who is not otherwise subject to the provisions of this subsection shall maintain material purchase records to verify that the provisions of this subsection do not apply to such owner or operator.
- (ii) **Industrial solvent cleaning.**
- (1) Definitions. For the purpose of this subsection:
- (A) "Capture efficiency" means the ratio of VOC emissions delivered to the control device to the total VOC emissions resulting from industrial solvent cleaning, expressed as a percentage;
 - (B) "Cleaning solvent" means any VOC-containing liquid, including a liquid impregnated wipe or towelette, used in cleaning;
 - (C) "Control device efficiency" means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 7 (continued)

- (D) "Industrial solvent cleaning" means the use of cleaning solvent to remove uncured adhesives, uncured inks, uncured coatings or contaminants such as dirt, soil or grease from parts, products, tools, machinery, equipment or work areas, where such parts, products, tools, machinery, equipment and work areas are incorporated into or used exclusively in manufacturing a product. "Industrial solvent cleaning" includes spray booth cleaning, cleaning of manufactured components, parts cleaning, cleaning of production equipment for maintenance or to prohibit cross-contamination, and cleaning of tanks, mixing pots, process vessels and lines. "Industrial solvent cleaning" does not include the cleaning of personal protection equipment, such as respirators.
- (E) "Janitorial cleaning" means general and maintenance cleaning of building or facility components including, but not limited to, floors, ceilings, walls, windows, doors, stairs, restrooms, furnishings, kitchens and exterior surfaces of office equipment. "Janitorial cleaning" includes graffiti removal. "Janitorial cleaning" does not include the cleaning of parts, products or equipment, where such parts, products or equipment are incorporated into or used exclusively in manufacturing a product. "Janitorial cleaning" excludes the cleaning of work areas, such as laboratory benches, where manufacturing or repair activity is performed;
- (F) "Medical device" means an instrument, apparatus, implement, machine, gadget, appliance, implant, *in vitro* reagent or other similar or related article, including any component, part or accessory, which meets one of the following conditions:
- (i) Recognized in the official National Formulary or the United States Pharmacopeia or any supplement thereto,
 - (ii) Intended for use in the diagnosis of disease or other conditions or in the cure, mitigation, treatment or prevention of disease, in persons or animals, or
 - (iii) Intended to affect the structure or function of the body of a person or animal, and which does not achieve its primary intended purposes through chemical action within or on such body and which is not dependent upon being metabolized for the achievement of its primary intended purposes;
- (G) "Overall control efficiency" means the product of the capture efficiency and the control device efficiency;
- (H) "Screen printing" means a method of creating an image by pressing ink through a screen or fabric to which a stencil has been applied and where the stencil openings determine the form and dimensions of the image; and
- (I) "As-applied VOC content" means the VOC content of a cleaning solvent at the time of use, including any solvent, catalyst or other substance added to the as-supplied cleaning solvent. "As-applied VOC content" is determined using an EPA reference method, a California Air Resources Board reference method or other method approved by the commissioner.

(2) Applicability. Except as provided in subdivision (3) of this subsection, the provisions of this subsection apply to an owner or operator of any premises who purchases for use at the premises at least 855 gallons of cleaning solvents in aggregate per rolling 12-month period. Any owner or operator of such a premises shall:

- (A) Comply with the requirements of this subsection no later than January 1, 2011; and
- (B) Remain subject to this subsection.

(3) Exemptions and exceptions.

STATE OF CONNECTICUT
REGULATIONOF
NAME OF AGENCY

Environmental Protection

Sec. 7 (continued)

- (A) The requirements of this subsection shall not apply to the use of cleaning solvent as follows:
- (i) In janitorial cleaning,
 - (ii) At an aerospace manufacturing and rework operation or a wood furniture coating operation in accordance with an order or a permit issued pursuant to sections 22a-174-32(e) and 22a-174-20(cc) of the Regulations of Connecticut State Agencies,
 - (iii) To perform general solvent cleaning in accordance with an order issued pursuant to section 22a-174-20(ee) of the Regulations of the Connecticut State Agencies,
 - (iv) At any aerospace manufacturing and rework facility, provided that cleaning solvent is used in accordance with the requirements of 40 CFR 63.744, inclusive of exemptions,
 - (v) As surface preparation or cleanup solvent in accordance with section 22a-174-44 of the Regulations of Connecticut State Agencies,
 - (vi) Where the cleaning solvent is regulated pursuant to section 22a-174-40 of the Regulations of Connecticut State Agencies,
 - (vii) To perform industrial solvent cleaning where such cleaning or cleaning solvent is subject to one of the following subsections of this section: (l) through (y), (ff) through (hh), or (jj),
 - (viii) In cleaning, including surface preparation prior to coating, necessary to meet a standard or specification issued or approved by the United States Department of Defense, Federal Aviation Administration or other federal government entity. Any person claiming exemption pursuant to this clause shall maintain records of the standard or specification,
 - (ix) Associated with research and development,
 - (x) Associated with quality control or laboratory testing,
 - (xi) Associated with medical device manufacturing,
 - (xii) Associated with pharmaceutical manufacturing,
 - (xiii) That exceeds the applicable limit of subdivision (4)(A) of this subsection where the quantity used does not exceed 55 gallons per any twelve-month rolling aggregate. Any person claiming exemption pursuant to this clause shall record and maintain monthly records sufficient to demonstrate compliance with this exemption, or
 - (xiv) That exceeds the applicable limit of subdivision (4)(A) of this subsection, if approved by the commissioner and the EPA Administrator. Any request for approval shall be made in writing to the commissioner and EPA Administrator and shall include a description of the cleaning solvent and its VOC content, an explanation of why the cleaning solvent is necessary, quantification of the amount of the VOC that will be emitted as a result of the use of the noncompliant cleaning solvent and the time period over which the noncompliant solvent will be used.

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 7 (continued)

- (B) The requirements of subdivisions (4) and (6) of this subsection shall not apply to the use of cleaning solvent in a digital printing operation, where digital printing means a method of printing in which an electronic output device transfers variable data, in the form of an image, from a computer to a substrate.
- (C) The limitations of subdivision (4)(A) of this subsection shall not apply to cleaning solvent used to clean screen printing equipment, if the cleaning solvent used has an as-applied VOC content that does not exceed 500 grams per liter (4.2 pounds per gallon).
- (4) Control of emissions. Except as provided in subdivision (3) of this subsection, any owner or operator performing industrial solvent cleaning shall use one of the following methods to limit VOC emissions:
- (A) Use only cleaning solvent that complies with one of the following limitations:
- (i) As-applied, has a VOC content that does not exceed 50 grams per liter (0.42 lb/gal), or
- (ii) As-applied, has a vapor pressure no greater than 8 mm Hg at 20°C; or
- (B) Install, operate and maintain in accordance with the manufacturer's recommendations, air pollution control equipment that reduces uncontrolled VOC emissions to the atmosphere from any industrial solvent cleaning by an overall control efficiency of at least 85%.
- (5) Work practices. Each owner or operator shall use the following work practices:
- (A) New and used cleaning solvent, including those mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
- (B) Spills and leaks of cleaning solvent shall be minimized. Any leaked or spilled cleaning solvent shall be absorbed and removed immediately;
- (C) Absorbent applicators, such as cloth and paper, which are moistened with cleaning solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling; and
- (D) Cleaning solvent shall be conveyed from one location to another in a closed container or pipe.
- (6) Records.
- (A) An owner or operator conducting industrial solvent cleaning shall maintain records of the information described in subparagraph (B) of this subdivision. Such records shall be:
- (i) Made available to the commissioner to inspect and copy upon request, and
- (ii) Maintained for five years from the date such record is created.
- (B) An owner or operator conducting industrial solvent cleaning shall maintain daily records of all cleaning solvents used, as follows:

STATE OF CONNECTICUT
REGULATION
 OF
 NAME OF AGENCY
 Environmental Protection

Sec. 7 (continued)

- (i) Name and description of each cleaning solvent,
 - (ii) VOC content of each cleaning solvent, as-applied, and the associated calculations,
 - (iii) VOC content of each cleaning solvent, as supplied,
 - (iv) The amount of each cleaning solvent,
 - (v) A Material Safety Data Sheet for each cleaning solvent,
 - (vi) Documentation of control device efficiency and capture efficiency, if applicable, using an applicable EPA reference method or alternate method as approved by the commissioner, and
 - (vii) Date and type of maintenance performed on air pollution control equipment, if applicable.
- (C) Any owner or operator conducting industrial solvent cleaning who is not otherwise subject to the provisions of this subsection shall maintain materials purchase records to verify that the provisions of this subsection do not apply to such owner or operator.
- (D) An owner or operator conducting industrial solvent cleaning subject to an exemption or exception in subdivision (3) of this subsection shall maintain records sufficient to verify the applicability of the exemption or exception.
- (jj) Spray application equipment cleaning.**
- (1) Definitions. For the purpose of this subsection:
- (A) "Capture efficiency" means the ratio of VOC emissions delivered to the control device to the total VOC emissions resulting from spray application equipment cleaning, expressed as a percentage;
 - (B) "Cleaning solvent" means any VOC-containing liquid used to clean spray application equipment;
 - (C) "Control device efficiency" means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;
 - (D) "Enclosed gun cleaner" means a device, used for cleaning spray application equipment, which has an enclosed cleaning solvent container and either:
 - (i) Is not open to the ambient air when in use and has a mechanism to force the cleaning solvent through the spray application equipment while the cleaner is in operation, or
 - (ii) Uses non-atomized solvent flow to flush the spray application equipment and collects and returns the discharged cleaning solvent to the enclosed container;
 - (E) "Medical device" means an instrument, apparatus, implement, machine, gadget, appliance, implant, *in vitro* reagent or other similar or related article, including any component, part or accessory, which meets one of the following conditions:
 - (i) Recognized in the official National Formulary or the United States Pharmacopeia or any supplement thereto,

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 7 (continued)

- (ii) Intended for use in the diagnosis of disease or other conditions or in the cure, mitigation, treatment or prevention of disease, in persons or animals, or
 - (iii) Intended to affect the structure or function of the body of a person or animal, and which does not achieve its primary intended purposes through chemical action within or on such body and which is not dependent upon being metabolized for the achievement of its primary intended purposes;
 - (F) "Overall control efficiency" means the product of the capture efficiency and the control device efficiency; and
 - (G) "Spray application equipment" means a hand-held device that creates an atomized mist of coating, or other liquid substance, and deposits the coating, or other liquid substance, on a substrate.
 - (H) "As-applied VOC content" means the VOC content of a cleaning solvent at the time of use, including any solvent, catalyst or other substance added to the as-supplied cleaning solvent. "As-applied VOC content" is determined using an EPA reference method, a California Air Resources Board reference method or other method approved by the commissioner.
- (2) Applicability. Except as provided in subdivision (3) of this subsection, on and after January 1, 2011, the provisions of this subsection apply to an owner or operator of any spray application equipment.
- (3) Exemptions and exceptions.
- (A) The requirements of this subsection shall not apply to cleaning of spray application equipment as follows:
 - (i) Associated with automotive refinishing and conducted pursuant to section 22a-174-3b(d) of the Regulations of Connecticut State Agencies,
 - (ii) Pursuant to section 22a-174-44(d) of the Regulations of Connecticut State Agencies,
 - (iii) At any aerospace manufacturing and rework facility, provided that cleaning solvent is used in accordance with the requirements of 40 CFR 63.744, inclusive of exemptions,
 - (iv) Necessary to meet a standard or specification of the United States Department of Defense,
 - (v) Associated with research and development, quality control or laboratory testing, or
 - (vi) Associated with medical device manufacturing;
 - (B) The cleaning solvent VOC content limit of subparagraphs (B) through (D) of subdivision (4) of this subsection shall not apply to the cleaning of spray application equipment used in the assembly, repair and manufacture of submarines;
 - (C) Using cleaning solvent that exceeds the VOC content limitation of subparagraph (B), (C) or (D) of subdivision (4) of this subsection where the quantity of cleaning solvent used does not exceed 55 gallons in aggregate per any 12-month rolling period. Any person claiming exemption pursuant to this subparagraph shall record and maintain monthly records sufficient to demonstrate compliance with this exemption; and

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 7 (continued)

- (D) The cleaning solvent VOC content limitations of subparagraph (B), (C) or (D) of subdivision (4) of this subsection shall not apply, upon request to and approval by the commissioner. Any request for approval shall be made in writing to the commissioner and shall include a description of the noncompliant solvent and its VOC content, an explanation of why the noncompliant solvent is necessary, the aggregate amount in gallons or pounds of noncompliant solvent use anticipated in a 12-month period and the frequency of use of the noncompliant solvent.
- (4) Control of emissions. An owner or operator shall clean spray application equipment in accordance with the requirements of one of the following subparagraphs:
- (A) Using an enclosed gun cleaner that is maintained and operated in accordance with the manufacturer's recommendations and the following practices:
- (i) Operate using an automated cycle, if applicable,
 - (ii) Inspect hoses regularly for leaks,
 - (iii) If a leak is discovered, repair as soon as practicable but no later than 15 days after discovery, and
 - (iv) Ensure the cover is properly closed;
- (B) Using only cleaning solvent with an as-applied VOC content that does not exceed 50 grams per liter (0.417 lb/gal) by placing cleaning solvent in the pressure pot and forcing the solvent through the gun with the atomizing cap in place, without the use of atomizing air. Used cleaning solvent shall be directed into a vat, drum or other waste container that is closed when not in use;
- (C) Using only cleaning solvent with an as-applied VOC content that does not exceed 50 grams per liter (0.417 lb/gal) by disassembling the spray gun and cleaning the components and associated hoses and pumps by hand in a vat, which shall remain closed at all times except when in use. Components and associated hoses and pumps may be soaked in a vat with a capacity no greater than 20 liters. Such a soaking vat shall remain closed during the soaking period, except when inserting or removing items;
- (D) Using only cleaning solvent with an as-applied VOC content that does not exceed 50 grams per liter (0.417 lb/gal) by forcing cleaning solvent through the spray gun and directing the atomized solvent spray into a waste container that is fitted with a device to capture the resulting emissions; or
- (E) Installing, operating and maintaining air pollution control equipment that reduces uncontrolled VOC emissions to the atmosphere from any spray application equipment cleaning by an overall control efficiency of at least 85%.
- (5) Work practices. Each owner or operator shall use the following work practices:
- (A) New and used cleaning solvent, including those mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
- (B) Spills and leaks of cleaning solvent shall be minimized. Any leaked or spilled cleaning solvent shall be absorbed and removed immediately;

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 7 -8

- (C) Absorbent applicators, such as cloth and paper that are moistened with cleaning solvent shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling;
- (D) Cleaning solvent shall be conveyed from one location to another in a closed container or pipe; and
- (E) Air pollution control equipment shall be operated and maintained in accordance with the manufacturer's recommendations.

(6) Records.

- (A) An owner or operator conducting spray application equipment cleaning shall maintain records of the information described in subparagraph (B) of this subdivision. Such records shall be:
 - (i) Made available to the commissioner to inspect and copy upon request, and
 - (ii) Maintained for five years from the date such record is created.
- (B) An owner or operator conducting spray application equipment cleaning shall maintain daily records of all cleaning solvents used, as follows:
 - (i) Name and description of each cleaning solvent,
 - (ii) VOC content of each cleaning solvent, as-applied, and the associated calculations,
 - (iii) VOC content of each cleaning solvent, as supplied,
 - (iv) The amount of each cleaning solvent,
 - (v) A Material Safety Data Sheet for each cleaning solvent,
 - (vi) A description of the type of cleaning equipment and process,
 - (vii) Documentation of control device efficiency and capture efficiency, if applicable, using an applicable EPA reference method or alternate method as approved by the commissioner, and
 - (viii) Date and type of maintenance performed on air pollution control equipment, if applicable.
- (C) An owner or operator that is conducting spray application equipment cleaning subject to an exemption or exception in subdivision (3) of this subsection shall maintain records sufficient to verify the applicability of the exemption or exception.

Sec. 8. Section 22a-174-32(b)(3) of the Regulations of Connecticut State Agencies is amended to read as follows:

(3) When calculating potential emissions to determine the applicability of this section, the owner or operator of a premises shall include potential emissions of volatile organic compounds from all sources located at such premises excluding those sources which are:

- (A) subject to regulation under 40 CFR [Parts] 61 and 63;

STATE OF CONNECTICUT

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Sec. 8-9

- (B) required to use Best Available Control Technology or Lowest Achievable Emission Rate for VOCs pursuant to a federally enforceable order or permit which contains specific VOC emission limitations;
- (C) subject to regulation under 40 CFR [Part] 264, Subparts AA or BB, or 40 CFR [Part] 265, Subparts AA or BB;
- (D) fuel burning equipment; or
- (E) subject to Reasonably Available Control Technology required pursuant to:
 - (i) any one of the following subsections [(a), (b) or (l) through (y) inclusive] of section 22a-174-20 of the Regulations of Connecticut State Agencies[;] : (a), (b), (l) through (y), or (ff) through (jj).
 - (ii) section 22a-174-30 of the Regulations of Connecticut State Agencies[;] ,
or
 - (iii) an order or permit requiring the implementation of Reasonably Available Control Technology issued by the commissioner prior to November 15, 1992 and approved by the Administrator prior to May 31, 1995.

Sec. 9. Section 22a-174-33(f)(6) of the Regulations of Connecticut State Agencies is amended to read as follows:

- (6) [Notwithstanding any other provision of this subsection, the owner or operator of a Title V source subject to 40 CFR 72 to 78, inclusive, which becomes subject to this section after January 1, 1998 shall submit a Title V application to the commissioner within the time provided by 40 CFR 72.30 or within ninety (90) days of receipt of notice from the commissioner that such application is required, whichever is earlier.] Reserved.

REGULATION

OF

NAME OF AGENCY

Environmental Protection

Statement of purpose: This amendment serves the primary purpose of updating Connecticut's reasonably available control technology (RACT) requirements for volatile organic compounds (VOCs) in response to the U.S. Environmental Protection Agency's issuance of control techniques guidelines (CTG) in 2006 for offset lithographic and letterpress printing, industrial cleaning solvents and flexible package printing [71 FR 58745] and in 2007 for metal furniture coating, large appliance coating and paper, film and foil coating [72 FR 57215]. The amendment also refines the requirements for metal cleaning; adds requirements specific to spray application equipment cleaning; and makes minor and technical revisions.

Specifically:

- The existing requirements for metal furniture and paper, film and foil coating operations in section 22a-174-20 of the Regulations of Connecticut State Agencies (RCSA) are enhanced through the adoption of the CTG requirements, which include lower VOC content requirements for coatings and work practices designed to reduce VOC emissions. (Section 4)
- New requirements, consistent with the CTG, are added to RCSA section 22a-174-20 for five source categories (flexible package printing; offset lithographic printing; letterpress printing; large appliance coating; general solvent cleaning). The requirements include VOC content limits for coatings, inks and solvents; an alternative compliance route through the operation of air pollution control equipment; and work practices to limit VOC emissions from coating and solvent storage and handling. (Section 7)
- New requirements regulating the cleaning of spray application equipment to limit VOC emissions are added to RCSA section 22a-174-20. (Section 7)
- The reactivity-based architectural coating requirements of subsection (g) of RCSA section 22a-174-20 are deleted, given the adoption in July 2007 of more comprehensive requirements in RCSA section 22a-174-41. (Section 2)
- The amendment also updates internal references, exemptions and applicability determinations of RCSA section 22a-174-20 with respect to additions made in the amendment; refines definitions; and updates the applicability determination of RCSA section 22a-174-32 given the adoption of the new requirements. (Sections 1, 3, 5, 6, 8)

The VOC reductions associated with the RACT update portion of this amendment will assist Connecticut to attain the federal 8-hour ozone national ambient air quality standards and serve as directionally correct measures with respect to Connecticut's compliance with the national fine particulate matter standards.

Section 9 of the amendment eliminates the reference to the federal Title V application timelines for Acid Rain program sources from RCSA section 22a-174-33(f), as the federal timing requirements apply independently.

CERTIFICATION

Be it known that the foregoing: (check one) Regulations Emergency Regulations

Are: Adopted Amended as hereinabove stated Repealed

By the aforesaid agency pursuant to:

- Section 22a-174 of the General Statutes
- Section _____ of the General Statutes, as amended by Public Act No. ____ of the _____ Public Acts. (enter year)
- Public Act Number _____ of the _____ Public Acts. (enter year)

(If applicable) After Publication in the Connecticut Law Journal on April 21, 2009 of the notice of proposal to: (enter publication date)

Adopt Amend Repeal such regulations

(If applicable) And the holding of an advertised public hearing on May 28, 2009 (enter date)

WHEREFORE, the foregoing regulations are hereby:

Adopted Amended as hereinabove stated Repealed

EFFECTIVE: (check one, and complete as applicable)

- When filed with the Secretary of the State (OR)
- The ____ day of _____ 20__.

In Witness Whereof:	DATE 10/28/09	SIGNED (Head of Board, Agency or Commission) Amy Mandella	OFFICIAL TITLE, DULY AUTHORIZED Commissioner
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Approved by the Attorney General as to legal sufficiency in accordance with Sec. 4-169, as amended, of C.G.S.	SIGNED W B AL 11/18/09	OFFICIAL TITLE, DULY AUTHORIZED ASSOC. ATTY. GENERAL
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For Regulation Review Committee Use Only

- Approved
- Disapproved
- Disapproved in part, (Indicate Section Numbers disapproved only)
- Rejected without prejudice.

By the Legislative Regulation Review Committee in accordance with Section 4-170, as amended, of the General Statutes	DATE 3/24/10	SIGNED (Administrator, Legislative Regulation Review Committee) Pamela B. Booth
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Two certified copies received and filed, and one such copy forwarded to the Commission on Official Legal Publications in accordance with Section 4-172, as amended, of the General Statutes.

DATE	SIGNED (Secretary of the State.)	BY
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INSTRUCTIONS

1. One copy of all regulations for adoption, amendment or repeal, except emergency regulations, must be presented to the Attorney General for his determination of legal sufficiency. Section 4-169 of the General Statutes.
2. Seventeen copies of all regulations for adoption, amendment or repeal, except emergency regulations, must be presented to the standing Legislative Regulation Review Committee for its approval. Section 4-170 of the General Statutes
3. Each Regulation must be in the form intended for publication and must include the appropriate regulation section number and section heading. Section 4-172 of the General Statutes.
4. Indicate by "(NEW)" in heading if new regulation. Amended regulations must contain new language underlined or in capital letters and deleted language in brackets. Section 4-179 of the General Statutes.
5. Additional information regarding rules and procedures of the Legislative Regulation Review Committee can be found in the Committee's web site: <http://www.cga.ct.gov/rr/>

DEPARTMENT OF THE STATE
 REGISTRATION & ELECTIONS
 ADMINISTRATION DIVISION
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Regulations
of

Environmental Protection

.....
CONCERNING

Amendment to Various Sections of the Air Quality Regulations

.....
Received and filed in the Office of the
Secretary of the State

.....
Approved by the Attorney General

.....
Approved by the Legislative Regulation
Review Committee or General Assembly

.....
Published in Connecticut Law Journal

ADMINISTRATIVE REGULATIONS

Regulations and notices published herein, pursuant to General Statutes Sections 4-168 and 4-173, are printed exactly as submitted by the forwarding agencies. These, being official documents submitted by the responsible agencies, are consequently not subject to editing by the Commission on Official Legal Publications.

A cumulative list of effective amendments to the Regulations of Connecticut State Agencies may be found in the Connecticut Law Journal dated April 7, 2009.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Notice of Intent to Amend the Regulations of Connecticut State Agencies and to Revise the State Implementation Plan for Air Quality

The Commissioner of Environmental Protection hereby gives notice of a public hearing to amend the Regulations of Connecticut State Agencies (RCSA), primarily to establish new or enhance existing reasonably available control technology (RACT) requirements for certain categories of equipment and activities. Once adopted, the amended regulations will be submitted to the U.S. Environmental Protection Agency for review and approval as a revision to the State Implementation Plan for air quality.

EPA's control techniques guidelines (CTG), issued in 2006 for offset lithographic and letterpress printing, industrial cleaning solvents and flexible package printing [71 FR 58745] and in 2007 for metal furniture coating, large appliance coating and paper, film and foil coating [72 FR 57215], are the basis for the RACT update portions of this proposal. The associated volatile organic compound (VOC) reductions will assist Connecticut to attain the federal 8-hour ozone national ambient air quality standards and serve as directionally correct emissions reductions with respect to Connecticut's compliance with the national fine particulate matter standards.

The specific revisions proposed to RCSA section 22a-174-20 are as follows:

- The existing requirements for metal furniture and paper, film and foil coating operations are enhanced through the adoption of the CTG requirements, which include lower VOC content requirements for coatings and work practices designed to reduce VOC emissions.
- New requirements consistent with the CTG are added for five source categories (flexible package printing; offset lithographic printing; letterpress printing; large appliance coating; general solvent cleaning).
- New requirements to limit VOC emissions from spray application equipment cleaning are added.
- The reactivity-based architectural coating requirements of subsections (g), (h) and (i) are deleted, given the adoption of more comprehensive requirements in RCSA section 22a-174-41 in July 2007.
- Internal references, exemptions, definitions and applicability determinations are revised to reflect the additions and deletions.

The applicability determination of RCSA section 22a-174-32 is also revised, given the adoption of requirements in RCSA section 22a-174-20 for new source categories, and the reference to the federal Title V application timelines for Acid Rain program sources is eliminated from RCSA section 22a-174-33(f).

All interested persons are invited to submit comment to the Department of Environmental Protection, Bureau of Air Management, Engineering & Enforcement Division, 79 Elm Street, Hartford, Connecticut 06106-5127. All comments should be directed to the attention of Merrily A. Gere and must be received by 5:00 PM on June 1, 2009. Comments may be submitted by post, facsimile to (860) 424-4064 or by electronic mail to merrily.gere@ct.gov.

In addition to accepting written comments, the Department of Environmental Protection will also hold the public hearing described below. The Commissioner requests that any person giving oral comment at the hearing also submit a written copy of such comments.

PUBLIC HEARING

May 28, 2009 at 10:30AM

**Department of Environmental Protection, 5th Floor, Holcombe Room
79 Elm Street, Hartford, CT**

Copies of the proposal are available for public inspection during normal business hours and may be obtained from Sharon Rowe-Johnson at the Bureau of Air Management, Engineering & Enforcement Division, 5th Floor, 79 Elm Street, Hartford, Connecticut. Additional copies are available for review at the Law Reference Desk at the Connecticut State Library, Torrington Public Library, New London Public Library and Bridgeport Public Library. For further information, contact Sharon Rowe-Johnson of the Bureau of Air Management at (860) 424-4152 or by electronic mail to Sharon.rowe-johnson@ct.gov.

The Department of Environmental Protection supports the goals of the Americans with Disabilities Act of 1990. Any individual who needs auxiliary aids for effective communication during this public hearing or in submitting comments should contact the Department's Affirmative Action Officer at (860) 424-3035 (TDD (860) 424-3333) at least one week before the public hearing.

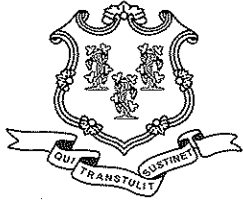
The authority to adopt this proposal is granted by CGS sections 22a-6 and 22a-174. This notice is required pursuant to CGS sections 22a-6 and 4-168 and 40 Code of Federal Regulations 51.102.

By Amey Marrella for
Gina McCarthy
Commissioner

DEPARTMENT OF PUBLIC HEALTH

Notice of Intent to Amend Regulations

In accordance with the provisions of Section 4-168(a) of the Connecticut General Statutes as amended, notice is hereby given that the Department of Public Health proposes the following amendment to the Regulations of the Connecticut State



STATE OF CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION



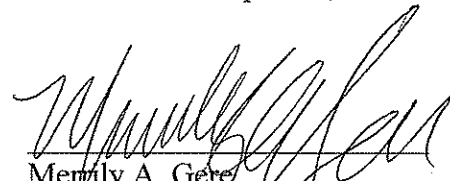
HEARING CERTIFICATION

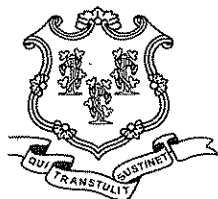
This certifies in accordance with the provisions of Title 40 Code of Federal Regulations Part 51.102 that the following actions were taken regarding the proposed amendment of RCSA sections 22a-174-20, 22a-174-32(b)(3) and 22a-174-33(f)(6):

- 1) The public hearing was held on May 28, 2009 as announced in the notice of hearing (copy attached);
- 2) In accordance with the notice, materials were available for review in each Air Quality Control Region (AQCR) in Connecticut;
- 3) Copies of the notice were mailed to the directors of the air pollution control agencies in New York, New Jersey, Rhode Island and Massachusetts along with a copy to the Director of the Air Management Division of Region I of the U.S. Environmental Protection Agency; and
- 4) The notice of hearing was published in four area newspapers as follows:

<u>Newspaper</u>	<u>AQCR</u>	<u>Date</u>
Connecticut Post	43	April 21, 2009
Hartford Courant	42	April 21, 2009
New London Day	41	April 21, 2009
The Register Citizen	44	April 21, 2009

April 28, 2010
Date


Mervyn A. Gere
Bureau of Air Management



**STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION**



EXHIBIT E

HEARING REPORT

**Prepared Pursuant to Section 4-168(d) of the
Connecticut General Statutes and
Section 22a-3a-3(d)(5) of the Department of Environmental Protection Rules of Practice**

**Regarding the
Amendment of Sections 22a-174-20, 22a-174-32(b)(3) and 22a-174-33(f)(6) of the
Regulations of Connecticut State Agencies**

**Merrily A. Gere
Hearing Officer
Date of Hearing: May 28, 2009**

On March 27, 2009, the Commissioner of the Department of Environmental Protection (DEP) signed a notice of intent to amend sections 22a-174-20, 22a-174-32(b)(3) and 22a-174-33(f) of the Regulations of Connecticut State Agencies (RCSA). Pursuant to such notice, a public hearing was held on May 28, 2009, and the public comment period closed June 1, 2009. The amended regulations will be submitted to the U. S. Environmental Protection Agency (EPA) for review and approval as a revision to the State Implementation Plan.

I. Hearing Report Content

As required by section 4-168(d) of the Connecticut General Statutes (CGS), this report describes the proposal; the principal reasons in support of and in opposition to the proposal; and summarizes and responds to all comments on the proposal. A final recommended version of the amended regulations, inclusive of changes recommended in response to comment, is also provided.

A statement in satisfaction of CGS section 22a-6(h) is located in Attachment 1 to this report.

II. Purpose and Summary of the Proposal

The proposal serves three purposes: (1) adopt requirements consistent with the reasonably available control technology (RACT) level of control established in EPA's control techniques guidelines (CTGs) promulgated in 2006 and 2007; (2) on DEP's initiative, improve DEP's ability to regulate certain activities; and (3) eliminate redundant or conflicting requirements.

EPA issued CTGs in 2006 for offset lithographic and letterpress printing, industrial cleaning solvents and flexible package printing [71 FR 58745] and in 2007 for metal furniture coating, large appliance coating and paper, film and foil coating [72 FR 57215]. As Connecticut currently has requirements controlling volatile organic compound (VOC) emissions from metal furniture coating and paper coating, which are based on earlier CTGs and are included in

RCSA section 22a-174-20, those requirements are proposed to be amended. Requirements for letterpress, offset lithographic and flexible package printing; industrial cleaning solvents; and large appliance coating are proposed for adoption as new requirements within RCSA section 22a-174-20. Minor revisions to RCSA section 22a-174-32 are also proposed to adjust the interaction of RCSA section 22a-174-32 and RCSA section 22a-174-20, given the new requirements of RCSA section 22a-174-20.

In association with revisions proposed in response to EPA's promulgation of the 2006/2007 CTGs, DEP used this opportunity to propose adoption of requirements specific to cleaning of spray application equipment, at the request of some regulated entities. Spray gun cleaning is one of the cleaning operations that would, absent DEP's adoption of specific requirements, be regulated under the industrial cleaning solvents CTG. DEP also proposes to delete the architectural coating requirements in RCSA section 22a-174-20(g) given the adoption of more comprehensive requirements for such coatings in RCSA section 22a-174-41; and to propose the elimination of the reference to the federal Title V application timelines for Acid Rain program sources from RCSA section 22a-174-33(f).

The text of the proposal is located in Attachment 2 to this report.

III. Principal Considerations in Opposition to the Proposal

No comments opposed moving the proposal forward to seek promulgation. Much of the comment requested revision of, and the addition of exemptions to, new subsections (ii) and (jj) of RCSA section 22a-174-20, concerning industrial solvent cleaning and spray gun cleaning.

A detailed discussion of the comments and responses is set out in the next section of this report.

IV. Summary of Comments

Written comments were received from the following persons:

1. Anne Arnold, Manager
Air Quality Planning Unit
United States Environmental Protection Agency
Region 1
1 Congress Street, Suite 1100
Boston, MA 02114-2023

2. Richard A. Love
Manager, Environmental Programs
United Technologies Corporation
United Technologies Building
Hartford, CT 06101
Richard.love@utc.com

3. David M. Eherts
Vice President, EHS and Chief Safety Officer
Sikorsky Aircraft Corporation
6900 Main Street
Stratford, CT 06615-9129
chellerman@sikorsky.com

4. Steven Burke
Principal Environmental, Health and Safety Engineer
United States Surgical
195 McDermott Road
North Haven, CT 06473
Steven.burke@covidien.com

5. Christine H. Porter
Director, Regional Environmental Coordination Department
Department of the Navy
1510 Gilbert Street
Norfolk, VA 23511-2737
Leal.boyd@navy.mil

6. Eugene A. Brackbill, P.E.
Principal Consulting Engineer
Sci-Tech, Inc.
185 Silas Dean Highway
Wethersfield, CT 06109
ebrackbill@sci-techinc.com

7. Marci Y. Kinter
Vice President – Government & Business Information
Specialty Graphic Imaging Association
10015 Main Street
Fairfax, VA 22031
marcik@sgia.org

8. Mark L. Flannery
Director of Environmental Affairs
Printing Industries of New England
5 Crystal Pond Road
Southborough, MA 01772-1758
Mflannery04@pine.org

All comments submitted are summarized below with DEP's responses. Commenters are associated with the individual comments below by the number assigned above. When changes to the proposed text are indicated in response to comment, new text is in bold font and deleted text is in strikethrough font. Comments not specific to a single portion of the proposal are set out first, followed by comments specific to certain provisions in the proposal, organized by regulatory section.

General comment

1. Comment: Connecticut's proposal addresses all of the 2006 and 2007 CTGs, except for the flat wood paneling CTG. We understand that DEP is not aware of any sources that would be subject to the CTG. If true, DEP should submit a negative declaration to EPA for this CTG including a summary of how DEP made its determination. [1]

Response: EPA's understanding is correct: DEP is not aware of any sources in the state that meet the applicability of the flatwood paneling coating CTG. The same lack of awareness of sources is true for automobile and light-duty truck assembly coating and fiberglass boat manufacturing materials.

DEP has proposed for public hearing a reasonably available control technology (RACT) update State Implementation Plan revision that includes negative declarations for three of the CTGs: flatwood paneling coating, automobile and light-duty truck assembly coating; and fiberglass boat manufacturing materials. Following the public hearing on August 27, 2009, DEP will submit that RACT update to EPA.

2. Comment: The proposed requirements include some recordkeeping provisions. In addition, although not explicitly stated in the proposal, it appears that the coating and printing operations addressed in the proposal are also subject to the requirements of subsection (aa), recordkeeping and test methods, and subsection (bb), compliance methods, of Connecticut's RCSA section 22a-174-20. DEP should verify this point in their response to comments, since recordkeeping provisions stated in the proposal are not sufficient to make all of the proposed requirements enforceable. Furthermore, it should be noted, that some of the provisions included in subsection (aa) and (bb) state that they apply to subsections (m) through (s) of RCSA section 22a-174-20. Therefore, those requirements would only apply to the metal furniture and paper, film and foil coating operations addressed in the proposal, and not to the other categories included in the proposal (i.e., large appliance coating or printing operations). [1]

Response: RCSA section 22a-174-20 currently includes CTG-responsive requirements in subsections (m) through (s) and (v). The record keeping requirements for those subsections are set out in subsection (aa), the compliance methods in subsection (bb) and an alternative emissions reductions option in subsection (cc). In adopting the 2006 and 2007 CTGs for coating and printing operations, DEP amended existing subsections (p) and (q) and added new subsections (ff) through (jj). DEP's proposal did not fully take into account how subsections (aa) through (cc) apply to subsections (p), (q) and (ff) through (jj). DEP appreciates the opportunity EPA's comment offers to correct this oversight.

DEP intends that the requirements of subsections (aa) through (cc) shall not apply to new subsections (ff) through (jj). As subsections (aa) through (cc) do not reference subsections (ff) through (jj) and as subsections (ff) through (jj) are drafted to stand independent of subsections (aa) through (cc), no revision is necessary to accomplish this result.

For revised subsections (p) and (q), DEP intends that subsection (aa) shall continue to apply, except for subsection (aa)(10), which establishes a two-year record retention minimum. Since subsection (aa)(1) through (9) apply, the record keeping requirements in proposed subsections (p)(7)(B) through (D) and (q)(7)(B) and (C) should be deleted. DEP further intends that subsection (bb) shall not apply to subsections (p) and (q); DEP will need to add language to subsections (p) and (q) to achieve this result. DEP also intends that the alternative emission reduction option provided in subsection (cc) shall continue to be available to owners and operators operating under subsections (p) and (q). No change to the proposal is required to accomplish this result, although DEP should add language to allow those operations now operating pursuant to an order issued under

subsection (cc)(2) or a permit issued under subsection (cc)(3) to continue to operate pursuant to such order or permit.

So that subsections (p) and (q) are consistent with the preceding description, DEP should make the following revisions to subsections (p)(3), (p)(5), (p)(7), (q)(3), (q)(5) and (q)(7) and add new subsections (p)(8) and (q)(8). In addition to making these changes, for administrative clarity, current subsection (q)(4) should be deleted and replaced entirely with new subsection (q)(3).

Subsection (p)

(3) Exemptions and exceptions.

(A) The requirements of this subsection shall not apply to the following coatings or lubricant:

(Ai) Stencil coating,

(Bii) Safety-indicating coating,

(Ciii) Solid-film lubricant,

(Div) Electric-insulating and thermal-conducting coating,

(Ev) Touch-up and repair coating, or

(Fvi) Coating applied with a hand-held aerosol can; .

(B) An owner or operator of a metal furniture coating unit operating in accordance with subdivision (5) of this subsection is exempt from any obligation to comply with subsection (bb) of this section.

(5) Compliance options. Except as provided in subdivision (3) of this subsection, no owner or operator of a metal furniture coating unit shall apply any coating, inclusive of any VOC-containing materials added to the original coating supplied by the manufacturer, unless the owner or operator uses one of the following methods to limit emissions of VOCs:

(A) Use only coatings with an as-applied VOC content no greater than the level specified in Table 20(p)-1, according to coating category and drying method. The VOC content limits of Table 20(p)-1 apply to the volume of coating as-applied, less water and less exempt VOC; Table 20(p)-1 establishes the minimum low solvent content coating technology pursuant to subsection (bb)(1)(A) of this section;

(B) Notwithstanding subdivisions (1)(B), (1)(C) and (2) through (6) of subsection (bb) of this section, install, **Install**, operate and maintain according to the manufacturer's recommendations an emissions control

system that reduces uncontrolled VOC emissions to the atmosphere from a coating unit by an overall control efficiency of at least 90%; or

(7) Records. An owner or operator shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection, as follows: **All records shall be:**

(A) All such records shall be:

(iA) Made available to the commissioner to inspect and copy upon request; and

(iiB) Maintained for five years from the date such record is created; and

(C) As described in subsection (aa)(1) through (9) of this section.

~~(B) Owners and operators of sources using add-on control technology in accordance with subdivision (5)(B) of this subsection shall maintain records demonstrating compliance with the required level of control;~~

~~(C) An owner or operator of any metal furniture operation using an application method in accordance with subdivision (4)(G) of this subsection shall maintain records demonstrating the transfer efficiency achieved; and~~

~~(D) Additional information sufficient to demonstrate compliance may include the following:~~

~~(i) Name and quantity of any coating or cleaning solvent used;~~

~~(ii) VOC content of each coating or solvent used, as applied, and~~

~~(iii) A catalog of Materials Safety Data Sheets for all coatings and solvents used.~~

(8) An owner or operator of a metal furniture coating unit operating under a valid order issued pursuant to subsection (cc)(2) of this section or a valid permit issued pursuant to subsection (cc)(3) of this section shall operate as required in such order or permit, regardless of the requirements of this subsection.

Subsection (q)

[(4) The provisions of this subsection do not apply to any coating line with a continuous web that has both paper coating and printing stations and that is subject to the requirements of section 22a-174-20(v) of the Regulations of Connecticut State Agencies.]

(3) Exemptions and exceptions.

(A) The provisions of this subsection shall not apply to the following activities:

- (Ai) Coating performed on any coating line that has both paper coating and printing stations and that is conducted pursuant to subsection (v) of this section.
- (Bii) The application of sizing or water-based clays in association with the use of a papermaking machine, or
- (Ciii) The application of inks, coatings or adhesives in association with flexible package printing conducted pursuant to subsection (ff) of this section or offset lithographic or letterpress printing conducted pursuant to subsection (gg) of this section.

(B) An owner or operator of a paper, film and foil coating operation operating in compliance with subdivisions (4) and (5) of this subsection is exempt from any obligation to comply with subsection (bb) of this section.

(5) Additional requirements. The owner and operator of any paper, film and foil coating line with a potential to emit greater than 25 tons per year, prior to the use of controls, shall use one of the following methods to control emissions of VOCs:

- (A) Use only coatings that result in VOC emissions no greater than the applicable emission limit of subparagraph (A)(i) or (A)(ii) of this subdivision, calculated either per coating or per coating line, as provided in subparagraph (A)(iii) of this subdivision. ~~The limits of subparagraphs (A)(i) and (A)(ii) of this subdivision establish the level of minimum low solvent content coating technology pursuant to subsection (bb)(1)(A) of this section:~~
 - (i) For all coatings except pressure sensitive tape and label coatings, use only coatings that result in VOC emissions no greater than 0.40 kilograms of VOC per kilogram of coating solids applied,
 - (ii) Use only pressure sensitive tape and label coatings that result in VOC emissions no greater than 0.20 kg VOC/kg of coating solids applied, and
 - (iii) The VOC emissions limits of subparagraphs (A)(i) and (A)(ii) of this subdivision may be met either if every coating applied individually meets the applicable emission limit or if the daily weighted average of the VOC content of every coating used on a single coating line meets the applicable emission limit;
- (B) Notwithstanding subdivisions (1)(B), (1)(C) and (2) through (6) of subsection (bb) of this section, install **Install**, operate and maintain according to the manufacturer's recommendations an emissions control

system that reduces uncontrolled VOC emissions to the atmosphere from a coating line by an overall control efficiency of at least 90%; or

(7) Records. An owner or operator shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection, as follows: . All records shall be:

~~(A) — All such records shall be:~~

(iA) Made available to the commissioner to inspect and copy upon request; and

(iiB) Maintained for five years from the date such record is created; and

(C) As described in subsection (aa)(1) through (9) of this section.

~~(B) — Owners and operators of sources using add-on control technology in accordance with subdivision (5)(B) of this subsection shall maintain records demonstrating compliance with the required level of control; and~~

~~(C) — Additional information sufficient to demonstrate compliance may include the following:~~

~~(i) — Name and quantity of any coating or cleaning solvent used;~~

~~(ii) — VOC content of each coating or solvent used, as applied, and~~

~~(iii) — A catalog of Materials Safety Data Sheets for all coatings and solvents used.~~

(8) An owner or operator of a paper, film and foil coating line operating under a valid order issued pursuant to subsection (cc)(2) of this section or a valid permit issued pursuant to subsection (cc)(3) of this section shall operate as required in such order or permit, regardless of the requirements of this subsection.

As stated above, DEP does not intend that subsections (aa) through (cc) apply to new subsections (ff) through (jj). However, EPA has indicated that the record keeping requirements proposed in subsections (ff) through (jj) are not acceptable to support enforcement of the proposed control requirements. EPA indicated verbally that the record keeping requirements of subsection (aa) are preferable to those proposed in subsections (ff) through (jj) and that EPA finds the term “may” particularly troublesome, as it appears to make the existence, rather than the form, of records discretionary.

DEP should revise the record keeping requirements of subsections (ff) through (jj) to make the requirement to maintain records clearly mandatory and to specify the required frequency and quality of records. DEP should also specify record keeping requirements for sources below the applicability threshold for each regulated activity so that DEP might verify the lack of applicability of the control requirements. DEP does not believe

that maintenance of such records is burdensome, since facilities need to track the use of coatings, inks or other similar materials for inventory and quality control purposes.

In each of subsections (ff) through (jj), the subdivision addressing records should be replaced in the format provided through the example of subsection (ff)(5), as follows:

(5) Records.

- (A) An owner or operator of any flexible package printing press shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection. All such records shall be:**
- (i) Made available to the commissioner to inspect and copy upon request, and**
 - (ii) Maintained for five years from the date such record is created.**
- (B) An owner or operator of a flexible package printing press that meets or exceeds the applicability threshold of subdivision (2) of this subsection shall maintain daily records of all inks, coatings, adhesives or cleaning solvents used, as follows:**
- (i) Name and description of each ink, coating, adhesive or cleaning solvent,**
 - (ii) VOC content of each ink, coating, adhesive or cleaning solvent, as-applied, and the associated calculations. As-applied VOC content shall be determined using an EPA reference method, a California Air Resources Board reference method or other method approved by the commissioner,**
 - (iii) VOC content of each ink, coating, adhesive or cleaning solvent, as-supplied,**
 - (iv) The amount of each ink, coating, adhesive or cleaning solvent,**
 - (v) A Material Safety Data Sheet for each ink, coating, adhesive or cleaning solvent,**
 - (vi) Documentation of control device efficiency and capture efficiency, if applicable, using an applicable EPA reference method or alternate method as approved by the commissioner, and**
 - (vii) Date and type of maintenance performed on air pollution control equipment, if applicable.**

- (C) **The owner or operator of any flexible package printing press for which the 12-month rolling aggregate of materials purchased for the printing operation is below the applicability threshold of this subsection shall maintain material purchase records to verify that the applicability threshold is not exceeded.**

The same format shall be used, with appropriate adjustments for the name of the regulated activity and the types of VOC-containing material, as a replacement for proposed subsections (gg)(7), (hh)(7), (ii)(6) and (jj)(6), except that the requirements of sample subparagraph (C) are not applicable to subsection (jj). Subsections (ii)(6) and (jj)(6) should also include a requirement to maintain records to verify the applicability of certain exemptions and exceptions.

- 3. Comment:** The subdivision and subsection designations are not consistent throughout RCSA section 22a-174-20. DEP should take the opportunity provided by this proposal to make the numbering consistent throughout. [6]

Response: DEP should not revise the proposal in response to this comment. The proposal does not include all of RCSA section 22a-174-20. While older subsections of RCSA section 22a-174-20 are not numbered and lettered precisely in the format recommended by the Legislative Commissioner's Office *Manual for Drafting Regulations*, which sets the standard for formatting new language and for revising old language, the differences are not significant to the identification of locations within RCSA section 22a-174-20 and so do not require DEP to open the entire section for revision.

- 4. Comment:** DEP should consider adding a definition of "coating" to subsections (n), (o) and (q) or add a definition of "coating" to RCSA section 22a-174-1 to make clear what is considered a coating in all contexts. [6]

Response: DEP should not revise the proposal in response to this comment. Of the subsections to which the commenter suggests adding a definition of "coating," only subsection (q) is included in the proposal; subsection (q)(2)(C) includes a definition of "coating." As a general matter of regulatory interpretation, terms that are not defined should be assigned their ordinary meaning, and the commenter should assume that is how "coating" is used in subsections without a specific meaning ascribed. "Coating" is not a good candidate for addition to RCSA section 22a-174-1, since, in that general context, the term would likely have little meaning beyond its ordinary use.

RCSA section 22a-174-20(f), Organic solvents

- 5. Comment:** RCSA section 22a-174-20(f) should be clarified to apply to coating operations. Subsection (f) originated in LA Rule 66, which was provided as guidance for the original round of State Implementation Plans in 1972. The portion of that old rule reflected in subsection (f) was designed primarily for coating operations. [2]

Response: As the commenter suggests, subsection (f) does regulate coating operations in the absence of specific requirements in other subsections of RCSA section 22a-174-20. However, regardless of its origins, subsection (f) has been applied to VOC-emitting activities other than coating. While DEP agrees that subsection (f) could be less

ambiguous in the scope of its applicability, the subsection will likely continue to apply to a variety of activities. DEP should consider revising the applicability of subsection (f) in a future rulemaking, as discussed further in the response to Comment 6.

6. Comment: Subdivision (9)(C) states that subsection (f) shall not apply to: “The use of any organic material where the as-applied volatile content of the material consists only of water and organic solvent, and the organic solvent content does not exceed 20% by volume of the material.” This appears to mean that a material must contain both water and organic solvent to qualify for exemption. Would a material be exempt if it contains less than 20% solvent but does not contain water? What if water is part of the volatile content of the organic material? Subtracting the water content would be consistent with the CTG VOC definition, i.e., lb VOC/gal, less water.

The language might be more clearly stated as follows:

“ . . . the as-applied volatile content of the material consists of organic solvent or organic solvent and water, and the organic content does not exceed 20% by volume of the material, less water.” [6]

Response: Regardless of intentions to the contrary, DEP agrees that the proposed language for RCSA section 22a-174-20(f)(9)(C) is as obscure as the existing language, in part because the terms “organic material” and “organic solvent” are not defined. At this time, DEP should proceed only with the proposed revision to subparagraph (A) of subsection (f)(9) and retain the current language of subparagraph (C).

To address the ambiguity infused through subsection (f), DEP should propose a complete revision of subsection (f) in the future to reduce ambiguity and improve the air quality protection provided by subsection (f), given that the control requirements of the subsection are quite old. In anticipation of a comprehensive review of subsection (f), DEP should retain subsections (f)(2) and (f)(13), which were proposed for deletion, as well as subsection (f)(9)(C).

An additional consideration against the proposed removal of subsection (f)(2) is that such a deletion would leave emissions resulting from the use of a “highly photochemically reactive solvent” now regulated under subsection (f)(2) with no limitation except as provided in subsection (f)(4), which has much higher discharge limits than subsection (f)(2). Such a result is unacceptable.

Since DEP is, at this time, retaining subsections (f)(2) and (f)(13), DEP should also retain RCSA section 22a-174-20(h) and (i), rather than deleting subsections (h) and (i) as proposed. Subsection (f)(2) references subsection (i), and subsection (f)(13) uses terms defined in subsection (i). If, at a future date, DEP revises subsection (f) *in toto*, DEP should consider also eliminating subsections (h) and (i).

7. Comment: Subsection (f)(11) exempts “such materials which exhibit a boiling point higher than 220 degrees F.” Subsection (f)(11) should apply the boiling point exemption to the properties of the whole material and not the properties of the material’s constituents. [2]

Response: Subdivision (11) of subsection (f) is not within the scope of this proceeding, and so DEP should not make any revisions in response to the comment. DEP should consider this comment in any future effort to revise subsection (f).

RCSA section 22a-174-20(I), Metal cleaning

8. Comment: A phrase appears to be missing from subsection (I)(1)(K)(ii), namely “that exposes such metal parts.” The named gases are not being reworked. The subclause should be revised to read in a manner similar to subclause (iv), as follows: “In the research, development, manufacture, and rework that exposes such metal parts to ozone, nitrous oxide,” [6]

Response: The comment misinterprets subsection (I)(1)(K)(ii), as the subclause is referring to the manufacture of the named compounds. The phrase “research, development, manufacture and rework” was used to parallel the structure of subclauses (i) and (iii), but the comment shows that the phrase is confusing in subclause (ii). The definition is stated more clearly if subclause (ii) only refers to manufacturing of the compounds. Research, development and rework were added to subclause (ii) in response to comment in a previous rulemaking, where the phrase is most relevant to precision parts and electronic parts, for which the cleanliness of the metal parts may be of utmost importance. Accordingly, subclause (ii) of the definition of “special and extreme solvent metal cleaning” should be revised as follows:

- (K) “Special and extreme solvent metal cleaning” means the use of a cold cleaning unit to clean metal parts where such metal parts are used:
- (i) In the research, development, manufacture and rework of electronic parts, assemblies, boxes, wiring harnesses, sensors and connectors used in aerospace service,
 - (ii) ~~In the research, development, manufacture and rework of~~ **manufacturing** ozone, nitrous oxide, fluorine, chlorine, bromine, halogenated compounds or oxygen in concentrations greater than [twenty-three percent (23%)] 23%,
 - (iii) In the research, development, manufacture and rework of high precision products for which contamination must be minimized in accordance with a customer or other specification, or
 - (iv) In a manner that exposes such metal parts to ozone, nitrous oxide, fluorine, chlorine, bromine, halogenated compounds or oxygen in concentrations greater than [twenty-three percent (23%)] 23%.

9. Comment: Subdivision (2)(C) includes an exception for 1,1,1 trichloroethane and trichlorotrifluoroethane, which are Group I ozone depleting substances that were banned from production and use after 1996, with a few “essential use” exemptions. Regardless, exempt VOC are being or may be used for metal cleaning and as additional volatile organic material may be exempt in the future, subdivision (2)(C) should be revised as follows:

“Metal cleaning equipment which uses an exempt volatile organic compound as identified in 40 CFR 51.100(s)(1), as amended from time to time.” [6]

Response: DEP should not expand the exemption provided in subsection (I)(2)(C) to include all exempt VOCs. The use of exempt VOCs in metal cleaning would by definition be exempt from the VOC content limits of subsection (I). Other provisions of subsection (I), such as work practices, should continue to apply.

RCSA section 22a-174-20(s)(2)(B), Miscellaneous metal parts and products

10. Comment: DEP should incorporate the Aerospace CTG into RCSA section 22a-174-20. The exemption for coating of the exterior surface of assembled aircraft now included in RCSA section 22a-174-20(s)(2)(B)(vii) is not broad enough to address the coating activities performed at UTC facilities. Often, coating characteristics are mandated by military and other Federal agency requirements and the mandated characteristics do not always allow for compliance with the requirements of RCSA section 22a-174-20(s). [2]

Response: DEP should not make any change in response to this comment at this time. The recommended adoption of the Aerospace CTG is outside the scope of this proceeding. DEP is aware that the aerospace industry is subject to a number of constraints, including safety and military specifications for aerospace parts and products. To date, DEP has addressed the concerns of the aerospace industry within individual regulatory provisions and through permits and orders. Should DEP determine that a new approach is preferable, DEP may propose to take a different course in a future rulemaking.

RCSA section 22a-174-20(ee), RACT for large sources

11. Comment: How will the deletion of subsection (ee) affect orders issued under the requirements of this subsection? Would they lack regulatory authority given the elimination of the underlying regulation? Also, if the subsection is deleted, internal references to the subsection should be deleted, e.g., subsections (cc)(1), (cc)(2), (cc)(3), (dd)(1) and (ii)(3)(iii). [6]

Response: The deletion of subsection (ee) would not invalidate orders issued under that subsection, since the law in effect at the time the order is issued would govern the order. If subsection (ee) is eliminated, should either DEP or the other party to such an order wish to renegotiate, a new order would need to be issued under different regulatory authority or a new compliance approach would be pursued.

The proposed deletion of subsection (ee) is intended as an administrative improvement rather than to achieve any air quality benefit. Any new source of VOC emissions would either comply with an applicable subsection of RCSA section 22a-174-20 or would comply with RCSA section 22a-174-32; no new orders will be issued under RCSA section 22a-174-20(ee) since the ability to issue such an order has a date restriction. Given that the proposed deletion has created concern in some members of the regulated community and given that there is no significant advantage to DEP to phase out all the existing orders issued under RCSA section 22a-174-20(ee), DEP should retain subsection (ee) in the final recommended version of RCSA section 22a-174-20. In retaining the subsection, DEP should revise the references in subsection (ee)(1) to include the new subsections that are part of this proposal, just as is proposed in RCSA section 22a-174-32(b)(3). As a result, subdivision (1) of subsection (ee) will appear as follows:

(1) [subsections (a), (b) or (l) through (y), inclusive, of section 22a-174-20 of the Regulations of Connecticut State Agencies;] **any one of the following subsections of section 22a-174-20 of the Regulations of Connecticut State Agencies: (a), (b), (l) through (y) or (ff) through (jj);**

Since DEP is retaining subsection (ee), there is no need to address the internal citations as recommended by the commenter.

12. Comment: DEP is proposing to delete RCSA section 22a-174-20(ee). This regulation requires a VOC RACT determination for any site with potential VOC emissions greater than 100 tons per year. In 1990, Consent Order 8010 was issued to Sikorsky's Stratford site to regulate its eight spray booths in operation at that time and used for coating helicopter and helicopter parts (and other now obsolete equipment). This order was issued as a source-specific VOC RACT determination for the paint booths, which were not subject to DEP's control technology guideline-based regulations. Subsequently, Sikorsky submitted an Alternative Emission Reduction Plan, as allowed by 22a-174-20(cc), because several of the coatings used could not meet the limits in Order 8010. Several addendums and Consent Order 8246 have since been issued to Sikorsky, which allows emissions offsets to limit the VOC emissions from painting at the Stratford site.

With the deletion of RCSA section 22a-174-20(ee), Sikorsky does not have the assurance that it can continue legally to operate its Stratford paint booths. The consent order was originally issued under RCSA section 22a-174-20(ee). Sikorsky is very concerned about potentially ambiguous enforceability issues. If the regulation is deleted, what is the Order's regulatory authority? Can other conditions be imposed absent the referenced regulation? Sikorsky recommends that the regulations be amended to recognize its operation under a consent order originally issued under RCSA section 22a-174-20(ee). Alternately, RCSA section 22a-174-20(s)(2)(B)(vii), which exempts the exterior surface of assembled aircraft, could be expanded to include all aerospace applications. Coating of aerospace parts, both interior surfaces and pre-assembled aircraft and parts, is routinely performed at many Sikorsky and supporting facilities. In many applications, the coatings' extreme performance characteristics are mandated by military and other specifications. The extreme performance characteristics required in such cases do not always allow for coatings that comply with the VOC paint limits in RCSA section 22a-174-20(s), CTG-based subsection for miscellaneous metal parts coating. [3]

Response: DEP's retention of subsection (ee) as described in the response to Comment 11 addresses the concerns raised in the comment related to Order 8010. Concerning the recommended expansion of RCSA section 22a-174-20(s)(2)(B)(vii), DEP should not so proceed at this time. See the response to Comment 10 for more discussion of this topic.

RCSA section 22a-174-20(gg), Offset lithographic printing and letterpress printing

13. Comment: The applicability of subsection (gg) is based on actual daily emissions from offset lithographic or letterpress printing and related cleaning. The CTG also allows for an applicability threshold of 3 tons per rolling 12-month period.

DEP should revise the applicability threshold from the daily actual VOC emissions to the use of purchase records or actual use records of raw materials that would be equivalent to the three tons per rolling 12-month threshold. VOC emissions from offset lithography and letterpress printing

are generally from the following sources: cleanings solvents, fountain solution additives and solvent-based inks.

To determine a conservative material use amount equivalent to the three tons per 12-month threshold, the following assumptions are reasonable:

- Cleaning solvents are 100% VOC and have a product density of 7 pounds per gallon;
- Fountain solution additives have the following VOC contents and product densities:
 - Alcohol: 6.6 pounds per gallon, 100% VOC
 - Alcohol substitutes: 8.5 pounds per gallon, 90% VOC; and
- Solvent-based ink is 45% VOC with a retention factor of 20% and a density of nine pounds per gallon.

Using these assumptions, the material use amount of 855 gallons per rolling 12-month of cleaning solvents, fountain solution and ink combined would be a conservative estimate equivalent to three tons per rolling 12-month period. The applicability should be written using either of the following thresholds: three tons of VOC per rolling 12 month period, or 855 gallons of cleaning solvents, fountain solution additives and heatset ink purchased or used per rolling 12-month period. [8]

Response: DEP should revise the proposal in response to this comment. Although DEP has prior to 2002 used the 15 pound per day actual emissions threshold for many of the CTG-based requirements in RCSA section 22a-174-20, the use of a longer averaging period for determining applicability is consistent with DEP's current approach to source permitting and makes for easier applicability determinations and record keeping. As indicated in the comment, an applicability threshold with a 12-month averaging period is acceptable to EPA.

In 2002, DEP revised its new source review permitting program to focus individual source permitting processes on sources of air emissions with a potential to emit of any single pollutant greater than 15 tons per year (tpy). As an alternative to obtaining an individual permit for certain equipment and operations, DEP adopted permit-by-rule requirements in RCSA sections 22a-174-3b and 22a-174-3c. The two permit-by-rule regulations set out requirements that, if followed, would limit actual emissions to levels below the 15 tpy permitting threshold. RCSA sections 22a-174-3b and 22a-174-3c also provide for ease in record keeping and compliance determinations. The applicability and compliance determinations in RCSA sections 22a-174-3b and 22a-174-3c are generally based on a 12-month rolling aggregate of materials purchased or used, and the record keeping requirements are, in some instances, satisfied with usage records or purchase records.

As the CTG requirements are similarly designed to limit emissions from equipment and activities that may not be subject to individual permitting, similar applicability thresholds, based on a 12-month period, are appropriate. DEP accepts the commenter's suggested applicability of 855 gallons of cleaning solvents, fountain solution additives and heatset ink purchased per rolling 12-month period.

In sum, DEP should revise the applicability of subsection (gg)(2) to 855 gallons of cleaning solvents, fountain solution additives and solvent-based ink purchased in aggregate per rolling 12-month period.

In allowing for a longer averaging time to determine applicability, some facilities that would be subject to the requirements of subsection (gg) if applicability was determined on a daily basis will go unregulated. The number of such facilities, which is likely small, is acceptable. As in source permitting, sources with a rare, high activity day that results in a singular or occasional breach of the applicability threshold should not be required to meet the VOC RACT requirements. The longer averaging period imposes the requirements on sources with emissions that consistently exceed a level where the cost of control is appropriate, allowing the smallest and typically less sophisticated operations to remain outside of the regulation. The longer applicability period also allows DEP to focus its enforcement and compliance-assistance resources on the regulation of the larger operations. Not including sources for a short-term spike in emissions is particularly important since EPA applies a "once in, always in" policy for RACT sources. If a source's actual emissions ever exceed the RACT applicability threshold, then the source is permanently subject to RACT requirements until such time as operations covered by the RACT category are ceased.

Subsection (gg)(2) should be revised to read as follows:

(2) Applicability. The provisions of this subsection apply to the owner or operator of any offset lithographic or letterpress printing press ~~or presses with actual emissions from offset lithographic or letterpress printing and related cleaning of at least 6.8 kilograms per day (15 pounds per day) of VOC prior to the use of air pollution control equipment who purchases for the printing operation at least 855 gallons of cleaning solvents, fountain solution additives and solvent-based inks in aggregate per any rolling 12-month period.~~ Any owner or operator of an offset lithographic or a letterpress printing press operation who is subject to this subsection shall:

- (A) Comply with the requirements of this subsection no later than January 1, 2010 or, for a source that commences operation after January 1, 2010, the date on which the source commences operation; and
- (B) Remain subject to this subsection. ~~regardless of actual daily VOC emissions.~~

14. Comment: Alcohol is not the only additive used in fountain solution in most offset lithographic printing facilities. The majority of offset lithographic printers will use a combination of acid fountain solution concentrates, alcohol substitutes, non-piling concentrates and possibly alcohol. To better capture all the potential VOC-containing materials in the fountain solutions, the following recommendation replaces existing "alcohol or alcohol substitute" weight percentage requirements:...maintain the as-applied VOC content of the fountain solution at or below x.x% by weight. The weight percent proposed in this section would remain the same but be based on as-applied VOC content instead of "alcohol" or "alcohol substitute" weight percentages. [8]

Response: The compounds other than alcohols that are used in fountain solution typically have a lower volatility than alcohol, which is why alcohol is the focus for fountain solution restrictions. Restating the fountain solution restrictions of subsection (gg)(3) in terms of the restrictions on the VOC content rather than the concentration of

alcohol is acceptable for fountain solutions that contain alcohol since alcohol is typically 100% VOC, which would make the VOC content and alcohol content limitations equivalent. For fountain solutions with no alcohol, the limitation should be on the amount of alcohol substitute, since alcohol substitute will typically have a VOC content less than 100%. Subsection (gg)(3) should be revised, as follows:

(3) Fountain solutions.

- (A) The owner or operator of a heatset web offset lithographic printing press with a fountain solution reservoir of at least one gallon in capacity shall:
- (i) ~~Reduce the on-press alcohol content to 1.6% alcohol or less by weight,~~ **Limit the as-applied VOC content of the fountain solution to 1.6% by weight or less,**
 - (ii) ~~Use 3% alcohol or less by weight on-press in the fountain solution and refrigerate the fountain solution to below 60°F, If the fountain solution is refrigerated to below 60°F, limit the as-applied VOC content of the fountain solution to 3% by weight or less,~~
or
 - (iii) ~~Use a 5% alcohol substitute or less by weight on-press and no alcohol in the fountain solution. Use fountain solution that~~ **contains no alcohol and limit the alcohol substitute content of the fountain solution to 5% by weight or less.**
- (B) The owner of a sheet-fed offset lithographic printing press with a minimum sheet size of greater than 11x17 inches and a fountain solution reservoir greater than one gallon in capacity shall:
- (i) ~~Reduce the on-press alcohol content to 5% alcohol or less by weight,~~ **Limit the as-applied VOC content of the fountain solution to 5% by weight or less,**
 - (ii) ~~Use 8.5% alcohol or less by weight on-press in the fountain solution and refrigerate the fountain solution to below 60°F, If the fountain solution is refrigerated to below 60°F, limit the as-applied VOC content of the fountain solution to 8.5% or less,~~
or
 - (iii) ~~Use 5% alcohol substitute or less by weight on-press and no alcohol in the fountain solution. Use fountain solution that~~ **contains no alcohol and limit the alcohol substitute content of the fountain solution to 5% by weight or less.**
- (C) The owner of a coldset web offset lithographic printing press with a fountain solution reservoir of at least one gallon in capacity shall use ~~a 5% alcohol substitute or less by weight on-press and~~ **a fountain solution that**

contains no alcohol in the fountain solution and that has an alcohol substitute content of 5% by weight or less.

15. Comment: DEP should add a new subdivision (8) to subsection (gg) to include retention factors and capture efficiencies for materials used in offset lithographic printing. The CTG includes retention factors and capture efficiencies, and these have been included in a number of state rules based on the CTG. Recommended language for new subdivision (8) is as follows:

- (8) Retention factors and capture efficiencies. For the purposes of determining VOC emissions from offset lithographic printing operations, the following retention factors and capture efficiencies shall be used:
 - (A) A portion of the VOC contained in inks and cleaning solution is retained in the printed web or in the shop towels used for cleaning. The following retention factors shall be used:
 - (i) A 20% VOC retention factor shall be used for heatset inks printed on absorptive substrates, meaning 80% of the VOC in the ink is emitted during the printing process and is available for capture and control by an add-on pollution control device.
 - (ii) A 95% VOC retention factor shall be used for sheet-fed and non-heatset web inks printed on absorptive substrates, meaning 5% of the VOC in the ink is emitted during the printing process.
 - (iii) A 50% VOC retention factor shall be used for cleaning solution VOC in shop towels for cleaning solutions with a VOC composite vapor pressure of no more than 10mmHg at 20 degrees Celsius (68 degrees Fahrenheit) if the contaminated shop towels are kept in closed containers, meaning 50% of the VOC used on the shop towels is emitted during the cleaning process.
 - (B) A portion of the VOC contained in inks, fountain solutions and automatic blanket washes on heatset presses is captured in the press dryer for control by add-on pollution control devices. The following capture efficiencies are to be used:
 - (i) 100% VOC carryover efficiency shall be used for inks. All the VOC in ink that is not retained is assumed to be volatilized in the press dryer. Capture efficiency testing for heatset dryers is not required if it is demonstrated that pressure in the dryer is negative relative to the surrounding press room and the airflow is into the dryer.
 - (ii) 70% VOC carryover efficiency shall be used for fountain solutions containing alcohol substitutes.
 - (iii) 40% VOC carryover efficiency shall be used for automatic blanket wash solutions with a VOC composite vapor pressure of no more than 10mmHg at 20°C (68° F). [8]

Response: DEP should not add the retention factors and capture efficiencies to subsection (gg). Given that the applicability is written in terms of materials purchased, retention factors and capture efficiencies are only relevant to determining whether an operation exceeds the 25 tons of VOC potential emissions threshold of subdivision (4). DEP did not specify procedures for determining emissions from offset lithographic printing operations to provide the owner of any such operation the flexibility to calculate potential emissions in a manner that takes into account the characteristics of that operation. A person may use the default retention factors and capture efficiencies of the CTG, if appropriate to the operation.

RCSA section 22a-174-20(hh)(5)(C), Large appliance coatings

16. Comment: Subsection (hh)(5)(C) of the proposed large appliance coating rule allows a company to seek an alternative means of compliance if approved by the Commissioner. Such alternatives however, must also be approved by EPA. Therefore, we recommend that Connecticut's proposed large appliance coating rule be revised to require those seeking alternatives to comply with the more detailed requirements of Connecticut's existing RCSA section 22a-174-20(cc), as is done in Connecticut's proposed metal furniture and paper, film and foil coating rules. [1]

Response: The proposed large appliance coating requirements differ from the proposed requirements for metal furniture and paper, film and foil coating in that the large appliance coating requirements are entirely new while the proposed metal furniture and paper, film and foil coating requirements are up-to-date versions of existing requirements. As noted in the comment, subsections (aa), (bb) and (cc) of RCSA section 22a-174-20 contain requirements of general applicability (*i.e.*, record keeping, compliance methods and alternative emissions reductions) to the source- or activity-specific requirements of subsections (m) through (s) and (v). DEP does not intend to have the requirements of subsections (aa), (bb) and (cc) apply to the proposed new requirements of RCSA section 22a-174-20, and, hence, DEP did not refer to subsection (cc) in the alternative compliance requirements for large appliance coating operations.

To address EPA's concern, DEP should add a requirement for the Administrator to approve alternative compliance methods to subsection (hh)(5)(C). While EPA recommends that the detailed requirements for alternative compliance requests should also be added to subsection (hh), DEP should not include those requirements in the final proposal since the "other information" provision of subclause (iii) allows for information equivalent to that specified in subsection (cc) to be obtained, as necessary. Subsection (hh)(5)(C) should be revised as follows:

- (C) With the approval of the commissioner **and the Administrator**, use an alternative means to achieve a level of control equivalent to that required in subparagraph (A) or (B) of this subdivision. An owner or operator shall submit a request to the commissioner **and the Administrator** to use an alternative means of compliance, and such request shall include:
 - (i) A description of the method,
 - (ii) A demonstration of the level of emissions control achieved, and

- (iii) Any other information requested by the commissioner or the Administrator.

RCSA section 22a-174-20(ii), Industrial solvent cleaning

17. Comment: The exemption for aerospace facilities in subsection (ii)(3)(A)(iv) appears to be included based on DEP's recognition of the multiple agency requirements that apply to aerospace facilities and the need to ensure that those requirements are not in conflict. DEP should categorically exempt all aerospace manufacturing and rework sources (major and minor) from subsection (ii), as all meet the same flight safety and governmental restrictions. In support of this exemption, the commenters note:

- Solvents such as methyl ethyl ketone, acetone and isopropyl alcohol are used in aerospace manufacturing and repair facilities as required in specifications of the Federal Aviation Administration or the Department of Defense. No alternatives that meet the VOC or vapor pressure limits are approved under the specifications.
- The Bay Area Air Quality Management District rules, which are referenced in the Industrial Cleaning Solvents CTG, support an exemption for all aerospace facilities, major and minor.

As an alternative to the categorical exemption for aerospace facilities, DEP should exempt aerospace facilities that use cleaning solvents "in accordance with 40 CFR 63, subpart GG" to exempt sources whether or not they are major and are subject to the Aerospace NESHAP. Another commenter recommends the following language to achieve the same result -- that the exemption of subclause (iv) applies to aerospace facilities regardless of facility size:

- (iv) At any aerospace manufacturing and rework facility that is a major or minor source provided that cleaning solvent is used consistent with the requirements of and the exemption in 40 CFR 63, subpart GG. [2, 3, 6]

Response: The intended result of the language proposed in subsection (ii)(3)(A)(iv) is the exemption of every aerospace manufacturing and rework facility, regardless of whether the facility is a "major source" as defined in 40 CFR 63.2, from any obligation to comply with subsection (ii). The exemption, as proposed, is intended to be contingent on the aerospace facility using cleaning solvents as required in 40 CFR 63, subpart GG, since those requirements adequately limit VOC emissions from cleaning. The phrase "used in accordance with" means that an aerospace facility observes the housekeeping requirements, cleaning solvent composition or vapor pressure requirements and spray gun cleaning requirements set out in 40 CFR 63.744, inclusive of the exemptions. For those facilities that are not subject to 40 CFR 63 subpart GG, compliance with the record keeping and reporting obligations is not encompassed by the phrase "used in accordance with."

As DEP's intention is consistent with the result requested by commenters and yet was not understood as such, the proposed language is not clear and should be replaced. Considering the replacement text recommended in comment and the intended result, subclause (iv) should be written as follows:

- (iv) ~~At an aerospace manufacturing and rework facility where cleaning solvent is used in accordance with 40 CFR 63,~~ **At any aerospace manufacturing and rework**

facility, provided that cleaning solvent is used in accordance with the requirements of 40 CFR 63.744, inclusive of exemptions,

18. Comment: As an alternative to the categorical exemption for aerospace facilities requested in Comment 17, the exemption requested in RCSA section 22a-174-20(ii)(3)(A)(viii) should be broadened in two respects:

- The exemption provided in RCSA section 22a-174-20(ii)(3)(A)(viii) should be broadened to include not only the use of cleaning solvents as specified in standards or specifications *issued* by the United States Department of Defense but also specifications *approved* by the Department of Defense. [2, 3]
- The exemption provided in RCSA section 22a-174-20(ii)(3)(A)(viii) should be broadened to include not only specifications of the Department of Defense but also the Federal Aviation Administration and other agencies or customers that provide specifications for the manufacture and repair of flight critical parts. For example, the FAA often specifies the use of MEK, acetone and IPA to provide a necessary level of cleanliness, and no acceptable substitutes are available that meet the 0.42 lb/VOC/gal limit of the proposed regulation. Even if a suitable substitute were available, a lengthy demonstration of performance would need to be prepared for FAA approval, a process that would take time beyond the January 1, 2010 compliance date. [2, 3]

Language that would broaden the exemption in subclause (viii) in both respects might read as follows:

- (viii) In cleaning, including surface preparation prior to coating, necessary to meet a standard or specification issued or approved by the United States Department of Defense, FAA, NASA, customer or other regulating entity. [2, 3]

Response: Although the categorical exemption for aerospace facilities as recommended in Comment 17 granted, DEP should revise subclause (viii) to address the concerns raised in comment since subclause (viii) is applicable to facilities other than aerospace manufacturing, and such other facilities may have similar concerns. DEP should revise subdivision (3)(A)(viii) as follows in the final recommended version of subsection (ii):

- (viii) In cleaning, including surface preparation prior to coating, necessary to meet a standard or specification of **issued or approved by the United States Department of Defense, Federal Aviation Administration or other federal government entity. Any person claiming exemption pursuant to this subclause shall maintain records of the standard or specification,**

19. Comment: DEP should add a new exemption to subsection (ii) to allow for the use of non-compliant solvent in amounts greater than the 55-gallon exemption. The exemption could take the following form:

- (A) The use of a cleaning solvent that does not comply with subdivision (4)(A) of this subsection may be allowed upon approval by the Commissioner.
- (B) Any request for approval under this subdivision shall be made in writing to the Commissioner and shall include, at a minimum, the following information:

- (i) The scope of the activity,
- (ii) An assessment of alternative materials and procedures,
- (iii) Quantification of the amount of VOC that would be emitted as a result of such activity, and
- (iv) The dates on which the activity will occur. [6]

Response: DEP should add the suggested exemption to subsection (ii). Although DEP is adding or broadening other exemptions in response to comment and narrowing the type of activities subject to subsection (ii), it is conceivable that an alternate approach to compliance may be necessary for a few, limited situations. The exemption should be added as new subclause (xiv) of subdivision (3), as follows:

- (xiv) **That exceeds the applicable limit of subdivision (4)(A) of this subsection, if approved by the commissioner and the Administrator. Any request for approval shall be made in writing to the commissioner and the Administrator and shall include a description of the cleaning solvent and its VOC content, an explanation of why the cleaning solvent is necessary, quantification of the amount of the VOC that will be emitted as a result of the use of the noncompliant cleaning solvent and the time period over which the noncompliant solvent will be used.**

20. Comment: The rule exempts janitorial cleaning, defined as “the cleaning of building or facility components including, but not limited to, floors, ceilings, walls, windows, doors, stairs, restrooms, furnishings and exterior surfaces of office equipment.” Janitorial cleaning excludes the cleaning of work areas where manufacturing or repair activity is performed. A very strict interpretation could indicate that the regulation applies to the cleaning of work stations, even at otherwise exempted sites, such as those subject to the Aerospace NESHAP.

To distinguish between and distribute separate cleaning formulations for flight critical parts and work stations will prove to be an onerous and impractical, if not impossible, record keeping and training effort. This problem could be solved by DEP categorically exempting aerospace manufacturing and rework sources from subsection (ii), or the language should be changed to exempt work station cleaning at aerospace manufacturing and rework sources if the use of solvents is otherwise permitted for cleaning parts. [3]

Response: The revision recommended in the response to Comment 17 addresses the concern raised, as the categorical exemption of aerospace manufacturing and rework facilities will eliminate the need for operators of such facilities to distinguish regulated and non-regulated activities.

21. Comment: Solvent cleaning is broadly defined with specific exemptions provided in subsection (ii)(3). Military facilities such as the Naval Submarine Base at Groton, Connecticut perform many functions in support of their primary mission, including maintenance of barracks, living spaces, equipment and vehicles; food preparation; operation of recreational facilities such as a gym, swimming pool, bowling alley, golf course and movie theater; and operation of a gas

station, medical and dental center and submarine school. As general solvent cleaning is performed within these various functions, and many of the products used are the same products otherwise regulated as consumer or institutional products under RCSA section 22a-174-40, further clarification of subsection (ii) is necessary. DEP should make specific changes to the proposal to address the multiple activities of some facilities, including the following:

- “Solvent cleaning” as defined under subsection (ii)(1)(F) should be revised to clarify what types of solvent cleaning operations are covered.
- Subsection (ii)(3) should include an exemption for solvent cleaners regulated under RCSA section 22a-174-40.
- Subsection (ii)(1)(C) should specify whether “liquid” cleaning solvent includes an aerosol cleaning solvent of a solvent laden (pre-moistened) towelette.
- Subsection (ii)(1)(D) should specify whether “janitorial cleaning” includes cleaning of furnishings and food service equipment.
- Subsection (ii)(1)(F) should state whether cleaning of personal protective equipment, such as respirators, would constitute “solvent cleaning.” [5]

Response: DEP agrees that the activities intended to be regulated under subsection (ii) are not clearly identified and appreciates the comments to help us so do. The CTG that forms the basis of subsection (ii) is focused on industrial solvent cleaning, which is not differentiated from other forms of solvent cleaning in subsection (ii). Industrial solvent cleaning is the cleaning of parts, products or equipment incorporated into or used exclusively in the manufacture or construction of a finished product at a facility. The CTG identifies nine categories of industrial solvent cleaning, including spray gun cleaning (to which proposed subsection (jj) is devoted), spray booth cleaning, parts cleaning, manufacturing equipment cleaning, manufactured components cleaning, line cleaning, floor cleaning and tank cleaning. The activities that constitute industrial solvent cleaning do not include routine cleaning or maintenance of an establishment, activities which are defined as “janitorial,” and the definitions in subsection (ii)(1) should be revised to make the distinction of the industrial and general cleaning clearer and to address the specific circumstances raised in the comment (*i.e.*, the bulleted list). The defined term “solvent cleaning” should be replaced with “industrial solvent cleaning,” and the definitions should be ordered alphabetically. Subsection (ii) should be labeled “industrial solvent cleaning” rather than “general solvent cleaning” to distinguish the subsection’s purpose from janitorial or general cleaning.

As the CTG is focused on manufacturing situations, facilities such as schools, universities, military bases and hospitals, would typically not be subject to the subsection unless a portion of the facility was devoted to manufacturing. For example, a technical school may operate a manufacturing shop, and the shop would need to be cleaned in accordance with subsection (ii) absent an exemption. The rest of the school, including classrooms, locker rooms, offices and library, would not be subject to subsection (ii).

The exemptions should lead to a result that cleaning and cleaners used in an industrial application should only be subject to a single regulation. To a large extent, this result is achieved by the proposed exemptions. However, the comment identifies an important oversight in that no exemption is provided for cleaning with cleaners regulated by RCSA section 22a-174-40, and such an exemption should be added to subsection (ii)(3). In addition, cleaning that is subject to any other subsection of RCSA section 22a-174-20 should also be exempt from subsection (ii). In adding a single subclause to address

cleaning otherwise regulated in RCSA section 22a-174-20, proposed subdivisions (3)(A)(vi) and (3)(A)(vii) should be deleted and the subclauses re-numbered, as appropriate.

Accordingly, the final version of subsection (ii) should be revised as indicated below.

(ii) **General Industrial solvent cleaning.**

(1) Definitions. For the purpose of this subsection:

- (A) “Air pollution control equipment efficiency” means the ratio of VOC emissions recovered or destroyed by the air pollution control equipment to the total VOC emissions that are introduced into the air pollution control equipment, expressed as a percentage;
- (B) “Capture efficiency” means the ratio of VOC emissions delivered to the air pollution control equipment to the total VOC emissions resulting from the **industrial** solvent cleaning activities, expressed as a percentage;
- (C) “Cleaning solvent” means any VOC-containing liquid, **including a liquid impregnated wipe or towelette, used in cleaning used to perform solvent cleaning;**
- (D) ~~“Solvent-~~ **Industrial solvent cleaning**” means the use of cleaning solvent to remove uncured adhesives, uncured inks, uncured coatings or contaminants such as dirt, soil ~~and or~~ grease from parts, products, tools, machinery, equipment or work areas, **where such parts, products, tools, machinery, equipment and work areas are incorporated into or used exclusively in manufacturing a product. “Industrial solvent cleaning” includes spray booth cleaning, cleaning of manufactured components, parts cleaning, cleaning of production equipment for maintenance or to prohibit cross-contamination, and cleaning of tanks, mixing pots, process vessels and lines. “Industrial solvent cleaning” does not include the cleaning of personal protection equipment, such as respirators.**
- (E) “Janitorial cleaning” means ~~the~~ **general and maintenance** cleaning of building or facility components including, but not limited to, floors, ceilings, walls, windows, doors, stairs, restrooms, furnishings, **kitchens** and exterior surfaces of office equipment. “Janitorial cleaning” includes graffiti removal. “Janitorial cleaning” excludes the cleaning of **parts, products or equipment, where such parts, products or equipment are incorporated into or used exclusively in manufacturing a product. “Janitorial cleaning” excludes the cleaning of work areas, such as laboratory benches, where manufacturing or repair activity is performed;**
- (F) “Overall control efficiency” means the product of the capture efficiency and the air pollution control equipment efficiency;

(3) Exemptions and exceptions.

(A) The requirements of this subsection shall not apply to the use of cleaning solvent as follows:

- (i) In janitorial cleaning,
- (ii) At an aerospace manufacturing and rework operation or a wood furniture coating operation in accordance with an order or a permit issued pursuant to sections 22a-174-32(e) and 22a-174-20(cc) of the Regulations of Connecticut State Agencies,
- (iii) To perform general solvent cleaning in accordance with an order issued pursuant to section 22a-174-20(ee) of the Regulations of the Connecticut State Agencies,
- (iv) At an aerospace manufacturing and rework facility where cleaning solvent is used in accordance with 40 CFR 63,
- (v) As surface preparation or cleanup solvent in accordance with section 22a-174-44 of the Regulations of Connecticut State Agencies,
- ~~(vi) To clean spray application equipment in compliance with subsection (jj) of this section,~~
- ~~(vii) To perform metal cleaning in compliance with subsection (l) of this section,~~
- (vi) Where the cleaning solvent is regulated pursuant to section 22a-174-40 of the Regulations of Connecticut State Agencies,**
- (vii) To perform industrial solvent cleaning where such cleaning or cleaning solvent is subject to one of the following subsections of this section: (l) through (y), (ff) through (hh), or (jj),**

.....

- (xii) Associated with pharmaceutical manufacturing, and
- (xiii) That exceeds the applicable limit of subdivision (4)(A) of this subsection where the quantity used does not exceed 55 gallons per any twelve-month rolling aggregate. Any person claiming exemption pursuant to this subparagraph

subclause shall record and maintain monthly records sufficient to demonstrate compliance with this exemption, **or**

.....

In addition, the term “solvent cleaning” as proposed in subsection (ii) shall be replaced with “industrial solvent cleaning” in each instance it appears.

22. Comment: Subsection (ii)(4) should include a conversion table or formula for comparison of MSDS vapor pressure units and reference temperatures to the regulatory limit and a formula for calculating as-applied vapor pressure for solvent-water mixtures. [5]

Response: DEP should not add a conversion table or formula as recommended in the comment. Information about the vapor pressure of any particular product is typically available in a MSDS or directly from the manufacturer. Should the units of measurement require conversion, there are a number of conversion tables and calculators available on the internet.

23. Comment: Subsection (ii)(5)(E) requires cleaning to be conducted to “minimize associated VOC emissions.” This mandate is ambiguous and should instead identify specific practices necessary to minimize emissions. [5]

Response: The commenter is correct that subsection (ii)(5)(E) is ambiguous, and DEP should delete that phrase in the final version of the proposal, as follows:

- (5) Work practices. Each owner or operator shall use the following work practices:
- (A) New and used cleaning solvent, including those mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
 - (B) Spills and leaks of cleaning solvent shall be minimized. Any leaked or spilled cleaning solvent shall be absorbed and removed immediately;
 - (C) Absorbent applicators, such as cloth and paper, which are moistened with cleaning solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling; **and**
 - (D) Cleaning solvent shall be conveyed from one location to another in a closed container or pipe. ~~and~~
 - ~~(E) Cleaning shall be performed to minimize associated VOC emissions.~~

The same ambiguous phrase should also be deleted in proposed subsections (p)(6)(E), (q)(6)(E), (ff)(3)(E), (gg)(6)(E), (hh)(6)(E) and (jj)(5)(E).

24. Comment: DEP should add an exemption for digital printing operations and presses in subsection (ii)(3). EPA did not consider emerging industry sectors in developing the CTG. Indeed, EPA collected data for the CTG in 1994 and only considered nine specific industry sectors. An exemption would be consistent with a recent action by California's Bay Area Air Quality Management District, which revised the District's graphic arts rule to exempt digital printing operations and presses from all VOC control requirements, including those associated with cleaning solvents. [7, 8]

Response: For the reasons stated in the comment, DEP should add an exemption to subsection (ii)(3) to exclude digital printing operations from the VOC control requirements of subsection (ii)(4) and the recordkeeping requirements of subsection (ii)(6). Owners of digital printing operations should meet the work practices of subsection (ii)(5).

The new exemption should be added as subparagraph (B) of subsection (ii)(3), as follows:

- (B) **The requirements of subdivisions (4) and (6) of this subsection shall not apply to the use of cleaning solvent in a digital printing operation, where digital printing means a method of printing in which an electronic output device transfers variable data, in the form of an image, from a computer to a substrate.**

25. Comment: The "once in always in" language of RCOSA section 22a-174-20(ii)(2)(B) does not encourage pollution prevention to reduce the use of VOC-containing products. There is no similar requirement in the CTG, and the provision should be deleted. [7]

Response: DEP agrees that the application of a "once in, always in" policy for RACT sources does not encourage pollution prevention. However, EPA applies the once in, always in policy to RACT sources as it has historically done for major sources of air toxics under CAA section 112. In essence, if a source was subject to RACT because its potential emissions exceeded a RACT threshold, but actual emissions did not, then the source could by permit or other enforceable mechanism prohibit its emissions from exceeding the actual emissions threshold in lieu of meeting RACT. However, if the source's actual emissions ever exceed the RACT applicability threshold, then the source is permanently subject to RACT until such time as the source ceases operations covered by the RACT category.

26. Comment: DEP should include all the exemptions in BAAQMD rule 8-4-116, or at least the following three categories: stripping of cured inks, coatings and adhesives; research and development laboratories; and performance or quality testing of coatings, inks or adhesives. [7]

Response: DEP should not add the exemptions recommended in the comment. The exemptions proposed in subdivisions (3)(A)(ix) and (x) already provide for a full exemption from subsection (ii) for industrial solvent cleaning associated with research and development and quality control or laboratory testing. The exemption specific to stripping of cured inks, coatings and adhesives does not, absent any other information, seem warranted given the range of exemptions included in subsection (ii)(3), including

those for printing operations otherwise regulated in RCSA section 22a-174-20 and for surface preparation conducted pursuant to RCSA section 22a-174-44.

27. Comment: The 50 gram VOC per liter limitation on solvents used for industrial cleaning activities should not be applied to all industrial sectors. EPA recognized that certain industries have unusual needs and allowed that states might tailor their rules to these specific scenarios. EPA also did not use accurate data in developing the CTG. Although EPA only identified 21 facilities in Connecticut that would be subject to the CTG, there are over 230 screen printing facilities operating in Connecticut that will be subject to the solvent cleaning requirements. Most of these operations are small businesses with 15 or fewer employees.

The screen printing industry has unique needs that are not compatible with the 50 gram VOC per liter limitation. The screen printing industry uses solvents for two specific cleaning activities: screen reclamation and on-press cleaning. Screen reclamation is the process of removing the stencil from the mesh so that a new stencil can be applied. Solvents used for on-press cleaning must be able to clean the mesh openings during a production run. The ability to quickly wipe off the screen during production with minimal waste is both an economic necessity as well as an environmental issue. Recognizing these needs, other states including Ohio, Wisconsin, Indiana and Illinois have set out individual VOC content limits for cleaning of ink application equipment, rather than regulating them under general solvent cleaning requirements. [7, 8]

A limit of 4.2 pounds of VOC per gallon should be added to the regulation for the cleaning of ink application equipment for screen printing operations. In addition, DEP should retain the alternative compliance method of using the composite vapor pressure of 25 mmHg for screen printing operations. [7, 8]

Response: DEP should add a VOC content limit specific to solvent cleaning at screen printing operations. A number of states with similar rules regulating industrial solvent cleaning specify cleaning solvent standards for screen printing operations; in all cases the VOC content limits are higher than the 0.42 pound of VOC per gallon (50 g/L) that would apply to screen printing operations under proposed subsection (ii).¹ The final version of subsection (ii) should be revised by adding new subparagraph (C) to subdivision (3), as follows:

(C) The limitations of subdivision (4)(A) of this subsection shall not apply to cleaning solvent used to clean screen printing equipment, if the cleaning solvent used has an as-applied VOC content that does not exceed 500 grams per liter (4.2 pounds per gallon).

DEP should also add a definition of “screen printing” to subsection (ii)(1) in the appropriate location alphabetically, as follows:

“Screen printing” means a method of creating an image by pressing ink through a screen or fabric to which a stencil has been applied. The stencil openings determine the form and dimensions of the image; and

¹ The commenter also recommends that DEP maintain a 25 mmHg vapor pressure limit for screen printing, but no such vapor pressure limit is in the proposed rule.

28. Comment: The applicability of subdivision (2) should be written in terms of the actual use of materials or purchase of materials over a 12-month rolling average, rather than the actual daily emissions. Possible substitutes for the proposed applicability threshold are 3 tons of VOC per rolling 12-month period or 855 gallons of cleaning solvents per rolling 12-month period. [8]

Response: DEP should revise the applicability for subsection (ii) to use a longer averaging period and to base the applicability on the purchase of solvent rather than actual emissions from industrial solvent cleaning. Both of these changes will make applicability determinations easier. In addition, the longer averaging period imposes the requirements on sources with emissions that consistently exceed a level where the cost of control is appropriate. See the discussion in response to Comment 13 for additional justification for the recommended change to the applicability.

(2) Applicability. Except as provided in subdivision (3) of this subsection, the provisions of this subsection apply to an owner or operator of any premises with ~~actual emissions from solvent cleaning of at least 6.8 kilograms per day (15 pounds per day) of VOC prior to the use of air pollution control equipment~~ **who purchases for use at the premises at least 855 gallons of cleaning solvents in aggregate per rolling 12-month period.** Any owner or operator of such a premises shall:

- (A) Comply with the requirements of this subsection no later than January 1, 2010 or, for a source commencing operation after January 1, 2010, the date on which the sources commences operation; and
- (B) Remain subject to this subsection ~~regardless of actual daily VOC emissions from solvent cleaning.~~

RCSA section 22a-174-20(jj), Spray application equipment cleaning

29. Comment: DEP should include a categorical exemption for all aerospace and rework facilities, regardless of size, or update RCSA section 22a-174-20(jj) to be consistent with the allowable gun cleaning methods in the Aerospace CTG and the Aerospace NESHAP. [2, 3, 6]

- The Aerospace CTG and Aerospace NESHAP recognize the following gun cleaning methods as acceptable: 1) cleaning in an enclosed system; 2) non-atomized cleaning forcing solvent through the gun into a container with the atomizing cap in place but using no atomized air; 3) disassembled gun cleaning/soaking by hand in a container; and 4) atomized cleaning forcing solvent through the gun into a container fitted with a device to capture the emissions. [2, 3]
- Coatings used in the aerospace industry are highly regulated by customers and are designed to withstand extreme conditions. Aerospace coating manufacturers often provide instructions on clean up of a particular coating from applicator equipment. These instructions typically require the applicator to be cleared with the same solvent as contained in the coating, in order to keep the applicator functioning properly. Solvents that meet the proposed VOC content limit of 0.42 lb/gal may not effectively clean spray guns used to apply aerospace coatings. [2, 3]
- The proposed rule includes the use of an enclosed gun cleaner as an alternative to meeting the solvent VOC limit. Some of UTC's smaller sites use a low vapor pressure VOC solvent (~4 mm Hg) to clean their spray guns by disassembly and soaking in a container that is closed when not in use. In addition such extended soaking may be

required for some of our more viscous materials. Emissions are minimal, and this approach to cleaning is acceptable under the Aerospace NESHAP. [2, 3]

Response: The exemption proposed in subsection (jj)(3)(iii) is intended to exempt all aerospace manufacturing and rework facilities, whether or not the facility is subject to the aerospace NESHAP, from subsection (jj), if spray application equipment cleaning is conducted as provided in the NESHAP and using cleaning solvents approved in the NESHAP (40 CFR 63 subpart GG), inclusive of the exemptions in the NESHAP. Given the number of comments submitted, the proposed language of subclause (iii) is not understood to provide this exemption and should be replaced with the following language:

- (iii) ~~Performed at an aerospace manufacturing and rework facility and in accordance with 40 CFR 63.744, At any aerospace manufacturing and rework facility, provided that cleaning solvent is used in accordance with the requirements of 40 CFR 63.744, inclusive of exemptions,~~

In response to the comment that subsection (jj) should include the cleaning methods offered in the aerospace NESHAP, the hearing officer notes that the four methods provided in proposed subsection (jj)(4)(A) through (D) are based on the four methods provided in 40 CFR 63.744(c)(1) through (4).

30. Comment: DEP should add a new exemption to subsection (jj) to allow for the use of non-compliant solvent in amounts greater than the 55-gallon exemption. The exemption could take the following form:

- (A) The use of a cleaning solvent that does not comply with subdivision (4)(A) of this subsection may be allowed upon approval by the Commissioner.
- (B) Any request for approval under this subdivision shall be made in writing to the Commissioner and shall include, at a minimum, the following information:
 - (i) The scope of the activity,
 - (ii) An assessment of alternative materials and procedures,
 - (iii) Quantification of the amount of VOC that would be emitted as a result of such activity, and
 - (iv) The dates on which the activity will occur. [6]

Response: DEP should expand the proposed exemptions of subsection (jj) to take into account those limited situations in which an owner of an activity that is not otherwise exempt requires the use of a non-compliant solvent and using a cleaning method other than an enclosed gun cleaner. Two new exemptions should be added to subsection (jj) in accordance with this comment. First, the commenter refers to a "55-gallon exemption," which was not included in the proposed exemptions in subsection (jj), but which is included in proposed subsection (ii) and in several similar regulations including RCSA

sections 22a-174-44 and 22a-174-20(s). Such an exemption should be added as new subparagraph (C) of subdivision (3), as follows:

- (C) Using cleaning solvent that exceeds the VOC content limitation of subparagraph (B), (C) or (D) of subdivision (4) of this subsection where the quantity of cleaning solvent used does not exceed 55 gallons in aggregate per any 12-month rolling period. Any person claiming exemption pursuant to this subparagraph shall record and maintain monthly records sufficient to demonstrate compliance with this exemption.**

In addition, as the commenter recommends, DEP should add the ability for an owner to apply for an exemption for situations not otherwise anticipated by the exemptions included in subdivision (3) by adding new subparagraph (D), as follows:

- (D) The cleaning solvent VOC content limitations of subparagraph (B), (C) or (D) of subdivision (4) of this subsection shall not apply, upon request to and approval by the commissioner. Any request for approval shall be made in writing to the commissioner and shall include a description of the noncompliant solvent and its VOC content, an explanation of why the noncompliant solvent is necessary, the aggregate amount in gallons or pounds of noncompliant solvent use anticipated in a 12-month period and the frequency of use of the noncompliant solvent.**

31. Comment: “Medical device manufacturing” should be added to RCSA section 22a-174-20(jj)(3)(A), which lists those operations and industries exempt from the requirements of subsection (jj). Medical device manufacturing involves a complex manufacturing process and must meet stringent requirements of the U.S. Food and Drug Administration. Any change to an established process requires expensive and time consuming validations and/or toxicity testing, which would be a competitive disadvantage for Connecticut industry. [4]

Response: For the reasons stated in the comment, DEP should add an exemption to subsection (jj) for medical device manufacturing. The exemption should be added as new subclause (vi) in subsection (jj)(3)(A), as follows:

- (vi) Associated with medical device manufacturing; and**

In addition, a definition of “medical device” should be added to subsection (jj)(1), in the appropriate location alphabetically, as follows:

“Medical device” means an instrument, apparatus, implement, machine, gadget, appliance, implant, *in vitro* reagent or other similar or related article, including any component, part or accessory, which meets one of the following conditions:

- (i) Recognized in the official National Formulary or the United States Pharmacopeia or any supplement thereto,**

- (ii) **Intended for use in the diagnosis of disease or other conditions or in the cure, mitigation, treatment or prevention of disease, in persons or animals, or**
- (iii) **Intended to affect the structure or function of the body of a person or animal, and which does not achieve its primary intended purposes through chemical action within or on such body and which is not dependent upon being metabolized for the achievement of its primary intended purposes;**

32. Comment: DEP proposes to implement several options for spray application equipment cleaning. Three of the five options require the use of a “cleaning solvent with an applied VOC content that does not exceed 50 grams per liter.” In two of the options, (subdivisions (4)(B) and (D)), the low-VOC cleaning solvent is used in a relatively closed system to minimize emissions. DEP should remove the requirement to use a “cleaning solvent with an applied VOC content that does not exceed 50 grams per liter” from subdivisions (4)(B) and (4)(D) for the following reasons:

- The reduction in emissions achieved by using a low-VOC solvent compared with any other solvent is minimal in a closed system.
- A low-VOC cleaning solvent may not be able to clean the spray application equipment adequately in a reasonable time, adding financial burden to the regulated community.
- If a new solvent that meets the VOC limit needs to be used during cleaning, the introduction of the solvent to an established, validated manufacturing process will require extensive quality testing, a substantial financial burden. [4]

Response: DEP should not remove the VOC content standard from subdivision (4) as the lack of a standard would degrade the potential air quality benefits of the revision. Although the commenter describes several of the acceptable cleaning methods as “relatively closed,” those methods are not in an enclosed gun cleaner and may, with a high VOC content solvent, result in significant emissions. EPA found, in developing the 1994 Alternative Control Techniques that preceded the 2006 CTG for industrial cleaning solvents, that spray gun cleaning accounts for 50% of the total emissions from cleaning operations. While DEP is not requiring the use of enclosed gun cleaners, an enclosed gun cleaner is the recommended approach and may be used with solvent of any VOC content.

DEP has not left owners and operators who require the use of a VOC content solvent to clean coatings or adhesives from spray guns with no recourse. An owner or operator who does require the use of a high VOC content cleaning solvent may do so in association with an enclosed gun cleaner. Furthermore, the expansion of the exemptions as discussed in the response to Comments 29, 30 and 31 also takes into account the needs of certain industries that require the use of a high VOC content solvent, either occasionally or routinely.

V. Revisions Recommended by the Hearing Officer

In addition to revisions to the proposal recommended based on the comment and response in Section IV of this report, the Hearing Officer recommends the following minor revisions:

(1) Throughout the proposal, DEP uses January 1, 2010 as the initial compliance date. Given the passage of time since the proposal was developed, DEP should replace January 1, 2010 with January 1, 2011 to allow regulated source owners additional compliance time after the proposal is effective and to allow DEP sufficient time for staff training and regulated community outreach.

(2) In each of the revised or new subsections proposed in response to a CTG, namely subsections (p), (q) and (ff) through (jj), DEP proposed to use the terms “air pollution control equipment efficiency,” “capture efficiency” and “overall control efficiency.” The term “air pollution control equipment efficiency” and the use of the term “air pollution control equipment” in the definition of “capture device” make the meaning of the terms difficult to ascertain. DEP’s intent would be better expressed by eliminating the term “air pollution control equipment efficiency,” adding the term “control device efficiency” and revising the definitions of “capture efficiency” and “overall control efficiency” to eliminate the phrase “air pollution control equipment.” This series of revisions should be made in subsections (p)(1), (q)(1), (ff)(1), (gg)(1), (hh)(1), (ii)(1) and (jj)(1). Specifically, the changes to the definitions in each of the referenced subsections should be as follows:²

“Air pollution control equipment efficiency” means the ratio of VOC emissions recovered or destroyed by air pollution control equipment to the total VOC emissions that are introduced into the air pollution control equipment, expressed as a percentage;

“Capture efficiency” means the ratio of VOC emissions delivered to the air pollution control equipment control device to the total VOC emissions resulting from [insert name of regulated activity] and related cleaning, expressed as a percentage;

“Control device efficiency” means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;

“Overall control efficiency” means the product of the capture efficiency and the air pollution control equipment control device efficiency;

As a result of the recommended changes to the definitions, the following changes should be made to each of the referenced subsections, as follows:

- Proposed subsection (p)(5)(B):
(B) Notwithstanding subdivisions (1)(B), (1)(C) and (2) through (6) of subsection (bb) of this section, install, operate and maintain according to the manufacturer’s recommendations an emissions control system **air pollution control equipment** that reduces uncontrolled VOC emissions to the atmosphere from a coating unit by an overall control efficiency of at least 90%; or
- Proposed subsection (q)(5)(B):
(B) Notwithstanding subdivisions (1)(B), (1)(C) and (2) through (6) of subsection (bb) of this section, install, operate and maintain according to the manufacturer’s recommendations an emissions control system **air pollution control equipment**

² Note that the specific subparagraph designation for each of the terms is not indicated since it varies from subsection to subsection.

that reduces uncontrolled VOC emissions to the atmosphere from a coating line by an overall control efficiency of at least 90%; or

- Proposed subsection (ff)(4)(B):
 - (B) Install, operate and maintain in accordance with the manufacturer's recommendations, ~~an emissions control system, consisting of a capture and a control device, which meets~~ **that produce** the overall control efficiency identified in Table 20(ff)-1, according to the date of installation of the press being controlled and the installation date of the air pollution control ~~device~~ **equipment**.

- Proposed subsection (ff)(5)(B):
 - (iv) Documentation of ~~air pollution control equipment efficiency or~~ **control device efficiency and** capture efficiency, if applicable, and
 - (v) Date and type of maintenance performed on air pollution control ~~or capture~~ equipment, if applicable.

- Proposed subsection (gg)(4):
 - (4) . . . shall operate ~~a control device~~ **air pollution control equipment** to:
 - (A) Achieve a 90% **overall** control efficiency if the ~~control device~~ **air pollution control equipment** is installed prior to January 1, 2011;
 - (B) Achieve a 95% **overall** control efficiency if the ~~control device~~ **air pollution control equipment** is installed on or after January 1, 2011; or
 - (C) Reduce the control device outlet concentration to 20 parts per million as hexane on a dry basis if the inlet VOC concentration is so low that ~~90% or 95% the overall control efficiency specified in subparagraph (A) or (B) of this subdivision cannot~~ **may not** be achieved.

- Proposed subsection (gg)(7)(B):
 - (iv) Documentation of ~~air pollution control equipment efficiency or~~ **control device efficiency and** capture efficiency, if applicable, and
 - (v) Date and type of maintenance performed on air pollution control ~~or capture~~ equipment, if applicable.

- Proposed subsection (hh)(5)(B):
 - (B) Install, operate and maintain in accordance with the manufacturer's recommendations, ~~an emissions control system, consisting of a capture and a control device, which meets~~ **that produce** . . .

- Proposed subsection (hh)(7)(B):
 - (iv) Documentation of ~~air pollution control equipment efficiency or~~ **control device efficiency and** capture efficiency, if applicable, and
 - (v) Date and type of maintenance performed on air pollution control ~~or capture~~ equipment, if applicable.

- Proposed subsection (ii)(4)(B):
 - (B) Install, operate and maintain in accordance with the manufacturer's recommendations, ~~an emissions control system~~ **air pollution control equipment** that reduces uncontrolled VOC emissions to the atmosphere from any solvent cleaning by an overall control efficiency of at least 85%.
- Proposed subsection (ii)(6)(B):
 - (vi) Documentation of ~~air pollution control equipment efficiency or control device efficiency~~ **efficiency and** capture efficiency, if applicable, and
 - (vii) Date and type of maintenance performed on air pollution control ~~or capture~~ equipment, if applicable.
- Proposed subsection (jj)(4)(E):
 - (E) Installing, operating and maintaining ~~an emissions control system~~ **air pollution control equipment** that reduces
- Proposed subsection (jj)(6)(B):
 - (vii) Documentation of ~~air pollution control equipment efficiency or control device efficiency~~ **efficiency and** capture efficiency, if applicable, and
 - (viii) Date and type of maintenance performed on air pollution control ~~or capture~~ equipment, if applicable.

(3) The exemption in subsection (ii)(3)(xi) for medical device manufacturing is inaccurately described as "medical device operations." The exemption should instead be stated as "medical device manufacturing" and a definition of "medical device" should be added to subsection (ii)(1). The definition should be identical to that in subsection (jj)(1) as set out in the response to Comment 31.

(4) Because the use of materials purchased offers several benefits over actual emissions as the mechanism for determining applicability, DEP should replace the 15 pound per day actual emissions threshold proposed for subsections (ff) and (hh) with 855 gallons of VOC-containing materials purchased in aggregate per 12-month rolling period. Although commenters only recommended this change for subsections (gg) and (ii), the same reasoning justifies that approach for subsections (ff) and (hh).

The proposed applicability of subsection (ff) should be replaced with the following language:

(2) **Applicability.** The provisions of this subsection apply to the owner or operator of any flexible package printing press who purchases for the printing operation at least 855 gallons of coatings, adhesives, cleaning solvents and solvent-based inks in aggregate per any rolling 12-month period. Any owner or operator of a flexible package printing press shall:

- (A) Comply with the requirements of this subsection no later than January 1, 2011 or, for a source commencing operation after January 1, 2011, the date on which the source commences operation; and

(B) Remain subject to this subsection.

The proposed applicability of subsection (hh) should be replaced with the following language:

(2) Applicability. Except as provided in subdivision (3) of this subsection, the provisions of this subsection apply to an owner or operator of any large appliance coating unit who purchases for the coating operation at least 855 gallons of coatings and cleaning solvents in aggregate per any rolling 12-month period. Any such owner or operator shall:

(A) Comply with the requirements of this subsection no later than January 1, 2011 or, for a source commencing operation after January 1, 2011, the date on which the source commences construction; and

(B) Remain subject to this subsection.

(5) The term “non-absorbent container” should be eliminated from the defined terms in RCSA section 22a-174-20(q)(1) because it is assigned an ordinary meaning and, therefore, does not require definition.

(6) The VOC content limit in subsection (q)(5)(A)(i) is proposed as 0.40 kilograms of VOC per kilogram of coating solids applied and is incorrect. The correct limit is 0.35 kilograms of VOC per kilogram of coating solids applied, which is the same limit proposed in subsection (q)(4) as a standard of general applicability. The requirements of subsection (q)(5) apply to larger sources and are not intended to be less protective than the requirements of subsection (q)(4). Subsection (q)(5)(i) should be revised, as follows:

(i) For all coatings except pressure sensitive tape and label coatings, use only coatings that result in VOC emissions no greater than ~~0.40~~ 0.35 kilograms of VOC per kilogram of coating solids applied.

(7) The definition of “HVLP spray” is not consistent with the part of speech or use of the term in subsections (p) and (hh), and so the defined term and definition should be revised as follows in subsections (p)(1), (p)(4), (hh)(1) and (hh)(4):

“HVLP spray application” means to apply a coating using a high-volume, low-pressure spray coating application system that is designed to operate at air pressures between 0.1 and 10 pounds per square inch gauge, measured dynamically at the center of the air cap and the air horns;

(8) An exception should be added to subsection (p)(3) as new subparagraph (C) to state that a person using air pollution control equipment to comply is not required to use one of the specified application techniques:

(C) The requirements of subdivision (4) shall not apply to a person using air pollution control equipment to comply with subdivision (5) of this subsection.

(9) A definition of “as-applied” should be added to subsection (q)(1) since the term is used in the subsection. The definition should be identical to that of subsection (p)(1).

(10) The kilogram equivalent to 15 pounds, which is 6.8 kilograms, should be added to the applicability language of subsection (q)(2).

(11) The statement in subsection (q)(5)(A), which allows owners of paper, film and foil coating operations to comply by using only coatings that meet the VOC content limits or by using coatings that per a daily coating line average meet the VOC content limits, is not clear. Subsection (q)(5)(A) should be replaced, as follows:

- ~~(A) Use only coatings that result in VOC emissions no greater than the applicable emission limit of subparagraph (A)(i) or (A)(ii) of this subdivision, calculated either per coating or per coating line, as provided in subparagraph (A)(iii) of this subdivision, as follows:~~
- ~~(i) For all coatings except pressure sensitive tape and label coatings, use only coatings that result in VOC emissions no greater than 0.35 kilograms of VOC per kilogram of coating solids applied.~~
- ~~(ii) Use only pressure sensitive tape and label coatings that result in VOC emissions no greater than 0.20 kilograms of VOC per kilogram of coating solids applied, and~~
- ~~(iii) The VOC emissions limits of subparagraphs (A)(i) and (A)(ii) of this subdivision may be met either if every coating applied individually meets the applicable emission limit or if the daily weighted average of the VOC content of every coating used on a single coating line meets the applicable emission limit;~~
- (A) Use only coatings that individually meet the applicable VOC emission limit of subparagraph (A)(i) or (A)(ii) of this subdivision or use only coatings so that the daily weighted average of the VOC content of all coatings used on a single coating line meets the VOC emission limit of subparagraph (A)(i) of this subdivision:**
- (i) For all coatings except pressure sensitive tape and label coatings, use only coatings that result in VOC emissions no greater than 0.35 kilograms of VOC per kilogram of coating solids applied, or**
- (ii) For pressure sensitive tape and label coatings, use only coatings that result in VOC emissions no greater than 0.20 kilograms of VOC per kilogram of coating solids applied;**

(12) Subsection (ff)(4) includes similar language to that discussed in recommendation (11) and should also be revised as follows:

... use one of the following methods to control VOC emissions from such a press:

- (A) Use only **individual** inks, coatings and adhesives with an as-applied VOC content that does not exceed 0.8 kg VOC/kg of solids (0.8 lb VOC/lb of solids) or 0.16 kg VOC/kg of materials (0.16 lb VOC/lb of materials). ~~The VOC content limits may be met by averaging the VOC content of materials used on a single printing line in a single day; or~~
- (B) Use only inks, coatings and adhesives so that the daily weighted average of the VOC content of the inks, coatings and adhesives used in a single printing line does not exceed 0.8 kg VOC/kg of solids (0.8 lb VOC/lb of solids) or 0.16 kg VOC/kg of materials (0.16 lb VOC/lb of materials); or
- (C) Install, operate and maintain in accordance with the manufacturer's recommendations, a capture and a control device that produce the overall control efficiency identified in Table 20(ff)-1, according to the date of installation of the press being controlled and the installation date of the air pollution control equipment.

(13) The definition of "flexographic print station" in subsection (ff)(1)(E) is not accurate and should be revised, as follows:

- (E) "Flexographic print station" means a work station on which a flexographic printing operation is conducted. A flexographic print station includes a flexographic printing plate, ~~which is an~~ **and an image carrier** made of rubber or other elastomeric material. The image to be printed is raised above the printing plate;

(14) The applicability of subsection (ff) should be amended to exempt a flexible package printing operation subject to subsection (ff) from the obligation to comply with subsection (v), as follows:

(2) Applicability.

- (A) The provisions of this subsection apply to the owner or operator of any flexible package printing press who purchases for the printing operation at least 855 gallons of coatings, adhesives, cleaning solvents and solvent-based inks in aggregate per any rolling 12-month period. Any owner or operator of a flexible package printing press shall:
 - (i) Comply with the requirements of this subsection no later than January 1, 2011 or, for a source commencing operation after January 1, 2011, the date on which the source commences operation, and
 - (ii) Remain subject to this subsection; **and**
- (B) **Any flexible package printing press operated pursuant to this subsection shall not be subject to subsection (v) of this section.**

(15) Subsection (hh) should include an additional exception specifying that the owner or operator of a large appliance coating operation complying via add-on controls is not required to use the specified application methods of subdivision (4). The exception should be added to subdivision (3), as follows:

(3) Exemptions and exceptions.

(A) The requirements of subdivision (5) of this subsection shall not apply to the following:

~~(A)~~ (i) Stencil coating,

~~(B)~~ (ii) Safety-indicating coating,

~~(C)~~ (iii) Solid-film lubricant,

~~(D)~~ (iv) Electric-insulating and thermal-conducting coating,

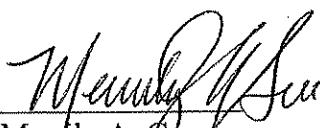
~~(E)~~ (v) Touch-up and repair coating, or

~~(F)~~ (vi) Coating applied with a hand-held aerosol can.

(B) The requirements of subdivision (4) shall not apply to a person using air pollution control equipment, as specified in subdivision (5)(B), to comply with the requirements of this subsection.

VI. Conclusion

Based upon the comments submitted by interested parties and addressed in this Hearing Report, I recommend the final proposal, included as Attachment 3 to this report, be submitted by the Commissioner for approval by the Attorney General and the Legislative Regulations Review Committee. Based upon the same considerations, I also recommend that upon promulgation portions of this proposal be submitted to EPA as a revision to the State Implementation Plan.


 Merrily A. Gere
 Hearing Officer

10/22/09
 Date



ATTACHMENT 1
Federal Standards Analysis Pursuant to Section 22a-6(h) of the General Statutes

Pursuant to the provisions of section 22a-6(h) of the Connecticut General Statutes (CGS), the Commissioner of the Department of Environmental Protection (the Department) is authorized to adopt regulations pertaining to activities for which the federal government has adopted standards or procedures. At the time of public notice, the Commissioner must distinguish clearly all provisions of a proposed regulation that differ from federal standards or procedures.

In accordance with the requirements of CGS section 22a-6(h), in the matter of the proposed amendment of sections 22a-174-20, 22a-174-32 and 22a-174-33(f) of the Regulations of Connecticut State Agencies (RCSA), the Department has performed a comparison of the proposed amendment with federal provisions, which is set out below.

Regarding the revision of subsections (p) and (q) and adoption of subsections (ff), (gg), (hh) and (ii) in RCSA section 22a-174-20: There are no comparable federal standards specifying a reasonably available control technology (RACT) level of control, although Clean Air Act section 182(b) requires states to establish a RACT level of control for certain categories of sources. EPA does issue control technique guidelines (CTGs) that recommend work practices, application methods, reformulation and/or control equipment operation that EPA considers a RACT level of control for a source category or activity, but the adoption of enforceable requirements that meet at least that recommended level of control is left to each state with a nonattainment area for an ozone national ambient air quality standard. In general, the proposed requirements for offset lithographic and letterpress printing, industrial cleaning solvents, flexible package printing, metal furniture coating, large appliance coating and paper, film and foil coating are consistent with the recommendations of the CTGs and provide at least a RACT level of control.

The deletion of the reactivity-based architectural coating requirements of subsections (g), (h) and (i) of RCSA section 22a-174-20 aligns RCSA section 22a-174-20 with the adoption in July 2007 of more comprehensive requirements to limit emissions from paints in RCSA section 22a-174-41. There are federal standards for architectural coatings but those standards, in 40 CFR 59 Subpart D, regulate fewer coating categories than those in RCSA section 22a-174-41 and otherwise differ, as follows:

- Subpart D applies to nationwide architectural coating manufacturers, importers and distributors while RCSA section 22a-174-41 applies to any person "who sells, supplies, offers for sale or manufactures for sale in the State of Connecticut on or after May 1, 2008 any architectural coating for use in the State of Connecticut and to any person who applies or solicits the application of any architectural coating within the State of Connecticut on or after May 1, 2008.
- The definitions for the regulated coating categories differ in some respects between the two rules.

- For the categories that are regulated under both rules, all of the limits in RCOSA section 22a-174-41 are at least as stringent and many of the limits in RCOSA section 22a-174-41 are more stringent than the federal limits.
- All of the VOC limits in Subpart D have an effective date of December 10, 1998, whereas the VOC limits in RCOSA section 22a-174-41 are effective on May 1, 2008 for most regulated product categories.

Regarding the addition of subsection (jj) to RCOSA section 22a-174-20: New subsection (jj) regulates the cleaning of spray application equipment at any facility where spray application equipment is used. There are no general federal requirements regulating the cleaning of spray application equipment. EPA does specify spray application equipment cleaning requirements for certain source categories in 40 CFR 63, national emissions standards for hazardous air pollutants, and aerospace manufacturing facilities that are subject to such requirements in 40 CFR 63 are exempt from the general spray application cleaning requirements proposed in subsection (jj).

RCOSA section 22a-174-32 defines a RACT level of control for volatile organic compound emissions from certain activities not regulated in RCOSA section 22a-174-20. The revision to the applicability requirements of RCOSA section 22a-174-32(b)(3) takes into account the establishment of RACT levels of control for several source categories in subsections (ff) through (ii) of RCOSA section 22a-174-20. As the CTGs generally recommend that only one set of RACT level controls apply to a given source category, the revision is consistent with the approach recommended in federal guidelines, although no analogous federal standards or procedures exist.

RCOSA section 22a-174-33(f) establishes the timing requirements for the submission of Title V permit applications. Subdivisions (1) through (5) include the timing requirements in general, for submission of applications concerning new sources, modifications and renewals. Subdivision (6) includes specific application submission timing requirements for Acid Rain sources, namely those required of Acid Rain program sources in 40 CFR 72.30. The amendment eliminates the reference to the federal application submission requirements for Acid Rain program sources, as those requirements apply independently.

December 9, 2008
Date

/s/Merrily A. Gere
Merrily A. Gere
Bureau of Air Management

ATTACHMENT 2
Text of the Proposal

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Section 1. Subsection (f)(2) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

(2) [No “person” shall cause or permit the discharge into the atmosphere of more than 40 pounds of organic materials in any one day, nor of more than 8 pounds in any one hour, from any article or machine, other than described in subdivision (f)(1), for employing or applying any highly photochemically reactive solvent as defined in subdivisions (i)(1) or (i)(2) of this section unless the discharge has been reduced by at least 85 percent overall. “Emissions” of organic materials into the atmosphere resulting from air or heated drying of products for the first 12 hours after their removal from any article, machine, equipment, or other contrivance described in this subdivision are included in determining compliance with this subdivision. “Emissions” resulting from baking, heat-curing, or heat polymerizing as described in subdivision (f)(1) are excluded from determination of compliance with this subdivision. Those portions of any series or articles, machines, equipment or other contrivances designed for processing a continuous web, strip or wire which emit organic materials and using operations described in this subdivision shall be collectively subject to compliance with this subdivision.] **Reserved.**

Sec. 2. Subsection (f)(9) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

(9) The provisions of subsection (f) shall not apply to:

- (A) The use of equipment for which other requirements are specified by [subsections] any one of the following subsections of this section: (a) through (e), (k) through (y) or (ff) through (jj); [22a-174-20(a) through (e) inclusive, subsections 22a-174-20(k) through (y) inclusive,] or for which [“]reasonably available control technology[”] is required by [subsection 22a-174-20(ee).] section 22a-174-32 of the Regulations of Connecticut State Agencies;
- (B) The spraying or other employment of insecticides, pesticides, or herbicides[.] ; or
- (C) [The “emission” of “organic compounds” from coating operations where the “volatile organic compound” portion of the coating solvent is 20 per cent or less by weight.] The use of any organic material where the as applied volatile content of the material consists only of water and organic solvent, and the organic solvent content does not exceed 20% by volume of the material.

Sec. 3. Subsection (f)(13) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

(13) [For the purpose of subdivision (f)(2) 85 percent reduction of “emissions” shall mean 85 percent reduction of highly photochemically reactive solvent “emissions” present when operations are conducted according to good industrial practice, utilizing the maximum proportion of highly photochemically reactive solvent appropriate to such good practice. Substitution of a nonhighly photochemically reactive solvent shall be considered 100 percent reduction of the highly photochemically reactive “emissions” involved.] **Reserved.**

DRAFT – March 25, 2009

Sec. 4. Subsections (g), (h) and (i) of section 22a-174-20 of the Regulations of Connecticut State Agencies are amended to read as follows:

(g) [“Architectural coatings.”

(g)(1) On or after January 1, 1974, no “person” shall sell or offer for sale to the final user in containers greater than 1-quart (0.95 liter) capacity any “architectural coating” or solvent for the purpose of thinning or diluting any “architectural coating” unless the solvent composition is are nonhighly photochemically reactive, as defined in subdivision (i)(4) of this section.

(g)(2) On or after January 1, 1975, no “person” shall employ, apply, evaporate, or dry any “architectural coating” purchased in containers of greater than 1- quart (0.95 liter) capacity unless the solvent composition is nonhighly photochemically reactive, as defined in subdivision (i)(4) of this section.

(g)(3) On or after January 1, 1975, no “person” shall thin or dilute for application any “architectural coating” with a highly photochemically reactive solvent as defined in subdivisions (i)(1) and (i)(2) of this section, purchased in containers of greater than 1-quart (0.95 liter) capacity.] **Reserved.**

(h) [Exemptions. If the “Commissioner” determines that nonhighly photochemically unreactive solvents are not available for a particular application or class of applications, then the Commissioner may issue an order providing for an exemption, provided that this shall not prevent the “attainment” or maintenance of the national “ambient air quality standard” for photochemical oxidants.] **Reserved.**

(i) [Classification of solvents.

(i)(1) The following solvents shall be considered highly photochemically reactive:

- (A) Group R1: Any hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones, having an olefinic or cycloolefinic type of unsaturation.
- (B) Group R2: Any aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene, phenyl acetate, and methyl benzoate.
- (C) Group R3: Any ketones having branched hydrocarbon structures, and ethylbenzene, trichloroethylene, and toluene.

(i)(2) Any solvent mixture will be considered highly photochemically reactive if the composition of the mixture exceeds any of the following limits by volume:

- (A) 5 percent of any combination of chemical compounds in group R1.
- (B) 8 percent of any combination of chemical compounds in group R2.
- (C) 20 percent of any combination of chemical compounds in group R3.
- (D) 20 percent of any combination of chemical compounds in groups R1, R2, and R3.

DRAFT – March 25, 2009

(i)(3) Whenever any organic solvent or any constituent of any organic solvent may be classified from its chemical structure into more than one of the above groups of “organic compounds,” it shall be considered a member of the most reactive chemical group, which is, that group having the least allowable percent of the total volume of solvents.

(i)(4) Any solvent not classified in subdivision (i)(1) and any solvent mixture which does not exceed any of the limits in subdivision (i)(2) of this section shall be considered nonhighly photochemically reactive.] **Reserved.**

Sec 5. Subdivisions (1) and (2) of subsection (D) of section 22a-174-20 of the Regulations of Connecticut State Agencies are amended to read as follows:

[(D)](1) Definitions. For the purposes of this subsection:

- (A) “Air knife system” means “air knife system” as defined in 40 CFR 63.461.
- (B) “Cold cleaning” means the batch process that involves spraying, brushing, flushing or immersion to clean and remove [of cleaning and removing] soils from metal surfaces [by spraying, brushing or flushing with or immersing in an unheated] using a degreasing solvent maintained at a temperature less than the boiling point of the solvent. [Wipe] Neither wipe cleaning nor spray application equipment cleaning is [not] included in this definition.
- (C) “Continuous web cleaning machine” means “continuous web cleaning machine” as defined in 40 CFR 63.461.
- (D) “Conveyorized degreasing” means the continuous process of cleaning and removing soils from metal surfaces by operating with either cold or vaporized degreasing solvents.
- (E) “Degreasing solvent” means any volatile organic compound used for metal cleaning.
- (F) “Freeboard height” means, for a cold cleaner, the distance from the liquid solvent in the degreaser tank to the lip of the tank. For an open top vapor degreaser it is the distance from the solvent vapor level in the tank during idling to the lip of the tank. For a vapor conveyorized degreaser, it is the distance from the vapor level to the bottom of the entrance or exit opening whichever is lower. For a cold conveyorized degreaser, it is the distance from the liquid solvent level to the bottom of the entrance or exit opening whichever is lower.
- (G) “Freeboard ratio” means the freeboard height divided by the smaller interior dimension (length, width or diameter) of the degreaser.
- (H) “Open top vapor degreasing” means the batch process of cleaning and removing soils from metal surfaces by condensing hot degreasing solvent vapor on the colder metal parts.

- (I) “Metal cleaning” means the process of cleaning soils from metal surfaces by cold cleaning or open top vapor degreasing or conveyORIZED degreasing.
- (J) “Refrigerated chiller” means a device, mounted above the water jacket and the primary condenser coils, that consists of secondary coils which carry a refrigerant to provide a chilled air blanket above the solvent vapor to reduce emissions from the degreaser bath. The chilled air blanket temperature, measured at the centroid of the degreaser at the coldest point, shall be no greater than [thirty (30) percent] 30% of the solvent's boiling point in degrees Fahrenheit.
- (K) “Special and extreme solvent metal cleaning” means the use of a cold cleaning unit to clean metal parts where such metal parts are used:
 - (i) In the research, development, manufacture and rework of electronic parts, assemblies, boxes, wiring harnesses, sensors and connectors used in aerospace service,
 - (ii) In the research, development, manufacture and rework of ozone, nitrous oxide, fluorine, chlorine, bromine, halogenated compounds or oxygen in concentrations greater than [twenty-three percent (23%)] 23%,
 - (iii) In the research, development, manufacture and rework of high precision products for which contamination must be minimized in accordance with a customer or other specification, or
 - (iv) In a manner that exposes such metal parts to ozone, nitrous oxide, fluorine, chlorine, bromine, halogenated compounds or oxygen in concentrations greater than [twenty-three percent (23%)] 23%.
- (L) “Squeegee system” means “squeegee system” as defined in 40 CFR 63.461.

[(D)](2) The provisions of this subsection apply with the following exceptions[.] :

- (A) Open top vapor degreasers with an open area smaller than one [(1)] square meter (10.8 square feet) are exempt from the provisions of [parts (ii), (iv) and (v) of subparagraph] subsection (D)(4)(C)(ii), (iv) and (v) of this section;
- (B) ConveyORIZED degreasers with a solvent/air interface smaller than two [(2)] square meters (21.6 square feet) are exempt from the provisions of [subparagraph] subsection (D)(5)(C); and
- (C) Metal cleaning equipment which uses 1,1,1 trichloroethane, methylene-chloride, or trichlorotrifluoroethane.

DRAFT – March 25, 2009

Sec 6. Subsections (p) and (q) of section 22a-174-20 of the Regulations of Connecticut State Agencies are amended to read as follows:

(p) Metal furniture coating.

(1) Definitions. For the purpose of this [section] subsection:

["Application area" means the area where the coating is applied by spraying, dipping or flowcoating techniques.

"Metal furniture coating" means the surface coating of any furniture made of metal or any metal part which will be assembled with other metal, wood, fabric, plastic or glass parts to form a furniture piece.]

- (A) "Air-dried" means cured at a temperature below 90° C (194°F);
- (B) "Air pollution control equipment efficiency" means the ratio of VOC emissions recovered or destroyed by air pollution control equipment to the total VOC emissions that are introduced into the air pollution control equipment, expressed as a percentage;
- (C) "As applied" means the composition of coating at the time it is applied to a substrate, including any solvent, catalyst or other substance added to the coating as supplied by the manufacturer;
- (D) "Baked" means cured at a temperature at or above 90° C (194°F);
- (E) "Capture efficiency" means the ratio of VOC emissions delivered to the air pollution control equipment to the total VOC emissions resulting from metal furniture coating and related cleaning, expressed as a percentage;
- (F) "Coating" means a material that is applied to a surface and that forms a continuous film in order to beautify or protect such surface;
- (G) "Coating unit" means a series of one or more coating applicators and any associated drying area or oven wherein a coating is applied, dried or cured. A "coating unit" ends at the point where the coating is dried or cured, or prior to any subsequent application of a different coating;
- (H) "Dip coating" means a method of applying a coating to a surface by submersion into and removal from a coating bath;
- (I) "Electric-insulating and thermal-conducting coating" means a coating that displays an electrical insulation of at least 1000 volts DC per mil on a flat test plate and an average thermal conductivity of at least 0.27 BTU per hour-foot-degree-Fahrenheit;

- (J) “Electrostatic application” means a method of applying coating particles or coating droplets to a grounded surface by electrically charging such particles or droplets;
- (K) “Extreme high gloss coating” means a coating that, when tested by the most recent active version of the American Society for Testing Material Test Method D523, shows a reflectance of 75 or more on a 60 degree meter;
- (L) “Extreme performance coating” means a coating used on a metal surface where the coated surface is, in its intended use, subject to one of the following conditions:
 - (i) Chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures or solution,
 - (ii) Repeated exposure to temperatures in excess of 121.1° C (250° F), or
 - (iii) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleaners or scouring agents;
- (M) “Flow coating” means a non-atomized technique of applying coating to a substrate using a fluid nozzle in a fan pattern with no air supplied to the nozzle;
- (N) “Heat-resistant coating” means a coating that must withstand a temperature of at least 204.5° C (400 ° F) during normal use;
- (O) “HVLP spray” means a high-volume, low-pressure spray coating application system that is designed to operate at air pressures between 0.1 and 10 pounds per square inch gauge, measured dynamically at the center of the air cap and the air horns;
- (P) “Metal furniture coating” means the application of a surface coating to any furniture made of metal or any metal part that will be assembled with other metal, wood, fabric, plastic or glass parts to form a furniture piece;
- (Q) “Metallic coating” means a coating that contains more than five grams of metal particle per liter of coating, as applied;
- (R) “Multi-component coating” means a coating requiring the addition of a separate reactive resin, such as a catalyst or hardener, before application to form an acceptable dry film;
- (S) “One-component coating” means a coating that is ready for application as packaged for sale, except for the addition of a thinner to reduce the viscosity;
- (T) “Overall control efficiency” means the product of the capture efficiency and the air pollution control equipment efficiency;

DRAFT – March 25, 2009

- (U) “Pretreatment coating” means a coating, containing no more than 12% solids by weight and at least one-half percent acid by weight, applied directly to metal surfaces to provide surface etching, adhesion and ease when stripping;
- (V) “Repair coating” means a coating used to recoat portions of a product that has sustained mechanical damage to the coating following normal painting operations;
- (W) “Roll coating” means a coating method using a machine that applies coating to a substrate by continuously transferring coating through a set of oppositely rotating rollers;
- (X) “Safety-indicating coating” means a coating that changes in a physical characteristic, such as color, to indicate unsafe conditions;
- (Y) “Solar-absorbent coating” means a coating that has as its prime purpose the absorption of solar radiation;
- (Z) “Solid-film lubricant” means a very thin coating consisting of a binder system containing as its chief pigment material one or more of molybdenum disulfide, graphite, polytetrafluoroethylene or other solids that act as a dry lubricant between faying surfaces; and
- (AA) “Stencil coating” means an ink or a coating that is rolled or brushed onto a template or stamp to add identifying letters or numbers to metal parts or products.

[(2) The owner or operator of a metal furniture coating line shall not cause or permit the discharge into the atmosphere of any volatile organic compounds from any coating in excess of 0.36 kilograms per liter of coating (3.0 pounds per gallon), excluding water and exempt volatile organic compounds listed in 40 CFR 51.100(s) as amended from time to time, delivered to the coating applicator from prime and topcoat or single coat operations.]

[(3)](2) Applicability.

- (A) The provisions of this subsection apply to:
 - (i) An owner or operator of any premises that has actual emissions of VOC of at least [fifteen (15)] pounds per day [or more in any one day] from metal furniture [operations] coating and related cleaning, prior to the use of controls, or
 - (ii) An owner or operator that became subject to this subsection on and after October 1, 1989. [After October 1, 1989 any premises, which is or becomes subject to the provisions of this subsection, shall remain subject to the provisions of this subsection regardless of the daily actual emissions. Notwithstanding the above, the owner or operator of any piece of equipment that was not required to meet control requirements by this subsection prior to October 1, 1989, shall have until October 1, 1990, to

DRAFT – March 25, 2009

comply with the control requirements of this subsection for that piece of equipment.]

(B) Any owner or operator conducting metal furniture coating shall:

(i) Comply with the requirements of this subsection no later than January 1, 2010 or, for a source commencing operation after January 1, 2010, the date on which the source commences operation, and

(ii) Remain subject to this subsection regardless of actual daily VOC emissions.

(3) Exemptions and exceptions. The requirements of this subsection shall not apply to the following coatings or lubricant:

(A) Stencil coating;

(B) Safety-indicating coating;

(C) Solid-film lubricant;

(D) Electric-insulating and thermal-conducting coating;

(E) Touch-up and repair coating; or

(F) Coating applied with a hand-held aerosol can.

(4) Application methods. A person shall not apply a VOC-containing coating to any metal furniture or metal furniture part unless the coating is applied by one of the following methods using equipment operated in accordance with the specifications of the equipment manufacturer:

(A) Electrostatic application;

(B) Flow coating;

(C) Dip coating;

(D) Roll coating;

(E) HVLP spraying;

(F) Hand application; or

(G) Any other coating application method capable of achieving a transfer efficiency equivalent to or better than that provided by HVLP spray application.

(5) Compliance options. Except as provided in subdivision (3) of this subsection, no owner or operator of a metal furniture coating unit shall apply any coating, inclusive of any VOC-

DRAFT – March 25, 2009

containing materials added to the original coating supplied by the manufacturer, unless the owner or operator uses one of the following methods to limit emissions of VOCs:

- (A) Use only coatings with an as-applied VOC content no greater than the level specified in Table 20(p)-1, according to coating category and drying method. The VOC content limits of Table 20(p)-1 apply to the volume of coating as applied, less water and less exempt VOC. Table 20(p)-1 establishes the minimum low solvent content coating technology pursuant to subsection (bb)(1)(A) of this section;
 - (B) Notwithstanding subdivisions (1)(B), (1)(C) and (2) through (6) of subsection (bb) of this section, install, operate and maintain according to the manufacturer's recommendations an emissions control system that reduces uncontrolled VOC emissions to the atmosphere from a coating unit by an overall control efficiency of at least 90%; or
 - (C) An alternative means, achieving a level of control equivalent to subparagraph (A) or (B) of this subdivision, requested from and approved by the commissioner in accordance with subsection (cc) of this section.
- (6) Work practices. Each owner or operator shall use the following work practices:
- (A) New and used VOC-containing coating or cleaning solvent, including a coating mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
 - (B) Spills and leaks of VOC-containing coating or cleaning solvent shall be minimized. Any leaked or spilled VOC-containing coating or cleaning solvent shall be absorbed and removed immediately;
 - (C) Absorbent applicators, such as cloth and paper, which are moistened with VOC-containing coatings or cleaning solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling;
 - (D) VOC-containing coating or cleaning solvent shall be conveyed from one location to another in a closed container or pipe; and
 - (E) Cleaning shall be performed to minimize associated VOC emissions.

Table 20(p)-1. As-Applied VOC Content Limits Per Volume of Coating (Excluding Water and Exempt VOC) per Coating Category, Specific to the Drying Process

<u>Coating Category</u>	<u>Baked</u>		<u>Air Dried</u>	
	<u>g/L</u>	<u>lb/gal</u>	<u>g/L</u>	<u>lb/gal</u>
<u>General, one component</u>	<u>275</u>	<u>2.3</u>	<u>275</u>	<u>2.3</u>
<u>General, multi-component</u>	<u>275</u>	<u>2.3</u>	<u>340</u>	<u>2.8</u>
<u>Extreme high gloss</u>	<u>360</u>	<u>3.0</u>	<u>340</u>	<u>2.8</u>
<u>Extreme performance</u>	<u>360</u>	<u>3.0</u>	<u>420</u>	<u>3.5</u>
<u>Heat-resistant</u>	<u>360</u>	<u>3.0</u>	<u>420</u>	<u>3.5</u>
<u>Metallic</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
<u>Pretreatment coatings</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
<u>Solar-absorbent</u>	<u>360</u>	<u>3.0</u>	<u>420</u>	<u>3.5</u>

(7) Records. An owner or operator shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection, as follows:

- (A) All such records shall be:
 - (i) Made available to the commissioner to inspect and copy upon request, and
 - (ii) Maintained for five years from the date such record is created;
- (B) Owners and operators of sources using add-on control technology in accordance with subdivision (5)(B) of this subsection shall maintain records demonstrating compliance with the required level of control;
- (C) An owner or operator of any metal furniture operation using an application method in accordance with subdivision (4)(G) of this subsection shall maintain records demonstrating the transfer efficiency achieved; and
- (D) Additional information sufficient to demonstrate compliance may include the following:
 - (i) Name and quantity of any coating or cleaning solvent used,
 - (ii) VOC content of each coating or solvent used, as applied, and
 - (iii) A catalog of Materials Safety Data Sheets for all coatings and solvents used.

DRAFT – March 25, 2009**(q) [Paper coating.] Paper, film and foil coating.****(1) Definitions.** For the purpose of this subsection:

["Knife coating" means the application of a coating material to a substrate by means of drawing the substrate beneath a knife that spreads the coating evenly over the full width of the substrate.

"Paper coating" means coatings put on paper and pressure sensitive tapes regardless of substrate by knife, roll or rotogravure coating. Related web coating processes on plastic film and decorative, protective or functional coatings on metal foil are included in this definition.

"Roll coating" means the application of a coating material to a substrate across the entire width of a web by means of hard rubber or steel rolls.

"Rotogravure coating" means the application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate.

(2) The owner or operator of a paper coating facility shall not cause or permit the discharge into the atmosphere of any volatile organic compounds from any coating in excess of 0.35 kilograms per liter of coating (2.9 pounds per gallon), excluding water and exempt volatile organic compounds listed in 40 CFR 51.100(s) as amended from time to time, delivered to the coating applicator from a paper coating line.]

- (A) "Air pollution control equipment efficiency" means the ratio of VOC emissions recovered or destroyed by air pollution control equipment to the total VOC emissions that are introduced into the air pollution control equipment, expressed as a percentage;
- (B) "Capture efficiency" means the ratio of VOC emissions delivered to the air pollution control equipment to the total VOC emissions resulting from paper, film and foil coating and related cleaning, expressed as a percentage;
- (C) "Coating" means a material applied onto or impregnated into a substrate for decorative, protective, or functional purposes. A material used to form an unsupported substrate, such as vinyl sheeting, blown film, cast film or extruded film, is not considered a "coating;"
- (D) "Coating line" means a series of coating applicators, associated curing or drying equipment and intermittent areas between one or more unwind or feed stations and one or more rewind or cutting stations;
- (E) "Non-absorbent container" means a container made of nonporous material that does not allow the migration of the liquid solvent through its walls, floor or lid;
- (F) "Overall control efficiency" means the product of the capture efficiency and the air pollution control equipment efficiency;

DRAFT – March 25, 2009

- (G) “Paper, film and foil coating” means the application of a continuous layer of coating across the width or any portion of the width of a paper, film or foil substrate to create a functional or protective layer; saturate a substrate for lamination; or provide adhesion between two substrates for lamination;
- (H) “Pressure sensitive adhesive” means adhesive that forms a bond when pressure is applied, without activation via solvent, water or heat; and
- (I) “Pressure sensitive tape and label coating” means the application of a pressure sensitive adhesive to a film carrier or face material.

[(3)] (2) Applicability.

- (A) The provisions of this subsection apply to:
 - (i) An owner or operator of any premises that has actual emissions of VOC of at least [fifteen (15)] 15 pounds per day [or more in any one day] from paper, film and foil coating and related cleaning [operations], prior to the use of controls, or
 - (ii) An owner or operator conducting paper, film and foil coating that became subject to this subsection on and after October 1, 1989. [After October 1, 1989 any premises that is or becomes subject to the provisions of this subsection shall remain subject to the provisions of this subsection regardless of the daily actual emissions. Notwithstanding the above, the owner or operator of any piece of equipment that was not required to meet control requirements by this subsection prior to October 1, 1989, shall have until October 1, 1990, to comply with the control requirements of this subsection for that piece of equipment.]
- (B) Any owner or operator conducting paper, film and foil coating shall:
 - (i) Comply with the requirements of this subsection no later than January 1, 2010 or, for a source commencing operation after January 1, 2010, the date on which the source commences operation, and
 - (ii) Remain subject to this subsection regardless of actual daily VOC emissions.

[(4)] (3) Exemptions and exceptions. The provisions of this subsection shall not apply to the following activities:

- (A) Coating performed on any coating line [with a continuous web] that has both paper coating and printing stations and that is [subject to the requirements of section 22a-174-20(v) of the Regulations of Connecticut State Agencies.] conducted pursuant to subsection (v) of this section;
- (B) The application of sizing or water-based clays in association with the use of a papermaking machine; or

DRAFT – March 25, 2009

- (C) The application of inks, coatings or adhesives in association with flexible package printing conducted pursuant to subsection (ff) of this section or offset lithographic or letterpress printing conducted pursuant to subsection (gg) of this section.
- (4) Except as provided in subdivision (3) of this subsection, or except for paper, film and foil coating subject to subdivision (5) of this subsection, only coatings with an as applied VOC content less than or equal to 350 grams per liter of coating, excluding the volume of any water and exempt compounds, shall be used for paper, film and foil coating.
- (5) Additional requirements. The owner and operator of any paper, film and foil coating line with a potential to emit greater than 25 tons per year, prior to the use of controls, shall use one of the following methods to control emissions of VOCs:
- (A) Use only coatings that result in VOC emissions no greater than the applicable emission limit of subparagraph (A)(i) or (A)(ii) of this subdivision, calculated either per coating or per coating line, as provided in subparagraph (A)(iii) of this subdivision. The limits of subparagraphs (A)(i) and (A)(ii) of this subdivision establish the level of minimum low solvent content coating technology pursuant to subsection (bb)(1)(A) of this section:
- (i) For all coatings except pressure sensitive tape and label coatings, use only coatings that result in VOC emissions no greater than 0.40 kilograms of VOC per kilogram of coating solids applied,
- (ii) Use only pressure sensitive tape and label coatings that result in VOC emissions no greater than 0.20 kg VOC/kg of coating solids applied, and
- (iii) The VOC emissions limits of subparagraphs (A)(i) and (A)(ii) of this subdivision may be met either if every coating applied individually meets the applicable emission limit or if the daily weighted average of the VOC content of every coating used on a single coating line meets the applicable emission limit;
- (B) Notwithstanding subdivisions (1)(B), (1)(C) and (2) through (6) of subsection (bb) of this section, install, operate and maintain according to the manufacturer's recommendations an emissions control system that reduces uncontrolled VOC emissions to the atmosphere from a coating line by an overall control efficiency of at least 90%; or
- (C) An alternative means, achieving a level of control equivalent to subparagraph (A) of this subdivision, requested from and approved by the commissioner in accordance with subsection (cc) of this section.
- (6) Work practices. Each owner or operator shall use the following work practices:
- (A) New and used VOC-containing coating or cleaning solvent, including a coating mixed on the premises, shall be stored in a nonabsorbent, non-leaking container.

DRAFT – March 25, 2009

Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;

- (B) Spills and leaks of VOC-containing coating or cleaning solvent shall be minimized. Any leaked or spilled VOC-containing coating or cleaning solvent shall be absorbed and removed immediately;
- (C) Absorbent applicators, such as cloth and paper, which are moistened with VOC-containing coating or cleaning solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling;
- (D) VOC-containing coating or cleaning solvent shall be conveyed from one location to another in a closed container or pipe; and
- (E) Cleaning shall be performed to minimize associated VOC emissions.

(7) Records. An owner or operator shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection, as follows:

- (A) All such records shall be:
 - (i) Made available to the commissioner to inspect and copy upon request, and
 - (ii) Maintained for five years from the date such record is created;
- (B) Owners and operators of sources using add-on control technology in accordance with subdivision (5)(B) of this subsection shall maintain records demonstrating compliance with the required level of control; and
- (C) Additional information sufficient to demonstrate compliance may include the following:
 - (i) Name and quantity of any coating or cleaning solvent used,
 - (ii) VOC content of each coating or solvent used, as applied, and
 - (iii) A catalog of Materials Safety Data Sheets for all coatings and solvents used.

Sec 7. Subdivision (2)(B) of subsection (s) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

- (B) Miscellaneous metal parts and products excludes the following items:
 - (i) automobiles and light duty trucks,
 - (ii) metal cans,

DRAFT – March 25, 2009

- (iii) flat metal sheets and strips in the form of rolls or coils,
- (iv) plastic and glass objects,
- (v) magnet wire for use in electrical machinery,
- (vi) metal furniture,
- (vii) the exterior surface of assembled aircraft,
- (viii) automobile refinishing,
- (ix) customized top coating of automobiles and trucks, if production is less than 5 vehicles per day, [and]
- (x) the exterior surface of assembled marine vessels[.] , and
- (xi) large appliance parts subject to subsection (hh) of this section.

Sec 8. Subsection (ee) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

(ee) [Reasonably Available Control Technology for large sources. The owner or operator of any premises with potential emissions of volatile organic compounds shall use Reasonably Available Control Technology in accordance with the provisions of section 22a-174-32 of the Regulations of Connecticut State Agencies on each source to limit the discharge of volatile organic compounds unless all the sources emitting volatile organic compounds at such premises are regulated by:

- (1) subsections (a), (b) or (l) through (y), inclusive, of section 22a-174-20 of the Regulations of Connecticut State Agencies;
- (2) section 22a-174-30 of the Regulations of Connecticut State Agencies; or
- (3) an order to implement reasonably available control technology issued by the Commissioner pursuant to this subsection prior to November 15, 1992 and approved by the Administrator prior to May 31, 1995. An order or permit to limit potential emissions of volatile organic compounds to less than 100 tons per year for any twelve (12) consecutive months shall not be considered an order to implement Reasonably Available Control Technology.] **Reserved.**

DRAFT – March 25, 2009

Sec. 9. Section 22a-174-20 of the Regulations of Connecticut State Agencies is amended by adding subsections (ff), (gg), (hh), (ii) and (jj), as follows:

(NEW)

(ff) Flexible package printing.

- (1) Definitions. For the purpose of this subsection:
- (A) “Air pollution control equipment efficiency” means the ratio of VOC emissions recovered or destroyed by the air pollution control equipment to the total VOC emissions that are introduced into the air pollution control equipment, expressed as a percentage;
 - (B) “Capture efficiency” the ratio of VOC emissions delivered to the air pollution control equipment to the total VOC emissions resulting from flexible package printing activities, expressed as a percentage;
 - (C) “Cleaning” means, with respect to a flexible package printing press or presses, cleaning of a press or press parts or the removal of dried ink from areas around the press. “Cleaning” does not include cleaning of electronic components, cleaning in platemaking or binding operations, housekeeping activity near a press or the use of a parts washer or cold cleaner;
 - (D) “Flexible package” means any package or part of a package the shape of which may be readily changed. A “flexible package” may be in the form of a bag, pouch, liner or wrap made of paper, plastic, film, aluminum foil, or metalized or coated film or paper, alone or in combination. None of the following are considered a “flexible package”: a folding carton, self-adhesive labels, gift wrap, wall covering, vinyl products, decorative laminates, floor coverings or tissue products;
 - (E) “Flexographic print station” means a work station on which a flexographic printing operation is conducted. A flexographic print station includes a flexographic printing plate, which is an image made of rubber or other elastomeric material. The image to be printed is raised above the printing plate;
 - (F) “Installation date” means the first date on which a piece of equipment is in place and prepared to operate. The “installation date” does not change if the equipment is moved to a new location at the same premises;
 - (G) “Overall control efficiency” means the product of the capture efficiency and the air pollution control equipment efficiency;
 - (H) “Press” means a printing production assembly that is composed of one or more work stations, one or more of which is a flexographic or rotogravure print station, that produces a printed product;
 - (I) “Rotogravure print station” means a work station on which a rotogravure printing operation is conducted. A rotogravure print station includes a rotogravure

DRAFT – March 25, 2009

cylinder and ink supply. The image to be printed is etched or engraved below the surface of the rotogravure cylinder; and

- (J) “Work station” means a unit on a press where material is deposited onto a substrate.

(2) Applicability. The provisions of this subsection apply to the owner or operator of any flexible package printing press with actual emissions from all flexible package printing and cleaning activities at a premises of at least 6.8 kilograms per day (15 pounds per day) of VOC prior to the use of air pollution control equipment. Any owner or operator of a flexible package printing operation who is subject to this subsection shall:

- (A) Comply with the requirements of this subsection no later than January 1, 2010 or, for a source commencing operation after January 1, 2010, the date on which the source commences operation; and

- (B) Remain subject to this subsection regardless of actual daily VOC emissions.

(3) Work practices. Each owner or operator shall use the following work practices:

- (A) New and used VOC-containing ink, coating or cleaning solvent, including ink or coating mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;

- (B) Spills and leaks of VOC-containing ink, coating or cleaning solvent shall be minimized. Any leaked or spilled VOC-containing ink, coating or cleaning solvent shall be absorbed and removed immediately;

- (C) Absorbent applicators, such as cloth and paper, which are moistened with VOC-containing ink, coating or solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling;

- (D) VOC-containing ink, coating and cleaning solvent shall be conveyed from one location to another in a closed container or pipe; and

- (E) Cleaning shall be performed to minimize associated VOC emissions.

(4) Additional requirements. The owner or operator of a flexible package printing press that has the potential to emit from the dryer, prior to controls, of at least 25 tons per year of VOC from the use of inks, coatings and adhesives combined shall, in addition to complying with the requirements of subdivision (3) of this subsection, use one of the following methods to control VOC emissions from such press:

- (A) Use only inks, coatings and adhesives with an as applied VOC content that does not exceed 0.8 kg VOC/kg of solids (0.8 lb VOC/lb of solids) or 0.16 kg VOC/kg of materials (0.16 lb VOC/lb of materials). The VOC content limits be met by averaging the VOC content of materials used on a single printing line in a single day; or

DRAFT – March 25, 2009

- (B) Install, operate and maintain in accordance with the manufacturer's recommendations, an emissions control system, consisting of a capture and a control device, which meets the overall control efficiency identified in Table 20(ff)-1, according to the date of installation of the press being controlled and the installation date of the air pollution control device.
- (5) Records. An owner or operator shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection, as follows:
- (A) All such records shall be:
- (i) Made available to the commissioner to inspect and copy upon request, and
 - (ii) Maintained for five years from the date such record is created; and
- (B) Information sufficient to determine compliance may include the following:
- (i) Name and quantity of any ink, coating or cleaning solvent used,
 - (ii) VOC content of each ink, coating or cleaning solvent used, as applied,
 - (iii) A catalog of Material Safety Data Sheets for all inks, coatings and cleaning solvents used,
 - (iv) Documentation of air pollution control equipment efficiency or capture efficiency, if applicable, and
 - (v) Date and type of maintenance performed on air pollution control or capture equipment, if applicable.

Table 20(ff)-1. Overall control efficiency levels

<i>Installation date of press</i>	<i>Installation date of the air pollution control device</i>	<i>Overall control efficiency (%)</i>
Prior to March 14, 1995	Prior to January 1, 2010	65
Prior to March 14, 1995	On or after January 1, 2010	70
On or after March 14, 1995	Prior to January 1, 2010	75
On or after March 14, 1995	On or after January 1, 2010	80

(gg) Offset lithographic printing and letterpress printing**(1) Definitions.** For the purpose of this subsection:

- (A) “Air pollution control equipment efficiency” means the ratio of VOC emissions recovered or destroyed by air pollution control equipment to the total VOC emissions that are introduced into the air pollution control equipment, expressed as a percentage;
- (B) “Capture efficiency” means the ratio of VOC emissions delivered to the air pollution control equipment to the total VOC emissions resulting from offset lithographic or letterpress printing, expressed as a percentage;
- (C) “Cleaning solvent” means a VOC-containing liquid used to remove ink and debris from the operating surfaces of the printing press and its parts;
- (D) “Coldset” or “non-heatset” means a printing process in which the ink dries on the substrate through ordinary evaporation and absorption;
- (E) “Fountain solution” means, with respect to offset lithographic printing, a water-based solution that contains small amounts of gum Arabic or synthetic resins, acids, buffer salts and a wetting agent or dampening aid applied to the image plate to reduce the surface tension of the solution;
- (F) “Heatset” means a printing process in which ink is set by the evaporation of ink solvents or oils in a hot air dryer;
- (G) “Installation date” means the first date on which a piece of equipment is in place and prepared to operate. The “installation date” does not change if the equipment is moved to a new location at the same facility;
- (H) “Letterpress printing” means a printing process in which the image area is raised relative to the non-image area, and the paste ink is transferred to the substrate directly from the image surface;
- (I) “Lithographic printing” means a printing process in which the image and non-image areas are chemically differentiated, i.e., the image area is oil receptive and the non-image area is water receptive;
- (J) “Offset lithographic printing” means a type of lithographic printing in which an ink film is applied to a lithographic plate and then transferred to an intermediary surface or blanket. The image on the blanket is then transferred to a substrate, typically paper or paperboard;
- (K) “Overall control efficiency” means the product of the capture efficiency and the air pollution control equipment efficiency;

DRAFT – March 25, 2009

- (L) “Press” means a printing production assembly composed of one or more units used to produce a printed substrate including any associated coating, spray powder application or infrared heating units;
- (M) “Sheet-fed printing” means, with respect to offset lithographic printing, a process in which individual sheets of paper or other substrate are fed to the press;
- (N) “VOC composite partial vapor pressure” means the sum of the partial pressure of the compounds defined as VOCs; and
- (O) “Web printing” means, with respect to offset lithographic printing, a process where continuous rolls of substrate material are fed to the press and rewound or cut to size after printing.

(2) Applicability. The provisions of this subsection apply to the owner or operator of any offset lithographic or letterpress printing press or presses with actual emissions from offset lithographic or letterpress printing and related cleaning of at least 6.8 kilograms per day (15 pounds per day) of VOC prior to the use of air pollution control equipment. Any owner or operator of an offset lithographic or letterpress printing operation who is subject to this subsection shall:

- (A) Comply with the requirements of this subsection no later than January 1, 2010 or, for a source that commences operation after January 1, 2010, the date on which the source commences operation; and
- (B) Remain subject to this subsection regardless of actual daily VOC emissions.

(3) Fountain solutions.

- (A) The owner or operator of a heatset web offset lithographic printing press with a fountain solution reservoir of at least one gallon in capacity shall:
 - (i) Reduce the on-press alcohol content to 1.6% alcohol or less by weight,
 - (ii) Use 3% alcohol or less by weight on-press in the fountain solution and refrigerate the fountain solution to below 60°F, or
 - (iii) Use a 5% alcohol substitute or less by weight on-press and no alcohol in the fountain solution.
- (B) The owner of a sheet-fed offset lithographic printing press with a minimum sheet size of greater than 11x17 inches and a fountain solution reservoir greater than one gallon in capacity shall:
 - (i) Reduce the on-press alcohol content to 5% alcohol or less by weight,
 - (ii) Use 8.5% alcohol or less by weight on-press in the fountain solution and refrigerate the fountain solution to below 60°F, or

DRAFT – March 25, 2009

- (iii) Use 5% alcohol substitute or less by weight on-press and no alcohol in the fountain solution.
 - (C) The owner of a coldset web offset lithographic printing press with a fountain solution reservoir of at least one gallon in capacity shall use a 5% alcohol substitute or less by weight on-press and no alcohol in the fountain solution.
- (4) Heatset web offset lithographic printing or heatset letterpress printing. Except heatset presses for book printing or heatset presses with a web width of 22 inches or less, the owner or operator of a heatset web offset lithographic or heatset letterpress printing press with the potential to emit at least 25 tons per year of VOC emissions from the dryer, prior to controls, shall operate a control device to:
- (A) Achieve a 90% control efficiency if the control device is installed prior to January 1, 2010;
 - (B) Achieve a 95% control efficiency if the control device is installed on or after January 1, 2010; or
 - (C) Reduce the control device outlet concentration to 20 parts per million as hexane on a dry basis if the inlet VOC concentration is so low that 90% or 95% efficiency may not be achieved.
- (5) Cleaning solvents. The owner or operator of an offset lithographic printing press or letterpress printing press:
- (A) Except as provided in subparagraph (B) of this subdivision, shall use cleaning solvents that:
 - (i) Have composite vapor pressure less than 10 mm Hg at 20°C, or
 - (ii) Have a VOC content less than 70% by weight; and
 - (B) May in any twelve-month period use no more than 110 gallons of cleaning solvent that does not comply with subparagraph (A) of this subdivision.
- (6) Work practices. Each owner or operator shall use the following work practices:
- (A) New and used VOC-containing ink, fountain solution and cleaning solvent, including solvents mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
 - (B) Spills and leaks of VOC-containing ink, fountain solution and cleaning solvent shall be minimized. Any leaked or spilled VOC-containing ink, fountain solution or cleaning solvent shall be absorbed and removed immediately;

- (C) Absorbent applicators, such as cloth and paper, which are moistened with VOC-containing ink, fountain solution or cleaning solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling;
- (D) VOC-containing ink, fountain solution and cleaning solvents shall be conveyed from one location to another in closed containers or pipes; and
- (E) Cleaning shall be performed to minimize associated VOC emissions.

(7) Records. An owner or operator shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection, as follows:

- (A) All such records shall be:
 - (i) Made available to the commissioner to inspect and copy upon request, and
 - (ii) Maintained for five years from the date such record is created; and
- (B) Information sufficient to determine compliance may include the following:
 - (i) Name and quantity of any ink, fountain solution, cleaning solvent and any other material used for operation, maintenance or cleaning,
 - (ii) VOC content of materials used, as applied,
 - (iii) A catalog of Material Safety Data Sheets for all inks, fountain solutions and cleaning solvents,
 - (iv) Documentation of air pollution control equipment efficiency or capture efficiency, if applicable, and
 - (v) Date and type of maintenance performed on air pollution control equipment or capture equipment, if applicable.

(hh) Large appliance coatings.

(1) Definitions. For the purpose of this subsection:

- (A) “Air dried” means cured at a temperature below 90° C (194°F);
- (B) “Air pollution control equipment efficiency” means the ratio of VOC emissions recovered or destroyed by air pollution control equipment to the total VOC emissions that are introduced into the air pollution control equipment, expressed as a percentage;

DRAFT – March 25, 2009

- (C) “As applied” means the composition of coating at the time it is applied to a surface, including any solvent, catalyst or other substance added to the coating as supplied by the manufacturer;
- (D) “Baked” means cured at a temperature at or above 90°C (194°F);
- (E) “Cleaning solvent” means any VOC-containing liquid used in a large appliance coating operation;
- (F) “Capture efficiency” means the ratio of VOC emissions delivered to the air pollution control equipment to the total VOC emissions resulting from large appliance coating and related cleaning, expressed as a percentage;
- (G) “Coating” means a material that is applied to a surface and that forms a continuous film in order to beautify or protect such surface;
- (H) “Coating unit” means a series of one or more coating applicators and any associated drying area or oven wherein a coating is applied, dried or cured. A “coating unit” ends at the point where the coating is dried or cured, or prior to any subsequent application of a different coating;
- (I) “Dip coating” means a method of applying a coating to a surface by submersion into and removal from a coating bath;
- (J) “Electrostatic application” means a method of applying coating particles or coating droplets to a grounded surface by electrically charging such particles or droplets;
- (K) “Extreme high-gloss coating” means a coating that, when tested by the most recent active version of the American Society for Testing Material Test Method D523, shows a reflectance of 75 or more on a 60 degree meter;
- (L) “Extreme-performance coating” means a coating used on a metal surface where the coated surface is, in its intended use, subject to one of the following conditions:
 - (i) Chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures or solution,
 - (ii) Repeated exposure to temperatures in excess of 121.1°C (250°F), or
 - (iii) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleaners or scouring agents;
- (M) “Flow coating” means a non-atomized technique of applying coating to a substrate using a fluid nozzle in a fan pattern with no air supplied to the nozzle;
- (N) “Heat-resistant coating” means a coating that must withstand a temperature of at least 400° F during normal use;

- (O) “HVLP spray” means a high-volume, low-pressure coating application system that is designed to operate at air pressures between 0.1 and 10 pounds per square inch gauge, measured dynamically at the center of the air cap and the air horns;
- (P) “Large appliance coating” means the application of a coating to a large appliance part or product during manufacture.
- (Q) “Large appliance part” means any organic, surface-coated metal lid, door, casing, panel or other interior or exterior metal part or accessory that is assembled to form a large appliance product;
- (R) “Large appliance product” means any organic surface-coated metal range, oven, microwave oven, refrigerator, freezer, washer, dryer, dishwasher, water heater or trash compactor manufactured for household, commercial or recreational use;
- (S) “Metallic coating” means a coating that contains more than five grams of metal particle per liter of coating, as applied;
- (T) “Multi-component coating” means a coating requiring the addition of a separate reactive resin, such as a catalyst or hardener, before application to form an acceptable dry film;
- (U) “One-component coating” means a coating that is ready for application as packaged for sale, except for the addition of a thinner to reduce the viscosity;
- (V) “Overall control efficiency” means the product of the capture efficiency and the air pollution control equipment efficiency;
- (W) “Pretreatment coating” means a coating, containing no more than 12% solids by weight and at least one-half percent acid by weight, applied directly to metal surfaces to provide surface etching, adhesion and ease when stripping;
- (X) “Repair coating” means a coating used to recoat portions of a product that has sustained mechanical damage to the coating following normal painting operations;
- (Y) “Roll coating” means a coating method using a machine that applies coating to a substrate by continuously transferring coating through a set of oppositely rotating rollers;
- (Z) “Stencil coating” means an ink or a coating that is rolled or brushed onto a template or stamp to add identifying letters or numbers to metal parts or products;
- (AA) “Solar-absorbent coating” means a coating which has, as its primary purpose, the absorption of solar radiation; and

DRAFT – March 25, 2009

- (BB) “Touch-up coating” means a coating used to cover minor coating imperfections appearing after the main coating operation.
- (2) Applicability. Except as provided in subdivision (3) of this subsection, the provisions of this subsection apply to an owner or operator of any large appliance coating unit on a premises with total actual emissions from all large appliance coating and related cleaning activities of at least 6.8 kilograms per day (15 pounds per day) of VOC prior to the use of air pollution control equipment. Any such owner or operator shall:
- (A) Comply with the requirements of this subsection no later than January 1, 2010 or, for a source commencing operation after January 1, 2010, the date on which the source commences construction; and
 - (B) Remain subject to this subsection regardless of actual daily VOC emissions.
- (3) Exemptions and exceptions. The requirements of subdivision (5) of this subsection shall not apply to the following:
- (A) Stencil coating;
 - (B) Safety-indicating coating;
 - (C) Solid-film lubricant;
 - (D) Electric-insulating and thermal-conducting coating;
 - (E) Touch-up and repair coating; or
 - (F) Coating applied with a hand-held aerosol can.
- (4) Application methods. A person shall not apply a VOC-containing coating to any large appliance part or product unless the coating is applied by one of the following methods using equipment operated in accordance with the specifications of the equipment manufacturer:
- (A) Electrostatic application;
 - (B) Flow coating;
 - (C) Dip coating;
 - (D) Roll coating;
 - (E) HVLP spraying;
 - (F) Hand application; or
 - (G) Any other coating application method capable of achieving a transfer efficiency equivalent to or better than that provided by HVLP spray application. Any owner

or operator using an application method pursuant to this subparagraph shall maintain records demonstrating the transfer efficiency achieved.

(5) Compliance options. Except as provided in subdivision (3) of this subsection, on and after January 1, 2010, no owner or operator conducting large appliance coating shall apply any coating, inclusive of any VOC-containing materials added to the original coating supplied by the manufacturer, unless the owner or operator uses one of the following methods to control emissions of VOCs:

- (A) Use only coatings with an as applied VOC content no greater than the levels specified in Table 20(hh)-1, according to coating category and drying method, where:
 - (i) The VOC content limits of Table 20(hh)-1 apply to the volume of coating as applied, less water and less exempt VOC, and
 - (ii) The VOC content limits of Table 20(hh)-1 may be met by averaging the VOC content of materials used on a single large appliance coating unit each day;
- (B) Install, operate and maintain in accordance with the manufacturer's recommendations, an emissions control system, consisting of a capture and control device, which meets an overall control efficiency of 90%; or
- (C) With the approval of the commissioner, use an alternative means to achieve a level of control equivalent to that required in subparagraph (A) or (B) of this subdivision. An owner or operator shall submit a request to the commissioner to use an alternative means of compliance, and such request shall include:
 - (i) A description of the method,
 - (ii) A demonstration of the level of emissions control achieved, and
 - (iii) Any other information requested by the commissioner.

(6) Work practices. Each owner or operator shall use the following work practices:

- (A) New and used VOC-containing coating or cleaning solvent, including a coating mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
- (B) Spills and leaks of VOC-containing coating or cleaning solvent shall be minimized. Any leaked or spilled VOC-containing coating or cleaning solvent shall be absorbed and removed immediately;

DRAFT – March 25, 2009

- (C) Absorbent applicators, such as cloth and paper, which are moistened with a VOC-containing coating or cleaning solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling;
- (D) VOC-containing coating and cleaning solvent shall be conveyed from one location to another in a closed container or pipe; and
- (E) Cleaning shall be performed to minimize associated VOC emissions.

Table 20(hh)-1. As Applied VOC Content Limits Per Volume of Coating (Excluding Water and Exempt VOCs) per Coating Category, Specific to the Drying Process

Coating Category	Baked		Air Dried	
	g/L	lb/gal	g/L	lb/gal
General, one component	275	2.3	275	2.3
General, multi-component	275	2.3	340	2.8
Extreme high gloss	360	3.0	340	2.8
Extreme performance	360	3.0	420	3.5
Heat-resistant	360	3.0	420	3.5
Metallic	420	3.5	420	3.5
Pretreatment coatings	420	3.5	420	3.5
Solar-absorbent	360	3.0	420	3.5

(7) Records. An owner or operator shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection, as follows:

- (A) All such records shall be:
 - (i) Made available to the commissioner to inspect and copy upon request, and
 - (ii) Maintained for five years from the date such record is created; and
- (B) Information sufficient to determine compliance may include the following:
 - (i) Name and quantity of any coating or cleaning solvent used,
 - (ii) VOC content of each coating and cleaning solvent used, as applied,
 - (iii) A catalog of Material Safety Data Sheets for each coating and cleaning solvent used,
 - (iv) Documentation of air pollution control equipment efficiency or capture efficiency, if applicable, and

- (v) Date and type of maintenance performed on air pollution control equipment or capture equipment, if applicable.

(ii) General solvent cleaning.

(1) Definitions. For the purpose of this subsection:

- (A) “Air pollution control equipment efficiency” means the ratio of VOC emissions recovered or destroyed by the air pollution control equipment to the total VOC emissions that are introduced into the air pollution control equipment, expressed as a percentage;
- (B) “Capture efficiency” means the ratio of VOC emissions delivered to the air pollution control equipment to the total VOC emissions resulting from the solvent cleaning activities, expressed as a percentage;
- (C) “Cleaning solvent” means any VOC-containing liquid used to perform solvent cleaning;
- (D) “Janitorial cleaning” means the cleaning of building or facility components including, but not limited to, floors, ceilings, walls, windows, doors, stairs, restrooms, furnishings and exterior surfaces of office equipment. “Janitorial cleaning” excludes the cleaning of work areas where manufacturing or repair activity is performed. “Janitorial cleaning” includes graffiti removal;
- (E) “Overall control efficiency” means the product of the capture efficiency and the air pollution control equipment efficiency; and
- (F) “Solvent cleaning” means the use of cleaning solvent to remove uncured adhesives, uncured inks, uncured coatings or contaminants such as dirt, soil and grease from parts, products, tools, machinery, equipment or work areas.

(2) Applicability. Except as provided in subdivision (3) of this subsection, the provisions of this subsection apply to an owner or operator of any premises with actual emissions from solvent cleaning of at least 6.8 kilograms per day (15 pounds per day) of VOC prior to the use of air pollution control equipment. Any owner or operator of such a premises shall:

- (A) Comply with the requirements of this subsection no later than January 1, 2010 or, for a source commencing operation after January 1, 2010, the date on which the sources commences operation; and
- (B) Remain subject to this subsection regardless of actual daily VOC emissions from solvent cleaning.

(3) Exemptions and exceptions.

- (A) The requirements of this subsection shall not apply to the use of cleaning solvent as follows:

DRAFT – March 25, 2009

- (i) In janitorial cleaning,
- (ii) At an aerospace manufacturing and rework operation or a wood furniture coating operation in accordance with an order or a permit issued pursuant to sections 22a-174-32(e) and 22a-174-20(cc) of the Regulations of Connecticut State Agencies,
- (iii) To perform general solvent cleaning in accordance with an order issued pursuant to section 22a-174-20(ee) of the Regulations of the Connecticut State Agencies,
- (iv) At an aerospace manufacturing and rework facility where cleaning solvent is used in accordance with 40 CFR 63,
- (v) As surface preparation or cleanup solvent in accordance with section 22a-174-44 of the Regulations of Connecticut State Agencies,
- (vi) To clean spray application equipment in compliance with subsection (jj) of this section,
- (vii) To perform metal cleaning in compliance with subsection (l) of this section,
- (viii) In cleaning, including surface preparation prior to coating, necessary to meet a standard or specification of the United States Department of Defense,
- (ix) Associated with research and development,
- (x) Associated with quality control or laboratory testing,
- (xi) Associated with medical device operations,
- (xii) Associated with pharmaceutical manufacturing, and
- (xiii) That exceeds the applicable limit of subdivision (4)(A) of this subsection where the quantity used does not exceed 55 gallons per any twelve-month rolling aggregate. Any person claiming exemption pursuant to this subparagraph shall record and maintain monthly records sufficient to demonstrate compliance with this exemption.

(4) Control of emissions. Except as provided in subdivision (3) of this subsection, any owner or operator performing solvent cleaning shall use one of the following methods to limit VOC emissions:

- (A) Use only cleaning solvent that complies with one of the following limitations:

DRAFT – March 25, 2009

- (i) As applied, has a VOC content that does not exceed 50 grams per liter (0.42 lb/gal), or
 - (ii) As applied, has a vapor pressure no greater than 8 mm Hg at 20°C; or
- (B) Install, operate and maintain in accordance with the manufacturer's recommendations, an emissions control system that reduces uncontrolled VOC emissions to the atmosphere from any solvent cleaning by an overall control efficiency of at least 85%.
- (5) Work practices. Each owner or operator shall use the following work practices:
- (A) New and used cleaning solvent, including those mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
 - (B) Spills and leaks of cleaning solvent shall be minimized. Any leaked or spilled cleaning solvent shall be absorbed and removed immediately;
 - (C) Absorbent applicators, such as cloth and paper, which are moistened with cleaning solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling;
 - (D) Cleaning solvent shall be conveyed from one location to another in a closed container or pipe; and
 - (E) Cleaning shall be performed to minimize associated VOC emissions.
- (6) Records. An owner or operator shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection, as follows:
- (A) All such records shall be:
 - (i) Made available to the commissioner to inspect and copy upon request, and
 - (ii) Maintained for five years from the date such record is created; and
 - (B) Information sufficient to determine compliance may include the following:
 - (i) Name and quantity of each cleaning solvent used,
 - (ii) VOC content or vapor pressure of each cleaning solvent, as applied,
 - (iii) A Material Safety Data Sheets for each cleaning solvent used,

DRAFT – March 25, 2009

- (iv) Documentation of air pollution control equipment efficiency or capture efficiency, if applicable,
- (v) Date and type of maintenance performed on air pollution control or capture equipment, if applicable, and
- (vi) Quantity of non-compliant solvent used, in gallons, for each month.

(jj) Spray application equipment cleaning.**(1) Definitions.** For the purpose of this subsection:

- (A) “Air pollution control equipment efficiency” means the ratio of VOC emissions recovered or destroyed by the air pollution control equipment to the total VOC emissions that are introduced into the air pollution control equipment, expressed as a percentage;
- (B) “Capture efficiency” means the ratio of VOC emissions delivered to the air pollution control equipment to the total VOC emissions resulting from spray application equipment cleaning, expressed as a percentage;
- (C) “Cleaning solvent” means any VOC-containing liquid used to clean spray application equipment;
- (D) “Enclosed gun cleaner” means a device, used for cleaning spray application equipment, which has an enclosed cleaning solvent container and either:
 - (i) Is not open to the ambient air when in use and has a mechanism to force the cleaning solvent through the spray application equipment while the cleaner is in operation, or
 - (ii) Uses non-atomized solvent flow to flush the spray application equipment and collects and returns the discharged cleaning solvent to the enclosed container;
- (E) “Overall control efficiency” means the product of the capture efficiency and the air pollution control equipment efficiency; and
- (F) “Spray application equipment” means a hand-held device that creates an atomized mist of coating, or other liquid substance, and deposits the coating, or other liquid substance, on a substrate.

(2) **Applicability.** Except as provided in subdivision (3) of this subsection, on and after January 1, 2010, the provisions of this subsection apply to an owner or operator of any spray application equipment.

(3) Exemptions and exceptions.

DRAFT – March 25, 2009

- (A) The requirements of this subsection shall not apply to cleaning of spray application equipment as follows:
 - (i) Associated with automotive refinishing and conducted pursuant to section 22a-174-3b(d) of the Regulations of Connecticut State Agencies,
 - (ii) Pursuant to section 22a-174-44(d) of the Regulations of Connecticut State Agencies,
 - (iii) Performed at an aerospace manufacturing and rework facility and in accordance with 40 CFR 63.744,
 - (iv) Necessary to meet a standard or specification of the United States Department of Defense, or
 - (v) Associated with research and development, quality control or laboratory testing; and
 - (B) The cleaning solvent VOC content limit of subparagraphs (B) through (D) of subdivision (4) of this subsection shall not apply to the cleaning of spray application equipment used in the assembly, repair and manufacture of submarines.
- (4) Control of emissions. An owner or operator shall clean spray application equipment in accordance with the requirements of one of the following subparagraphs:
- (A) Using an enclosed gun cleaner that is maintained and operated in accordance with the manufacturer's recommendations and the following practices:
 - (i) Operate using an automated cycle, if applicable,
 - (ii) If the enclosed gun cleaner is equipped with a ventilated exhaust system, vent vapors out of the work area and subject such vapors to capture and control,
 - (iii) Replace cleaning solvent routinely,
 - (iv) Inspect hoses regularly for leaks,
 - (v) If a leak is discovered, repair as soon as practicable but no later than 15 days after discovery, and
 - (vi) Ensure the lid is seated properly;
 - (B) Using only cleaning solvent with an as applied VOC content that does not exceed 50 grams per liter (0.417 lb/gal) by placing cleaning solvent in the pressure pot and forcing the solvent through the gun with the atomizing cap in place, without the use of atomizing air. Used cleaning solvent shall be directed into a vat, drum or other waste container that is closed when not in use;

DRAFT – March 25, 2009

- (C) Using only cleaning solvent with an as applied VOC content that does not exceed 50 grams per liter (0.417 lb/gal) by disassembling the spray gun and cleaning the components and associated hoses and pumps by hand in a vat, which shall remain closed at all times except when in use. Components and associated hoses and pumps may be soaked in a vat with a capacity no greater than 20 liters. Such a soaking vat shall remain closed during the soaking period, except when inserting or removing items;
 - (D) Using only cleaning solvent with an as applied VOC content that does not exceed 50 grams per liter (0.417 lb/gal) by forcing cleaning solvent through the spray gun and directing the atomized solvent spray into a waste container that is fitted with a device to capture the resulting emissions; or
 - (E) Installing, operating and maintaining an emissions control system that reduces uncontrolled VOC emissions to the atmosphere from any spray application equipment cleaning by an overall control efficiency of at least 85%.
- (5) Work practices. Each owner or operator shall use the following work practices:
- (A) New and used cleaning solvent, including those mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
 - (B) Spills and leaks of cleaning solvent shall be minimized. Any leaked or spilled cleaning solvent shall be absorbed and removed immediately;
 - (C) Absorbent applicators, such as cloth and paper that are moistened with cleaning solvent shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling;
 - (D) Cleaning solvent shall be conveyed from one location to another in a closed container or pipe;
 - (E) Cleaning shall be performed to minimize VOC emissions; and
 - (F) Air pollution control equipment shall be operated and maintained in accordance with the manufacturer's recommendations.
- (6) Records. An owner or operator shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection, as follows:
- (A) All such records shall be:
 - (i) Made available to the commissioner to inspect and copy upon request, and

DRAFT – March 25, 2009

- (ii) Maintained for five years from the date such record is created; and
- (B) Information sufficient to determine compliance may include the following:
 - (i) Name and quantity of any cleaning solvent used per calendar month,
 - (ii) VOC content of cleaning solvent used, as applied,
 - (iii) A Material Safety Data Sheet for each cleaning solvent used,
 - (iv) Documentation of air pollution control equipment efficiency or capture efficiency, if applicable, and
 - (v) Date and type of maintenance performed on air pollution control or capture equipment, if applicable.

Sec. 10. Section 22a-174-32(b)(3) of the Regulations of Connecticut State Agencies is amended to read as follows:

- (3) When calculating potential emissions to determine the applicability of this section, the owner or operator of a premises shall include potential emissions of volatile organic compounds from all sources located at such premises excluding those sources which are:
- (A) subject to regulation under 40 CFR [Parts] 61 and 63;
 - (B) required to use Best Available Control Technology or Lowest Achievable Emission Rate for VOCs pursuant to a federally enforceable order or permit which contains specific VOC emission limitations;
 - (C) subject to regulation under 40 CFR [Part] 264, Subparts AA or BB, or 40 CFR [Part] 265, Subparts AA or BB;
 - (D) fuel burning equipment; or
 - (E) subject to Reasonably Available Control Technology required pursuant to:
 - (i) any one of the following subsections [(a), (b) or (l) through (y) inclusive] of section 22a-174-20 of the Regulations of Connecticut State Agencies: (a), (b), (l) through (y), or (ff) through (jj), [;]
 - (ii) section 22a-174-30 of the Regulations of Connecticut State Agencies[;],
or
 - (iii) an order or permit requiring the implementation of Reasonably Available Control Technology issued by the commissioner prior to November 15, 1992 and approved by the Administrator prior to May 31, 1995.

DRAFT – March 25, 2009**Sec. 11. Section 22a-174-33(f)(6) of the Regulations of Connecticut State Agencies is amended to read as follows:**

(6) [Notwithstanding any other provision of this subsection, the owner or operator of a Title V source subject to 40 CFR 72 to 78, inclusive, which becomes subject to this section after January 1, 1998 shall submit a Title V application to the commissioner within the time provided by 40 CFR 72.30 or within ninety (90) days of receipt of notice from the commissioner that such application is required, whichever is earlier.] Reserved.

Statement of purpose: This amendment serves the primary purpose of updating Connecticut's reasonably available control technology (RACT) requirements for volatile organic compounds (VOCs) in response to the U.S. Environmental Protection Agency's issuance of control techniques guidelines (CTG) in 2006 for offset lithographic and letterpress printing, industrial cleaning solvents and flexible package printing [71 FR 58745] and in 2007 for metal furniture coating, large appliance coating and paper, film and foil coating [72 FR 57215]. The amendment also refines the requirements for metal cleaning; adds requirements specific to spray application equipment cleaning; and makes minor and technical revisions.

Specifically:

- The existing requirements for metal furniture and paper, film and foil coating operations in section 22a-174-20 of the Regulations of Connecticut State Agencies (RCSA) are enhanced through the adoption of the CTG requirements, which include lower VOC content requirements for coatings and work practices designed to reduce VOC emissions. (Section 6)
- New requirements, consistent with the CTG, are added to RCSA section 22a-174-20 for five source categories (flexible package printing; offset lithographic printing; letterpress printing; large appliance coating; general solvent cleaning). The requirements include VOC content limits for coatings, inks and solvents; an alternative compliance route through the operation of air pollution control equipment; and work practices to limit VOC emissions from coating and solvent storage and handling. (Section 9)
- New requirements regulating the cleaning of spray application equipment to limit VOC emissions are added to RCSA section 22a-174-20. (Section 9)
- The reactivity-based architectural coating requirements of subsections (g), (h) and (i) of RCSA section 22a-174-20 are deleted, given the adoption in July 2007 of more comprehensive requirements in RCSA section 22a-174-41. (Sections 1, 3, 4)
- The amendment also updates internal references, exemptions and applicability determinations of RCSA section 22a-174-20 with respect to additions made in the amendment; refines definitions; and updates the applicability determination of RCSA section 22a-174-32 given the adoption of the new requirements. (Sections 2, 5, 7, 8, 10)

The VOC reductions associated with the RACT update portion of this amendment will assist Connecticut to attain the federal 8-hour ozone national ambient air quality standards and serve as directionally correct measures with respect to Connecticut's compliance with the national fine particulate matter standards.

Section 11 of the amendment eliminates the reference to the federal Title V application timelines for Acid Rain program sources from RCSA section 22a-174-33(f), as the federal timing requirements apply independently.

ATTACHMENT 3

Final Recommended Text, Including Recommendations of the Hearing Officer



Section 1. Subsection (f)(9) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

- (9) The provisions of subsection (f) shall not apply to:
- (A) The use of equipment for which other requirements are specified by [subsections] any one of the following subsections of this section: (a) through (e), (k) through (y) or (ff) through (jj); [22a-174-20(a) through (e) inclusive, subsections 22a-174-20(k) through (y) inclusive,] or for which [“]reasonably available control technology[”] is required by [subsection 22a-174-20(ee).] section 22a-174-32 of the Regulations of Connecticut State Agencies;
 - (B) The spraying or other employment of insecticides, pesticides, or herbicides[.] ; or
 - (C) The “emission” of “organic compounds” from coating operations where the “volatile organic compound” portion of the coating solvent is 20 per cent or less by weight.

Sec. 2. Subsection (g) of section 22a-174-20 of the Regulations of Connecticut State Agencies are amended to read as follows:

(g) [“Architectural coatings.”

(g)(1) On or after January 1, 1974, no “person” shall sell or offer for sale to the final user in containers greater than 1-quart (0.95 liter) capacity any “architectural coating” or solvent for the purpose of thinning or diluting any “architectural coating” unless the solvent composition is are nonhighly photochemically reactive, as defined in subdivision (i)(4) of this section.

(g)(2) On or after January 1, 1975, no “person” shall employ, apply, evaporate, or dry any “architectural coating” purchased in containers of greater than 1- quart (0.95 liter) capacity unless the solvent composition is nonhighly photochemically reactive, as defined in subdivision (i)(4) of this section.

(g)(3) On or after January 1, 1975, no “person” shall thin or dilute for application any “architectural coating” with a highly photochemically reactive solvent as defined in subdivisions (i)(1) and (i)(2) of this section, purchased in containers of greater than 1-quart (0.95 liter) capacity.] **Reserved.**

Sec 3. Subdivisions (1) and (2) of subsection (l) of section 22a-174-20 of the Regulations of Connecticut State Agencies are amended to read as follows:

[(l)](1) Definitions. For the purposes of this subsection:

- (A) “Air knife system” means “air knife system” as defined in 40 CFR 63.461.
- (B) “Cold cleaning” means the batch process that involves spraying, brushing, flushing or immersion to clean and remove [of cleaning and removing] soils from metal surfaces [by spraying, brushing or flushing with or immersing in an unheated] using a degreasing solvent maintained at a temperature less than the

boiling point of the solvent. [Wipe] Neither wipe cleaning nor spray application equipment cleaning is [not] included in this definition.

- (C) “Continuous web cleaning machine” means “continuous web cleaning machine” as defined in 40 CFR 63.461.
- (D) “Conveyorized degreasing” means the continuous process of cleaning and removing soils from metal surfaces by operating with either cold or vaporized degreasing solvents.
- (E) “Degreasing solvent” means any volatile organic compound used for metal cleaning.
- (F) “Freeboard height” means, for a cold cleaner, the distance from the liquid solvent in the degreaser tank to the lip of the tank. For an open top vapor degreaser it is the distance from the solvent vapor level in the tank during idling to the lip of the tank. For a vapor conveyorized degreaser, it is the distance from the vapor level to the bottom of the entrance or exit opening whichever is lower. For a cold conveyorized degreaser, it is the distance from the liquid solvent level to the bottom of the entrance or exit opening whichever is lower.
- (G) “Freeboard ratio” means the freeboard height divided by the smaller interior dimension (length, width or diameter) of the degreaser.
- (H) “Open top vapor degreasing” means the batch process of cleaning and removing soils from metal surfaces by condensing hot degreasing solvent vapor on the colder metal parts.
- (I) “Metal cleaning” means the process of cleaning soils from metal surfaces by cold cleaning or open top vapor degreasing or conveyorized degreasing.
- (J) “Refrigerated chiller” means a device, mounted above the water jacket and the primary condenser coils, that consists of secondary coils which carry a refrigerant to provide a chilled air blanket above the solvent vapor to reduce emissions from the degreaser bath. The chilled air blanket temperature, measured at the centroid of the degreaser at the coldest point, shall be no greater than [thirty (30) percent] 30% of the solvent's boiling point in degrees Fahrenheit.
- (K) “Special and extreme solvent metal cleaning” means the use of a cold cleaning unit to clean metal parts where such metal parts are used:
 - (i) In the research, development, manufacture and rework of electronic parts, assemblies, boxes, wiring harnesses, sensors and connectors used in aerospace service,
 - (ii) In [the research, development, manufacture and rework of] manufacturing ozone, nitrous oxide, fluorine, chlorine, bromine, halogenated compounds

or oxygen in concentrations greater than [twenty-three percent (23%)] 23%,

- (iii) In the research, development, manufacture and rework of high precision products for which contamination must be minimized in accordance with a customer or other specification, or
 - (iv) In a manner that exposes such metal parts to ozone, nitrous oxide, fluorine, chlorine, bromine, halogenated compounds or oxygen in concentrations greater than [twenty-three percent (23%)] 23%.
- (L) “Squeegee system” means “squeegee system” as defined in 40 CFR 63.461.

[(D)](2) The provisions of this subsection apply with the following exceptions[.] :

- (A) Open top vapor degreasers with an open area smaller than one [(1)] square meter (10.8 square feet) are exempt from the provisions of [parts (ii), (iv) and (v) of subparagraph] subsection (D)(4)(C)(ii), (iv) and (v) of this section;
- (B) Conveyorized degreasers with a solvent/air interface smaller than two [(2)] square meters (21.6 square feet) are exempt from the provisions of [subparagraph] subsection (D)(5)(C); and
- (C) Metal cleaning equipment which uses 1,1,1 trichloroethane, methylene-chloride, or trichlorotrifluoroethane.

Sec 4. Subsections (p) and (q) of section 22a-174-20 of the Regulations of Connecticut State Agencies are amended to read as follows:

(p) Metal furniture coating.

(1) Definitions. For the purpose of this [section] subsection:

[“Application area” means the area where the coating is applied by spraying, dipping or flowcoating techniques.

“Metal furniture coating” means the surface coating of any furniture made of metal or any metal part which will be assembled with other metal, wood, fabric, plastic or glass parts to form a furniture piece.]

- (A) “Air-dried” means cured at a temperature below 90° C (194°F);
- (B) “As-applied” means the composition of coating at the time it is applied to a substrate, including any solvent, catalyst or other substance added to the coating as supplied by the manufacturer;
- (C) “Baked” means cured at a temperature at or above 90° C (194°F);

- (D) “Capture efficiency” means the ratio of VOC emissions delivered to the control device to the total VOC emissions resulting from metal furniture coating and related cleaning, expressed as a percentage;
- (E) “Control device efficiency” means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;
- (F) “Coating” means a material that is applied to a surface and that forms a continuous film in order to beautify or protect such surface;
- (G) “Coating unit” means a series of one or more coating applicators and any associated drying area or oven wherein a coating is applied, dried or cured. A “coating unit” ends at the point where the coating is dried or cured, or prior to any subsequent application of a different coating;
- (H) “Dip coating” means a method of applying a coating to a surface by submersion into and removal from a coating bath;
- (I) “Electric-insulating and thermal-conducting coating” means a coating that displays an electrical insulation of at least 1000 volts DC per mil on a flat test plate and an average thermal conductivity of at least 0.27 BTU per hour-foot-degree-Fahrenheit;
- (J) “Electrostatic application” means a method of applying coating particles or coating droplets to a grounded surface by electrically charging such particles or droplets;
- (K) “Extreme high gloss coating” means a coating that, when tested by the most recent active version of the American Society for Testing Material Test Method D523, shows a reflectance of 75 or more on a 60 degree meter;
- (L) “Extreme performance coating” means a coating used on a metal surface where the coated surface is, in its intended use, subject to one of the following conditions:
- (i) Chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures or solution,
 - (ii) Repeated exposure to temperatures in excess of 121.1° C (250° F), or
 - (iii) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleaners or scouring agents;
- (M) “Flow coating” means a non-atomized technique of applying coating to a substrate using a fluid nozzle in a fan pattern with no air supplied to the nozzle;
- (N) “Heat-resistant coating” means a coating that must withstand a temperature of at least 204.5° C (400 ° F) during normal use;

- (O) “HVLP spray application” means to apply a coating using a high-volume, low-pressure spray application system that is designed to operate at air pressures between 0.1 and 10 pounds per square inch gauge, measured dynamically at the center of the air cap and the air horns;
- (P) “Metal furniture coating” means the application of a surface coating to any furniture made of metal or any metal part that will be assembled with other metal, wood, fabric, plastic or glass parts to form a furniture piece;
- (Q) “Metallic coating” means a coating that contains more than five grams of metal particle per liter of coating, as-applied;
- (R) “Multi-component coating” means a coating requiring the addition of a separate reactive resin, such as a catalyst or hardener, before application to form an acceptable dry film;
- (S) “One-component coating” means a coating that is ready for application as packaged for sale, except for the addition of a thinner to reduce the viscosity;
- (T) “Overall control efficiency” means the product of the capture efficiency and the control device efficiency;
- (U) “Pretreatment coating” means a coating, containing no more than 12% solids by weight and at least one-half percent acid by weight, applied directly to metal surfaces to provide surface etching, adhesion and ease when stripping;
- (V) “Repair coating” means a coating used to recoat portions of a product that has sustained mechanical damage to the coating following normal painting operations;
- (W) “Roll coating” means a coating method using a machine that applies coating to a substrate by continuously transferring coating through a set of oppositely rotating rollers;
- (X) “Safety-indicating coating” means a coating that changes in a physical characteristic, such as color, to indicate unsafe conditions;
- (Y) “Solar-absorbent coating” means a coating that has as its prime purpose the absorption of solar radiation;
- (Z) “Solid-film lubricant” means a very thin coating consisting of a binder system containing as its chief pigment material one or more of molybdenum disulfide, graphite, polytetrafluoroethylene or other solids that act as a dry lubricant between faying surfaces; and
- (AA) “Stencil coating” means an ink or a coating that is rolled or brushed onto a template or stamp to add identifying letters or numbers to metal parts or products.

[(2) The owner or operator of a metal furniture coating line shall not cause or permit the discharge into the atmosphere of any volatile organic compounds from any coating in excess of 0.36 kilograms per liter of coating (3.0 pounds per gallon), excluding water and exempt volatile organic compounds listed in 40 CFR 51.100(s) as amended from time to time, delivered to the coating applicator from prime and topcoat or single coat operations.]

[(3)] (2) Applicability.

(A) The provisions of this subsection apply to:

- (i) An owner or operator of any premises that has actual emissions of VOC of at least [fifteen (15)] pounds per day [or more in any one day] from metal furniture [operations] coating and related cleaning, prior to the use of controls, or
- (ii) An owner or operator that became subject to this subsection on and after October 1, 1989. [After October 1, 1989 any premises, which is or becomes subject to the provisions of this subsection, shall remain subject to the provisions of this subsection regardless of the daily actual emissions. Notwithstanding the above, the owner or operator of any piece of equipment that was not required to meet control requirements by this subsection prior to October 1, 1989, shall have until October 1, 1990, to comply with the control requirements of this subsection for that piece of equipment.]

(B) Any owner or operator conducting metal furniture coating shall:

- (i) Comply with the requirements of this subsection no later than January 1, 2011 or, for a source commencing operation after January 1, 2011, the date on which the source commences operation, and
- (ii) Remain subject to this subsection regardless of actual daily VOC emissions.

(3) Exemptions and exceptions.

(A) The requirements of this subsection shall not apply to the following coatings or lubricant:

- (i) Stencil coating,
- (ii) Safety-indicating coating,
- (iii) Solid-film lubricant,
- (iv) Electric-insulating and thermal-conducting coating,
- (v) Touch-up and repair coating, or
- (vi) Coating applied with a hand-held aerosol can.

- (B) An owner or operator of a metal furniture coating unit operating in accordance with subdivision (5) of this subsection is exempt from any obligation to comply with subsection (bb) of this section.
- (C) The requirements of subdivision (4) shall not apply to a person using air pollution control equipment to comply with subdivision (5) of this subsection.

(4) Application methods. A person shall not apply a VOC-containing coating to any metal furniture or metal furniture part unless the coating is applied by one of the following methods using equipment operated in accordance with the specifications of the equipment manufacturer:

- (A) Electrostatic application;
- (B) Flow coating;
- (C) Dip coating;
- (D) Roll coating;
- (E) HVLP spray application;
- (F) Hand application; or
- (G) Any other coating application method capable of achieving a transfer efficiency equivalent to or better than that provided by HVLP spray application.

(5) Compliance options. Except as provided in subdivision (3) of this subsection, no owner or operator of a metal furniture coating unit shall apply any coating, inclusive of any VOC-containing materials added to the original coating supplied by the manufacturer, unless the owner or operator uses one of the following methods to limit emissions of VOCs:

- (A) Use only coatings with an as-applied VOC content no greater than the level specified in Table 20(p)-1, according to coating category and drying method. The VOC content limits of Table 20(p)-1 apply to the volume of coating as-applied, less water and less exempt VOC;
- (B) Install, operate and maintain according to the manufacturer's recommendations air pollution control equipment that reduces uncontrolled VOC emissions to the atmosphere from a coating unit by an overall control efficiency of at least 90%; or
- (C) An alternative means, achieving a level of control equivalent to subparagraph (A) or (B) of this subdivision, requested from and approved by the commissioner in accordance with subsection (cc) of this section.

(6) Work practices. Each owner or operator shall use the following work practices:

- (A) New and used VOC-containing coating or cleaning solvent, including a coating mixed on the premises, shall be stored in a nonabsorbent, non-leaking container.

Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;

- (B) Spills and leaks of VOC-containing coating or cleaning solvent shall be minimized. Any leaked or spilled VOC-containing coating or cleaning solvent shall be absorbed and removed immediately;
- (C) Absorbent applicators, such as cloth and paper, which are moistened with VOC-containing coatings or cleaning solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling; and
- (D) VOC-containing coating or cleaning solvent shall be conveyed from one location to another in a closed container or pipe.

Table 20(p)-1. As-Applied VOC Content Limits Per Volume of Coating (Excluding Water and Exempt VOC) per Coating Category, Specific to the Drying Process

<u>Coating Category</u>	<u>Baked</u>		<u>Air Dried</u>	
	<u>g/L</u>	<u>lb/gal</u>	<u>g/L</u>	<u>lb/gal</u>
<u>General, one component</u>	<u>275</u>	<u>2.3</u>	<u>275</u>	<u>2.3</u>
<u>General, multi-component</u>	<u>275</u>	<u>2.3</u>	<u>340</u>	<u>2.8</u>
<u>Extreme high gloss</u>	<u>360</u>	<u>3.0</u>	<u>340</u>	<u>2.8</u>
<u>Extreme performance</u>	<u>360</u>	<u>3.0</u>	<u>420</u>	<u>3.5</u>
<u>Heat-resistant</u>	<u>360</u>	<u>3.0</u>	<u>420</u>	<u>3.5</u>
<u>Metallic</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
<u>Pretreatment</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
<u>Solar-absorbent</u>	<u>360</u>	<u>3.0</u>	<u>420</u>	<u>3.5</u>

(7) Records. An owner or operator shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection. All records shall be:

- (A) Made available to the commissioner to inspect and copy upon request;
- (B) Maintained for five years from the date such record is created; and
- (C) As described in subsection (aa)(1) through (9) of this section.

(8) An owner or operator of a metal furniture coating unit operating under a valid order issued pursuant to subsection (cc)(2) of this section or a valid permit issued pursuant to subsection (cc)(3) of this section shall operate as required in such order or permit, regardless of the requirements of this subsection.

(q) **[Paper coating.] Paper, film and foil coating.**

(1) Definitions. For the purpose of this subsection:

["Knife coating" means the application of a coating material to a substrate by means of drawing the substrate beneath a knife that spreads the coating evenly over the full width of the substrate.

"Paper coating" means coatings put on paper and pressure sensitive tapes regardless of substrate by knife, roll or rotogravure coating. Related web coating processes on plastic film and decorative, protective or functional coatings on metal foil are included in this definition.

"Roll coating" means the application of a coating material to a substrate across the entire width of a web by means of hard rubber or steel rolls.

"Rotogravure coating" means the application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate.

(2) The owner or operator of a paper coating facility shall not cause or permit the discharge into the atmosphere of any volatile organic compounds from any coating in excess of 0.35 kilograms per liter of coating (2.9 pounds per gallon), excluding water and exempt volatile organic compounds listed in 40 CFR 51.100(s) as amended from time to time, delivered to the coating applicator from a paper coating line.]

- (A) "As-applied" means the composition of coating at the time it is applied to a substrate, including any solvent, catalyst or other substance added to the coating as supplied by the manufacturer;
- (B) "Capture efficiency" means the ratio of VOC emissions delivered to the control device to the total VOC emissions resulting from paper, film and foil coating and related cleaning, expressed as a percentage;
- (C) "Coating" means a material applied onto or impregnated into a substrate for decorative, protective, or functional purposes. A material used to form an unsupported substrate, such as vinyl sheeting, blown film, cast film or extruded film, is not considered a "coating;"
- (D) "Coating line" means a series of coating applicators, flash-off areas, and any associated curing or drying equipment between one or more unwind or feed stations and one or more rewind or cutting stations;
- (E) "Control device efficiency" means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;
- (F) "Overall control efficiency" means the product of the capture efficiency and the control device efficiency;
- (G) "Paper, film and foil coating" means the application of a continuous layer of coating across the width or any portion of the width of a paper, film or foil

substrate to create a functional or protective layer; saturate a substrate for lamination; or provide adhesion between two substrates for lamination;

(H) “Pressure sensitive adhesive” means adhesive that forms a bond when pressure is applied, without activation via solvent, water or heat; and

(I) “Pressure sensitive tape and label coating” means the application of a pressure sensitive adhesive to a paper, film or foil substrate.

[(3)] (2) Applicability.

(A) The provisions of this subsection apply to:

(i) An owner or operator of any premises that has actual emissions of VOC of at least [fifteen (15)] 15 pounds (6.8 kilograms) per day [or more in any one day] from paper, film and foil coating and related cleaning [operations], prior to the use of controls, or

(ii) An owner or operator conducting paper, film and foil coating that became subject to this subsection on and after October 1, 1989. [After October 1, 1989 any premises that is or becomes subject to the provisions of this subsection shall remain subject to the provisions of this subsection regardless of the daily actual emissions. Notwithstanding the above, the owner or operator of any piece of equipment that was not required to meet control requirements by this subsection prior to October 1, 1989, shall have until October 1, 1990, to comply with the control requirements of this subsection for that piece of equipment.]

(B) Any owner or operator conducting paper, film and foil coating shall:

(i) Comply with the requirements of this subsection no later than January 1, 2011 or, for a source commencing operation after January 1, 2011, the date on which the source commences operation, and

(ii) Remain subject to this subsection regardless of actual daily VOC emissions.

[(4)] The provisions of this subsection do not apply to any coating line with a continuous web that has both paper coating and printing stations and that is subject to the requirements of section 22a-174-20(v) of the Regulations of Connecticut State Agencies.]

(3) Exemptions and exceptions.

(A) The provisions of this subsection shall not apply to the following activities:

(i) Coating performed on any coating line that has both paper coating and printing stations and that is conducted pursuant to subsection (v) of this section.

- (ii) The application of sizing or water-based clays in association with the use of a papermaking machine, or
 - (iii) The application of inks, coatings or adhesives in association with flexible package printing conducted pursuant to subsection (ff) of this section or offset lithographic or letterpress printing conducted pursuant to subsection (gg) of this section.
 - (B) An owner or operator of any paper, film and foil coating line operating in compliance with subdivisions (4) and (5) of this subsection is exempt from any obligation to comply with subsection (bb) of this section.
- (4) Except as provided in subdivision (3) of this subsection, or except for paper, film and foil coating subject to subdivision (5) of this subsection, only coatings with an as-applied VOC content less than or equal to 350 grams per liter of coating, excluding the volume of any water and exempt compounds, shall be used for paper, film and foil coating.
- (5) Additional requirements. The owner and operator of any paper, film and foil coating line with a potential to emit greater than 25 tons per year, prior to the use of controls, shall use one of the following methods to control emissions of VOCs:
- (A) Use only coatings that individually meet the applicable VOC emission limit of subparagraph (A)(i) or (A)(ii) of this subdivision or use only coatings so that the daily weighted average of the VOC content of all coatings used on a single coating line meets the VOC emission limit of subparagraph (A)(i) of this subdivision:
 - (i) For all coatings except pressure sensitive tape and label coatings, use only coatings that result in VOC emissions no greater than 0.35 kilograms of VOC per kilogram of coating solids applied, or
 - (ii) For pressure sensitive tape and label coatings, use only coatings that result in VOC emissions no greater than 0.20 kilograms of VOC per kilogram of coating solids applied;
 - (B) Install, operate and maintain according to the manufacturer's recommendations air pollution control equipment that reduces uncontrolled VOC emissions to the atmosphere from a coating line by an overall control efficiency of at least 90%; or
 - (C) An alternative means, achieving a level of control equivalent to subparagraph (A) of this subdivision, requested from and approved by the commissioner in accordance with subsection (cc) of this section.
- (6) Work practices. Each owner or operator shall use the following work practices:
- (A) New and used VOC-containing coating or cleaning solvent, including a coating mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;

- (B) Spills and leaks of VOC-containing coating or cleaning solvent shall be minimized. Any leaked or spilled VOC-containing coating or cleaning solvent shall be absorbed and removed immediately;
- (C) Absorbent applicators, such as cloth and paper, which are moistened with VOC-containing coating or cleaning solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling; and
- (D) VOC-containing coating or cleaning solvent shall be conveyed from one location to another in a closed container or pipe.

(7) Records. An owner or operator shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection. All records shall be:

- (A) Made available to the commissioner to inspect and copy upon request;
- (B) Maintained for five years from the date such record is created; and
- (C) As described in subsection (aa)(1) through (9) of this section.

(8) An owner or operator of a paper, film and foil coating line operating under a valid order issued pursuant to subsection (cc)(2) of this section or a valid permit issued pursuant to subsection (cc)(3) of this section shall operate as required in such order or permit, regardless of the requirements of this subsection.

Sec 5. Subdivision (2)(B) of subsection (s) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

- (B) Miscellaneous metal parts and products excludes the following items:
 - (i) automobiles and light duty trucks,
 - (ii) metal cans,
 - (iii) flat metal sheets and strips in the form of rolls or coils,
 - (iv) plastic and glass objects,
 - (v) magnet wire for use in electrical machinery,
 - (vi) metal furniture,
 - (vii) the exterior surface of assembled aircraft,
 - (viii) automobile refinishing,
 - (ix) customized top coating of automobiles and trucks, if production is less than 5 vehicles per day, [and]

- (x) the exterior surface of assembled marine vessels[.] , and
- (xi) large appliance parts subject to subsection (hh) of this section.

Sec 6. Subsection (ee) of section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

(ee) Reasonably Available Control Technology for large sources. The owner or operator of any premises with potential emissions of volatile organic compounds shall use Reasonably Available Control Technology in accordance with the provisions of section 22a-174-32 of the Regulations of Connecticut State Agencies on each source to limit the discharge of volatile organic compounds unless all the sources emitting volatile organic compounds at such premises are regulated by:

- (1) [subsections (a), (b) or (l) through (y), inclusive, of section 22a-174-20 of the Regulations of Connecticut State Agencies;] any one of the following subsections of section 22a-174-20 of the Regulations of Connecticut State Agencies: (a), (b), (l) through (y) or (ff) through (jj);
- (2) section 22a-174-30 of the Regulations of Connecticut State Agencies; or
- (3) an order to implement reasonably available control technology issued by the Commissioner pursuant to this subsection prior to November 15, 1992 and approved by the Administrator prior to May 31, 1995. An order or permit to limit potential emissions of volatile organic compounds to less than 100 tons per year for any twelve (12) consecutive months shall not be considered an order to implement Reasonably Available Control Technology.

Sec. 7. Section 22a-174-20 of the Regulations of Connecticut State Agencies is amended by adding subsections (ff), (gg), (hh), (ii) and (jj), as follows:

(NEW)

(ff) Flexible package printing.

- (1) Definitions. For the purpose of this subsection:
 - (A) “Capture efficiency” means the ratio of VOC emissions delivered to the control device to the total VOC emissions resulting from operation of a flexible package printing press and related cleaning, expressed as a percentage;
 - (B) “Cleaning” means, with respect to a flexible package printing press or presses, cleaning of a press or press parts or the removal of dried ink from areas around the press. “Cleaning” does not include cleaning of electronic components, cleaning in platemaking or binding operations, housekeeping activity near a press or the use of a parts washer or cold cleaner;
 - (C) “Control device efficiency” means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;
 - (D) “Flexible package” means any package or part of a package the shape of which may be readily changed. A “flexible package” may be in the form of a bag,

pouch, liner or wrap made of paper, plastic, film, aluminum foil, or metalized or coated film or paper, alone or in combination. None of the following are considered a "flexible package": a folding carton, self-adhesive labels, gift wrap, wall covering, vinyl products, decorative laminates, floor coverings or tissue products;

- (E) "Flexographic print station" means a work station on which a flexographic printing operation is conducted. A flexographic print station includes a flexographic printing plate and an image carrier made of rubber or other elastomeric material. The image to be printed is raised above the printing plate;
- (F) "Installation date" means the first date on which a piece of equipment is in place and prepared to operate. The "installation date" does not change if the equipment is moved to a new location at the same premises;
- (G) "Overall control efficiency" means the product of the capture efficiency and the control device efficiency;
- (H) "Press" means a printing production assembly that is composed of one or more work stations, one or more of which is a flexographic or rotogravure print station, and that produces a printed product;
- (I) "Rotogravure print station" means a work station on which a rotogravure printing operation is conducted. A rotogravure print station includes a cylinder and ink supply. The image to be printed is etched or engraved below the surface of the cylinder; and
- (J) "Work station" means a unit on a press where material is deposited onto a substrate.

(2) Applicability.

- (A) The provisions of this subsection apply to the owner or operator of any flexible package printing press who purchases for the printing operation at least 855 gallons of coatings, adhesives, cleaning solvents and solvent-based inks in aggregate per any rolling 12-month period. Any owner or operator of a flexible package printing press shall:
 - (i) Comply with the requirements of this subsection no later than January 1, 2011 or, for a source commencing operation after January 1, 2011, the date on which the source commences operation, and
 - (ii) Remain subject to this subsection; and
- (B) Any flexible package printing press operated pursuant to this subsection shall not be subject to subsection (v) of this section.

(3) Work practices. Each owner or operator shall use the following work practices:

- (A) New and used VOC-containing ink, coating, adhesive or cleaning solvent, including ink or coating mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
- (B) Spills and leaks of VOC-containing ink, coating, adhesive or cleaning solvent shall be minimized. Any leaked or spilled VOC-containing ink, coating or cleaning solvent shall be absorbed and removed immediately;
- (C) Absorbent applicators, such as cloth and paper, which are moistened with VOC-containing ink, coating, adhesive or solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling; and
- (D) VOC-containing ink, coating, adhesive and cleaning solvent shall be conveyed from one location to another in a closed container or pipe.

(4) Additional requirements. The owner or operator of a flexible package printing press that has the potential to emit from the dryer, prior to controls, of at least 25 tons per year of VOC from the use of inks, coatings and adhesives combined shall, in addition to complying with the requirements of subdivision (3) of this subsection, use one of the following methods to control VOC emissions from such a press:

- (A) Use only individual inks, coatings and adhesives with an as-applied VOC content that does not exceed 0.8 kg VOC/kg of solids (0.8 lb VOC/lb of solids) or 0.16 kg VOC/kg of materials (0.16 lb VOC/lb of materials);
- (B) Use only inks, coatings and adhesives so that the daily weighted average of the VOC content of the inks, coatings and adhesives used in a single printing line does not exceed 0.8 kg VOC/kg of solids (0.8 lb VOC/lb of solids) or 0.16 kg VOC/kg of materials (0.16 lb VOC/lb of materials); or
- (C) Install, operate and maintain in accordance with the manufacturer's recommendations, a capture and a control device that produce the overall control efficiency identified in Table 20(ff)-1, according to the date of installation of the press being controlled and the installation date of the air pollution control equipment.

(5) Records.

- (A) An owner or operator of any flexible package printing press shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection. All such records shall be:
 - (i) Made available to the commissioner to inspect and copy upon request, and
 - (ii) Maintained for five years from the date such record is created.

- (B) An owner or operator of a flexible package printing press that meets or exceeds the applicability threshold of subdivision (2) of this subsection shall maintain daily records of all inks, coatings, adhesives or cleaning solvents used, as follows:
- (i) Name and description of each ink, coating, adhesive or cleaning solvent,
 - (ii) VOC content of each ink, coating, adhesive or cleaning solvent, as-applied, and the associated calculations. As-applied VOC content shall be determined using an EPA reference method, a California Air Resources Board reference method or other method approved by the commissioner,
 - (iii) VOC content of each ink, coating, adhesive or cleaning solvent, as supplied,
 - (iv) The amount of each ink, coating, adhesive or cleaning solvent,
 - (v) A Material Safety Data Sheet for each ink, coating, adhesive or cleaning solvent,
 - (vi) Documentation of control device efficiency and capture efficiency, if applicable, using an applicable EPA reference method or alternate method as approved by the commissioner, and
 - (vii) Date and type of maintenance performed on air pollution control equipment, if applicable.
- (C) The owner or operator of any flexible package printing press for which the 12-month rolling aggregate of materials purchased for the printing operation is below the applicability threshold of this subsection shall maintain material purchase records to verify that the applicability threshold is not exceeded.

Table 20(ff)-1. Overall control efficiency levels

<i>Installation date of press</i>	<i>Installation date of the air pollution control device</i>	<i>Overall control efficiency (%)</i>
Prior to March 14, 1995	Prior to January 1, 2011	65
Prior to March 14, 1995	On or after January 1, 2011	70
On or after March 14, 1995	Prior to January 1, 2011	75
On or after March 14, 1995	On or after January 1, 2011	80

(gg) Offset lithographic printing and letterpress printing

(1) Definitions. For the purpose of this subsection:

- (A) "Capture efficiency" means the ratio of VOC emissions delivered to the control device to the total VOC emissions resulting from offset lithographic or letterpress printing and related cleaning, expressed as a percentage;
- (B) "Cleaning solvent" means a VOC-containing liquid used to remove ink and debris from the operating surfaces of the printing press and its parts;

- (C) “Coldset” or “non-heatset” means a printing process in which the ink dries on the substrate through ordinary evaporation and absorption;
- (D) “Control device efficiency” means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;
- (E) “Fountain solution” means, with respect to offset lithographic printing, a water-based solution that contains small amounts of gum Arabic or synthetic resins, acids, buffer salts and a wetting agent or dampening aid applied to the image plate to reduce the surface tension of the solution;
- (F) “Heatset” means a printing process in which ink is set by the evaporation of ink solvents or oils in a hot air dryer;
- (G) “Letterpress printing” means a printing process in which the image area is raised relative to the non-image area, and the paste ink is transferred to the substrate directly from the image surface;
- (H) “Lithographic printing” means a printing process in which the image and non-image areas are chemically differentiated, *i.e.*, the image area is oil receptive and the non-image area is water receptive;
- (I) “Offset lithographic printing” means a type of lithographic printing in which an ink film is applied to a lithographic plate and then transferred to an intermediary surface or blanket. The image on the blanket is then transferred to a substrate, typically paper or paperboard;
- (J) “Overall control efficiency” means the product of the capture efficiency and the control device efficiency;
- (K) “Press” means a printing production assembly composed of one or more units used to produce a printed substrate including any associated coating, spray powder application or infrared heating units;
- (L) “Sheet-fed printing” means, with respect to offset lithographic printing, a process in which individual sheets of paper or other substrate are fed to the press;
- (M) “VOC composite partial vapor pressure” means the sum of the partial pressure of the compounds defined as VOCs; and
- (N) “Web printing” means, with respect to offset lithographic printing, a process where continuous rolls of substrate material are fed to the press and rewound or cut to size after printing.

(2) Applicability. The provisions of this subsection apply to the owner or operator of any offset lithographic or letterpress printing press who purchases for the printing operation at least 855 gallons of cleaning solvents, fountain solution additives and solvent-based inks in aggregate

per any rolling 12-month period. Any owner or operator of an offset lithographic or a letterpress printing press shall:

- (A) Comply with the requirements of this subsection no later than January 1, 2011 or, for a source that commences operation after January 1, 2011, the date on which the source commences operation; and
- (B) Remain subject to this subsection.

(3) Fountain solutions.

- (A) The owner or operator of a heatset web offset lithographic printing press with a fountain solution reservoir of at least one gallon in capacity shall:
 - (i) Limit the as-applied VOC content of the fountain solution to 1.6% by weight or less,
 - (ii) If the fountain solution is refrigerated to below 60°F, limit the as-applied VOC content of the fountain solution to 3% by weight or less, or
 - (iii) Use fountain solution that contains no alcohol and limit the alcohol substitute content of the fountain solution to 5% by weight or less.
- (B) The owner of a sheet-fed offset lithographic printing press with a minimum sheet size of greater than 11x17 inches and a fountain solution reservoir greater than one gallon in capacity shall:
 - (i) Limit the as-applied VOC content of the fountain solution to 5% by weight or less,
 - (ii) If the fountain solution is refrigerated to below 60°F, limit the as-applied VOC content of the fountain solution to 8.5% or less, or
 - (iii) Use fountain solution that contains no alcohol and limit the alcohol substitute content of the fountain solution to 5% by weight or less.
- (C) The owner of a coldset web offset lithographic printing press with a fountain solution reservoir of at least one gallon in capacity shall use a fountain solution that contains no alcohol and that has an alcohol substitute content of 5% by weight or less.

(4) Heatset web offset lithographic printing or heatset letterpress printing. Except heatset presses for book printing or heatset presses with a web width of 22 inches or less, the owner or operator of a heatset web offset lithographic or heatset letterpress printing press with the potential to emit at least 25 tons per year of VOC emissions from all dryers, prior to controls, shall operate air pollution control equipment to:

- (A) Achieve a 90% overall control efficiency if the air pollution control equipment is installed prior to January 1, 2011;

- (B) Achieve a 95% overall control efficiency if the air pollution control equipment is installed on or after January 1, 2011; or
 - (C) Reduce the control device outlet concentration to 20 parts per million as hexane on a dry basis if the inlet VOC concentration is so low that the control efficiency specified in subparagraph (A) or (B) of this subdivision cannot be achieved.
- (5) Cleaning solvents. The owner or operator of an offset lithographic printing press or letterpress printing press:
- (A) Except as provided in subparagraph (B) of this subdivision, shall use cleaning solvents that:
 - (i) Have composite vapor pressure less than 10 mmHg at 20°C, or
 - (ii) Have a VOC content less than 70% by weight; and
 - (B) May in any twelve-month period use no more than 110 gallons of cleaning solvent that does not comply with subparagraph (A) of this subdivision.
- (6) Work practices. Each owner or operator shall use the following work practices:
- (A) New and used VOC-containing ink, fountain solution and cleaning solvent, including solvents mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
 - (B) Spills and leaks of VOC-containing ink, fountain solution and cleaning solvent shall be minimized. Any leaked or spilled VOC-containing ink, fountain solution or cleaning solvent shall be absorbed and removed immediately;
 - (C) Absorbent applicators, such as cloth and paper, which are moistened with VOC-containing ink, fountain solution or cleaning solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling; and
 - (D) VOC-containing ink, fountain solution and cleaning solvents shall be conveyed from one location to another in a closed container or pipe.
- (7) Records.
- (A) An owner or operator of any offset lithographic or letterpress printing press shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection. All such records shall be:
 - (i) Made available to the commissioner to inspect and copy upon request, and
 - (ii) Maintained for five years from the date such record is created.

- (B) An owner or operator of an offset lithographic or a letterpress printing press that meets or exceeds the applicability threshold of subdivision (2) of this subsection shall maintain daily records of all cleaning solvents, fountain solution additives or solvent-based inks used, as follows:
- (i) Name and description of each cleaning solvent, fountain solution additive or solvent-based ink,
 - (ii) VOC content of each cleaning solvent, fountain solution additive or solvent-based ink, as-applied, and the associated calculations. As-applied VOC content shall be determined using an EPA reference method, a California Air Resources Board reference method or other method approved by the commissioner,
 - (iii) VOC content of each cleaning solvent, fountain solution additive or solvent-based ink, as supplied,
 - (iv) The amount of each cleaning solvent, fountain solution additive or solvent-based ink,
 - (v) A Material Safety Data Sheet for each cleaning solvent, fountain solution additive or solvent-based ink,
 - (vi) Documentation of control device efficiency and capture efficiency, if applicable, using an applicable EPA reference method or alternate method as approved by the commissioner, and
 - (vii) Date and type of maintenance performed on air pollution control equipment, if applicable.
- (C) The owner or operator of any offset lithographic or letterpress printing press for which the 12-month rolling aggregate of materials purchased for the printing operation is below the applicability threshold of this subsection shall maintain material purchase records to verify that the applicability threshold of this subsection is not exceeded.

(hh) Large appliance coatings.

- (1) Definitions. For the purpose of this subsection:
- (A) “Air dried” means cured at a temperature below 90° C (194°F);
 - (B) “As-applied” means the composition of coating at the time it is applied to a surface, including any solvent, catalyst or other substance added to the coating as supplied by the manufacturer;
 - (C) “Baked” means cured at a temperature at or above 90°C (194°F);

- (D) “Capture efficiency” means the ratio of VOC emissions delivered to control device to the total VOC emissions resulting from large appliance coating and related cleaning, expressed as a percentage;
- (E) “Cleaning solvent” means any VOC-containing liquid used in cleaning a large appliance coating operation;
- (F) “Coating” means a material that is applied to a surface and that forms a continuous film in order to beautify or protect such surface;
- (G) “Coating unit” means a series of one or more coating applicators and any associated drying area or oven wherein a coating is applied, dried or cured. A “coating unit” ends at the point where the coating is dried or cured, or prior to any subsequent application of a different coating;
- (H) “Control device efficiency” means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;
- (I) “Dip coating” means a method of applying a coating to a surface by submersion into and removal from a coating bath;
- (J) “Electrostatic application” means a method of applying coating particles or coating droplets to a grounded surface by electrically charging such particles or droplets;
- (K) “Extreme high gloss coating” means a coating that, when tested by the most recent active version of the American Society for Testing Material Test Method D523, shows a reflectance of 75 or more on a 60 degree meter;
- (L) “Extreme performance coating” means a coating used on a metal surface where the coated surface is, in its intended use, subject to one of the following conditions:
 - (i) Chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures or solution,
 - (ii) Repeated exposure to temperatures in excess of 121.1°C (250°F), or
 - (iii) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleaners or scouring agents;
- (M) “Flow coating” means a non-atomized technique of applying coating to a substrate using a fluid nozzle in a fan pattern with no air supplied to the nozzle;
- (N) “Heat-resistant coating” means a coating that must withstand a temperature of at least 400° F during normal use;
- (O) “HVLP spray application” means to apply a coating using a high-volume, low-pressure application system that is designed to operate at air pressures between

- 0.1 and 10 pounds per square inch gauge, measured dynamically at the center of the air cap and the air horns;
- (P) "Large appliance coating" means the application of a coating to a large appliance part or product during manufacture;
 - (Q) "Large appliance part" means any surface-coated metal lid, door, casing, panel or other interior or exterior metal part or accessory that is assembled to form a large appliance product;
 - (R) "Large appliance product" means any surface-coated large appliance including, but not limited to, a metal range, oven, microwave oven, refrigerator, freezer, washer, dryer, dishwasher, water heater or trash compactor manufactured for household, commercial or recreational use;
 - (S) "Metallic coating" means a coating that contains more than five grams of metal particle per liter of coating, as-applied;
 - (T) "Multi-component coating" means a coating requiring the addition of a separate reactive resin, such as a catalyst or hardener, before application to form an acceptable dry film;
 - (U) "One-component coating" means a coating that is ready for application as packaged for sale, except for the addition of a thinner to reduce the viscosity;
 - (V) "Overall control efficiency" means the product of the capture efficiency and the control device efficiency;
 - (W) "Pretreatment coating" means a coating, containing no more than 12% solids by weight and at least one-half percent acid by weight, applied directly to metal surfaces to provide surface etching, adhesion and ease when stripping;
 - (X) "Repair coating" means a coating used to recoat portions of a product that has sustained mechanical damage to the coating following normal painting operations;
 - (Y) "Roll coating" means a coating method using a machine that applies coating to a substrate by continuously transferring coating through a set of oppositely rotating rollers;
 - (Z) "Stencil coating" means an ink or a coating that is rolled or brushed onto a template or stamp to add identifying letters or numbers to metal parts or products;
 - (AA) "Solar-absorbent coating" means a coating which has, as its primary purpose, the absorption of solar radiation; and
 - (BB) "Touch-up coating" means a coating used to cover minor coating imperfections appearing after the main coating operation.

(2) Applicability. Except as provided in subdivision (3) of this subsection, the provisions of this subsection apply to an owner or operator of any large appliance coating unit who purchases for the coating operation at least 855 gallons of coatings and cleaning solvents in aggregate per any rolling 12-month period. Any such owner or operator shall:

- (A) Comply with the requirements of this subsection no later than January 1, 2011 or, for a source commencing operation after January 1, 2011, the date on which the source commences construction; and
- (B) Remain subject to this subsection.

(3) Exemptions and exceptions.

- (A) The requirements of subdivision (5) of this subsection shall not apply to the following:
 - (i) Stencil coating,
 - (ii) Safety-indicating coating,
 - (iii) Solid-film lubricant,
 - (iv) Electric-insulating and thermal-conducting coating,
 - (v) Touch-up and repair coating, or
 - (vi) Coating applied with a hand-held aerosol can.
- (B) The requirements of subdivision (4) shall not apply to a person using air pollution control equipment, as specified in subdivision (5)(B), to comply with the requirements of this subsection.

(4) Application methods. A person shall not apply a VOC-containing coating to any large appliance part or product unless the coating is applied by one of the following methods using equipment operated in accordance with the specifications of the equipment manufacturer:

- (A) Electrostatic application;
- (B) Flow coating;
- (C) Dip coating;
- (D) Roll coating;
- (E) HVLP spray application;
- (F) Hand application; or
- (G) Any other coating application method capable of achieving a transfer efficiency equivalent to or better than that provided by HVLP spray application. Any owner

or operator using an application method pursuant to this subparagraph shall maintain records demonstrating the transfer efficiency achieved.

(5) Compliance options. Except as provided in subdivision (3) of this subsection, on and after January 2011, no owner or operator conducting large appliance coating shall apply any coating, inclusive of any VOC-containing materials added to the original coating supplied by the manufacturer, unless the owner or operator uses one of the following methods to control emissions of VOCs:

- (A) Use only coatings with an as-applied VOC content no greater than the levels specified in Table 20(hh)-1, according to coating category and drying method, where:
 - (i) The VOC content limits of Table 20(hh)-1 apply to the volume of coating as-applied, less water and less exempt VOC, and
 - (ii) The VOC content limits of Table 20(hh)-1 may be met by averaging the VOC content of materials used on a single large appliance coating unit per a single day;
- (B) Install, operate and maintain in accordance with the manufacturer's recommendations, a capture and a control device that produce an overall control efficiency of 90%; or
- (C) With the approval of the commissioner and the Administrator, use an alternative means to achieve a level of control equivalent to that required in subparagraph (A) or (B) of this subdivision. An owner or operator shall submit a request to the commissioner and the Administrator to use an alternative means of compliance, and such request shall include:
 - (i) A description of the method,
 - (ii) A demonstration of the level of emissions control achieved, and
 - (iii) Any other information requested by the commissioner or the Administrator.

(6) Work practices. Each owner or operator shall use the following work practices:

- (A) New and used VOC-containing coating or cleaning solvent, including a coating mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
- (B) Spills and leaks of VOC-containing coating or cleaning solvent shall be minimized. Any leaked or spilled VOC-containing coating or cleaning solvent shall be absorbed and removed immediately;

- (C) Absorbent applicators, such as cloth and paper, which are moistened with a VOC-containing coating or cleaning solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling; and
- (D) VOC-containing coating and cleaning solvent shall be conveyed from one location to another in a closed container or pipe.

Table 20(hh)-1. As-Applied VOC Content Limits Per Volume of Coating (Excluding Water and Exempt VOCs) per Coating Category, Specific to the Drying Process

Coating Category	Baked		Air Dried	
	g/L	lb/gal	g/L	lb/gal
General, one component	275	2.3	275	2.3
General, multi-component	275	2.3	340	2.8
Extreme high gloss	360	3.0	340	2.8
Extreme performance	360	3.0	420	3.5
Heat-resistant	360	3.0	420	3.5
Metallic	420	3.5	420	3.5
Pretreatment	420	3.5	420	3.5
Solar-absorbent	360	3.0	420	3.5

(7) Records.

- (A) An owner or operator of any large appliance coating unit shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection. All such records shall be:
 - (i) Made available to the commissioner to inspect and copy upon request, and
 - (ii) Maintained for five years from the date such record is created.
- (B) An owner or operator of a large appliance coating unit that meets or exceeds the applicability threshold of subdivision (2) of this subsection shall maintain daily records of all coatings and cleaning solvents used, as follows:
 - (i) Name and description of each coating or cleaning solvent,
 - (ii) VOC content of each coating or cleaning solvent, as-applied, and the associated calculations. As-applied VOC content shall be determined using an EPA reference method, a California Air Resources Board reference method or other method approved by the commissioner,
 - (iii) VOC content of each coating or cleaning solvent, as supplied,

- (iv) The amount of each coating or cleaning solvent,
 - (v) A Material Safety Data Sheet for each coating or cleaning solvent,
 - (vi) Documentation of control device efficiency and capture efficiency, if applicable, using an applicable EPA reference method or alternate method as approved by the commissioner, and
 - (vii) Date and type of maintenance performed on air pollution control equipment, if applicable.
- (C) The owner or operator of any large appliance coating unit for which the 12-month rolling aggregate of materials purchased for the coating operation is below the applicability threshold of this subsection shall maintain material purchase records to verify that the applicability threshold is not exceeded.
- (ii) Industrial solvent cleaning.**
- (1) Definitions. For the purpose of this subsection:
- (A) “Capture efficiency” means the ratio of VOC emissions delivered to the control device to the total VOC emissions resulting from industrial solvent cleaning, expressed as a percentage;
 - (B) “Cleaning solvent” means any VOC-containing liquid, including a liquid impregnated wipe or towelette, used in cleaning;
 - (C) “Control device efficiency” means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;
 - (D) “Industrial solvent cleaning” means the use of cleaning solvent to remove uncured adhesives, uncured inks, uncured coatings or contaminants such as dirt, soil or grease from parts, products, tools, machinery, equipment or work areas, where such parts, products, tools, machinery, equipment and work areas are incorporated into or used exclusively in manufacturing a product. “Industrial solvent cleaning” includes spray booth cleaning, cleaning of manufactured components, parts cleaning, cleaning of production equipment for maintenance or to prohibit cross-contamination, and cleaning of tanks, mixing pots, process vessels and lines. “Industrial solvent cleaning” does not include the cleaning of personal protection equipment, such as respirators.
 - (E) “Janitorial cleaning” means general and maintenance cleaning of building or facility components including, but not limited to, floors, ceilings, walls, windows, doors, stairs, restrooms, furnishings, kitchens and exterior surfaces of office equipment. “Janitorial cleaning” includes graffiti removal. “Janitorial cleaning” excludes the cleaning of parts, products or equipment, where such parts, products or equipment are incorporated into or used exclusively in manufacturing a

product. "Janitorial cleaning" excludes the cleaning of work areas, such as laboratory benches, where manufacturing or repair activity is performed;

- (F) "Medical device" means an instrument, apparatus, implement, machine, gadget, appliance, implant, *in vitro* reagent or other similar or related article, including any component, part or accessory, which meets one of the following conditions:
 - (i) Recognized in the official National Formulary or the United States Pharmacopeia or any supplement thereto,
 - (ii) Intended for use in the diagnosis of disease or other conditions or in the cure, mitigation, treatment or prevention of disease, in persons or animals, or
 - (iii) Intended to affect the structure or function of the body of a person or animal, and which does not achieve its primary intended purposes through chemical action within or on such body and which is not dependent upon being metabolized for the achievement of its primary intended purposes;
- (G) "Overall control efficiency" means the product of the capture efficiency and the control device efficiency;
- (H) "Screen printing" means a method of creating an image by pressing ink through a screen or fabric to which a stencil has been applied. The stencil openings determine the form and dimensions of the image; and

(2) Applicability. Except as provided in subdivision (3) of this subsection, the provisions of this subsection apply to an owner or operator of any premises who purchases for use at the premises at least 855 gallons of cleaning solvents in aggregate per rolling 12-month period. Any owner or operator of such a premises shall:

- (A) Comply with the requirements of this subsection no later than January 1, 2011 or, for a source commencing operation after January 1, 2011, the date on which the source commences operation; and
- (B) Remain subject to this subsection.

(3) Exemptions and exceptions.

- (A) The requirements of this subsection shall not apply to the use of cleaning solvent as follows:
 - (i) In janitorial cleaning,
 - (ii) At an aerospace manufacturing and rework operation or a wood furniture coating operation in accordance with an order or a permit issued pursuant to sections 22a-174-32(e) and 22a-174-20(cc) of the Regulations of Connecticut State Agencies,

- (iii) To perform general solvent cleaning in accordance with an order issued pursuant to section 22a-174-20(ee) of the Regulations of the Connecticut State Agencies,
 - (iv) At any aerospace manufacturing and rework facility, provided that cleaning solvent is used in accordance with the requirements of 40 CFR 63.744, inclusive of exemptions,
 - (v) As surface preparation or cleanup solvent in accordance with section 22a-174-44 of the Regulations of Connecticut State Agencies,
 - (vi) Where the cleaning solvent is regulated pursuant to section 22a-174-40 of the Regulations of Connecticut State Agencies,
 - (vii) To perform industrial solvent cleaning where such cleaning or cleaning solvent is subject to one of the following subsections of this section: (l) through (y), (ff) through (hh), or (jj),
 - (viii) In cleaning, including surface preparation prior to coating, necessary to meet a standard or specification issued or approved by the United States Department of Defense, Federal Aviation Administration or other federal government entity. Any person claiming exemption pursuant to this subclause shall maintain records of the standard or specification,
 - (ix) Associated with research and development,
 - (x) Associated with quality control or laboratory testing,
 - (xi) Associated with medical device manufacturing,
 - (xii) Associated with pharmaceutical manufacturing,
 - (xiii) That exceeds the applicable limit of subdivision (4)(A) of this subsection where the quantity used does not exceed 55 gallons per any twelve-month rolling aggregate. Any person claiming exemption pursuant to this subclause shall record and maintain monthly records sufficient to demonstrate compliance with this exemption, or
 - (xiv) That exceeds the applicable limit of subdivision (4)(A) of this subsection, if approved by the commissioner and the Administrator. Any request for approval shall be made in writing to the commissioner and Administrator and shall include a description of the cleaning solvent and its VOC content, an explanation of why the cleaning solvent is necessary, quantification of the amount of the VOC that will be emitted as a result of the use of the noncompliant cleaning solvent and the time period over which the noncompliant solvent will be used.
- (B) The requirements of subdivisions (4) and (6) of this subsection shall not apply to the use of cleaning solvent in a digital printing operation, where digital printing

means a method of printing in which an electronic output device transfers variable data, in the form of an image, from a computer to a substrate.

- (C) The limitations of subdivision (4)(A) of this subsection shall not apply to cleaning solvent used to clean screen printing equipment, if the cleaning solvent used has an as-applied VOC content that does not exceed 500 grams per liter (4.2 pounds per gallon).
- (4) Control of emissions. Except as provided in subdivision (3) of this subsection, any owner or operator performing industrial solvent cleaning shall use one of the following methods to limit VOC emissions:
- (A) Use only cleaning solvent that complies with one of the following limitations:
 - (i) As-applied, has a VOC content that does not exceed 50 grams per liter (0.42 lb/gal), or
 - (ii) As-applied, has a vapor pressure no greater than 8 mm Hg at 20°C; or
 - (B) Install, operate and maintain in accordance with the manufacturer's recommendations, air pollution control equipment that reduces uncontrolled VOC emissions to the atmosphere from any industrial solvent cleaning by an overall control efficiency of at least 85%.
- (5) Work practices. Each owner or operator shall use the following work practices:
- (A) New and used cleaning solvent, including those mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
 - (B) Spills and leaks of cleaning solvent shall be minimized. Any leaked or spilled cleaning solvent shall be absorbed and removed immediately;
 - (C) Absorbent applicators, such as cloth and paper, which are moistened with cleaning solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling; and
 - (D) Cleaning solvent shall be conveyed from one location to another in a closed container or pipe.
- (6) Records.
- (A) An owner or operator conducting industrial solvent cleaning shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection. All such records shall be:
 - (i) Made available to the commissioner to inspect and copy upon request, and

- (ii) Maintained for five years from the date such record is created.
 - (B) An owner or operator conducting industrial solvent cleaning that meets or exceeds the applicability threshold of subdivision (2) of this subsection shall maintain daily records of all cleaning solvents used, as follows:
 - (i) Name and description of each cleaning solvent,
 - (ii) VOC content of each cleaning solvent, as-applied, and the associated calculations. As-applied VOC content shall be determined using an EPA reference method, a California Air Resources Board reference method or other method approved by the commissioner,
 - (iii) VOC content of each cleaning solvent, as supplied,
 - (iv) The amount of each cleaning solvent,
 - (v) A Material Safety Data Sheet for each cleaning solvent,
 - (vi) Documentation of control device efficiency and capture efficiency, if applicable, using an applicable EPA reference method or alternate method as approved by the commissioner, and
 - (vii) Date and type of maintenance performed on air pollution control equipment, if applicable.
 - (C) The owner or operator conducting industrial solvent cleaning for which the 12-month rolling aggregate of materials purchased for the premises is below the applicability threshold of this subsection shall maintain material purchase records to verify that the applicability threshold is not exceeded.
 - (D) An owner or operator conducting industrial solvent cleaning subject to an exemption or exception in subdivision (3) of this subsection shall maintain records sufficient to verify the applicability of the exemption or exception.
- (jj) Spray application equipment cleaning.**
- (1) Definitions. For the purpose of this subsection:
 - (A) “Capture efficiency” means the ratio of VOC emissions delivered to the control device to the total VOC emissions resulting from spray application equipment cleaning, expressed as a percentage;
 - (B) “Cleaning solvent” means any VOC-containing liquid used to clean spray application equipment;
 - (C) “Control device efficiency” means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;

- (D) “Enclosed gun cleaner” means a device, used for cleaning spray application equipment, which has an enclosed cleaning solvent container and either:
- (i) Is not open to the ambient air when in use and has a mechanism to force the cleaning solvent through the spray application equipment while the cleaner is in operation, or
 - (ii) Uses non-atomized solvent flow to flush the spray application equipment and collects and returns the discharged cleaning solvent to the enclosed container;
- (E) “Medical device” means an instrument, apparatus, implement, machine, gadget, appliance, implant, *in vitro* reagent or other similar or related article, including any component, part or accessory, which meets one of the following conditions:
- (i) Recognized in the official National Formulary or the United States Pharmacopeia or any supplement thereto,
 - (ii) Intended for use in the diagnosis of disease or other conditions or in the cure, mitigation, treatment or prevention of disease, in persons or animals, or
 - (iii) Intended to affect the structure or function of the body of a person or animal, and which does not achieve its primary intended purposes through chemical action within or on such body and which is not dependent upon being metabolized for the achievement of its primary intended purposes;
- (F) “Overall control efficiency” means the product of the capture efficiency and the control device efficiency; and
- (G) “Spray application equipment” means a hand-held device that creates an atomized mist of coating, or other liquid substance, and deposits the coating, or other liquid substance, on a substrate.

(2) Applicability. Except as provided in subdivision (3) of this subsection, on and after January 1, 2011, the provisions of this subsection apply to an owner or operator of any spray application equipment.

(3) Exemptions and exceptions.

- (A) The requirements of this subsection shall not apply to cleaning of spray application equipment as follows:
- (i) Associated with automotive refinishing and conducted pursuant to section 22a-174-3b(d) of the Regulations of Connecticut State Agencies,
 - (ii) Pursuant to section 22a-174-44(d) of the Regulations of Connecticut State Agencies,

- (iii) At any aerospace manufacturing and rework facility, provided that cleaning solvent is used in accordance with the requirements of 40 CFR 63.744, inclusive of exemptions,
 - (iv) Necessary to meet a standard or specification of the United States Department of Defense,
 - (v) Associated with research and development, quality control or laboratory testing, or
 - (vi) Associated with medical device manufacturing;
- (B) The cleaning solvent VOC content limit of subparagraphs (B) through (D) of subdivision (4) of this subsection shall not apply to the cleaning of spray application equipment used in the assembly, repair and manufacture of submarines;
- (C) Using cleaning solvent that exceeds the VOC content limitation of subparagraph (B), (C) or (D) of subdivision (4) of this subsection where the quantity of cleaning solvent used does not exceed 55 gallons in aggregate per any 12-month rolling period. Any person claiming exemption pursuant to this subparagraph shall record and maintain monthly records sufficient to demonstrate compliance with this exemption; and
- (D) The cleaning solvent VOC content limitations of subparagraph (B), (C) or (D) of subdivision (4) of this subsection shall not apply, upon request to and approval by the commissioner. Any request for approval shall be made in writing to the commissioner and shall include a description of the noncompliant solvent and its VOC content, an explanation of why the noncompliant solvent is necessary, the aggregate amount in gallons or pounds of noncompliant solvent use anticipated in a 12-month period and the frequency of use of the noncompliant solvent.
- (4) Control of emissions. An owner or operator shall clean spray application equipment in accordance with the requirements of one of the following subparagraphs:
- (A) Using an enclosed gun cleaner that is maintained and operated in accordance with the manufacturer's recommendations and the following practices:
 - (i) Operate using an automated cycle, if applicable,
 - (ii) Inspect hoses regularly for leaks,
 - (iii) If a leak is discovered, repair as soon as practicable but no later than 15 days after discovery, and
 - (iv) Ensure the cover is properly closed;
 - (B) Using only cleaning solvent with an as-applied VOC content that does not exceed 50 grams per liter (0.417 lb/gal) by placing cleaning solvent in the pressure pot and forcing the solvent through the gun with the atomizing cap in place, without

the use of atomizing air. Used cleaning solvent shall be directed into a vat, drum or other waste container that is closed when not in use;

- (C) Using only cleaning solvent with an as-applied VOC content that does not exceed 50 grams per liter (0.417 lb/gal) by disassembling the spray gun and cleaning the components and associated hoses and pumps by hand in a vat, which shall remain closed at all times except when in use. Components and associated hoses and pumps may be soaked in a vat with a capacity no greater than 20 liters. Such a soaking vat shall remain closed during the soaking period, except when inserting or removing items;
 - (D) Using only cleaning solvent with an as-applied VOC content that does not exceed 50 grams per liter (0.417 lb/gal) by forcing cleaning solvent through the spray gun and directing the atomized solvent spray into a waste container that is fitted with a device to capture the resulting emissions; or
 - (E) Installing, operating and maintaining air pollution control equipment that reduces uncontrolled VOC emissions to the atmosphere from any spray application equipment cleaning by an overall control efficiency of at least 85%.
- (5) Work practices. Each owner or operator shall use the following work practices:
- (A) New and used cleaning solvent, including those mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
 - (B) Spills and leaks of cleaning solvent shall be minimized. Any leaked or spilled cleaning solvent shall be absorbed and removed immediately;
 - (C) Absorbent applicators, such as cloth and paper that are moistened with cleaning solvent shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling;
 - (D) Cleaning solvent shall be conveyed from one location to another in a closed container or pipe; and
 - (E) Air pollution control equipment shall be operated and maintained in accordance with the manufacturer's recommendations.
- (6) Records.
- (A) An owner or operator conducting spray application equipment cleaning shall maintain records of the information necessary for the commissioner to determine compliance with the applicable requirements of this subsection. All such records shall be:
 - (i) Made available to the commissioner to inspect and copy upon request, and
 - (ii) Maintained for five years from the date such record is created.

- (B) An owner or operator conducting spray application equipment cleaning that meets or exceeds the applicability threshold of subdivision (2) of this subsection shall maintain daily records of all cleaning solvents used, as follows:
- (i) Name and description of each cleaning solvent,
 - (ii) VOC content of each cleaning solvent, as-applied, and the associated calculations. As-applied VOC content shall be determined using an EPA reference method, a California Air Resources Board reference method or other method approved by the commissioner,
 - (iii) VOC content of each cleaning solvent, as supplied,
 - (iv) The amount of each cleaning solvent,
 - (v) A Material Safety Data Sheet for each cleaning solvent,
 - (vi) A description of the type of cleaning equipment and process,
 - (vii) Documentation of control device efficiency and capture efficiency, if applicable, using an applicable EPA reference method or alternate method as approved by the commissioner, and
 - (viii) Date and type of maintenance performed on air pollution control equipment, if applicable.
- (C) An owner or operator that is conducting spray application equipment cleaning subject to an exemption or exception in subdivision (3) of this subsection shall maintain records sufficient to verify the applicability of the exemption or exception.

Sec. 8. Section 22a-174-32(b)(3) of the Regulations of Connecticut State Agencies is amended to read as follows:

- (3) When calculating potential emissions to determine the applicability of this section, the owner or operator of a premises shall include potential emissions of volatile organic compounds from all sources located at such premises excluding those sources which are:
- (A) subject to regulation under 40 CFR [Parts] 61 and 63;
 - (B) required to use Best Available Control Technology or Lowest Achievable Emission Rate for VOCs pursuant to a federally enforceable order or permit which contains specific VOC emission limitations;
 - (C) subject to regulation under 40 CFR [Part] 264, Subparts AA or BB, or 40 CFR [Part] 265, Subparts AA or BB;
 - (D) fuel burning equipment; or

- (E) subject to Reasonably Available Control Technology required pursuant to:
- (i) any one of the following subsections [(a), (b) or (l) through (y) inclusive] of section 22a-174-20 of the Regulations of Connecticut State Agencies[;] : (a), (b), (l) through (y), or (ff) through (jj).
 - (ii) section 22a-174-30 of the Regulations of Connecticut State Agencies[;] ,
or
 - (iii) an order or permit requiring the implementation of Reasonably Available Control Technology issued by the commissioner prior to November 15, 1992 and approved by the Administrator prior to May 31, 1995.

Sec. 9. Section 22a-174-33(f)(6) of the Regulations of Connecticut State Agencies is amended to read as follows:

(6) [Notwithstanding any other provision of this subsection, the owner or operator of a Title V source subject to 40 CFR 72 to 78, inclusive, which becomes subject to this section after January 1, 1998 shall submit a Title V application to the commissioner within the time provided by 40 CFR 72.30 or within ninety (90) days of receipt of notice from the commissioner that such application is required, whichever is earlier.] Reserved.

Statement of purpose: This amendment serves the primary purpose of updating Connecticut's reasonably available control technology (RACT) requirements for volatile organic compounds (VOCs) in response to the U.S. Environmental Protection Agency's issuance of control techniques guidelines (CTG) in 2006 for offset lithographic and letterpress printing, industrial cleaning solvents and flexible package printing [71 FR 58745] and in 2007 for metal furniture coating, large appliance coating and paper, film and foil coating [72 FR 57215]. The amendment also refines the requirements for metal cleaning; adds requirements specific to spray application equipment cleaning; and makes minor and technical revisions.

Specifically:

- The existing requirements for metal furniture and paper, film and foil coating operations in section 22a-174-20 of the Regulations of Connecticut State Agencies (RCSA) are enhanced through the adoption of the CTG requirements, which include lower VOC content requirements for coatings and work practices designed to reduce VOC emissions. (Section 4)
- New requirements, consistent with the CTG, are added to RCSA section 22a-174-20 for five source categories (flexible package printing; offset lithographic printing; letterpress printing; large appliance coating; general solvent cleaning). The requirements include VOC content limits for coatings, inks and solvents; an alternative compliance route through the operation of air pollution control equipment; and work practices to limit VOC emissions from coating and solvent storage and handling. (Section 7)
- New requirements regulating the cleaning of spray application equipment to limit VOC emissions are added to RCSA section 22a-174-20. (Section 7)
- The reactivity-based architectural coating requirements of subsection (g) of RCSA section 22a-174-20 are deleted, given the adoption in July 2007 of more comprehensive requirements in RCSA section 22a-174-41. (Section 2)

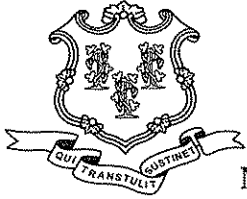
- The amendment also updates internal references, exemptions and applicability determinations of RCSA section 22a-174-20 with respect to additions made in the amendment; refines definitions; and updates the applicability determination of RCSA section 22a-174-32 given the adoption of the new requirements. (Sections 1, 3, 5, 6, 8)

The VOC reductions associated with the RACT update portion of this amendment will assist Connecticut to attain the federal 8-hour ozone national ambient air quality standards and serve as directionally correct measures with respect to Connecticut's compliance with the national fine particulate matter standards.

Section 9 of the amendment eliminates the reference to the federal Title V application timelines for Acid Rain program sources from RCSA section 22a-174-33(f), as the federal timing requirements apply independently.

Attachment B: RACT Update Statement

- B-1. Notice of public hearing.
- B-2. Certification of public hearing.
- B-3. Hearing report.



STATE OF CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION



Notice of Two Revisions to the State Implementation Plan for Air Quality: Visibility Protection and Reasonably Available Control Technology (RACT)

The Commissioner of the Department of Environmental Protection (DEP) hereby gives notice of a public hearing as part of a proceeding to revise the State Implementation Plan (SIP) for air quality to: (1) address the visibility protection requirements of section 169A of the federal Clean Air Act (CAA); and (2) update RACT requirements, given the promulgation of eleven federal control techniques guidelines (CTGs) in 2006 through 2008. Both the visibility and RACT elements of this proposal will be submitted to the U.S. Environmental Protection Agency (EPA) for review and approval as a revision to the SIP.

Visibility Protection

The visibility protection SIP revision is a plan consistent with the national goal of restoring natural visibility conditions to mandatory Class I Federal Areas by 2064. The proposed SIP revision also satisfies the Regional Haze Rule (40 Code of Federal Regulations (CFR) 51.300-309), which seeks to protect mandatory Class I Federal Areas by addressing the combined visibility impacts of various air pollution sources over a large geographic region.

The proposed plan includes an assessment of baseline and natural visibility conditions, an air monitoring strategy, an alternative program for Best Available Retrofit Technology, a set of reasonable progress visibility goals, and a long-term strategy for achieving those goals.

RACT

On February 1, 2008, DEP submitted to EPA an attainment demonstration for the 1997 8-hour ozone national ambient air quality standard. That attainment demonstration includes an analysis of how Connecticut complies with the RACT requirements of the CAA. EPA's adoption of eleven CTGs in 2006 through 2008 requires that DEP update its RACT analysis. In the proposed SIP revision, DEP makes negative declarations for three CTG source categories (flat wood paneling coating, fiberglass boat manufacturing, automobile and light-duty truck assembly coating); provides a statement of equivalency for one CTG (miscellaneous industrial adhesives); and indicates the status of pending DEP regulatory revisions for the seven remaining CTGs (industrial cleaning solvents; offset lithographic printing and letterpress printing; flexible package printing; paper, film and foil coating; large appliance coating; metal furniture coating; miscellaneous metal and plastic parts coating).

All interested persons are invited to comment. Comments should be submitted to DEP, Bureau of Air Management, Engineering & Enforcement Division, 79 Elm Street, Hartford, Connecticut 06106-5127. All comments should be directed to the attention of Merrily Gere and must be received by 4:30 PM on August 28, 2009. Comments may be submitted by post, facsimile to (860) 424-4064 or by electronic mail to merrily.gere@ct.gov.

In addition to accepting written comments, DEP will also hold the public hearing described below. Any person speaking at the hearing is requested to submit a written copy of his or her

statement. However, oral comments without a written statement will also be made a part of the hearing record.

PUBLIC HEARING
August 27, 2009 at 10 AM
Department of Environmental Protection
5th Floor, Holcombe Room
79 Elm Street, Hartford, CT

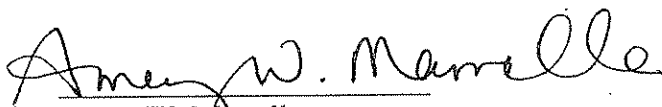
Copies of the proposal described above are available at the following location on DEP's website:
http://www.ct.gov/dep/cwp/view.asp?a=2684&q=331234&depNav_GID=1619

Paper copies are also available for public inspection during normal business hours and may be obtained from Sharon Rowe-Johnson at the Bureau of Air Management, Engineering & Enforcement Division, 5th Floor, 79 Elm Street, Hartford, CT or by request to Sharon Rowe-Johnson at (860) 424-3302 or Sharon.rowe-johnson@ct.gov. Additional copies are also available for review at the Law Reference Desk at the Connecticut State Library, Torrington Public Library, New London Public Library and Bridgeport Public Library.

In conformance with the Americans with Disabilities Act (ADA), individuals with disabilities who need information in an alternative format, to allow them to benefit and/or participate in the agency's programs and services, should call (860)-424-3051 or (860) 418-5937 or email Marcia Z. Bonitto, ADA Coordinator, at: Marcia.bonitto@ct.gov. **Requests for accommodations must be made at least two weeks prior to the program date.**

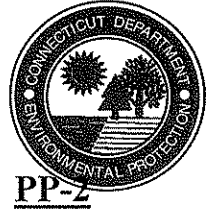
The authority to adopt this proposal is granted by Connecticut General Statutes (CGS) section 22a-6. This notice is required pursuant to CGS section 22a-6, 40 CFR 51.102 and 40 CFR 51, Appendix V, 2.1(f).

7/17/09
Date


Amey W. Marrella
Acting Commissioner



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



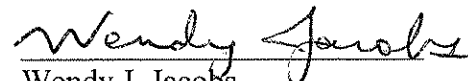
HEARING CERTIFICATION

This certifies in accordance with the provisions of Title 40 Code of Federal Regulations Part 51.102 that the actions listed below were taken regarding the Connecticut Regional Haze State Implementation Plan.

- 1) The public hearing was held on August 27, 2009 as announced in the notice of hearing (copy attached);
- 2) In accordance with the notice, materials were available for review in each Air Quality Control Region (AQCR) in Connecticut;
- 3) Copies of the notice were mailed to the directors of the air pollution control agencies in New York, New Jersey, Rhode Island and Massachusetts along with a copy to the Director of the Air Management Division of Region I of the U.S. Environmental Protection Agency; and
- 4) The notice of hearing was published in newspapers as follows:

<u>Newspaper</u>	<u>AQCR</u>	<u>Date</u>
Connecticut Post (Bridgeport)	43	July 27, 2009
Hartford Courant	42	July 27, 2009
New London Day	41	July 27, 2009
The Register Citizen (Torrington)	44	July 27, 2009

October 26, 2009
Date


Wendy J. Jacobs
Bureau of Air Management



STATE OF CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION



HEARING REPORT

Prepared Pursuant to
40 Code of Federal Regulations Section 51.102

Regarding a Revision to the State Implementation Plan:
Reasonably Available Control Technology (RACT) Update

Hearing Officer:
Merrily A. Gere

Date of Hearing: August 27, 2009

On July 27, 2009, the Commissioner of the Department of Environmental Protection (CTDEP) published a notice of intent to revise the State Implementation Plan (SIP) for air quality to: (1) address the visibility protection requirements of section 169A of the federal Clean Air Act (CAA); and (2) update RACT requirements, given the promulgation of eleven federal control techniques guidelines (CTGs) in 2006 through 2008. Pursuant to such notice, a public hearing was held on August 27, 2009, with the public comment period closing on August 28, 2009. This hearing report addresses only the RACT update proposal, comment and final recommended SIP revision.

I. Hearing Report Content

This report describes the revision to the SIP as proposed for hearing; the comment made and a response thereto; and the final recommendation based on the proposal and comment received.

II. Summary and Purpose of Proposal

On February 1, 2008, CTDEP submitted to the U.S. Environmental Protection Agency (EPA) an attainment demonstration SIP revision for the 1997 8-hour ozone national ambient air quality standard. That attainment demonstration includes an analysis of how Connecticut's SIP complies with the RACT requirements of the CAA. EPA's adoption of eleven CTGs in 2006 through 2008 requires that CTDEP update its RACT analysis. In the proposed SIP revision, CTDEP makes negative declarations for three CTG source categories (flat wood paneling coating, fiberglass boat manufacturing, automobile and light-duty truck assembly coating); provides a statement of equivalency for one CTG (miscellaneous industrial adhesives); and indicates the status of pending CTDEP regulatory revisions for the seven remaining CTGs (industrial cleaning solvents; offset lithographic printing and letterpress printing; flexible package printing; paper, film and foil coating; large appliance coating; metal furniture coating; miscellaneous metal and plastic parts coating).

III. Summary of Comments

EPA was the only commenter on the SIP proposal, as follows:

Anne Arnold, Manager
Air Quality Planning Unit
U.S. Environmental Protection Agency
Region 1
1 Congress Street, Suite 1100
Boston, MA 02114-2023
Mcconnell.robert@epamail.epa.gov

EPA's comment is summarized below with CTDEP's response.

Comment: CTDEP's RACT update to address CTGs issued by EPA in 2006 through 2008 includes a determination that the state's existing adhesives and sealants rule (section 22a-174-44 of the Regulations of Connecticut State Agencies (RCSA)) represents an equivalent level of control as compared to EPA's CTG for miscellaneous industrial adhesives. In most cases, the VOC emission limits of Connecticut's rule and EPA's CTG are identical, although some differences do exist. For example, EPA's limit for wood adhesives (30 grams/liter) is more stringent than the comparable limit in Connecticut's rule (120 grams/liter), but Connecticut's limit for automotive glass adhesive primer (700 grams/liter) is more stringent than the comparable limit in EPA's CTG (900 grams/liter). In addition to these emission limits, there are other potentially more significant differences that Connecticut should consider in making the equivalency determination.

- For example, EPA's CTG contains a recommendation that certain application methods such as electrostatic spray, high volume low pressure (HVLP) spray, and airless spray methods be used in conjunction with the recommended VOC emission limits. Connecticut's adhesives and sealant rule does not address this. We note that other Connecticut rules, such as RCSA section 22a-174-3c regarding automotive refinishing operations, do contain application method requirements.
- Additionally, although both the Connecticut rule and EPA's CTG contain many similar exemptions, Connecticut's rule includes additional exemptions not found in the CTG. For example, subsection (c)(9) of RCSA section 22a-174-44 provides an exemption for the United States military. This provision, as currently structured, is very broad and does not require any type of showing be made that the emission limits within Connecticut's rule are impracticable for the military to meet. Given the fairly large number of U.S. military facilities in Connecticut, this exemption is likely to lower the emission reduction potential of the state's rule.

Response: RCSA section 22a-174-44 differs from the CTG recommendations in one aspect crucial to Connecticut's view of RCSA section 22a-174-44 as equivalent. RCSA section 22a-174-44 applies to manufacturers, sellers and users of regulated products, while the CTG recommendations only apply to users of regulated products at industrial facilities. The much greater breadth of Connecticut's applicability produces emissions reductions beyond those of the CTG recommendations, which makes up for any


decreased emissions benefits that may result from the lack of specific application techniques¹ and additional exemptions. Furthermore, the CTG recommendations do not include adhesives applied to EPDM single-ply roof membrane, the dominant single-ply roof material in Connecticut, which, by some estimates, is alone responsible for as much as 25% of Connecticut's summer day emissions from regulated adhesives and sealants. For these two differences in applicability, CTDEP maintains that the emissions benefits of RCSA section 22a-174-44 are at least equivalent to, if not greater than, the emissions benefits of the CTG recommendations for miscellaneous industrial adhesives. CTDEP should submit the RACT update SIP without revision to the discussion of RCSA section 22a-174-44.

IV. Hearing Officer Comment

Final regulations that are responsive to six of the CTGs discussed in Table 2 of the RACT update have been adopted, effective April 6, 2010. Table 2 and the text discussing Table 2 should be revised consistent with the adoption of the CTG-based regulatory requirements, and the newly adopted regulatory requirements should be submitted to EPA with the RACT update.

V. Conclusion

I recommend that the proposed RACT update SIP revision be revised as recommended in this report and be submitted to EPA for approval.


Merrily A. Gere
Hearing Officer

April 28, 2010

Date

¹ DEP's experience is that industrial users of adhesives and coatings use those application methods that reduce waste because they are cost effective; such waste reducing methods often happen to be those same methods that reduce VOC emissions.