ILLINOIS POLLUTION CONTROL BOARD
June 16, 2011

IN THE MATTER OF:	)	
	)	
REASONABLY AVAILABLE CONTROL TECHNOLOGY (RACT) FOR VOLATILE ORGANIC MATERIAL EMISSIONS FROM GROUP II AND GROUP IV CONSUMER & COMMERCIAL PRODUCTS: PROPOSED AMENDMENTS TO 35 ILL. ADM. CODE 211, 218, and 219	)	R11-23 (Rulemaking - Air)

Proposed Rule. Second Notice.

OPINION AND ORDER OF THE BOARD (by A.S. Moore):

The Board today proposes for second-notice review by the Joint Committee on Administrative Rules (JCAR) amendments to its air pollution regulations. On March 7, 2011, the Illinois Environmental Protection Agency (Agency or Illinois EPA) filed a proposal under provisions including the "fast-track" rulemaking authority of Section 28.5 of the Environmental Protection Act (Act). *See* 415 ILCS 5/10, 27, 28 (2010); Public Act 96-0308, eff. Aug. 11, 2009 (P.A. 96-0308) (re-enacting repealed Section 28.5). The Agency responds to comments by the United States Environmental Protection Agency (USEPA) by proposing amendments to recently-promulgated rules controlling emission of volatile organic material (VOM) from the following Group II and Group IV Consumer and Commercial Product Categories: industrial cleaning solvents, flat wood paneling coatings, flexible packaging printing materials, lithographic printing materials, letterpress printing materials, miscellaneous metal and plastic parts coatings, auto and light-duty truck coatings, miscellaneous industrial adhesives, and fiberglass boat manufacturing materials. On March 17, 2011, the Board adopted its first-notice opinion and order without commenting on the substantive merits of the Agency's proposal. *See* 35 Ill. Reg. 4887 (Apr. 1, 2011); *see also* P.A. 96-0308 (subsection (e)).

In addition, after reviewing testimony and comments by the American Coatings Association (ACA) and the Agency, the Board today opens a subdocket A in this rulemaking in order to address a small container exemption in Sections 218.208 and 219.208, neither of which was included in the Board's first-notice opinion and order. *See* 35 Ill. Adm. Code 218.208, 219.208; Reasonably Available Control Technology (RACT) for Volatile Organic Emissions from Group II and Group IV Consumer and Commercial Products: Proposed Amendments to 35 Ill. Adm. Code 211, 218, and 219, R11-23 (Mar. 17, 2011); *see also* 5 ILCS 100/5-40(b) (2010) ("Each agency shall give at least 45 days' notice of its intended action to the general public. This first notice period shall commence on the first day the notice appears in the Illinois Register."); 35 Ill. Reg. 4887 (Apr. 1, 2011).

In this opinion, the Board first provides the procedural history of this rulemaking before addressing two preliminary matters. The Board then briefly summarizes the statutory and

regulatory background of VOM regulation. The opinion next generally reviews the sources addressed in this rulemaking and VOM emissions from them. The Board then considers the economic reasonableness and technical feasibility of the Agency's proposal. The Board then summarizes its second-notice proposal on a section-by-section basis. Finally, the order following the opinion sets forth the proposed amendments for second-notice review by JCAR.

PROCEDURAL HISTORY

On March 7, 2011, the Agency filed a proposal to amend Parts 211, 218, and 219 of the Board's air pollution regulations (Prop. 211, Prop. 218, and Prop. 219, respectively). A number of documents accompanied the proposal, including a Statement of Reasons (SR), a "Technical Support Document for Controlling VOM Emissions from Lithographic Printing, Letterpress Printing, Flexible Package Printing, Flat Wood Paneling Coating, and Industrial Cleaning Operations" (TSD Group II) and a "Technical Support Document for Control of Volatile Organic Material Emissions in Non-Attainment Areas from Miscellaneous Metal and Plastic Parts Coatings; Automobile and Light-Duty Truck Assembly Coatings; Miscellaneous Industrial Adhesives; and Fiberglass Boat Manufacturing Materials" (TSD Group IV). The Agency also filed a motion for waiver of copy requirements.

In an order dated March 17, 2011, the Board accepted the Agency's proposal for hearing and submitted the proposal to first-notice publication in the *Illinois Register* without commenting on its substantive merits. *See* 35 Ill. Reg. 4887 (Apr. 1, 2011). In the same order, the Board also granted the Agency's motion for waiver of copy requirements.

In a letter dated March 17, 2011, the Board requested that the Department of Commerce and Economic Opportunity (DCEO) conduct an economic impact study of the Agency's rulemaking proposal. *See* 415 ILCS 5/27(b) (2010). The letter requested that DCEO determine whether it would conduct a study and respond to the Board by April 6, 2011. On May 23, 2011, the Board received a response from DCEO. In a letter dated May 5, 2011, DCEO Director Warren Ribley stated that, "[a]t this time, the Department is unable to undertake such an economic impact study. Therefore, I must respectfully decline your request."

In an order dated March 18, 2011, the hearing officer scheduled three hearings: the first beginning Wednesday, April 27, 2011, in Chicago with pre-filed testimony due on or before Friday, April 15, 2011; the second beginning Wednesday, May 18, 2011, in Chicago with pre-filed testimony due on or before Friday, May 6, 2011; and the third beginning Wednesday, June 1, 2010, in Chicago with pre-filed testimony due on or before Friday, May 20, 2011. *See* P.A. 96-0308 (subsections (e), (f)).

First notice of the proposed rules appeared in the *Illinois Register* on April 1, 2011. 35 Ill. Reg. 4887 (Apr. 1, 2011); *see* 5 ILCS 100/5-40(b) (2010) (establishing 45-day comment period).

On April 14, 2011, the Agency pre-filed for the first hearing testimony by Mr. David Bloomberg (Bloomberg Test.) and Mr. Yoginder Mahajan (Mahajan Test.). Both witnesses included an Exhibit A, a letter from USEPA to the chief of the Agency's air bureau (Exh. A).

Exhibit A included an attachment entitled "Required Corrections to Volatile Organic Compound Reasonably Available Control Technology (RACT) Rules Submitted to U.S. EPA on July 29, 2010 by Illinois EPA" (USEPA Attachment).

On April 15, 2011, the Board received a public comment (PC 1) on the Agency's proposal from the Specialty Graphics Imaging Association (SGIA) and the Printing Industry of Illinois/Indiana Association (PII).

On April 25, 2011, the Agency filed a motion to amend its rulemaking proposal (Mot. Amend). The Board grants the motion below under "Preliminary Matters."

The first hearing took place as scheduled on April 27, 2011, in Chicago. Also on April 27, 2011, the Board received the transcript of the first hearing (Tr.1). During the first hearing, the hearing officer admitted into the record two exhibits, the pre-filed testimony of Mr. Bloomberg (Exh. 1) and the pre-filed testimony of Mr. Mahajan (Exh. 2).

In an order dated April 27, 2011, the hearing officer stated that the Board would hold open the statutory seven-day period during which any person may request that the second hearing be held. *See* P.A. 96-308 (subsection (f)(1)). On May 3, 2011, Mr. James Sell filed a request on behalf of ACA that the second hearing take place as scheduled.

On May 6, 2011, Mr. Sell pre-filed testimony (Sell Test.) on behalf of the ACA for the second hearing. On May 16, 2011, the Agency filed post-hearing comments (PC 2). On May 17, 2011, Mr. David Shanks of Boeing Environmental Policy Analysis filed comments on behalf of The Boeing Company (Boeing) (PC 3).

The second hearing took place as scheduled on May 18, 2011. Also on May 18, 2011, the Board received the transcript of the second hearing (Tr.2). During the second hearing, the hearing officer admitted into the record two exhibits. The first was prepared by ACA and compared the application of one coat and two coats of both solvent-based and water-based coating (Exh. 3), and the second consisted of testimony by Mr. Scott Townsend, Vice President of International Paint Yacht Division of Akzo Nobel (Townsend Test. or Exh. 4), who appeared on behalf of Mr. Sell. Townsend Test. at 1.

On May 19, 2011, the Agency filed a "Request to Cancel Hearing." In an order dated May 20, 2011, the hearing officer cancelled the third hearing and set a deadline of June 1, 2011 to file post-hearing comments.

On June 1, 2011, the Agency filed post-hearing comments (PC 4).

PRELIMINARY MATTERS

Motion to Amend Rulemaking Proposal

As noted above under "Procedural History," the Agency on April 25, 2011 filed a motion to amend its rulemaking proposal. *See* Mot. Amend. The Agency's motion responds to requests from industry representatives and also seeks to correct a small number of errors. *Id.*

Section 101.500(d) of the Board's procedural rules provides in pertinent part that, "[w]ithin 14 days after service of a motion, a party may file a response to the motion. If no response is filed, the party will be deemed to have waived objection to the granting of the motion, but the waiver of objection does not bind the Board or the hearing officer in its disposition of the motion." 35 Ill. Adm. Code 101.500(d). Having reviewed the substance of the motion, and in the absence of any response to it, the Board grants the Agency's motion and amends the rulemaking proposal as requested.

The Board summarizes the substance of the Agency's amendments on a section-by-section basis below in the summary of its second-notice proposal. *See infra* at __-__.

Motion to Correct Transcript

On May 19, 2011, the Agency filed a motion to correct the transcript of the second hearing (Mot. Corr.). The Agency requests that the Board make four changes "to correct errors in the transcript. . . ." Mot. Corr. at 1.

Section 101.500(d) of the Board's procedural rules provides in pertinent part that, "[w]ithin 14 days after service of a motion, a party may file a response to the motion. If no response is filed, the party will be deemed to have waived objection to the granting of the motion, but the waiver of objection does not bind the Board or the hearing officer in its disposition of the motion." 35 Ill. Adm. Code 101.500(d). Having reviewed the substance of the motion, and in the absence of any response to it, the Board grants the Agency's motion and directs the Clerk to correct the transcript of the second hearing as requested in the Agency's motion.

STAUTORY AND REGULATORY BACKGROUND

The Agency states that its proposal is intended to satisfy Illinois' obligation to submit a State Implementation Plan (SIP) addressing sources of VOM[1] emissions in areas designated as nonattainment with respect to the National Ambient Air Quality Standard (NAAQS) for ozone. SR at 1-2, 6, citing 42 U.S.C. §§ 7502, 7511a. The Agency reports that two Illinois areas,

[1] The Agency states that VOM "is effectively the same as volatile organic compounds" (VOC). SR at 1.

Chicago and St. Louis/Metro East, have been designated as moderate nonattainment areas (NAA) for the 8-hour ozone standard.[2]

These nonattainment designations trigger Clean Air Act (CAA) requirements "for adopting regulations that reduce emissions sufficiently to demonstrate attainment of the standard." SR at 3, citing 42 U.S.C. § 7502(c)(1). Specifically, the Agency claims that the CAA requires Illinois "to submit VOM regulations constituting RACT [reasonably available control technology] for Group II and Group IV Consumer and Commercial Product Categories in ozone NAAs classified as moderate and above." SR at 4, citing 42 U.S.C. §§ 7502(c)(1), 7511a(b)(2); *see* Mahajan Test. at 2. The Agency defines RACT "as the lowest emission limitation that a particular source can meet by applying a control technique that is reasonably available considering technological and economic feasibility." SR at 3, citing 44 Fed. Reg. 53762 (Sept. 17, 1979); *see* Mahajan Test. at 2.

The Agency states that the CAA requires states to revise SIPs "to include RACT for sources of VOM emissions covered by a control techniques guideline (CTG) issued between November 15, 1990, and the date of attainment." SR at 2, citing 42 U.S.C. § 7511a(b)(2); *see* Mahajan Test. at 2. The Agency reports that "[o]n October 5, 2006, the USEPA issued final CTGs for Group II Consumer and Commercial Products." SR at 4. The Agency also reports that, "[o]n October 7, 2008, the USEPA issued final CTGs for Group IV Consumer and Commercial Products." *Id*.; *see* Mahajan Test. at 2. USEPA required submission of SIP revisions responding to the CTGs within one year. SR at 4, citing 73 Fed. Reg. 58484, 71 Fed. Reg. 58745-53.

The Agency states that, in response to the Group II and Group IV CTGs, it submitted to the Board proposed amendments to the VOM regulations. SR at 4, citing 35 Ill. Adm. Code 211, 218, 219. The Agency notes that the Board subsequently adopted amendments. Reasonably Available Control Technology (RACT) for Volatile Organic Material Emissions from Group IV Consumer & Commercial Products: Proposed Amendments to 35 Il. Adm. Code 211, 218, and 219, R10-20 (Sept. 2, 2010); Reasonably Available Control Technology (RACT) for Volatile Organic Material Emissions from Group II Consumer & Commercial Products: Proposed Amendments to 35 Ill. Adm. Code 211, 218, and 219, R10-8 (June 17, 2010); *see* Mahajan Test. at 2.

The Agency indicates that, on July 29, 2010, it "submitted the adopted rules to the USEPA and requested that USEPA approve them as amendments to Illinois' SIP." SR at 4; *see* Bloomberg Test. at 3, Mahajan Test. at 2; *see also* Tr.1 at 10. The Agency reports that the USEPA determined "that the revisions were insufficient and that USEPA would not approve them without additional amendments." SR at 4; *see* Mahajan Test. at 2. The Agency states that, while the USEPA ultimately "agreed that several of its suggested revisions were not necessary,"

---

[2] The Chicago nonattainment area includes the following Illinois jurisdictions: Cook, DuPage, Kane, Lake, McHenry, and Will Counties, Goose Lake and Aux Sable Townships in Grundy County, and Oswego Township in Kendall County. SR at 7, citing 40 C.F.R. 81.314. The St. Louis/Metro East nonattainment includes the following Illinois counties: Jersey, Madison, Monroe, and St. Clair. SR at 7, citing 40 C.F.R. 81.31.

it insisted on a number of changes necessary for SIP approval. SR at 5; *see* Bloomberg Test. at 3; Mahajan Test. at 2, 3; USEPA Attachment.

In testimony pre-filed for the first hearing, Mr. Bloomberg and Mr. Mahajan noted that USEPA specified deficiencies that it required the Agency to address. Bloomberg Test. at 3, Mahajan Test. at 2-3; *see* Exh. A (USEPA letter to chief of Agency air bureau), USEPA Attachment. Mr. Bloomberg listed the following general issues identified by USEPA: "[i]nadequate recordkeeping requirements for exempt sources, insufficient VOM limitations in certain categories, typographical errors, provisions requiring clarification, failure to include definitions for certain terms, and failure to implement certain recommendations set forth in the CTGs." Bloomberg Test. at 3; *see also* Mahajan Test. at 2. Mr. Bloomberg's pre-filed testimony stated that the Agency's proposal addressed the issues specified by USEPA in its Attachment. Bloomberg Test. at 3; *see* Mahajan Test. at 3, USEPA Attachment. Mr. Bloomberg also reported that the Agency proposed additional changes "in order to clarify and simplify some sections of the rules that were found to cause confusion for affected sources." Bloomberg Test. at 3; *see* Mahajan Test. at 3.

The Agency states that "Illinois is required to submit these SIP revisions before the USEPA can re-designate the Chicago and Metro East NAAs to attainment of the 1997 ozone NAAQS." SR at 6, citing 42 U.S.C. § 7407(d)(3)(E). The Agency notes that, on July 2, 2007, it "submitted to the USEPA an attainment demonstration for the Metro East nonattainment area for the 1997 8-hour ozone NAAQS." SR at 7. The Agency further notes that it submitted an attainment demonstration for the Chicago nonattainment area on March 19, 2009. *Id*. The Agency argues that "[t]hese areas cannot be redesignated to attainment, however, unless and until the Illinois EPA submits the additional USEPA-mandated amendments as SIP revisions and the USEPA approves such revisions." *Id*. at 7; *see* Bloomberg Test. at 2, 3, Mahajan Test. at 3.

In its second post-hearing comments filed June 1, 2011, the Agency stated that it had worked closely with USEPA to address deficiencies in Illinois' regulations "as well as to ensure that any other amendments made to the rule in response to stakeholder comments are acceptable to the USEPA." PC 4 at 18. The Agency describes this process as "working with industry groups and USEPA to resolve all issues brought to the Agency's attention, and obtaining USEPA approval before recommending/supporting any substantive amendments to the original rulemaking proposal." *Id*.

The Agency characterizes USEPA's disapproval of regulations proposed for amendment as "the main roadblock to Illinois' redesignation to attainment of the 1997 8-hour ozone standard." PC 4 at 19. The Agency claims that another USEPA disapproval of these VOM regulations will require additional rulemaking and delay redesignation. *Id*. The Agency concludes that it "strongly opposes any changes to the rules that have not been first approved in writing by the USEPA."

DESCRIPTIONS OF POTENTIALLY AFFECTED SOURCES AND PROJECTED VOM EMISSIONS

The Agency indicated in its Statement of Reasons that its proposed regulations apply within the Chicago and Metro East regions, the two Illinois areas designated as nonattainment for the eight-hour ozone NAAQS. SR at 7, citing 40 C.F.R. § 81.314. The Agency further stated that, within those two areas, the proposed regulations "are generally expected to affect both new and existing sources that are covered by a Group II or Group IV CTG" and meet specified applicability criteria. SR at 7. The Agency noted that it had filed in rulemaking dockets R10-8 and R10-20 lists of sources potentially affected by the proposed regulations. *Id*. The Agency incorporated those two TSDs into the current rulemaking by reference. *Id*., *see* TSD Group II, TSD Group IV.

The Board addresses the record with regard to potentially affected sources on a category-by-category basis in the following subsections.

Miscellaneous Metal and Plastic Parts Coatings

Description of Sources

In its TSD, the Agency stated that "[m]iscellaneous metal and plastic parts coatings are coatings applied to a wide range of metal and plastic parts for decorative, protective, and functional purposes." TSD Group IV at 8 (§2.1). The Agency further stated that manufacturers apply these coatings to components of products such as

> fabricated metal products, molded plastic parts, small and large farm machinery, commercial and industrial machinery and equipment, automotive or transportation equipment, interior or exterior automotive parts, construction equipment, motor vehicle accessories, bicycles and sporting goods, toys, recreational vehicles, pleasure craft (recreational boats), extruded aluminum structural components, railroad cars, heavier vehicles, lawn and garden equipment, business machines, laboratory and medical equipment, electronic equipment, steel drums, metal pipes, and numerous other industrial and household products. *Id*.

The Agency indicated that, in order to conform to the CTG corresponding to these products, it refers to coatings applied to these subcategories of parts as "miscellaneous metal and plastic parts coatings." *Id*. The Agency stated that "[e]missions of VOM from this source category occur when the solvent carrying the coating material evaporates and leaves the coating material on the surface during application and drying, and to a lesser extent during the mixing and thinning of the coating, and during cleaning operations." *Id*.

The Agency emphasized that its proposal affects coatings "that are applied by manufacturers to the parts they produce, and not [] coatings that are applied to test panels or coupons for research and development, quality control, or performance testing." TSD Group IV at 8. The Agency also emphasized that its proposal does not address "any coatings that are otherwise defined in CAA Section 183(e) which have been previously addressed by other CTGs." *Id*. The Agency stated that CTGs have addressed coatings including the following: shipbuilding and repair coatings; aerospace coatings; wood furniture coatings; metal furniture coatings; large appliance coatings; automobile and light-duty truck assembly coatings; flatwood

paneling coatings; miscellaneous industrial adhesives; fiberglass boat manufacturing materials; and paper, film, and foil coatings." *Id.*

Potentially Affected Sources

The Agency stated that it relied upon USEPA's estimate of the number of sources affected nationally by the proposed regulations to determine the number of Illinois sources "potentially affected by the proposed regulation regarding miscellaneous metal and plastic parts coatings." TSD Group IV at 20 (§2.6). According to the Agency, the CTG lists 1,269 sources in this category in nonattainment areas nationally with 155 in Illinois nonattainment areas. *Id.* The Agency reported that "111 of these sources remained in operation in 2007." *Id.*; *see id.* at 20-23 (Table 2.3).

VOM Emissions

Noting that "existing emission sources in Illinois are not required to report what portion of their VOM emissions are due to metal and plastic parts coatings," the Agency claimed that "it is difficult to determine the total VOM emissions directly related to the category." TSD Group IV at 9 (§2.2). Based on USEPA data indicating 111 Illinois sources potentially affected by these proposed regulations, the Agency estimated that those sources "emitted a total of 1,730 tons of VOM in 2007." *Id.* Claiming that the CTG "does not detail the level of control anticipated from proposed regulations meeting the CTG's recommendations," the Agency stated that it "has not estimated the VOM reductions that may result from implementation of this proposal." *Id.*

While it acknowledged uncertainty regarding emissions reduction, the Agency claimed that it must revise Illinois' SIP "to include RACT for VOM sources covered by a CTG issued by USEPA after November 15, 1990, and before the area's date of attainment." TSD Group IV at 9. The Agency stated that the CTG for this category recommends controls that may constitute RACT for affected coating operations. *Id.* The Agency further stated that it "concurs with the recommendations of the CTG and has included them, with few exceptions, in the proposed regulation. . . ." *Id.*

Industrial Cleaning Solvents

Description of Potentially Affected Sources

Prior to the adoption of rules in docket R10-8, Illinois had "current regulations for cold cleaning degreasing, open top vapor degreasing, and conveyorized degreasing operations as well as some limitations and work practices on cleaning solvent uses in existing rules, *e.g.*, regulations regarding autobody refinishing, wood furniture coating, and lithographic printing." TSD Group II at 17 (§5.4); *see* 35 Ill. Adm. Code 218.182-184, 219.182-184. In docket R10-8, the Board adopted Section 218/219.187, which addresses other industrial solvent cleaning operations and defines "cleaning operation" for the purposes of that section as

> the process of cleaning products, product components, tools, equipment, or general work areas during production, repair, maintenance, or servicing, including but not limited to spray gun cleaning, spray booth cleaning, large and small manufactured components cleaning, parts cleaning, equipment cleaning, line cleaning, floor cleaning, and tank cleaning, at sources with emission units. *See* 35 Ill. Adm. Code 218.187(a), 219.187(a).

In the TSD for Group II, the Agency stated that the category of industrial cleaning solvents includes a number of products and procedures "used to clean dirt, soil, oil, and grease as well as remove adhesives, paints, and inks." TSD Group II at 5 (§2.4). The Agency further stated that "VOM emissions occur during the cleaning process while wiping, flushing, brushing, and from the storage and disposal of used solvents and rags." TSD at 6.

The Agency noted that USEPA has conducted studies of VOM emissions focusing on six industries: "automotive, electrical equipment, magnetic tape, furniture, packaging, and photographic supplies." TSD Group II at 5-6. The Agency claimed that these studies revealed nine major categories in which cleaning processes result in VOM emissions: "spray gun cleaning, spray booth cleaning, large manufactured components cleaning, parts cleaning, equipment cleaning, line cleaning, floor cleaning, tank cleaning, and small manufactured components cleaning." *Id*. The Agency argued that the first four account for a majority of VOM emissions from these categories and that spray gun cleaning alone accounts for 50 percent. *Id*. The Agency stated that the CTG nonetheless "recommends coverage of a wide range of cleaning activities" and that its proposal in R10-8 reflected that recommendation. *Id*. The Agency emphasized, however, that the regulations proposed in R10-8 did not cover "[g]eneral cleaning of offices, bathrooms, and other janitorial type services." *Id*.

Projected VOM Emissions

Also in the TSD for Group II, the Agency noted USEPA's estimate that 130 sources in Illinois' two nonattainment areas emit a total of 15 PPD or more of VOM from cleaning operations at the source. TSD Group II at 20 (§6.4). During consideration of the proposal in docket R10-8, the Agency stated that its proposal applied to "anybody who uses this amount of industrial cleaning solvents" and not only to operations in Group II categories. Reasonably Available Control Technology (RACT) for Volatile Organic Material Emissions from Group II Consumer & Commercial Products: Proposed Amendments to 35 Ill. Adm. Code 211, 218, and 219, R10-8, slip op. at 8-9 (May 6, 2010) (citing transcript of hearing). Elaborating, the Agency argued that, because it does not generally seek specific information on solvent use and because that use may not be subject to a current permit, "there was no good way to make an estimate as to who might be affected. . . ." *Id*. at 9.

Nonetheless, the Agency stated that baseline emissions from the 130 sources noted by USEPA are estimated to be 2293 MG/yr (2528 tpy) of VOM. TSD Group II at 20. The Agency further stated that this estimate included "degreasing operations that are already impacted by existing state regulations and will not gain any further reductions." *Id*. The Agency argued that it was "not reasonably practicable to estimate emission reductions for the other impacted sources under the industrial clean-up solvent rule, as any source in either NAA that uses cleaning solvent

is potentially affected, depending on the source's usage level." *Id*. at 20-21. The Agency also claimed that potentially affected sources may already be using solutions that comply with the proposed regulations. *Id*. at 21. Accordingly, the Agency projected that its proposed regulations would result in actual VOM emission reductions but claimed that "calculation of such emission reductions cannot be accomplished without detailed information from every affected source." *Id*. at 21.

Flat Wood Paneling Coatings

Description of Potentially Affected Sources

In the TSD for Group II, the Agency cited the applicable CTG to state that "[f]lat wood paneling products are used in construction and can be classified as three main product types: decorative interior panels, exterior siding, and tileboard." TSD Group II at 6 (§2.5) (citation omitted). The Agency stated that "[d]ecorative interior panels are often embossed and usually grooved, having more decorative coating requirements than many other products." *Id*. For these panels, the Agency indicated that "[s]ubstrates include hardwood, plywood, medium density fiberboard, and particle board." *Id*.

With regard to exterior siding, the Agency stated that it "may be coated at the production facility or on-site." TSD Group II at 6. The TSD indicated that flat wood paneling regulations do not apply to on-site coating of exterior siding. *Id*. The Agency further stated that, in addition to siding, "[e]xterior trim is also generally manufactured at the same production facility and coated with the same coatings." For this classification, the Agency listed substrates including solid wood, hardboard, and waferboard. *Id*.

With regard to tileboard, the Agency indicated that it "is used on high-moisture areas such as kitchens and bathrooms, and is considered a premium interior wall paneling." TSD Group II at 6. The Agency stated that "[t]ileboard meets the specifications for Class I hardboard according to the American National Standards Institute." *Id*.

The Agency stated that producers coat flat wood paneling in order "to provide protection from the environment, modify the surface, and present a desired appearance." TSD Group II at 6. The Agency cited the CTG to state that

> a typical flat wood coating facility applies stains and varnishes to natural plywood panels used for wall coverings. Other plants print wood grain patterns on particle board panels that were first undercoated with an opaque coating to mask the original surface. Coatings applied to flat wood surfaces include fillers, sealers, 'groove' coats, primers, stains, basecoats, inks and topcoats. TSD Group II at 6 (citation omitted).

Addressing methods and techniques, the Agency cited the CTG to state that coating line processes typically begin "with mechanical alterations of the substrate (filing of holes, cutting of grooves, sanding, etc.). . . ." TSD Group II at 7 (citation omitted). Following this step,

> [m]ost coatings are applied by direct roll coating. Filler is usually applied by reverse roll coating. The offset rotogravure process is used where the coating and printing operation requires precision printing techniques. Other coating methods include spray techniques, brush coating and curtain coating. A typical flat wood paneling coating line includes a succession of coating operations. Each individual operation consists of the application of one or more coatings followed by a heated oven to cure the coatings. *Id*. at 6-7 (citation omitted).

The Agency stated that, during these operations, "VOM emissions occur primarily during the coating process as the coatings dry and cure, but also as coatings are applied, and during mixture before application." *Id*. at 7.

Projected VOM Emissions

The TSD for Group II noted a 2005 search of the Agency's source inventory maintained by its Bureau of Air. That search projected that four sources, all in the Chicago NAA, would become subject to the proposed flat wood paneling coating regulations. TSD at 21 (§6.5). The Agency stated that "[o]ne of these four sources would appear to fall below the proposed applicability threshold" and that "[t]he other three total 0.09 TPD of VOM emissions." *Id*. The Agency claimed that the CTG projects VOM emission reductions averaging 60 percent from interior paneling and tileboard manufacturing. *Id*. Stating that the Illinois sources appear to fall within these two manufacturing categories, the Agency "estimates a VOM reduction of 0.05 TPD in the Chicago NAA." *Id*

Flexible Package Printing

Description of Potentially Affected Sources

In the TSD for Group II, the Agency stated that "[f]lexible packaging means any package or part of a package, the shape of which can be readily changed." TSD Group II at 4 (§2.3). The Agency further stated that this packaging "includes, but is not limited to, bags, pouches, liners, and wraps utilizing paper, plastic, film, aluminum foil, metalized or coated paper or film, or any combination of these materials." *Id*. The Agency also indicated that "[s]hrink-wrap labels or wrappers (but not self-adhesive labels) printed on or in-line with a flexible packaging printing press are also considered to be flexible packaging." *Id*. The Agency stated, however, that the following items are not flexible packaging: "cartons, gift wraps, hot stamp foils, wall coverings, vinyl products, decorative laminates, floor coverings, or tissue products." *Id*. at 5.

The Agency characterized rotogravure printing as using "an image etched or engraved into a plate or cylinder." TSD Group II at 5. The Agency stated that "[i]nks, coatings, and adhesives may be applied to a substrate through the rotogravure process." *Id*. The Agency described flexographic printing as the use of "an image raised above the level of the printing plate, with the image carrier made of rubber or other flexible material." *Id*. The Agency distinguished the two in part by stating that "[f]lexographic printing is better suited to short production runs, in contrast to rotogravure printing, which is more useful for long runs." *Id*. The

Agency claimed that "VOM emissions for both types of printing originate from the drying of inks as well as solvents used to clean presses and other components." *Id*.

The Agency cited the CTG to state that "the use of waterbased inks is increasing." TSD Group II at 5 (citation omitted). However, the Agency also noted that "[m]any facilities use hundreds of different inks to print various custom colors required by their packaging customers. Low [VOM] inks, coatings, and adhesives may not be available to meet all of the performance requirements." *Id* (citation omitted).

The Agency stated that "most VOM control for flexible package printing is achieved through the use of add-on control devices." TSD Group II at 5. The Agency indicated that most of the VOM emitted through these processes "is captured through evaporation in a dryer, along with hoods and other collection devices for solvent that evaporates elsewhere in the printing process." *Id*. The Agency claimed that "[o]lder presses frequently do not allow for the same level of capture as newer installations do." *Id*. However, the Agency cited the CTG to claim that "'[t]here have been significant improvements in capture efficiency of flexographic presses and rotogravure presses' since USEPA's most recent review of those operations." *Id*. (citation omitted). The Agency further cited the CTG to state that, "[s]ince 1990, many vendors have guaranteed capture efficiency of 85 to 90 percent without use of a permanent total enclosure." *Id*. at 5 (citation omitted). The Agency argued that control devices can now attain control efficiencies of at least 95 percent. *Id*. (citation omitted).

Projected VOM Emissions

In the Group II TSD, the Agency stated that its proposal in docket R10-8 separated flexible packaging printing from the existing flexographic and rotogravure regulations. TSD Group II at 17; *see* 35 Ill. Adm. Code 218.401, 219.401. The Agency indicated that "[s]ources that print on flexible packaging will need to meet either a tightened ink VOM content or add-on control requirement." TSD Group II at 17. The Agency stated that the required efficiency of the add-on control "will depend on both the date of construction, at the source, of the press and the control device." *Id*.; *see* 35 Ill. Adm. Code 218.401(c), 219.401(c). The Agency claimed that these factors reflect "that presses and control devices already installed at the source might not have been designed to obtain capture and control efficiencies as high as are currently obtainable." TSD Group II at 17. The Agency's proposal also required that printing lines that meet the CTG's prescribed applicability threshold comply with work practice requirements for cleaning materials. *See id*. at 5; *see also* 35 Ill. Adm. Code 218.402(b), 219.402(b).

In the Group II TSD, the Agency stressed difficulties in estimating emission reductions in this category. First, the Agency stated that "the Illinois source database does not generally specify the type of substrate being used by a flexographic or rotogravure printing operation." TSD Group II at 20 (§6.3). The Agency further stated that the data also do not "specify the date of original installation of the printing press or the associated control device." *Id*. Accordingly, the Agency listed as a potentially affected source each existing flexographic or rotogravure printing facility in the Illinois inventory exceeding the proposed applicability threshold. *Id*.; *see id*. at 27-28 (Appendix B: Potentially Affected Sources).

The Agency emphasized, however, that "all sources but one using flexographic or rotogravure printing of any type are already achieving greater control efficiency than required by the proposed regulation." TSD Group II at 20. The Agency stated that the single remaining source "is required by its permit to achieve 60 percent control efficiency, but will now need to achieve 65 percent." *Id*. The Agency claimed that this represents a reduction of 0.03 TPD in permitted emissions, "but a 0.01 TPD reduction according to emissions information in the inventory." *Id*.

The Agency expected negligible emission reductions from proposed new ink limits. TSD Group II at 20. The Agency stated that, "[w]hile the inventory does not provide information regarding the use of compliant inks, it has been the Agency's experience that sources printing on flexible packaging have had difficulty with the use of compliant VOM inks on such substrates." *Id*. The Agency reported that "[s]ources either relied on add-on controls or switched to water-based inks that should meet the newly proposed requirements as well as the existing ones." *Id*.

Regarding proposed work practice standards for cleaning materials, the Agency argued that they "do not lend themselves to a calculation of emission reductions." TSD Group II at 20. The Agency claimed that actual VOM emission reductions will result from requirements such as "storing of cleaning materials and used shop towels in closed containers, as well as conveying cleaning materials in closed containers or pipes. . . ." *Id*.; *see* 35 Ill. Adm. Code 218.401(d), 219.401(d). The Agency argued, however, that "calculation of such emission reductions cannot be accomplished without detailed information from every affected source -- both before and after such changes are made." TSD Group II at 20.

Lithographic Printing Lines

Description of Potentially Affected Sources

In the TSD for Group II, the Agency stated that offset lithographic printing is used to produce materials including "books, magazines, periodicals, labels and wrappers, catalogs and directories, financial and legal documents, business forms, advertising materials, newspapers, newspaper inserts, charts and maps, calendars, tickets and coupons, greeting cards, and stamps." TSD Group II at 2 (§ 2.1). The Agency added that, although other printing processes may produce these materials, "the newspaper industry uses offset lithography predominantly, with over 70 percent of all newspapers in the United States printed by this method." *Id*.

The Agency described lithography as "a planographic method of printing; that is, the printing and nonprinting areas are essentially in the same plane on the surface of a thin 'lithographic' plate." TSD Group II at 3 (§ 2.1). The Agency further stated that the two areas are distinguished chemically by rendering the image area water repellent and the nonimage area water receptive. *Id*.

The Agency described the category of offset lithographic printing: "ink is transferred from the lithographic plate to a rubber-covered 'intermediate' or 'blanket' cylinder and then to the substrate." TSD Group II at 3. The Agency stated that this "[t]ransfer of the ink from the lithographic plate to the blanket cylinder, rather than directly to the substrate, is the offset

characteristic of this type of printing." *Id*. The Agency stated that offset lithographic printing itself can be categorized by the manner in which the substrate is fed to the press. *Id*. The Agency indicated that, "[i]n sheet-fed printing, individual sheets of paper or other substrate are fed to the press. In web printing, continuous rolls of paper are fed to the press and the paper is cut to size after it is printed." *Id*.

The Agency stated that pigments, vehicles, binders, and other additives comprise lithographic inks. TSD Group II at 3. The Agency further stated that pigments include both organic and inorganic materials. *Id*. The Agency indicated that "[l]ithographic inks may be heatset, where heat is required to set the ink, or non-heatset, where the inks are set by absorption into the substrate by oxidation or other methods not requiring added heat." *Id*. The Agency claimed that "[h]eatset inks may contain up to 45 percent VOMs." *Id*. The Agency also listed the characteristics of non-heatset inks: higher boiling points, less pastiness, and usually less than 35 percent VOM content. *Id*. The Agency also stated that "[m]ost non-heatset inks used in sheet-fed printing are below 25 percent VOM." *Id*.

The Agency stated that printing operations apply a fountain solution to a lithographic plate to render nonimage areas unreceptive to ink. TSD Group II at 3. The Agency further stated that, "[s]ince printing inks are oil-based and oil is repelled by water, the fountain solution is water-based." *Id*. The Agency indicated that these fountain solutions also contain "small quantities of gum arabic or synthetic resins, acids, and buffer salts to maintain the pH of the solution, and a wetting agent or 'dampening aid' to enhance the spreadability of the fountain solution across the print plate." *Id*. The Agency stated that the dampening aid reduces the surface tension of water and increases viscosity. *Id*.

The Agency stated that, since the 1950s, isopropyl alcohol, a VOM, "has been used as the primary dampening aid." TSD Group II at 3. The Agency further stated that "[e]thanol and normal propyl alcohol have also been used in this capacity." *Id*. The Agency indicated that, "[b]efore the 1980s, concentration of alcohol in the fountain solution could range from 0 to 35 percent or higher, with most presses using between 15 and 20 percent." *Id*. The Agency argued that printers have since reduced the alcohol content of fountain solution and have "often replaced alcohol completely with other dampening aids." *Id*. at 4.

The Agency stated that printers use cleaning solutions "to remove excess printing inks, oils, and paper components from press equipment" and also "to wash the blankets, the rollers, the outside of the presses, and to remove excess ink residue between color changes." TSD Group II at 4. The Agency further stated that these "solutions are petroleum-based solvents, often mixed with detergent and/or water." *Id*. The Agency indicated that "[t]he cleaning compound may be a single solvent, such as kerosene, or a combination of solvents." *Id*.

In the TSD for its proposed Group II regulations, the Agency stated that its "proposal does not reduce the applicability threshold for add-on control devices used by heatset presses." TSD Group II at 15. The Agency thus argued that "no new lithographic printing units will need to add controls." *Id*. The Agency indicated, however, that "new control devices on heatset web lithographic presses will need to meet a 95 percent control efficiency instead of the current 90 percent limit." *Id*.; *see* 35 Ill. Adm. Code 218.407, 219.407 The Agency expressed the belief

that "control devices in existence today can meet the 95 percent limit, but at the request of printing industry representatives, the Agency has agreed not to ask existing sources to meet the higher control efficiency." TSD Group II at 15.

The Agency stated that its proposal establishes "a new applicability threshold of 15 PPD for fountain solution and cleaning solution requirements for all lithographic printing operations." TSD Group II at 15; *see* 35 Ill. Adm. Code 218.405, 219.405. The Agency further stated that "[t]he requirements are the same as are already present in the Illinois regulations, other than a correction to the fountain solution limits that changes their measurement from 'by volume' to 'by weight.'" TSD Group II at 15.

The Agency emphasized that "sources between 15 and 100 PPD will be able to take advantage of several new exclusions pertaining to fountain and cleaning solutions." TSD Group II at 15; *see* 35 Ill. Adm. Code 218.405, 219.405. The Agency stated that "[s]heet-fed presses that print substrates no larger than 11 inches by 17 inches and any lithographic press with a fountain solution reservoir of no larger than one gallon are not required to comply with the fountain solution requirements." TSD Group II at 15. The Agency further stated that "sources in this [15 to 100 PPD] group will also need to meet only a 70 percent VOM content limit in cleaning solutions rather than the 30 percent limit that is applicable to sources over 100 PPD." *Id*. at 15; *see* 35 Ill. Adm. Code 218.407, 219.407. Finally, the Agency also stated that "[a]ll such sources will also be able to use up to 110 gallons of cleaning solution per year that do not meet either the VOM content or vapor pressure requirements." TSD Group II at 15-16; *see* 35 Ill. Adm. Code 218.405, 219.405.

The Agency stated that, "[b]ecause of the new exclusions that apply only between 15 and 100 PPD, even subject sources in this group must continue to calculate emissions to ensure they do not exceed the 100 PPD threshold and lose the exclusions." TSD Group II at 16. The Agency further stated that "[s]ources may opt out of the exclusions if they do not wish to make use of them, and thus would not need to calculate emissions in this fashion." *Id*.

The Agency stated that "[s]ources which fall below one of the applicability limits, and are thus exempt from one or more control requirements, must certify this exemption to the Illinois EPA through calculations showing that their emissions will not exceed the applicable VOM threshold." TSD Group II at 16; *see* 35 Ill. Adm. Code 218.411, 219.411. The Agency further stated that "[t]hese calculations must include all VOM emissions, including inks, fountain solution, and cleaning solvents, and are determined on a monthly basis." TSD Group II at 16.

The Agency emphasized that current regulations recognize "that the substrate retains some of the VOM present in the ink, and this a retention factor of 0.95 is used when calculating emissions from non-heatset inks, and a factor of 0.20 is used when calculating emissions from heatset inks." TSD Group II at 16; *see* 35 Ill. Adm. Code 218.411, 219.411. The Agency noted that current regulations also contain "a factor recognizing that VOM remains on solvent-laden rags that are stored and disposed of properly." TSD Group II at 16; *see* 35 Ill. Adm. Code 218.411, 219.411. The Agency stated that "[t]hese factors continue to be allowed for determination of applicability." TSD Group II at 16; *see* 35 Ill. Adm. Code 218.405, 219.405. The Agency also noted that its "proposal adds emission adjustment factors to be used in other

situations when not determining applicability (such as Annual Emissions Reports and permit limits)." TSD Group II at 16; *see* 35 Ill. Adm. Code 218.411, 219.411. The Agency claimed that "[t]hese factors take into account carryover of VOM from automatic blanket wash and fountain solutions into the dryer and control device." TSD Group II at 16 (citation omitted).

Projected VOM Emissions

In the TSD for its proposed Group II regulations, the Agency indicated that it did not "expect any additional [emission] reductions from increasing the required control efficiency for heatset web lithographic printers from 90 to 95 percent, because that change will not affect existing control devices." TSD Group II at 18 (§6.1). The Agency did expect "some small VOM reductions related to the addition of fountain and cleaning solution requirements for sources with 15 PPD or more of emissions." *Id*. The Agency claimed that it is difficult to estimate these reductions because it is not possible to identify sources that may be excluded from the proposed requirements. *Id*. The Agency elaborated that its source inventory "does not track information such as the number of gallons of cleaning solution used, the size of sheet-fed presses, or the fountain solution reservoir volume. . . ." *Id*.

The Agency's search of the 2005 source inventory maintained by its Bureau of Air indicated that 98 lithographic printing sources in the Chicago NAA and three in the Metro East NAA have VOM emission over 15 PPD. TSD Group II at 18. The Agency reported that 66 of those sources in the Chicago NAA and all three of those sources in the Metro East NAA emit less than 100 PPD and were potentially affected by the proposed regulations. *Id*.

For those potentially affected sources, the Agency estimated potential emission reductions attributable to reformulation of fountain solutions at between 25% and 90% for smaller sources. TSD Group II at 19. Because this estimate was based on a 1993 draft CTG, and because the current CTG refers to steps reducing the VOM content of fountain solutions, the Agency relied on the 25% estimate in calculating reductions. *Id*. The Agency argued that "[c]leaning solutions can be calculated as a straight 30% reduction, since the regulation requires reformulation such that they cannot contain more than 70% VOM. " *Id*. With regard to cleaning solutions emissions, the Agency claimed that they "make up a lower percentage of emissions compared to fountain solutions, ranging up to approximately 50% at certain facilities." *Id*. The Agency argued that, "[a]ssuming that almost 50% of non-ink emissions come from cleaning solutions, which have 30% reduction, it is safe to use a 25% overall emission reduction to cover all VOM originating from the source." *Id*.

The Agency stated that total VOM emissions from the 66 potentially affected sources in the Chicago NAA equal 1.455 TPD. TSD Group II at 19. Accordingly, a 25% reduction represents 0.36 TPD of VOM. *Id*. The Agency further stated that, in the Metro East NAA, a 25% reduction from total emissions of 0.0295 TPD represents a reduction of 0.007 TPD. *Id*.

Letterpress Printing Lines

Description of Potentially Affected Sources

In the TSD for its proposed Group II regulations, the Agency stated that "[l]etterpress printing involves the use of a reverse-imaged raised surface that is inked and then pressed against a substrate to transfer the image." TSD Group II at 4 (§2.2). The Agency further stated that, compared with lithographic, flexographic, and rotogravure printing, "[l]etterpress operations make up a very small percentage of the printing industry." *Id*. Based on its source inventory, the Agency indicated that "no letterpress printing facility could be found in the Metro-East NAA, with very few of these facilities found even in the Chicago NAA." *Id*.

The Agency stated that letterpress and lithographic printing operations use inks that are "very similar" and may both be accomplished through sheet-fed and web presses. TSD Group II at 4. The Agency thus argued that "ink emission sources are similar" to those of lithographic printing. *Id*. The Agency further argued that, although "[l]etterpress operations do not use fountain solutions," they use cleaning solutions similar to those used in lithographic printing operations. *Id*.

In the TSD for its proposed Group II regulations, the Agency stated that its proposal addressed "both heatset and non-heatset letterpress operations." TSD Group II at 16. The Agency further stated that the proposal "would require that heatset letterpress printers use an add-on control device if they meet the applicability requirements of 25 TPY PTE plantwide." *Id*.; *see* 35 Ill. Adm. Code 218.413, 219.413. The Agency believed that no operation in either of the two NAAs would be subject to this requirement. TSD Group II at 16.

The Agency further stated that "[a]ll letterpress printing operations of 15 PPD or more will be also required to abide by cleaning material limitations equivalent to those" applicable to lithographic printing sources emitting between 15 and 100 PPD. TSD Group II at 16; *see* 35 Ill. Adm. Code 218.413, 219.413. Specifically, such sources would be required to use cleaning solutions containing no more than 70 percent VOM or having a maximum composite partial vapor pressure or less than 10 mm Hg. TSD Group II at 16.

Projected VOM Emissions

In the TSD for its proposed Group II regulations, the Agency indicated that there are no heatset web letterpress printing operations in the two NAAs and that it expected no emission reductions from add-on controls for this category. TSD Group II at 19 (§6.2). The Agency's search of the 2005 source inventory maintained by its Bureau of Air indicated that there are two sources in the Chicago NAA using letterpress printing. *Id*. The Agency stated that "[o]nly one of these sources appears to emit more than 15 PPD from such operations, with less than 0.02 TPD of VOM, including emissions from the letterpress as well as other printing operations." *Id*. The Agency argued that, "[e]ven if all of the emissions originated from letterpress cleaning solutions, which are to be reduced by 30 percent, the resulting reduction would be 0.005 TPD. *Id*. Accordingly, the Agency expected only "negligible" emission reduction from proposed regulations for this category. *Id*.

Automobile and Light-Duty Trick Assembly Coatings

Description of Potentially Affected Sources

In the TSD for its proposed Group IV regulations, the Agency characterized automobile and light-duty truck assembly coatings as "coatings applied to new automobile or light-duty truck bodies or body parts for those vehicles" in order "to enhance durability and appearance." TSD Group IV at 24 (§3.1). The Agency stated that the CAA categorizes these coatings, which are generally formulated and marketed for these purposes. *Id*. The Agency emphasized that "[t]his coating category includes coatings applied on a contractual basis outside vehicle manufacturing facilities, but does not include coatings used at plastic or composites molding facilities described in the Auto and Light-Duty Trucks NESHAP [National Emission Standards for Hazardous Air Pollutants] (40 C.F.R. Part 63, Subpart III)." *Id*. (citation omitted).

The Agency stated that "[t]he coating process for automobiles and light-duty trucks generally consists of surface preparation, priming operations, topcoat operations, and final repair operation." TSD Group IV at 24. The Agency further stated that "[e]missions of VOM from auto and light-duty truck coatings occur when the solvent carrying the coating material evaporates and leaves the coating material on the surface during application and drying, and to a lesser extent during the mixing and thinning of the coating." *Id*. The Agency claimed that coating application, flash off, and the drying and curing of coatings account for a majority of emissions from this category. *Id*.

The Agency stated that its emissions inventory identified only a single source affected by the proposed regulation of these coating operations. TSD Group IV at 29 (§3.6). The Agency elaborated that Ford Motor Company in Cook County is the only source in that inventory "that is classified by the North American Industry Classification System ("NAICS") codes specified by the USEPA's notice of final determination and availability of control techniques guidelines to be affected by the auto and light-duty truck coatings category." *Id*. at 24-25 (§3.2) (citation omitted).

Projected VOM Emissions

In the TSD for its proposed Group IV regulations, the Agency reported that the single subject source, Ford Motor Company in Cook County, included the following affected coating operations: topcoat operations, prime coat operations, sealer application, dip coating application, and a final repair coating line. TSD Group IV at 25 (§3.2). The Agency stated that all of these operations exceed the CTG's applicability threshold of 15 pounds of VOM emissions per day. *Id*. The Agency stated that this source emitted approximately 466 tons of VOM from affected coating lines in 2007. *Id*.

Miscellaneous Industrial Adhesives

Description of Potentially Affected Sources

In the TSD for its proposed Group IV regulations, the Agency stated that "[t]he miscellaneous industrial adhesives category includes adhesives and adhesive primers at manufacturing and repair facilities with adhesive application operations." TSD Group IV at 30 (§4.1). The Agency emphasized, however, that "[t]he category does not include adhesives that have been addressed by earlier CTGs." *Id*.

The Agency reported that these "[m]iscellaneous industrial adhesives are used for joining surfaces in assembly and construction of a large variety of products." TSD Group IV at 30. The Agency argued that, compared with other fastening methods, "[a]dhesives allow for faster assembly speeds, less labor input, and more ability for joining dissimilar materials." *Id*.

The Agency indicated that, while "there are a wide variety of adhesives formulated from a multitude of synthetic and natural raw materials, all adhesives can be generally classified as solution/waterborne, solvent-borne, solventless or solid (*e.g.*, hot melt adhesives), pressure sensitive, hot-melt, or reactive (*e.g.*, epoxy adhesives and ultraviolet-curable adhesives)." *Id*. The Agency also indicated that these "[a]dhesives can also be generally classified according to whether they are structural or nonstructural. Structural adhesives are commonly used on industrial assembly processes and are designed to maintain a product's structural integrity." *Id*. The Agency states that industrial adhesives can be applied by methods including "air atomized spray, electrostatic spray, high volume/low pressure (HVLP) spray, dip coating, flow coating, brush or roll coating, electrocoating, and hand application." *Id*.

The Agency reported that "VOM emissions from miscellaneous industrial adhesives are generally due to evaporation of solvents during application of the adhesive, drying and curing of the adhesive, and in cleaning operations." TSD Group IV at 30. The Agency elaborated that "[t]he majority of emissions occurs during the application and drying/curing of the adhesives." *Id*.

The Agency stated that it relied upon USEPA's estimate of the number of sources affected nationally by the proposed regulations to determine the number of Illinois sources "potentially affected by the proposed regulation." TSD Group IV at 35 (§4.6). According to the Agency, the CTG lists 180 sources in this category in nonattainment areas nationally with 17 in Illinois nonattainment areas. *Id*. at 35-36. The Agency reported that 12 of those 17 operated in 2007. *Id*.; *see id*. at 36 (Table 4.2).

Projected VOM Emissions

In the TSD for its proposed Group IV regulations, the Agency noted that "Illinois emission inventory data is not adequately specific to determine what portion of a source's emissions are due to industrial adhesives." TSD Group IV at 31 (§4.2). The Agency claimed that "it is difficult to determine the total VOM emissions directly related to the category at any given source." *Id*. The Agency determined, however, that there are 12 potentially affected

sources in Illinois NAAs and that they "emitted an estimated total of 120 tons of VOM in 2007." *Id*.

The Agency claimed that data regarding emission reductions from the proposed regulation are "uncertain." TSD Group IV at 31. The Agency stated that it must nonetheless revise Illinois' SIP "to include RACT for VOM sources covered by a CTG issued by USEPA after November 15, 1990, and before the area's date of attainment." *Id*. The Agency stated that the CTG for this category recommends controls that constitute RACT for affected adhesives. *Id*. The Agency further stated that its proposed regulations "are consistent with the CTG's recommendations." *Id*.

Fiberglass Boat Manufacturing Materials

Description of Potentially Affected Sources

In the TSD for its proposed Group IV regulations, the Agency stated that "[t]he CTG addressing fiberglass boat manufacturing materials applies to sources manufacturing fiberglass hulls or decks for boats, or sources that construct molds for the manufacture of fiberglass boat hulls or decks." TSD Group IV at 37 (§5.1). The Agency further stated that "[t]he CTG does not apply to sources solely manufacturing boat parts." *Id*. The Agency indicated that, if a source manufactures fiberglass boat hulls and decks, [then] the manufacture of all fiberglass boat parts at the source is covered by the CTG." *Id*. The Agency stated that "[e]missions of VOM from fiberglass boat manufacture occurs from the use of gel coats and resins applied to fiberglass in the manufacturing process and from material used to clean application equipment used in the process." *Id.*

Projected VOM Emissions

In the TSD for its proposed Group IV regulations, the Agency stated that "there are currently no sources in Illinois that will be affected by the proposed regulation of this source category." TSD Group IV at 43 (§5.4). The Agency stated that it assumes "that any source that intended to commence operation of a source in this category in an Illinois non-attainment area would necessarily consider the proposed regulation in the planning of source operations. . . ." *Id*.

TECHNICAL FEASIBILITY AND ECONOMIC REASONABLENESS

The Agency indicated in its Statement of Reasons that "[t]he technology for controlling VOM emissions from Group II and Group IV product categories is both technically feasible and economically reasonable." SR at 8. The Agency states that the TSDs filed in R10-8 and R10-20, which it had incorporated by reference into this rulemaking, "included a thorough discussion of the control techniques available to subject sources." *Id*.; *see* TSD Group II, TSD Group IV.

Technical Feasibility

The Agency claims that it is technically feasible to control VOM emissions from Group II and Group IV product categories. SR at 8. The Board addresses the record with regard to technical feasibility on a category-by-category basis on the following subsections.

Miscellaneous Metal and Plastic Parts Coatings

The CTG for miscellaneous metal and plastic parts coating provided three emission control options and recommended various work practices. TSD Group IV at 9 (§2.3). The TSD argued that "[t]he three options for control detailed in the CTG are intended to provide a measure of flexibility in compliance," and the Agency included all three options in its proposal. *Id*. at 10.

The TSD stated that the Agency "relied upon the CTG to determine the technical feasibility of the proposed VOM limits." TSD Group IV at 10. The TSD noted that "USEPA based the limits and practices on regulations achieving the same level of emission reduction in California, and specifically in the South Coast Air Quality Management District" (SCAQMD). TSD at 10. The Agency argued that, because sources in other regions comply with these limits and because there is some flexibility in complying, "the limits in the proposed regulation are technically feasible." *Id*.

In his testimony pre-filed on behalf of the ACA, Mr. Sell argued that VOM limits applicable to certain pleasure craft surface coatings "do not represent RACT." Sell Test. at 1; *see* Townsend Test. at 2. He indicates that the SCAQMD limits were recognized at the time of their adoption as "technology-forcing." Sell Test. at 1. He adds that SCAQMD has amended its regulations on the basis that "the hoped for technology had not developed. . . . " *Id*. at 2. Mr. Townsend's testimony stated that the SCAQMD regulations and the CTG include compliance deadlines that "do not provide sufficient time for the coatings manufacturers to formulate products that comply with the restrictive VOC limits, while also meeting the technical performance and aesthetic requirements of pleasure craft manufacturers and owners." Townsend Test. at 3, 4; *see* Tr.2 at 9-10, 15. Mr. Sell also states that SCAQMD adopted regulations "before the ban on TBT containing antifouling coatings and thus failed to include a coatings category that is designed to contain their release -- an 'Antifoulant Sealer/Tie Coating.'" Sell Test. at 2; *see* Townsend Test. at 3-4; Tr.2 at 14. He further argues that the draft CTG did not include pleasure craft coating limitations, which "surfaced for industry's review in the final CTG." *Id*.; *see* Townsend Test at 2; Tr.2 at 8-9. He stated that this procedure prevented the ACA from working with the USEPA on the VOM limitations before they appeared in the final CTG. Sell Test. at 3; *see* Townsend Test. at 2; Tr. 2 at 9, 17.

Mr. Sell states that industry has provided USEPA with data on current pleasure craft coatings for development of a National Emission Standards for Hazardous Air Pollutants (NESHAP). Sell Test. at 3; *see* Townsend Test. at 5; Tr.2 at 16. He argues that the prior development of a more stringent NESHAP applicable nationally may have reduced or even obviated the need for a less stringent RACT standard applicable in nonattainment areas. Sell Test. at 4. He suggests that, if USEPA had first developed the NESHAP, it would have seen that

the VOM limitations for pleasure craft coatings "are not available or technologically achievable and thus cannot be considered current RACT." *Id*.

Accordingly, the ACA proposed to revise a number of provisions pertaining to pleasure craft surface coating. The Board summarizes those proposed revisions below in its section-by-section summary of its second-notice proposal. *See infra* at __-__.

Use of Low VOM Coatings. The TSD noted the use of low-VOM coatings as one option for reducing VOM emissions. TSD Group IV at 10 (§2.3.1). The TSD further noted that the CTG provides "recommended application methods and specific limits on VOM content in coatings in terms of mass of VOM per volume of coating. These VOM limits do not include water and exempt compounds in the calculation of mass per volume VOM content." *Id*. at 10, 12-13 (Table 2.1). The CTG also recommended "one or more of the following application methods: electrostatic application, HVLP spray, flow coat, roller coat, dip coat (including electrodeposition), airless spray, air-assisted airless spray, or other coating application methods capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spraying." TSD Group IV at 17.

The TSD indicated that the CTG provides "exceptions for specified coatings or uses of those coatings that exempt them from either the VOM limits, the application methods, or both." TSD Group IV at 10. The TSD attributed these exemptions "to these coatings requiring a higher VOM content in order to meet performance specifications." *Id*. The Agency indicated that these exemptions are reflected in its proposal. *Id*. at 10-11.

Use of Low VOM Coatings and Add-On Controls. The TSD noted that "[a]n affected source may also choose to combine the use of low-VOM coatings with add-on controls." TSD Group IV at 14 (§2.3.2). This compliance option limits VOM emissions "in terms of mass of VOM emitted per volume of coatings solids applied." *Id*. The CTG intended this option "for use by facilities employing a combination of low-VOM coatings, specific application methods, and add-on controls. . . ." *Id*. The TSD listed "the equivalent VOM limits in terms of mass of VOM per volume of solids." *Id*. at 10, 14, 15-16 (Table 2.2). The CTG derived these limits from those based upon mass per volume of coating, "assuming a VOM density of 883 g/L." *Id*. at 14.

The CTG also recommended "one or more of the following application methods: electrostatic application, HVLP spray, flow coat, roller coat, dip coat (including electrodeposition), airless spray, air-assisted airless spray, or other coating application methods capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spraying." TSD Group IV at 17.

90% Capture and Control Efficiency. The TSD noted that, instead of using low-VOM coatings, "a source may opt to install and operate an add-on capture and control system that provides an overall control efficiency of at least 90%." TSD Group IV at 17 (§2.3.3). The TSD expected this option to achieve VOM emissions reductions "that are equal to or greater than the limits" under the two preceding compliance options. *Id*. Sources complying through this option

need not meet VOM content limits described above or employ recommended application methods. *Id*.

Work Practices. In addition to VOM content and emission limits, the CTG recommended work practices for these operations. TSD Group IV at 19 (§2.5). The CTG stated that "[t]he work practices address coating activities and cleaning activities, and are intended to further reduce VOM emissions from the source category." *Id*. The TSD indicated that "[t]he proposed regulation includes the recommended work practices from the CTG in their entirety." *Id*. Specifically, the CTG recommended work practices for coating-related activities including the following:

> (1) store all VOM-containing coatings, thinners, and coating-related waste materials in closed containers; (2) ensure that mixing and storage containers used for VOM-containing coatings, thinners, and coating-related waste materials are kept closed at all times except when depositing or removing those materials; (3) minimize spills of VOM-containing coatings, thinners, and coating-related waste materials; and (4) convey VOM-containing coatings, thinners, and coating-related waste materials from one location to another in closed containers or pipes. *Id*.

The CTG also recommended work practices for cleaning materials including the following:

> (1) store all VOM-containing cleaning materials and used shop towels in closed containers; (2) ensure that storage containers used for VOM-containing cleaning materials are kept closed at all times except when depositing or removing those materials; (3) minimize spills of VOM containing cleaning materials; (4) convey VOM-containing cleaning materials from one location to another in closed containers of pipes; and (5) minimize VOM emission from cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers. *Id*.

Industrial Cleaning Solvents

In the TSD for its proposed Group II regulations, the Agency noted the CTG's recommendation that sources emitting more than 15 pounds per day of VOM through industrial cleaning comply with various requirements. TSD Group II at 10 (§3.4) (citation omitted); *see* 35 Ill. Adm. Code 218.187, 219.187. The Agency stated that the various cleaning activities "use a multitude of different solvents with different styles of applications." TSD Group II at 10. The Agency proposed regulations covering "a wide range of products that remove contaminants from parts, products, tools, machinery, and other work production areas." *Id*. The Agency stressed work practices, solvent substitution, and controls as the chief techniques for reducing VOM emissions from this category. *Id*. at 10-11.

Work Practices. The Agency indicated that solvent management practices can reduce VOM emissions. TSD Group II at 10. The Agency stated that these practices "include keeping solvent containers and used applicators covered; properly storing and disposing of spent solvents

and used cleaning rags; minimizing air circulation around all cleaning operations; and implementing equipment practices that reduce emission, *e.g.*, leak detection and repair practices." *Id*.; *see* 35 Ill. Adm. Code 218.187, 219.187.

VOM Content Limits. The Agency indicated that substitution of low-VOM or no-VOM solvents can reduce emissions. Group II TSD at 10. The Agency notes the CTG's recommendation of "a content limit of 50 grams VOM per liter (0.42 lb/gal) of cleaning material for those industries that are not already covered, or to be covered, by a CTG." *Id*. The Agency also stated that, as a result of discussions with industry, other states, and USEPA, it proposed to add additional "exemptions and higher VOM content limits for certain specific cleaning activities." *Id*. at 10-11; *see* 35 Ill. Adm. Code 218.187(b)(1), 219.187(b)(1).

Alternate Vapor Pressure Limit. The Agency noted that the CTG recommends the use of low vapor pressure solvents because "the slower evaporation reduces the amount of VOM released into the atmosphere." TSD Group II at 11. The Agency stated that its proposal reflected the CTG's recommended limit of 8 mm Hg at 20 degrees Celsius in place of 50 grams of VOM per liter of cleaning material. *Id*.; *see* 35 Ill. Adm. Code 218.187(b)(2), 219.187(b)(2).

Alternate Control. The Agency stated that add-on controls, equipment modification, and changing cleaning methods all can reduce VOM emissions. TSD Group II at 11. The Agency further stated that "[t]he CTG recommends an overall control efficiency of 85 percent reduction in emissions of VOM, which is reflected in the proposed rule." *Id*.; *see* 35 Ill. Adm. Code 218.187(b)(3), 219.187(b)(3).

Exclusions. The Agency stated that the CTG proposes to exclude "certain categories from the cleaning regulations, as these categories already have or will have their own recommended work practices and limitations." TSD Group II. at 11. The Agency further stated that

> [t]hese categories include coating operations for aerospace, wood furniture, flat wood paneling, large appliance, metal furniture, plastic parts, paper film and foil, miscellaneous metal parts, auto and light-duty truck assembly, and shipbuilding and repair; flexible packaging printing materials; lithographic printing materials; letterpress printing materials; fiberglass boat manufacturing materials; and miscellaneous industrial adhesives." *Id*.; *see* 35 Ill. Adm. Code 218.187(a)(2)(B), 219.187(a)(2)(B).

The Agency also stated that both the CTG and industry groups have suggested "[o]ther categories with specific exemptions." TSD Group II at 11. These categories include

> electrical and electronic components; precision optics; numismatic dies; stripping of cured inks, coatings, and adhesives; cleaning of resin, coating, ink, and adhesive mixing, molding, and application equipment; research and development laboratories; medical device or pharmaceutical manufacturing; and performance or quality assurance testing of coatings, inks, or adhesives. *Id*. Further exclusion recommendation include cleaning of paper-based gaskets and clutch assemblies;

> cleaning of adhesive application equipment used for thin metal laminating; touch-up cleaning on circuit boards; cleaning of coating and adhesive application processes utilized to manufacture transdermal drug delivery product using less than three gallons per day of ethyl acetate; cleaning of application equipment used to apply coatings on satellites and radiation effect coatings; cleaning of application equipment used to apply solvent-borne fluoropolymer coatings; cleaning of ultraviolet or electron beam adhesive application; and cleaning of electrical cables. *Id*. at 11-12; *see* 35 Ill. Adm. Code 218.187(a)(2)(C), 219.187(a)(2)(C).

Flat Wood Paneling Coating Lines

In the TSD for its proposed Group II regulations, the Agency stated that the CTG refers to three options for controlling VOM emissions from flat wood paneling coating operations: reformulation, add-on controls, or work practices. TSD Group II at 12 (§3.5).

Material Reformulation. The Agency stated that reformulation involves replacing high-VOM coatings with low-VOM coatings. TSD Group II at 12. Citing the CTG, the Agency argued that "water-based coatings 'are generally available' and 'can lower [VOM] emissions greatly, and most coatings operations are capable of converting to waterborne coatings.'" *Id*. (citation omitted). The Agency further argued that sources can reformulate by using "coatings that emit almost zero VOM and are cured through the use of ultraviolet light or an electron beam." *Id*. The Agency acknowledged that "[t]he use of such systems are more limited than those for waterbased coatings, but they are available." *Id*.; *see* 35 Ill. Adm. Code 218.204(p), 219.204(o).

Add-On Controls. The Agency claimed that, when a source uses high-VOM coatings, it can use add-on controls. TSD Group II at 12. Citing its experience with a range of coating operations, the Agency agreed with the CTG that "an overall control and capture efficiency of 90 percent is a widely-accepted and readily available technique." *Id*. (citation omitted); *see* 35 Ill. Adm. Code 218.207, 219.207.

Work Practices. The Agency noted that

> [t]he CTG recommends specific work practice requirements for flat wood paneling coating operations: storing all [VOM] coatings, thinners, and cleaning materials in closed containers, minimizing spills of [VOM] containing coatings, thinners, cleaning up spills immediately, conveying any coatings, thinners, and cleaning materials in closed containers or pipes, closing mixing vessels which contain [VOM] coatings and other materials except when specifically in use, and minimizing emissions of [VOM] during cleaning of storage, mixing, and conveying equipment." TSD Group II at 12 (citation omitted); *see* 35 Ill. Adm. Code 218.217, 219.217.

The Agency stated that Illinois has already adopted some of these requirements through regulations for wood furniture coaters. *Id*. The Agency further stated that its proposal applies those requirements and other specific requirements to flat wood paneling coaters. *Id*.

Flexible Packaging Printing Lines

In the TSD for its proposed Group II regulations, the Agency stated that VOM emissions from flexible package printing operations stem largely from evaporation of inks, coatings, and adhesives and from the use of cleaning materials. TSD Group II at 9 (§3.3). The Agency argued that these emissions can be controlled through material reformulation, add-on controls, and work practices. *Id*. at 9-10.

Material Reformulation. The Agency state that this control substitutes high-VOM inks, coatings, and adhesives with low-VOM versions of those materials. TSD Group II at 9. Citing the CTG, the Agency argued that "such reformulation 'has been achieved by many facilities in the packaging rotogravure and flexographic printing industries.'" *Id*. (citation omitted). The Agency acknowledged that "[w]hether a particular facility is able to use such reformulated material depends upon their specific activities, including the substrate(s) being used." *Id*.; *see* 35 Ill. Adm. Code 218.401, 219.401.

Add-On Controls. The Agency stated that all flexible packaging printers can use add-on controls. TSD Group II at 9. The Agency argued that "[t]he most common control devices used by these sources are thermal oxidizers, catalytic oxidizers, and carbon adsorbers, with adsorbers probably being the least-used of the three." *Id*. The Agency agreed with the CTG that "[t]oday, these control devices can achieve at least 95 percent control device efficiency." *Id*. (citation omitted); *see* 35 Ill. Adm. Code 218.401, 219.401.

The Agency also described capture systems, which collect air containing VOM "so it may be destroyed or reclaimed by the control device. . . ." TSD Group II at 9. The Agency noted that, "[w]hile new presses may be able to obtain as high as 100 percent capture if designed properly, older presses were not necessarily constructed with emissions capture in mind." *Id*. The Agency proposed a tiered approach to capture efficiency based on the construction date of the printing line and the control device. *Id*.; *see* 35 Ill. Adm. Code 218.401, 219.401.

Work Practices. The Agency noted the CTG's recommendation of "work practice requirements as the best means to control emissions from cleaning operations at flexible package printing sources." TSD Group II at 10. The Agency listed some of these practices: "keeping solvent containers closed except when filling, draining or conducting cleaning operations, keeping used shop towels in closed containers, and conveying cleaning materials from one location to another in closed containers or pipes." *Id*. (citation omitted); *see* 35 Ill. Adm. Code 218.401, 219.401.

Lithographic Printing Lines

In the TSD for its proposed Group II regulations, the Agency addressed three options for regulating VOM emissions from lithographic printing lines: add-on controls, fountain solution

reformulation and process modification, and material reformulation or substitution for cleaning solutions. TSD Group II at 7-8 (§3.1).

Add-On Controls. The Agency stated that add-on controls apply only to heatset web offset lithographic printing and not to non-heatset or sheet-fed lithographic printing. TSD Group II at 7; *see* 35 Ill. Adm. Code 218.407, 219.407. The Agency further stated that these add-on controls fall into two broad categories: combustion control devices "designed to destroy VOMs in the vent stream prior to atmospheric discharge" and recovery devices that "limit VOM emissions by recovering material for reuse." TSD Group II at 7. The Agency indicated that heatset web offset lithographic printers use three add-on controls: thermal afterburners, catalytic afterburners, and condenser filter systems. *Id*. The Agency's experience leads it to conclude "that the field is dominated by thermal and catalytic afterburners, which can often achieve 98 percent or greater VOM removal." *Id*. The Agency also reported that condenser filter systems now in use have been designed specifically for heatset web offset printers with efficiency as high as 97 percent removal, "with 90 percent being easily achievable for older systems." *Id*.

Fountain Solution Reformulation and Process Modifications. The Agency argued that "[a] significant portion of VOM emissions from lithographic printing can be ascribed to evaporation from fountain solutions." TSD Group II at 8. The Agency stated that substitutes reduce or replace alcohol in fountain solutions. *Id*. The Agency further stated that the substitutes have lower volatility and reduce emissions. *Id*.; *see* 35 Ill. Adm. Code 218.407, 219.407.

The Agency characterized process modifications as "changes in operational methods or equipment resulting in improved VOM control." TSD Group II at 8. The Agency named cooling fountain solution to minimize evaporation as one process modification that reduces VOM emissions. *Id*. The Agency claimed that the use of refrigerated circulators to cool fountain solution "has been shown to reduce consumption of alcohol in the solution by as much as 44 percent." *Id*. Although process modification may involve retrofitting or replacing existing equipment, the Agency did "not expect retrofitting or replacement to be an issue with this rulemaking." *Id*.; *see* 35 Ill. Adm. Code 218.407, 219.407.

Material Reformulation or Substitution for Cleaning Solutions. The Agency described two reformulations to reduce VOM emissions from cleaning solutions. First, sources can use solutions containing a smaller amount of VOM. TSD Group II at 8. Current Illinois regulations now limit these solutions to no more than 30 percent VOM by weight. *Id*.; *see* 35 Ill. Adm. Code 218.407(a)(4)(A)(i); 35 Ill. Adm. Code 219.407(a)(4)(A)(i). The Agency reported that, "[w]hile no problems with this limit have been reported to Agency personnel in Illinois, there have apparently been complaints on a national level." TSD Group II at 8. The Agency noted that "the CTG now recommends limiting such solutions to 70 percent VOM." *Id*. (citation omitted). The Agency proposed to apply "this higher limit for sources between 15 and 100 pounds per day (PPD), with the previous limit remaining in effect for larger sources." *Id*.; *see* 35 Ill. Adm. Code 218.407, 219.407.

Second, the Agency reported that sources can rely on cleaning solution with a low vapor pressure. TSD Group II at 8. Citing the CTG, the Agency stated that "[c]leaning solutions with

[VOM] composite vapor pressure less than 10 millimeters of mercury (mm Hg) at 20ºC have been used successfully by many printers for blanket washing and other cleaning activities. *Id.* (citation omitted). The Agency further stated that, before Illinois adopted its previous lithographic printing rules, USEPA determined that the use of such materials results in emission reductions comparable "to using cleaning materials that contain less than 30 weight percent VOM." *Id.* Because the Agency believes that sources now use these materials without difficulty, it proposed not to amend the limit but to apply it to smaller sources. *Id.*; *see* 35 Ill. Adm. Code 218.407, 219.407.

Letterpress Printing Lines

In the TSD for its proposed Group II regulations, the Agency stated that sources of VOM emissions from letterpress printing are similar to those for lithographic printing, except "that letterpress operations do not use a fountain solution." TSD Group II at 9. The Agency further stated that "letterpress printing presses are often operated at the same source as lithographic printing[,] and many of the control options for letterpress printing are the same as the control options for lithographic printing," particularly with regard to cleaning solutions." *Id.*

"Because letterpress operations have never been specifically regulated in Illinois before, the Agency is proposing to use the 70 percent VOM content limit for all subject letterpress units." TSD Group II at 9; *see* 35 Ill. Adm. Code 218.413, 219.413. The Agency indicated on the basis of communication with industry representatives "that Illinois does not currently contain any heatset web letterpress operations in either the Chicago or Metro-East NAA. . . ." TSD Group II at 9. The Agency argued, however, that "the regulation is necessary and technically feasible should a new such operation locate in one of the NAAs." *Id.*

Automobile and Light-Duty Truck Assembly Coatings

In the TSD for its proposed Group IV regulations, the Agency stated that it has relied on the CTG for this category "to determine the appropriate level of control and the feasibility of those measures." TSD Group IV at 25 (§3.3). The Agency further stated that the CTG intended "to provide recommendations for RACT control of the affected coating operations. . . ." *Id.* The Agency claimed that its proposed regulations in this category are consistent with the recommendations in the CTG. *Id.* The Agency recommended "VOM emission limits for coating operations; work practices for storage and handling of coatings, thinners, and waste materials; and work practices for handling and use of cleaning materials." TSD Group IV at 25. The Agency argued that the CTG reflects "current practices that the USEPA considers to be RACT, and were supplied to the USEPA by member and non-member companies of the Alliance of Automobile Manufacturers in 2008." *Id.*

Emission Limits. The Agency reported that VOM limits for automobile and light-duty truck coatings are listed by assembly coating process operations: electrodeposition primer (EDP), primer-surfacer, topcoat, final repair, and combined primer-surfacer and topcoat. TSD Group IV at 26 (Table 3.1); *see* 35 Ill. Adm. Code 218.204(a), 219.204(a). For EDP operations, the VOM emission limit is based on the solids turnover ratio (R_T). That ratio "is defined as the ratio of total volume of coating solids that is added to the EDP system in a calendar month

divided by the total design capacity of the EDP system." TSD Group IV at 26; *see* 35 Ill. Adm. Code 211.6065 (definition). The Agency also recommended limits "for a number of miscellaneous materials used in auto and light-duty truck assembly coating." *Id*. The following materials have a recommended VOM emission limit: glass bonding primer, adhesive, cavity wax, sealer, deadener, gasket/gasket sealing material, underbody coating, trunk interior coating, bed liner, weatherstrip adhesive, and lubricating wax/compound. *Id*. at 27 (Table 3.2); *see* 35 Ill. Adm. Code 218.204(a)(2)(F), 219.204(a)(2)(F).

Work Practices. In addition to VOM emission limits, the Agency recommended work practices for these operations. TSD Group IV at 28 (§3.5). The Agency stated that the recommended practices "address coating activities and cleaning activities, and are intended to further reduce VOM emissions from the source category." *Id*. The Agency indicated that "[t]he proposed regulation includes the recommended work practices from the USEPA CTG in their entirety." *Id*. Specifically, the CTG recommends the following work practices for coating-related and cleaning activities:

> (1) store all VOM-containing coatings, thinners, and coating-related waste materials in closed containers; (2) ensure that mixing and storage containers used for VOM-containing coatings, thinners, and coating-related waste materials are kept closed at all times, except when depositing or removing these materials; (3) minimize spills of VOM-containing coatings, thinners, and coating-related waste materials; (4) convey VOM-containing coatings, thinners, and coating-related waste materials from one location to another in closed containers or pipes; and (5) minimize VOM emissions from cleaning of storage, mixing, and conveying equipment. *Id*.; *see* 35 Ill. Adm. Code 218.219, 219.219.

The CTG also recommends development and implementation of "a work practice plan to ensure that VOM emissions are minimized from the following operations: vehicle body wiping; coating line purging; flushing of coating systems; cleaning of spray booth grates; cleaning of spray booth walls; cleaning of spray both equipment; cleaning external spray booth areas; and other housekeeping measures (*e.g.*, keeping solvent-laden rags in closed containers)." TSD Group IV at 28; *see* 35 Ill. Adm. Code 218.219(a)(6), 219.219(a)(6). The Agency states that, if a source has in place a work practices plan pursuant to specified federal authority, then the proposed regulations do not require a new one. *Id*. (citation omitted).

Miscellaneous Industrial Adhesives

The Agency stated that it relied on the CTG for this category "to determine the appropriate level of control and the feasibility of those measures." TSD Group IV at 31 (§4.3). The CTG based its recommendations in this category "upon rules currently in effect in California and the Ozone Transport Commission" jurisdictions. *Id*. at 32. The Agency stated that "USEPA believes these measures to be RACT, and the Illinois EPA concurs." *Id*.

Emission Limits. The Agency described pollution prevention and add-on control equipment as "[t]he two most common emission control techniques for reducing VOM emissions from miscellaneous industrial adhesives." TSD Group IV at 31.

> [P]ollution prevention measures involve the use of lower VOM adhesives, higher solids content adhesives, higher efficiency application methods, and work practices to reduce waste and minimize emissions during cleaning operations. Add-on controls for capture and control of VOM emissions are systems similar to those used for a variety of processes that generate VOM emissions, and involve capture and oxidation or recovery. *Id*. at 31-32.

The Agency listed the VOM emission limits recommended in the CTG and incorporated into the Agency's proposal. *Id*. at 33 (Table 4.1); *see* 35 Ill. Adm. Code 218.901(b), 219.901(b).

The Agency argued that, in order to provide sources with flexibility in complying, it followed the CTG in recommending three control options. TSD at Group IV at 32; *see* 35 Ill. Adm. Code 218.901, 219.901. The first "involves the use of low VOM adhesives and adhesive primers." TSD Group IV at 32. The second relies on "use of a combination of low VOM adhesives and primers and add-on controls to achieve emissions equivalent to the VOM content limits of the first option." *Id*. The third allows a source to "employ add-on controls to achieve a control efficiency of 85% as an alternative to the prescribed emission limits of the first control option." *Id*. The Agency stated that "[t]his 85% control efficiency criteria is expected to achieve emission reductions of VOM that are equal to or greater than the prescribed emission limits for the industrial adhesives." *Id*.

Application Method Limitations and Work Practice Requirements. The Agency indicated that, in addition to emission limits recommended by the CTG and incorporated into the proposal, the it also recommended work practices to reduce VOM emissions from this category. TSD Group IV at 34. The Agency reported that its proposal includes these recommended practices "in their entirety." *Id*. at 35. Specifically, the CTG recommended the following work practices regarding adhesives:

> (1) store all VOM-containing adhesives, adhesive primers, and process-related waste materials in closed containers; (2) ensure that mixing and storage containers used for VOM-containing adhesives, adhesive primers, and process-related waste materials are kept closed at all times, except when depositing or removing these materials; (3) minimize spills of VOM-containing adhesives, adhesive primers, and process-related waste materials; and (4) convey VOM-containing adhesives, adhesive primers, and process-related waste materials from one location to another in closed containers or pipes. *Id*. at 35; *see* 35 Ill. Adm. Code 218.901(f), 219.901(f).

The CTG also recommended the following work practices with regard to cleaning materials:

> (1) store all VOM-containing cleaning materials and used shop towels in closed containers; (2) ensure that storage containers used for VOM-containing cleaning materials are kept closed at all times except when depositing or removing these materials; (3) minimize spills of VOM-containing cleaning materials; (4) convey VOM-containing cleaning materials from one location to another in closed

> containers or pipes; and (5) minimize VOM emission from cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers. TSD Group IV at 35; *see* 35 Ill. Adm. Code 218.901(f), 219.901(f).

Fiberglass Boat Manufacturing Materials

The Agency stated that the CTG recommends what it considers to be RACT for sources in the fiberglass boat manufacturing materials category. TSD Group IV at 37 (§5.2). The Agency stated that it concurs with USEPA's RACT determination for this category. *Id*. at 43 (§5.3). The Agency further stated that it "concurs with the determination that the recommendations of the CTG are technically feasible because these recommended control measures are merely based on controls currently in place at affected sources" as a result of a 2001 NESHAP. *Id*. The Agency also assumed "that any source that intended to commence operation of a source in this category in an Illinois non-attainment area would necessarily consider the proposed regulation in the planning of source operations, and that the proposed controls would be technically feasible for any new source." *Id*.

The Agency noted that control measures for this category "are intended to reduce emissions of monomer VOM." TSD Group IV at 37. The Agency indicated that "[s]tyrene and methyl methacrylate ("MMA") are the primary monomer VOMs used in gel coats and resins for the manufacture of fiberglass boats." *Id*. at 38. The Agency cited the CTG to state that

> [a] monomer is a volatile organic compound that partially combines with itself, or other similar compounds, by a cross-linking reaction to become a part of the cured resin. A fraction of each monomer compound evaporates during resin and gel coat application and curing. Not all of the styrene and MMA evaporate, because a majority of these compounds are bound in the cross-linking reaction between polymer molecules in the hardened resin or gel coat and become part of the finished product. *Id*. at 37-38.

The Agency stated that "[n]on-monomer VOM is generally less than 5% of a resin or gel coat formulation." *Id*. at 38. Although the Agency's proposal did not directly limit non-monomer VOM, "if a product is found to contain greater than 5% non-monomer VOM, the percentage exceeding 5% will be added to the monomer VOM content of a product of the purposes of compliance." *Id*.

The Agency noted that the CTG recommended and it had proposed three control options in order to provide sources with compliance flexibility. TSD Group IV at 37. The Agency claimed that these options are similar to those for other categories, including low-VOM materials, add-on controls, an emissions averaging option, and recommended work practices. *Id*. at 37, 38. The Agency further claimed that "[o]ther control options are specific to this category and include the use of vapor suppressed resins and gel coats, the use of non-atomizing resin application, and various closed molding operations." *Id*. at 38.

Use of Low Monomer VOM Manufacturing Methods. The Agency noted that the "CTG recommends a compliance option for sources using low monomer VOM resins and gel coats." TSD Group IV at 38 (§5.2.1). The Agency indicated that "[a] source may meet the requirements by using low monomer VOM products that meet the emission limits given for each material used in a given operation, or the VOM content for all materials used on a covered operation that can be averaged on a weight-adjusted basis." *Id*. The Agency listed these VOM content limits, which are "based upon the material type and the application method used." *Id*. at 38; *see id*. at 39 (Table 5.1 Compliant Materials Monomer VOM Content Recommendations for Open Molding Resin and Gel Coat); *see* 35 Ill. Adm. Code 218.891(b)(1), 219.891(b)(1).

The Agency stated that the recommended VOM content limits "would be considered met if all materials of a certain type meet the applicable monomer VOM content limit for a specific application method on a weighted-average basis." TSD Group IV at 38. The Agency provided an Equation 1 that sources use "to determine weighted-average monomer VOM content for a particular open molding resin or gel coat material." *Id*.; *see* 35 Ill. Adm. Code 218.891(b)(2), 219.891(b)(2). The Agency further provided that "[t]he weighted average monomer VOM content would be determined based on a 12-month rolling average." TSD Group IV at 38.

Emissions Averaging Option. The Agency noted that the CTG recommends a second compliance option, which averages "the monomer VOM emissions for all operations that a source chooses to include in an averaging group." TSD Group IV at 39; *see* 35 Ill. Adm. Code 218.891(c), 219.891(c). The Agency indicated that operations outside the averaging group could meet VOM emission limits either through the use of low monomer VOM materials or through add-on controls. TSD Group IV at 39.

The Agency provided an Equation 2, which determines a source-specific monomer VOM limit for the operations a source includes in the averaging option. TSD Group IV at 39-40; *see* 35 Ill. Adm. Code 218.891(c)(1), 219.891(c)(1). The Agency stated that, "[a]fter a monomer VOM limit for a source's averaged operations has been determined using Equation 2, an emission average is determined on a 12 month rolling-average basis and calculated at the end of each month." TSD Group IV at 40.

The Agency also provided an Equation 3. TSD Group IV at 41; *see* 35 Ill. Adm. Code 218.891(c)(2), 219.891(c)(2). The Agency stated that, "[a]t the end of the first 12 month period, and at the end of each subsequent month, the monomer VOM emissions from the source's averaged operations are calculated, using Equation 3, to determine whether these emissions exceed the source's limit." TSD Group IV at 40. The Agency also provided an Equation 4. *Id*. at 41-42; *see* 35 Ill. Adm. Code 218.891(c)(3), 219.891(c)(3). For each operation averaged through Equation 3, Equation 4 calculates the weighted-average monomer VOM emission rate for the previous 12-month period for each open molding resin and gel coat operations included in the average. TSD Group IV at 41. The Agency also provided a table listing formulas to use in calculating monomer VOM emission rates for resins and gel coats for Equation 4. *Id*. at 42 (Table 5.2 Monomer VOM Emission Rate Formulas for Open Molding Operations); *see* 35 Ill. Adm. Code 218.891(c)(4), 219.891(c)(4).

Add-On Controls. The Agency stated that, if an operation requires use of materials that do not meet VOM limits, "a source may opt to use add-on control equipment to reduce VOM emissions to below the limit determined by Equation 2." TSD Group IV at 42 (§5.2.3); *see id*. at 40 (Equation 2); *see also* 35 Ill. Adm. Code 218.891(d), 219.891(d). The Agency provided that "[a] source would be considered to be complaint if measured emissions at the outlet of a control device were less than the applicable emission limit for that operation." TSD Group IV at 42-43.

Work Practice Requirements. The Agency stated that the CTG "also recommends work practices for fiberglass boat manufacturing materials." TSD Group IV at 43. The Agency's proposal included these recommendations "in their entirety." *Id*. at 44. The CTG addresses resin and gel coat mixing containers by recommending that "all containers with a capacity of 55 gallons or greater should have a cover with no visible gaps in place at all times. This does not apply to containers smaller than 55 gallons, or when material is being manually added or removed from a container" *Id*. at 43-44; *see* 35 Ill. Adm. Code 218.891(h), 219.891(h). The CTG also "recommends the use of low-VOM and low vapor pressure cleaning materials." TSD Group IV at 44. Specifically, the CTG recommends "that VOM cleaning solvents should contain no more than 5% VOM by weight, or have a composite vapor pressure of no more than 0.50 mm Hg at 68º F." *Id*.; *see* 35 Ill. Adm. Code 218.891(g), 219.891(g).

Agency Summary of Technical Feasibility

The Agency concurs with the USEPA that the proposed amendments are all technically feasible. Bloomberg Test. at 3; *see* Mahajan Test. at 3.

Economic Reasonableness and Cost Effectiveness

In the Statement of Reasons, the Agency claimed that it had "included a thorough discussion of the control techniques available to subject sources in the TSDs filed in the R10-8 and R01-20 rulemakings, incorporated by reference into this rulemaking." SR at 8; *see* TSD Group II, TSD Group IV. The Agency claims that the technology to control VOM emissions from Group II and Group IV product categories is economically reasonable. SR at 8. The Board addresses the record with regard to economic reasonableness on a category-by-category basis in the following subsections.

Miscellaneous Metal and Plastic Parts Coatings

The Agency stated that it "relied upon the cost analysis conducted by the USEPA for the CTGs for miscellaneous metal and plastic parts coatings to determine that the proposed regulations are cost effective." TSD Group IV at 17 (§2.4). The TSD first noted that USEPA used the 2002 National Emissions Inventory database to estimate that there are 1,269 facilities in the ozone nonattainment areas nationwide emitting at or above the recommended 15 pounds per day applicability threshold. *Id*. at 18. These 1,269 facilities emitted an estimated total of 22,108 tons of VOM per year. *Id*. "The USEPA also estimated the average cost of compliance with the CTGs for this emission category to be $10,500 per source, and a cost effectiveness of $1,758 per ton of VOM reduced." *Id*. Based on USEPA estimates, the TSD projected that each affected

source on average would reduce VOM emissions by 5.97 tons annually, with "an estimated reduction of 662 tons of VOM in Illinois NAAs." *Id.*

The TSD further noted that, of the 1,269 potentially affected sources nationwide, 155 are situated in Illinois nonattainment areas, and 111 of those "remained in operation in 2007." TSD Group IV at 18. Although the TSD noted that "the source emission data is generally not specific enough to determine whether a source is emitting 15 pounds of VOM per day specifically from miscellaneous metal and plastic parts coatings," the Agency conservatively included all 111 potentially affected sources in its cost estimate. *Id*. Based on USEPA's $10,500 per source average cost of compliance, the Agency expected statewide compliance costs to be approximately $1,165,500. *Id*. Although the Agency believes that this amount "is almost certainly an over-estimate of potential costs," it accepted USEPA's estimated cost effectiveness of $1,758 per ton as "reasonable for control of VOM." *Id*.

Industrial Cleaning Solvents

In the TSD for its proposed Group II regulations, the Agency cited USEPA's estimate that the regulations would affect 130 Illinois sources with baseline VOM emissions of 2528 tons per year. TSD Group II at 14 (§4.4) (referring to 2002 National Emissions Inventory database). The Agency also noted USEPA's determination that "the cost effectiveness of meeting the 50 grams of VOM per liter of cleaning material limit for a parts cleaner at $1664/ton based on a study provided by the California Bay Area Air Quality Management District." *Id*. The Agency indicated that sources switching from high-VOM content solvents to low-VOM content solvents may realize savings of $1325/ton because of lower disposal costs. *Id*.

Flat Wood Paneling Coating Lines

In the TSD for its proposed Group II regulations, the Agency noted that USEPA relied upon data from the South Coast Air Quality Management District of California to estimate cost effectiveness "of between $1,900 and $2,600 per ton of VOM reduced (in 2005 dollars)." TSD Group II at 14 (§4.5). The Agency also cited the CTG to indicate that Illinois sources subject to the proposed rule could incur costs to make their coatings compliant. *Id*. at 14-15 (citation omitted). The Agency concluded that "the only significant cost is expected to be reformulation of coatings." *Id*. at 15.

Flexible Packaging Printing Lines

In the TSD for its proposed Group II regulations, the Agency cited the CTG to claim that "[m]any facilities located in ozone nonattainment areas are already meeting the control levels being recommended in this CTG." TSD Group II at 14 (§4.3) (citation omitted). The Agency argued that

> this proposal does not expand the number of sources that will be subject to the ink or control device portions of the flexible packaging rotogravure and flexographic printing regulations. It is expected that those sources currently able to use compliant inks and coatings will similarly be able to make use of inks and

> coatings meeting the new compliance limit, while those using add-on control devices will continue to do so as well. As such, the Illinois EPA expects that there will not be any additional add-on control costs for subject facilities. *Id*.

The Agency cited the CTG to state that sources installing add-on control devices will face costs that vary based on operating factors. *Id*. The Agency cited the CTG to estimate that "'a press exhausting approximately 5,800 cubic feet per minute, operating 2000 hours per year, and achieving 70 percent capture efficiency' would have a cost of between $1,300 and $2,800 per ton of VOM removed." *Id*. (citation omitted). The Agency argued that factors including a larger press or more operating hours would lower the cost per ton of VOM removed. *Id*.

Addressing the cleaning provisions of the proposed regulations, the Agency expected "minimal" costs for sources becoming subject to them. TSD Group II at 14. The Agency argued that "some sources may see an overall costs savings as less cleaning solution is necessary." *Id*.

Lithographic Printing Lines

In the TSD for its proposed Group II regulation, the Agency argued that "[t]he largest cost factor for lithographic printing -- add-on controls - is applicable to heatset web lithographic operations only. Since the Agency's proposal does not increase the number of sources for which this requirement is applicable, there is no foreseen additional cost due to add-on controls for existing sources." TSD Group II at 13 (§4.1). Although the Agency acknowledged that new sources will be subject to a higher control efficiency, it expects new control devices to achieve that efficiency. *Id*. The Agency argued that "no additional cost is expected for this reason either." *Id*.

The Agency stated that its proposal could result in fountain solution and cleaning solution reformulation costs for newly-regulated sources emitting between 15 and 100 pounds per day of VOM. TSD Group II at 13. The Agency reported that "USEPA estimated the cost for cleaning material reformulation at $855 per ton of VOM removed (in 2005 dollars)." *Id*. (citation omitted).

The Agency noted USEPA's projection of a costs saving with fountain solutions because of reduced alcohol use. TSD Group II at 13. The Agency indicated that, although USEPA has not specifically estimated the amount of these savings, it noted that "the TSD for the Illinois lithographic printing rule in 1994 put this savings at $920 per ton. *Id*. The Agency explained that, "while alcohol substitutes are more expensive, the cost is reduced because they are used in lower quantities." *Id*. (citation omitted).

Letterpress Printing Lines

In the TSD for its proposed Group II regulations, the Agency cited the CTG to state that,

> [b]ecause of the similarities between offset lithographic printing and letterpress printing in terms of the nature of the processes at issue, the sources of [VOM] emissions and available control approaches, it is reasonable to assume that the

> cost-effectiveness estimates . . . for control of [VOM] from heatset inks and control of [VOM] from cleaning materials apply equally to the letterpress printing industry. TSD Group II at 13 (§4.2) (citation omitted).

The Agency acknowledged that, because Illinois does not now regulate heatset web letterpress printing operations, "the reasoning behind the zero cost estimate for heatset web lithographic printing" does not apply to letterpress printing. *Id*. The Agency noted the CTG's estimate of $2,010 per ton of VOM removed in 2005 dollars as the cost-effectiveness for this category. *Id*. However, the Agency expressed the belief that there are not now any heatset web letterpress operations in either of the Illinois NAAs. *Id*.

Automobile and Light-Duty Truck Assembly Coatings

The Agency noted that, in this source category, "[a]ffected sources have reduced VOM emissions from coating operations in response to the New Source Performance Standards ("NSPS"), the 2004 NESHAP for this category, and various State rules." TSD Group IV at 27 (citation omitted). The Agency indicated that the CTG's recommendations "were derived from information supplied to the USEPA by the Alliance of Automobile Manufacturers, and reflect measures currently being implemented at affected sources." *Id*. In addition, the Agency projected "that the additional work practices recommended in the CTG will result in a net cost savings to sources, as implementing these work practices reduces the amount of coating and cleaning materials used." *Id*. Accordingly, the Agency stated that "[t]he USEPA estimates that there will be no additional cost for implementation of the control techniques guidelines for auto and light-duty truck assembly coating." *Id*.

Miscellaneous Industrial Adhesives

The Agency stated that it "relied upon the cost analysis conducted by the USEPA for the CTGs for the miscellaneous industrial adhesives and determined that the proposed regulations are cost effective." TSD Group IV at 34 (§4.4). The Agency first noted that USEPA used the 2002 National Emissions Inventory database to estimate that there are 180 sources in the ozone nonattainment areas nationwide emitting at or above the recommended 15 pounds per day applicability threshold, 12 of which are in Illinois. *Id*. Those 180 sources emit an estimated 4,881 tons of VOM per year. *Id*.

The Agency reported that, in order to develop cost estimates, USEPA relied upon a 1993 study performed by the Ventura County Air Pollution Control District. TSD Group IV at 34. That study assumed that sources would comply through VOM limits rather than add-on controls, "because sources in currently regulated areas have already implemented the use of these low VOM adhesives, and the reformulated products should be readily available today." *Id*. The study estimated that each affected sources would annually spend approximately $3,356 in 1997 to comply with the proposed regulations. *Id*. The Agency reported that USEPA thus "estimated the cost effectiveness on a per ton basis of $265 per ton of VOM reduced." *Id*. The Agency estimated that, with 12 affected sources in Illinois, "the total cost statewide for the proposed regulations will be approximately $40,272 annually." *Id*. The Agency "considers these figures for cost effectiveness and total statewide cost to be reasonable for control of VOM." *Id*.

Fiberglass Boat Manufacturing Materials

The Agency stated that, "[b]ecause there are currently no sources in Illinois that will be affected by the proposed regulation of this source category, there will be no associated economic impact for sources in Illinois." TSD Group IV at 43 (§5.4). The Agency cited the CTG to add that "USEPA expects sources in this category will incur little if any increased costs due to the control recommendations." *Id*. The Agency stated that it "concurs with the USEPA determination of the economic reasonableness of the measures." *Id*.

Agency Summary of Economic Reasonableness

In its Statement of Reasons, the Agency stated that "[t]he technology for controlling VOM emissions from Group II and Group IV product categories is both technically feasible and economically reasonable." SR at 8. The Agency further stated that it technical support documents submitted in the original rulemakings and incorporated by reference into this proceeding had "included a thorough discussion of the control techniques available to subject sources. . . ." *Id*.; *see* Reasonably Available Control Technology (RACT) for Volatile Organic Material Emissions from Group IV Consumer & Commercial Products: Proposed Amendments to 35 Il. Adm. Code 211, 218, and 219, R 10-20 (Mar. 8, 2010) (TSD); Reasonably Available Control Technology (RACT) for Volatile Organic Material Emissions from Group II Consumer & Commercial Products: Proposed Amendments to 35 Ill. Adm. Code 211, 218, and 219, R10-8 (July 9, 2009) (TSD).

The Agency concurs with the USEPA that the proposed amendments are all economically reasonable. Bloomberg Test. at 3; *see* Mahajan Test. at 3.

Board Discussion of Technical Feasibility and Economic Reasonableness

In a letter dated March 17, 2011, the Board requested that DCEO determine by April 6, 2011, whether it would conduct an economic impact study of the rulemaking proposal. *See* 415 ILCS 5/27(b) (2010). On May 23, 2011, the Board received from the DCEO Director a response dated May 5, 2011, and stating that, "[a]t this time, the Department is unable to undertake such an economic impact study. Therefore, I must respectfully decline your request."

Although the hearing officer during both hearings sought testimony on the Board's request to DCEO, no participant offered such testimony. Tr.1 at 23-24; Tr. 2 at 26-27.

In adopting VOM RACT regulations in docket R10-8, the Board based on its review of the record found that the regulations are both technically feasible and economically reasonable. Reasonably Available Control Technology (RACT) for Volatile Organic Material Emissions from Group II Consumer & Commercial Products: Proposed Amendments to 35 Ill. Adm. Code 211, 218, and 219, R10-8, slip op. at 17-18 (June 17, 2010). Similarly, in adopting regulation in docket R10-20, the Board based on its review of the record, and particularly in light of amendments proposed by the Agency, found that the regulations are both technically feasible and economically reasonable. Reasonably Available Control Technology (RACT) for Volatile

Organic Material Emissions from Group IV Consumer & Commercial Products: Proposed Amendments to 35 Il. Adm. Code 211, 218, and 219, R 10-20, slip op. at 23 (Sept. 2, 2010).

During the course of this proceeding, the Agency moved to amend its proposal. *See* Mot. Amend. The Board granted that motion above, adopting amendments including, but not limited to, a clarification of testing obligations for lithographic printing operations and a revision of a definition pertaining to pleasure craft coatings. *See id*. at 2-3, 5. The Board notes that the Agency proposed these amendments in response to regulated entities. *See id*. at 2, 5.

In addition, the Agency's post-hearing comments recommended additional amendments for the Board's consideration. These recommendations include, but are not limited to, the addition of emission adjustment factor for solvent cleaning operations and amended emission limits applicable to pleasure craft coating operations. *See* PC 4 at 5, 10-11. Again, the Board notes that these recommendations stem from requests by regulated entities. *See id*. at 5, 10-11. In all significant respects, the Agency's recommendations are reflected in the Board's order below.

Having reviewed the record in this proceeding, and particularly in light of amendments such as those described in the preceding paragraphs, the Board finds that the proposed regulations, amended according to the Agency's motion to amend and recommendations in the Agency's post-hearing comments, are economically reasonable and technically feasible. In the following section of its opinion, the Board summarizes the proposal on a section-by-section basis.

SECTION-BY-SECTION SUMMARY OF BOARD'S SECOND-NOTICE PROPOSAL

Part 211: Definitions and General Provisions

"All terms defined in 35 Ill. Adm. Code 201 which appear in 35 Ill. Adm. Code 211 through 219 have the definitions specified by 35 Ill. Adm. Code 201.102. Otherwise, the definitions specified in this Part shall apply." 35 Ill. Adm. Code 211.121; *see* 35 Ill. Adm. Code 201.102 (Definitions). In its original proposal, the Agency sought to amend one definition and add six new definitions in this Part. The Agency's motion to amend addressed one other definition. *See* Mot. Amend at 5. The Agency's post-hearing comment recommended the addition of one more definition to Part 211. PC 4 at 4-5. The following subsections of the opinion separately address proposed amendments to Part 211.

Section 211.493: Antifouling Sealer/Tie Coat

The Agency's original proposal did not include a definition of this term. *See* Prop. 211. In his testimony on behalf of ACA, Mr. Sell proposed a definition of "antifouling sealer/tie coat" providing that the term means "a coating applied over Biocidal antifouling coating for the purpose of preventing release of biocides into the environment and/or to promote adhesion between an antifouling and a primer or other antifoulings." Sell. Test. at 10; *see* Tr.2 at 25.

In its second post-hearing comments filed on June 1, 2011, the Agency notes ACA's request to adopt a definition of this term. PC 4 at 4. The Agency reports that USEPA has approved that proposed definition, and the Agency recommends adding that language to its proposal. *Id*. at 4-5. The Board concurs with the Agency, and the definition is included in its order below.

Section 211.2200: Extreme High-Gloss Coating

On September 2, 2010, the Board adopted a definition of "extreme high-gloss coating" providing in its entirety that the term means

> [f]or purposes of 35 Ill. Adm. Code 218.204(q)(1) regarding metal parts and products coatings, a coating that, when tested by ASTM D 523-80, incorporated by reference in Section 211.101 of this Part, shows a reflectance of 75 or more on a 60° meter;
>
> [f]or purposes of 35 Ill. Adm. Code 218.204(q)(5) regarding pleasure craft coatings, any coating that achieves at least 95 percent reflectance on a 60° meter when tested using ASTM D 523-89, incorporated by reference in Section 211.101 of this Part. 35 Ill. Adm. Code 211.2200; *see* Reasonably Available Control Technology (RACT) for Volatile Organic Material Emissions from Group IV Consumer & Commercial Products: Proposed Amendments to 35 Il. Adm. Code 211, 218, and 219, R 10-20 (Sept. 2, 2010).

The Agency's original proposal did not seek to amend this definition. *See* Prop. 211.

In its motion to amend, however, the Agency responded to a comment by an industry representative by recommending an amendment to this definition. Specifically, the Agency proposed that the second element of the definition provide as follows: "[f]or purposes of 35 Ill. Adm. Code 218.204(q)(5) regarding pleasure craft coatings, any coating that achieves greater than 90~~at least 95~~ percent reflectance on a 60° meter when tested using ASTM D 523-89, incorporated by reference in Section 211.101 of this Part." Mot. Amend at 5; *but see* Reasonably Available Control Technology (RACT) for Volatile Organic Material Emissions from Group IV Consumer & Commercial Products: Proposed Amendments to 35 Il. Adm. Code 211, 218, and 219, R 10-20, slip op. at 38 (Sept. 2, 2010) (declining to amend definition to 90 percent reflectance).

On behalf of the ACA, Mr. Sell stated that "application of topcoats is undertaken in a variety of environmental conditions that can have an effect on the final gloss level of the product at the point of application. To manage this variation it is suggested that the gloss level stated in the definition of the Extreme High Glass Topcoats category be lowered slightly. . . ." Sell Test. at 7. He proposed that, for purposes of pleasure craft coatings, the definition means "any coating which achieves *greater than 90* percent reflectance on a 60º meter when tested by ASTM Method D523-89." *Id*. (emphasis in original); *see* Townsend Test. at 5; Tr.2 at 15.

In its first post-hearing comment filed May 16, 2011, the Agency acknowledged ACA's proposed revision of this definition. PC 2 at 10; *see* Sell. Test. at 7. Noting that it had proposed the same revision in its motion to amend (*see* Mot. Amend at 5), the Agency stated that USEPA accepts the language offered by the ACA. PC 2 at 10; PC 4 at 3. The Board above granted the Agency's motion to amend, and the definition is included below in the Board's order.

Section 211.2358: Flat Wood Paneling

On June 17, 2010, the Board adopted a definition of "flat wood paneling" providing that the term "means natural finish hardwood plywood panels, hardwood panels with Class II finishes, tileboard, exterior siding, and printed interior panels made of hardwood, plywood, or thin particleboard." 35 Ill. Adm. Code 211.2358; *see* Reasonably Available Control Technology (RACT) for Volatile Organic Material Emissions from Group II Consumer & Commercial Products: Proposed Amendments to 35 Ill. Adm. Code 211, 218, and 219, R10-8, slip op. at 19, 69 (June 17, 2010); 34 Ill. Reg. 9090 (July 9, 2010).

The Agency sought to revise this definition "by correcting a punctuation error." SR at 9. Specifically, the Agency proposed that "'[f]lat wood paneling' means natural finish hardwood plywood panels, hardwood panels with Class II finishes, tileboard, exterior siding, and printed interior panels made of hardwood plywood or thin particleboard." Prop. 211 at 15; *see* USEPA Attachment at 2.

Section 211.2800: Hardwood Plywood

In its original proposal, the Agency sought to define the term "hardwood plywood," to which the existing definition of "flat wood paneling" refers. SR at 9; *see* 35 Ill. Adm. Code 211.2358. Specifically, the Agency proposed that "'hardwood plywood' means plywood whose surface layer is a veneer of hardwood." Prop. at 15; *see* USEPA Attachment at 2.

Section 211.3985: Natural Finish Hardwood Plywood Panel

In its original proposal, the Agency sought to define the term "natural finish hardwood plywood panel," to which the existing definition of "flat wood paneling" refers. SR at 9; *see* 35 Ill. Adm. Code 211.2358. Specifically, the Agency proposed that "'natural finish hardwood plywood panel' means a panel whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by filters and toners." Prop. at 15; *see* USEPA Attachment at 2.

Section 211.4460: Panel

In its original proposal, the Agency sought to define the term "panel," to which the existing definition of "flat wood paneling" refers. SR at 9; *see* 35 Ill. Adm. Code 211.2358. Specifically, the Agency proposed that "'panel' means a flat piece of wood or wood product usually rectangular and used inside homes and mobile homes for wall decorations." Prop. at 15; *see* USEPA Attachment at 2.

Section 211.5062: Pretreatment Wash Primer

The existing definition of "pretreatment wash primer" provides that the term means,

> [f]or purposes of Subparts HH of 35 Ill. Adm. Code 218 and 219, the first coating applied to bare metal if solventborne primers will be applied. This coating contains a minimum of 0.5 percent acid, by weight, is necessary to provide surface etching, and provides corrosion resistance and adhesion;
>
> For purposes of Subparts F of 35 Ill. Adm. Code 218 and 219, a coating that contains no more than 12 percent solids by weight and at least 0.50 percent acids by weight, is used to provide surface etching, and is applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings. 35 Ill. Adm. Code 211.5062; *see* Reasonably Available Control Technology (RACT) for Volatile Organic Material Emissions from Group IV Consumer & Commercial Products: Proposed Amendments to 35 Il. Adm. Code 211, 218, and 219, R10-20, slip op. at 52 (Sept. 2, 2010) (re-numbering section and adding definition applicable for purposes of Subpart F of Parts 218 and 219.)

In his pre-filed testimony on behalf of ACA, Mr. Sell argues that the definition derived from the SCAQMD regulations hinders the development of less toxic materials. *See* Sell Test. at 11. He states that products meeting the current definition contain known carcinogens because those materials have "excellent anti-corrosive properties." *Id*. Mr. Sell elaborated that the CTG generally defines controls in terms of product attributes. *Id*. He cites the definition of "high gloss topcoat," which refers specifically to the product attribute of gloss result. *Id*. In this definition, he claims that "the approach has been to define the category both in terms of the formulation parameters (acid content and solids content) and the performance attribute of the product (surface etching)." *Id*. He argues that this approach has "tied industry to the current, well established but very toxic zinc-based etch primers." *Id*. Mr. Sell concludes that the definition must be amended "*to allow for the introduction of safer, alternative etch systems which are not based on zinc tetroxy chromate*." *Id*. (emphasis in original).

Specifically, Mr. Sell proposed to amend this definition to provide that the term "means a coating which contains no more than 25 percent solids by weight, and at least 0.1 percent acids, by weight; is used to provide surface etching; and is applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings." Sell Test. at 11. He explained that increasing the "percent solids" would "allow for an increased quantity of safer (non-carcinogenic) replacement pigment[,] which is required for equivalent coating performance." *Id*. He continued that "[t]hese replacement formulations require a reduced level of acid to perform adequately[,] therefore it is also necessary to reduce the de minimus value associated to 'percent acids' from 0.5 to *0.1*." *Id*. (emphasis in original).

In its post-hearing comment, the Agency indicates that USEPA might accept ACA's proposed revision but "needs more information regarding how the revision will impact VOM emissions." PC 2 at 10; PC 4 at 3. The Agency adds that it "intends to work with the ACA and USEPA regarding this issue." PC 2 at 10; *see* Tr.2 at 21.

In its second post-hearing comments filed June 1, 2011, the Agency reports that the ACA supplied additional information regarding its proposed definition of this term. PC 4 at 4. The Agency reports that does not approve ACA's amendment, "[a]s there is already an existing definition for pretreatment wash primer, and the information provided by the ACA did not indicate what impact the proposed revision will have on VOM emission." *Id*. The Agency states that it "therefore recommends against revising the definition at this time." *Id*. The Board concurs with the Agency and declines to include this amendment in its order below.

Section 211.5140: Printed Interior Panel

In its original proposal, the Agency sought to define the term "printed interior panel," to which the existing definition of "flat wood paneling" refers. SR at 9; *see* 35 Ill. Adm. Code 211.2358. Specifically, the Agency proposed that "'printed interior panel' means a panel whose grain or natural surface is obscured by filters and basecoats upon which a simulated grain or decorative pattern is printed." Prop. at 15-16; *see* USEPA Attachment at 2.

Section 211.6587: Thin Particleboard

In its original proposal, the Agency sought to define the term "thin particleboard," to which the existing definition of "flat wood paneling" refers. SR at 9; *see* 35 Ill. Adm. Code 211.2358. Specifically, the Agency proposed that "'thin particleboard' is a manufactured board 1/4 inch or less in thickness made of individual wood particles which have been coated with a binder and formed into flat sheets by pressure." Prop. at 16; *see* USEPA Attachment at 2.

Section 211.6635: Tileboard

In its original proposal, the Agency sought to define the term "tileboard," to which the existing definition of "flat wood paneling" refers. SR at 9-10; *see* 35 Ill. Adm. Code 211.2358. Specifically, the Agency proposed that "'tileboard' means paneling that has a colored waterproof surface coating." Prop. at 16; *see* USEPA Attachment at 2.

Part 218: Organic Material Emission Standards and Limitations for the Chicago Area
Part 219: Organic Material Emission Standards and Limitations for the Metro East Area

Subpart A: General Provisions.

Section 218/219.105: Test Methods and Procedures.

Existing Section 218/219.105(e)(2) provides an equation for calculating the equivalent overall efficiency of a capture system and control device, which is applicable to owners or operators of coating lines complying with specified alternative emission limitations. 35 Ill. Adm. Code 218.105(e)(2), 219.105(e)(2). The Agency sought to amend this provision by adding references to Section 218.207(m) and (n) and Section 219.207(l) and (m) as alternative emission

limitations to which the equation applies. SR at 10; *see* Prop. 218 at 23, Prop. 219 at 22; *see* USEPA Attachment at 2. Sections 218.207(m) and 219.207(l) address flat wood paneling coating lines equipped with a capture system and control device. 35 Ill. Adm. Code 218.207(m), 219.207(l). Section 218.207(n) and 219.207(m) address miscellaneous metal parts and products coating lines equipped with a capture system and control device. 35 Ill. Adm. Code 218.207(n), 219.207(m). The Agency stated that these references "were mistakenly omitted from the Illinois EPA's prior rulemaking." SR at 10.

Subpart E: Solvent Cleaning.

Subpart E of Part 218/219 addresses solvent cleaning operations using VOM. 35 Ill. Adm. Code 218.181-187, 219.181-187.

Section 218/219.187: Other Industrial Solvent Cleaning Operations. Section 218/219.182 addresses cold cleaning degreasing operations, Section 218/219.183 addresses open top vapor degreasing operations, and Section 218/219.184 addresses conveyorized degreasing operations. 35 Ill. Adm. Code 218/219.182-184. On June 17, 2010, the Board adopted Section 218/219.187, which addresses other industrial solvent cleaning operations. 35 Ill. Adm. Code 218/219.187; *see* Reasonably Available Control Technology (RACT) for Volatile Organic Material Emissions from Group II Consumer & Commercial Products: Proposed Amendments to 35 Ill. Adm. Code 211, 218, and 219, R10-8, slip op. at 26-30, 77-89 (June 17, 2010); 34 Ill. Reg. 9111-25 (July 9, 2010).

Subsection (a). In subsection (a), which addresses applicability, the Agency proposed to extend the compliance deadline from April 1, 2011, to January 1, 2012. SR at 10; Prop. 218 at 27; Prop. 219 at 27.

Subsection (a)(1). In subsection (a)(1), the Agency proposed to change the applicability threshold from a daily standard of 15 pounds of VOM emissions to a monthly standard of 500 pounds. SR at 10; Prop. 218 at 27; Prop. 219 at 27, *see* USEPA Attachment at 1. In addition, the Agency suggested adding to this subsection language "specifying that emissions from cleaning operations identified in subsection (a)(2) are not included in the calculation to determine applicability." SR at 10; *see* Prop. 218 at 27; Prop. 219 at 27; USEPA Attachment at 1.

Subsection (a)(2). In subsection (a)(2), which provides various exemptions from the requirements of this section, the Agency proposed to add "two references to subsection (e) [of this Section] to specify that certain sources exempt from other requirements in this Section are also exempt from recordkeeping and reporting requirements." SR at 10; Prop. 218 at 27-28; Prop. 219 at 27; *see* 35 Ill. Adm. Code 218/219.187(e).

Subsection (a)(2)(A). In this provision establishing exemptions for specified cleaning operations, the Agency sought to delete from subsection (a)(2)(A)(iii) "exemptions for screen reclamation activities, in response to a USEPA comment that the screen printing emission limitation is sufficiently high to accommodate screen reclamation activities." SR at 10; Prop. 218 at 28; Prop. 219 at 27; *see* USEPA Attachment at 1.

Subsection (a)(2)(B). This existing provision establishes exemptions for cleaning operations within specified source categories. 35 Ill. Adm. Code 218.187(a)(2)(B), 219.187(a)(2)(B). During the first hearing, Mr. Alec Davis on behalf of IERG asked whether the Agency intended "to exclude emissions from cleaning operations associated with the source categories listed in Section 218.187(a)(2)(B) from being counted towards the 500 pounds per calendar month applicability threshold contained in Section 218.187(a)(1)?" Tr.1 at 12; *see* Prop. 218 at 27, Prop. 219 at 27 (subsections (a)(1)). Mr. Bloomberg responded "[y]es" and indicated that the Agency's proposal includes such language. Tr.1 at 12. In response to an additional question, Mr. Bloomberg clarified that facilities having only cleaning operations listed in subsection (a)(2)(B) would not have recordkeeping and reporting obligations under subsection (e) if the Agency's proposal is adopted. *Id*. at 13. Mr. Davis further asked that, "[i]f a facility has only cleaning operations associated with the source categories listed in Section 218.187(a)(2)(B), what are that facilities' obligations, if any, under the full Section 218.187?" *Id*. at 12. Mr. Bloomberg responded that, if the Board adopted the Agency's proposal, it would have "[n]one." *Id*. Mr. Davis also inquired about requirements applicable to non-exempt facilities that include cleaning operations exempt under subsection (a)(2)(B). *Id*. at 14. Mr. Bloomberg responded that the exempt operations would not trigger any additional requirements but recommended that facilities maintain records demonstrating eligibility for an exemption. *Id*.

Mr. Davis also addressed the issue of certification. Tr.1 at 14. Mr. Bloomberg indicated that fully exempt cleaning operations such as those under subsection (a)(2)(B) "don't need to send in another certification." *Id*. at 15. He further indicated that most subject sources will need to re-certify by January 1, 2012, for reasons including a change in the applicability threshold from 15 pounds per day to 500 pounds per month. *Id*. He stressed that USEPA has insisted on certifying exemptions. *Id*.; *see* USEPA Attachment at 2.

Finally, in its second post-hearing comments filed June 1, 2011, the Agency noted that an industry group had "indicated that the introductory language to Section 218/219.187(a)(2)(B) should be amended to clarify that the exemptions in this subsection apply to emission units that fall within the specified categories; such emission units need not be located at sources that, as a whole, fall within such categories, and indeed sources may have operations that fall within multiple categories at the same location." PC 4 at 7. The agency proposed simply to strike the word "source" from the language of this introductory language." *Id*. at 8, 12. The Board concurs, and this amendment is reflected in its order below.

Subsection (a)(2)(B)(i). In this provision exempting cleaning operations at emission units within specified source categories, the Agency sought to strike an exemption for aerospace coatings "in response to a USEPA comment that the exemptions should not be included because Illinois has no rules for such coatings." SR at 10; Prop. 218 at 28; Prop. 219 at 27-28; *see* USEPA Attachment at 1.

In his comment on behalf of Boeing, Mr. Shanks stated that Boeing had recently begun its first Illinois manufacturing operation near Mascoutah in the Metro East ozone nonattainment area. PC 3 at 1. He indicated that Boeing's operations in a nonattainment area ordinarily "would be regulated by an Aerospace VOM RACT rule, usually based on the US EPA Control

Techniques Guideline (CTG) for Aerospace Manufacturing and Rework." *Id*. He added that, "[o]n October 11, 1996, Illinois EPA submitted a negative declaration to US EPA, saying that an Aerospace RACT rule was not needed at that time, because metro east did not have any aerospace facilities with potential to emit greater than the Aerospace CTG applicability threshold." *Id*.

Mr. Shanks notes that the Agency's proposal seeks to amend Section 219.187(a)(2)(B) , which exempts cleaning operations addressed by industry-specific RACT rules, by deleting an exemption for "aerospace coating." PC 3 at 1; *see* 35 Ill. Adm. Code 219.187(a)(2)(B); 35 Ill. Reg. 5145 (Apr. 1, 2011) (first-notice publication). Mr. Shanks argues that, if the Board deletes the exemption and Boeing increases "manufacturing activity to exceed the proposed 500 lb/month solvent cleaning threshold, the Boeing facility would be subject to a rule that does not represent presumptive RACT, as described in the Aerospace CTG." PC 3 at 2 (citation omitted). Mr. Shanks briefly compared the aerospace rules based upon the CTG and in effect in most nonattainment areas and those applicable under the Other Industrial Solvent Cleaning Operations regulations. *Id*.; *see* 35 Ill. Adm. Code 219.187.

Noting that Boeing may increase its manufacturing in the state, Mr. Shanks stated that Boeing in a separate proceeding intends "to petition Illinois to consider adopting an aerospace RACT rule and/or amendments to existing rules to clarify applicability of metro east VOM rules to aerospace." PC 3 at 1. "Boeing requests that this deletion be deferred until such time that aerospace solvent cleaning operations can be subject to a regulation that is RACT for aerospace manufacturing." PC 3 at 1; *see id*. at 2 ("Please retain the aerospace exemption. . . ."). Mr. Shanks states that Boeing "will follow up with a separate rulemaking petition regarding an Aerospace RACT rule for metro east and a request for interim determination of RACT rule applicability, understanding that rulemaking does take some time to complete." *Id*. at 2.

In its second post-hearing comments filed June 1, 2011, the Agency acknowledged Boeing's request to retain an exemption for aerospace coatings. PC 4 at 5. The Agency reports that it contacted Boeing and confirmed that Boeing's facility is not subject to the industrial cleaning solvents rule because its projected emissions do not exceed 15 lb/day. *Id*. Boeing indicated that its position stems from concern that future expansion may cause it to exceed that threshold. *Id*. The Agency argues that USEPA requires removal of this exemption, "as the exemptions listed in this subsection are reserved for emission units already governed by regulations that contain their own set of cleaning requirements." *Id*. at 5-6. The Agency argues that the possibility of implementing the aerospace CTG in the future should have no effect on adoption of the current proposal. *Id*. at 5. The Agency concludes that, until an aerospace coatings rule is proposed, the Board should comply "with USEPA's requirement that the exemption be removed, particularly as the removal has no current impact upon the facility at issue." *Id*. The Board concurs with the Agency and will not restore this exemption in its order below.

Subsection (a)(2)(B)(x). In this provision exempting cleaning operations at emission units within specified source categories, the Agency sought to strike an exemption for shipbuilding and repair coating "in response to a USEPA comment that the exemptions should

not be included because Illinois has no rules for such coatings." SR at 10; Prop. 218 at 28; Prop. 219 at 27-28; *see* USEPA Attachment at 1.

Subsection (a)(2)(C). In this provision establishing exemptions for cleaning operations, the Agency proposed to amend "the exemption for medical device and pharmaceutical manufacturing operations to be consistent with language used in other exclusions." SR at 10-11; Prop. 218 at 29; Prop. 219 at 28-29.

In their public comment filed April 15, 2011, SGIA and PII note that subsection (a)(2)(C) exempts specified cleaning operations from the requirements of subsections (b), (c), (f), and (g) of this Section but not from the recordkeeping and reporting requirements of subsection (e). PC 1 at 2; *see* 35 Ill. Adm. Code 218.187(a)(2)(C), 219.187(a)(2)(C). SGIA and PII argue that the only recordkeeping and reporting requirements applicable to sources exempt under subsection (a)(2)(C) is subsection (e)(2)(vii), which requires a description of cleaning operations and a listing of exempt emission units. PC 1 at 2. SGIA and PII claim that, "[a]s this information does not limit or reduce emissions in any way, it creates an unnecessary recordkeeping burden for exempt sources and requires both exempt sources and the department to dedicate time to a task that does not improve air quality." SGIA and PII request that Board revise subsection (a)(2)(C) "to indicate that the listed cleaning operations are completely exempt from Section 218.187(e)." *Id*. at 2, 3. As an alternative, SGIA and PII propose that subsection (a)(2)(c) could be merged with subsection (a)(2)(B). *Id*. at 2.

In its post-hearing comment, the Agency notes this request to exclude specified cleaning operations from recordkeeping obligations. PC 2 at 2. The Agency states that USEPA "has advised, however, that exempting such cleaning operations from the recordkeeping requirements in subsection (e) is not acceptable." *Id*. The Agency "strongly opposes" the proposed change, "as the USEPA could once again disapprove the rule if such changes are made." *Id*. at 3. The Board concurs and has not included this change in its order below.

During the first hearing, Mr. Davis on behalf of IERG noted that cleaning operations listed in subsection (a)(2)(C) are not exempt from the recordkeeping and reporting requirements at subsection (e). Tr.1 at 15. Mr. Bloomberg accounted for this by stating that two of the exemptions are based upon specific material use thresholds. *Id*.; *see* 35 Ill. Adm. Code 218.187(a)(2)(C)(v, xiii); 219.187(a)(2)(C)(v, xiii). He noted USEPA's position that exempting the sources listed in subsection (a)(2)(C) from the recordkeeping and reporting requirements "is not acceptable." Tr.1 at 16, 21. In its first post-hearing comment, the Agency noted USEPA's position "that sources with cleaning operations subject to (a)(2)(C)(v) and (a)(2)(C)(xiii) must comply with the additional recordkeeping/reporting requirements set forth in Section 218/219.187(e)(7) of the Illinois EPA's proposal." PC 2 at 2-3. Based on this position, the Agency "strongly opposes" any change to its proposed language, "as the USEPA could once again disapprove the rules if such changes are made." *Id*. at 3. The Board concurs and has not included this change in its order below.

Subsection (a)(2)(C)(v). This subsection exempts from the requirements of subsection (b), (d), (f), and (g) of this Section the "[c]leaning of medical device and pharmaceutical manufacturing operations if the facility uses no more than 1.5 gallons per day of solvents for

such cleaning. 35 Ill. Adm. Code 218.187(a)(2)(C)(v), 219.187(a)(2)(C)(v). In its second post-hearing comments filed on June 1, 2011, the Agency proposes to amend this subsection only by adding to the existing daily limit a metric equivalent "mistakenly omitted from the Agency's original proposal." PC 4 at 7; *see id*. at 9, 13.

Subsection (a)(2)(C)(xiii). This subsection exempts from the requirements of subsection (b), (d), (f), and (g) of this Section the "[c]leaning of sterilization indicating ink application equipment if the facility uses no more than 1.5 gallons per day of solvents for such cleaning." 35 Ill. Adm. Code 218.187(a)(2)(C)(xiii), 219.187(a)(2)(C)(xiii). In its second post-hearing comments filed on June 1, 2011, the Agency proposes to amend this subsection only by adding to the existing daily limit a metric equivalent "mistakenly omitted from the Agency's original proposal." PC 4 at 7; *see id*. at 9, 14.

Subsection (a)(2)(C)(xiv). In their public comment filed April 15, 2011, SGIA and PII stated that subsection (a)(2)(C)(xiv) exempts from the requirements of subsections (b), (c), (f), and (g) the "[c]leaning of metering rollers, dampening rollers, and printing plates." PC 1 at 2; *see* 35 Ill. Adm. Code 218.187(a)(2)(C)(xiv), 219.187(a)(2)(C)(xiv). SGIA and PII state that "these cleaning operations take place at lithographic printing operations." PC 1 at 2. SGIA and PII argues that subsection (a)(2)(B)(ii) exempts lithographic printing from the requirements of subsection (b) through (g). Suggesting that it is unnecessary, SGIA and PII claim that subsection (a)(2)(C)(xiv) "should be deleted to avoid confusion regarding the applicability of Sections 218.187(d) and (e) to cleaning of metering rollers, dampening rollers, and printing plates." PC 1 at 2.

During the first hearing, Mr. Bloomberg indicated that the Agency had discussed this issue with USEPA and that this proposed change was "fine." Tr.1 at 19-20; *see* PC 4 at 2. He added that the Agency would further address this request in its response to the comments from SGIA and PII. *Id*. at 20.

In its first post-hearing comments filed May 16, 2011, the Agency noted the request from SGIA and PII to remove this exemption. PC 2 at 2. The Agency acknowledged indicating during the first hearing that it was likely to agree with this request. *Id*.; *see* PC 4 at 2. However, the Agency stated that another industry group had since opposed this change. PC 2 at 2; *see* PC 4 at 2 (noting sources intending to utilize exemption). The Agency further stated that it "needs to work with the other group and USEPA to determine the proper course of action, and thus does not have a specific response to this issue at the present time." *Id*.

In its second post-hearing comments filed on June 1, 2011, the Agency reported learning "that can coating operations, and potentially other types of operations as well, utilize lithographic-type presses that are not necessarily covered by the regulations governing lithographic printing lines. . . ." PC 4 at 2, citing 35 Ill. Adm. Code 218.405-411, 219.405-411. The Agency argues that these sources would not fall under the lithographic printing exemption in Section 218/219.187, "as this exemption was intended to relieve only lithographic printers that are already otherwise regulated from additional cleaning obligations." PC 4 at 2; *see* 35 Ill. Adm. Code 218.187(a)(2)(B)(ii). 219.187(a)(2)(B)(ii). As these printers would be able to rely on the existing exemption for metering rollers, dampening rollers, and printing plates, the Agency

argues that it is necessary to retain it and recommends against striking it. PC 4 at 2-3. The Agency adds that it "does not believe that the risk of confusion for lithographic printers is great enough to justify depriving other sources of the benefit of this exemption." *Id*. at 3. The Board concurs and declines to strike this provision from its order below.

Subsection (a)(2)(C)(xvii). In its second post-hearing comments filed June 1, 2011, the Agency reports receiving "additional comments from an industry group regarding industrial cleaning solvents." PC 4 at 7. Specifically, the group "requested that an exemption be added for cleaning performed with aerosol products if such use falls below a specified threshold." *Id*. Having obtained USEPA's approval of such a change, the Agency proposes to amend existing Section 218/219.187(a)(2)(C), which provides that various cleaning operations are exempt from the requirements of subsections (b), (c), (f), and (g) of this Section. 35 Ill. Adm. Code 218.187(a)(2)(C), 219.187(a)(2)(C). The Agency recommends adding the following language as an additional exempt category under subsection (a)(2)(C)(xvii): "[c]leaning with aerosol products if the facility uses no more than 4.7 liters (1.25 gallons) per day of such products." PC 4 at 10, 14. The Board concurs, and this addition is reflected in its order below.

Subsection (a)(2)(C)(xviii). In their public comment filed April 15, 2011, SGIA and PII stated that "[t]he rule does not specifically address substrate cleaning for screen printing." PC 1 at 2. SGIA and PII further state that "[s]ubstrate cleaning is necessary to insure the ink will properly adhere to the surface of the substrate, which frequently has residue on the surface of the as-received that must be removed prior to printing." *Id*. SGIA and PII acknowledge that material and control requirements at subsection (b)(1)(A) refer to product cleaning, but they argue that those requirements address electrical and electronic components and medical and pharmaceutical manufacturing. PC 1 at 2; *see* 35 Ill. Adm. Code 218.187(b)(1)(A), 219.187(b)(1)(A). SGIA and PII further argue that, although the exemption in subsections (a)(2)(A)(iv) and (a)(2)(C)(xvi) address pre-press cleaning operations and cleaning operations associated with digital printing, no exemption addresses "substrate cleaning for screen printing operations." PC 1 at 2; *see* 35 Ill. Adm. Code 218.187(a)(2)(A)(iv), 218(a)(2)(C)(xvi), 219.187(a)(2)(A)(iv), 219.187(a)(2)(C)(xvi). SGIA and PII request that the Board add a new subsection (a)(2)(A)(v) providing an exemption from various requirements for "cleaning of substrates prior to screen printing." PC 1 at 2; *see* Tr.1 at 18-19.

In its first post-hearing comments filed on May 16, 2011, the Agency noted the request that substrate cleaning for screen printing be exempted. PC 2 at 2. The Agency reports, however, that "USEPA indicated that there is not currently a sufficient basis for the exemption, and requested additional information in order to further evaluate the proposed amendment." *Id*. The Agency states that, although it has sought this information and believes that SGIA and PII are preparing a response, it has not yet received one. *Id*. The Agency indicates that, "[u]nless and until PII/SGIA submits the requested information and the USEPA approves the amendment, the Illinois EPA opposes adding the exemption." *Id*.

In its second post-hearing comments filed on June 1, 2011, the Agency again noted the request that substrate cleaning for screen printing be exempted. PC 4 at 1. The Agency indicated that SGIA and PII supplied information supporting this proposed amendment. *Id.* The Agency reports USEPA's response that SGIA and PII "still did not provide sufficient

documentation to support their requested amendment. . . ." Id. at 1-2. USEPA also noted that the CTG is based upon Bay Area Air Quality Management District regulations, which do not include such an exemption. *Id*. at 2. The Agency states that SGIA and PII ultimately requested a limited exemption, which USEPA accepted. *Id*.

Existing Section 218/219.187(a)(2)(C) provides that various cleaning operations are exempt from the requirements of subsections (b), (c), (f), and (g) of this Section. 35 Ill. Adm. Code 218.187(a)(2)(C), 219.187(a)(2)(C). The Agency recommends adding the following language as an additional exempt category under subsection (a)(2)(C)(xviii): "[c]leaning of plastic-based or vinyl-based substrates for use in the screen printing process when using UV curable ink and coating systems." PC 4 at 10, 14. The Board concurs, and this addition is reflected in its order below.

Subsection (a)(2)(C)(xix). In its second post-hearing comments filed on June 1, 2011, the Agency noted that an "industry group recommended that an exemption be added to Section 218/219.187(a)(2)(C) for cleaning associated with performance testing conducted on production lines." PC 4 at 7. After USEPA requested and received information in support of this proposal, it "approved a limited exemption." *Id*. Existing Section 218/219.187(a)(2)(C) provides that various cleaning operations are exempt from the requirements of subsections (b), (c), (f), and (g) of this Section. 35 Ill. Adm. Code 218.187(a)(2)(C), 219.187(a)(2)(C). The Agency recommends adding the following language as an additional exempt category under subsection (a)(2)(C)(xix):

> [c]leaning conducted as part of performance tests on coatings, adhesives, or inks that are in research and development and that are not yet commercially used for the applications for which they are being tested. This exemption is limited to the use of up to a total of 90.9 liters (24 gallons) of cleaning solvent per calendar month and 416.3 liters (110 gallons) of cleaning solvent per calendar year for such cleaning. *Id*. at 10, 14.

The Board concurs, and this addition is reflected in its order below.

Subsection (b). In this subsection, which provides material and control requirements, the Agency sought "to add USEPA-approved additional compliance alternatives" for sources that manufacture coatings, inks, adhesives, or resins. SR at 11; Prop. 218 at 30-32; Prop. 219 at 30-32; *see* USEPA Attachment at 1-2.

Subsection (b)(1). In this subsection, the Agency proposed to add a VOM limitation applicable to the "[c]leaning of equipment used in the manufacture of coatings, inks, adhesives, or resins." Prop. 218 at 31; Prop. 219 at 30; *see* SR at 11, USEPA Attachment at 1. In addition, because it proposed to remove an exemption for screen reclamation activities, the Agency "recommends specifying that the VOM limitation for screen printing includes such activities." SR at 11; *see* Prop. 218 at 31; Prop. 219 at 30.

Subsection (b)(2). In its motion to amend the proposal, the Agency responds to a request by an industry representative by recommending an addition to this compliance alternative.

Specifically, the Agency seeks "to add the term 'VOM' to a reference to composite vapor pressure." Mot. Amend at 1-2. The Agency indicates that it had mistakenly omitted this term from its original proposal. *Id*. at 1. Having granted the Agency's motion to amend, the Board includes this addition in its order below.

Subsection (b)(3). The Agency proposed to amend the add-on device compliance alternative to address cleaning operations at sources manufacturing coatings, inks, adhesives, or resins. Prop. 218 at 31; Prop. 219 at 30; *see* SR at 11; USEPA Attachment at 1.

Subsection (b)(4). The Agency proposed to add a new subsection establishing work practice requirements "[f]or sources that manufacture coatings, inks, adhesives, or resins." Prop. 218 at 32; Prop. 219 at 31; USEPA Attachment at 1-2; *see* SR at 11.

Subsection (b)(5). The Agency proposed to add a new subsection providing that sources manufacturing coatings, inks, adhesives, or resins may use solvents that do not meet VOM content or composite vapor pressure requirements if they meet requirements including a material use restriction. Prop. 218 at 32; Prop. 219 at 31-32; USEPA Attachment at 2.

Subsection (d). In this subsection providing operating requirements for subject sources, the Agency proposed to add work practice requirements for the use of cleaning solvents for wipe cleaning at sources that manufacture coatings, inks, adhesives, or resins." SR at 11; *see* Prop. 218 at 32-33; Prop. 219 at 32, USEPA Attachment at 1.

Subsection (e). In this subsection providing recordkeeping and reporting requirements, the Agency first proposed to change the compliance date from April 1, 2011, to January 1, 2012. Prop. 218 at 33-39; Prop. 219 at 32-38; *see* SR at 11. The Agency also proposed to change the applicability standard from a daily to a monthly limit. SR at 11; Prop. 218 at 33-34; Prop. 219 at 33. In addition, the Agency recommended "adding monthly recordkeeping requirements for exempt sources." SR at 11; *see* Prop. 218 at 34, Prop. 219 at 33, USEPA Attachment at 2. In a provision addressing sources changing the method of compliance, the Agency also recommended adding cross-references to new compliance alternatives for sources manufacturing coatings, inks, adhesives, or resins. SR at 11; Prop. 218 at 35, Prop. 219 at 34. Finally, the Agency also proposed to add "recordkeeping requirements for sources complying pursuant to subsection (b)(5) and for sources with cleaning operations subject to one or more of the exclusions in subsection (a)(2)(C)(v) or (xiii) of this Section." SR at 11; *see* Prop. 218 at 38-39, Prop. 219 at 37-38; *see* USEPA Attachment at 1.

In their public comment filed April 15, 2011, SGIA and PII stated that VOM regulations do "not include a provision for retention of cleaning solvent in shop towels." PC 1 at 3. SGIA and PII note that the recordkeeping requirement applicable to lithographic printers "provides for 50 percent retention of cleaning solutions used with shop towels kept in closed containers that have a vapor pressure of 10 mm Hg or less at 20 ºC (68ºF)." *Id*. citing 35 Ill. Adm. Code 218.411(b)(1)(B)(iv). SGIA and PII cite USEPA documents to argue that "[t]he same VOM retention factor should be included in this rule." PC 1 at 3. Specifically, they propose a new subsection (e)(10) providing in its entirety that

> [a]ll emission calculations required by this subsection (e) shall use an emission adjustment factor of 0.50 in calculating emissions from used shop towels if the VOM composite vapor pressure of each associated cleaning solution is less than 10 mmHg measured at 20ºC (68ºF) and the shop towels are kept in closed containers. For cleaning solutions with VOM composite vapor pressure of equal to or greater than 10 mmHg measured at 20ºC (68ºF) and for shop towels that are not kept in closed containers, no emission adjustment factor is used. PC 1 at 3.

During the first hearing, Mr. Bloomberg indicated that the Agency was still discussing this proposed language and would address it in written comments. Tr.1 at 21-22.

In its first post-hearing comment filed May 16,. 2011, the Agency noted the request to include a retention factor "for cleaning solvents that have a vapor pressure of 10 mm Hg or less and that are kept in closed containers." PC 2 at 3. The Agency states that it "does not object to the revision, but recommends that it be included in a different subsection . . ." *Id*. at 3-4 (proposing amendment to subsection (e)(1)(A)(ii)). The Agency adds that "USEPA has advised that the revision is acceptable, provided that sources must demonstrate that the vapor pressure falls below the specified threshold." *Id*. at 3; *see* Tr.2 at 22-23. Accordingly, the Agency proposes to amend Section 218/219.187(e)(1)(A)(ii) as follows:

> 1) The owner or operator of a source exempt from the limitations of this Section because of the criteria in Section 218[/219].187(a)(1) of this Subpart shall comply with the following:
>
> A) By January 1, 2012, or upon initial start-up of the source, whichever is later, submit a certification to the Agency that includes:
>
> ii) Calculations that demonstrate that combined emissions of VOM from cleaning operations at the source, other than cleaning operations identified in subsection (a)(2) of this Section, never equal or exceed 226.8 kg/month (500 lbs/month), in the absence of air pollution control equipment. An emission adjustment factor of 0.50 shall be used in calculating emissions from used shop towels if the VOM composite vapor pressure of each associated cleaning solution is demonstrated to be less than 10 mmHg measured at 20ºC (68ºF) and the shop towels are kept in closed containers. For cleaning solutions with VOM composite vapor pressures of equal to or greater than 10 mmHg measured at 20ºC (68ºF) and for shop towels that are not kept in closed containers, no emission adjustment factor shall be used;

PC 2 at 3-4.

During the second hearing on May 18, 2011, the Agency indicated that it would respond in post-hearing comments to a question by the Board about any requirement to demonstrate vapor pressure. Tr.2 at 22-23. The Agency's comment states that the proposal simply requires "that sources be able to demonstrate, through recordkeeping, that their cleaning solutions satisfy

the criteria for use of the emission adjustment factor, *i.e.*, that the solutions have a vapor pressure below the applicable threshold." PC 4 at 6. The Agency believes that this proposed language would not subject sources to additional requirements. *Id*. The Agency elaborates that existing language requires exempt sources

> to submit a certification to the Agency setting forth calculations that demonstrate that the source does not exceed the applicability threshold. Complying with this requirement necessarily entails maintaining sufficient record to support emissions calculations, including those necessary to demonstrate that cleaning solutions satisfy the criteria for use of the emission adjustment factor. *Id*.

The Agency adds that, even in the absence of this requirement, "sources are always required to demonstrate compliance." *Id*. at 6-7. The Agency argues that its amendment "simply clarifies this obligation, as required by the USEPA." *Id*. at 7.

Finally, in its second post-hearing comments filed June 1, 2011, the Agency reported that USEPA required the addition of certain recordkeeping requirements to address the additional exemptions added in response to industry comments. PC 4 at 7-8, 10-12, 14-16. The Agency also noted USEPA's "suggestion that the Illinois EPA amend references to cleaning operations being 'subject to' exclusions, in order to avoid causing confusion." *Id*. at 8. The Agency proposed to refer to sources that "fall under" those exemptions. *See id*. at 10-11, 14-15. The Board concurs in these revisions, which are reflected in its order below.

Subsection (f). Existing Section 218/219.187(f) addresses monitoring requirements applicable to the category of "other industrial solvent cleaning operations." 35 Ill. Adm. Code 218.187(f), 219.187(f). In its second post-hearing comments filed June 1, 2011, the Agency notes USEPA's request to amend this subsection "regarding monitoring requirements for sources subject to Section 218/219.187(b)(3)." PC 4 at 16; *see* 35 Ill. Adm. Code 218.187(b)(3), 219.187(b)(3). The Agency states that, regarding industrial adhesives, USEPA had insisted upon an amendment requiring the addition of continuous monitoring equipment when a carbon adsorber is used to demonstrate compliance. PC 4 at 16, citing USEPA Attachment. The Agency adds that USEPA noted that industrial cleaning solvent provisions present the same issue. PC 4 at 16. Accordingly, the Agency proposes to add a new subsection (f)(2) providing in its entirety that,

> [i]f a carbon adsorber is used to demonstrate compliance, the owner or operator of a source subject to Section 218[/219].187(b)(3) of this Subpart shall used Agency and USEPA approved continuous monitoring equipment which is installed, calibrated, maintained, and operated according to vendor specifications at all times the control device is in use. The continuous monitoring equipment shall monitor the VOM concentration of each carbon adsorption bed exhaust or the exhaust of the bed next in sequence to be desorbed. *Id*. at 17, 18.

The Agency states that it does not expect this provision to have a negative effect on subject sources, "as such sources are most likely already complying with these monitoring procedures."

Id. at 16. The Board concurs with the Agency' recommendation, and this revision is reflect dint he order below.

Subsection (q). In this subsection providing testing requirements, the Agency proposed to add language clarifying that, "[i]n the event of any inconsistency between a Method 24 test and the manufacturer's specifications, the Method 24 test shall govern." Prop. 218 at 40, Prop,. 219 at 39; *see* SR at 11; *see also* 35 Ill. Adm. Code 218.112(d) (incorporating Method 24 by reference), USEPA Attachment at 2.

Subpart F: Coating Operations.

Subpart F of Part 218/219 addresses coating operations using VOM. 35 Ill. Adm. Code 218.204-219, 219.204-219.

Section 218/219.204: Emission Limitations.

Subsection (a). In this subsection addressing automobile or light-duty truck coating, the Agency proposed to amend language regarding compliance with the VOM content limitation for final repair coat operations by adding a definition of "occurrence." SR at 12; *see* USEPA Attachment at 5. The Agency recommended defining the term as "the application of the combination of coatings that constitute a final repair coat for a single automobile or light-duty truck." Prop. 218 at 45-46; Prop. 219 at 44. The Agency also sought to add language providing that Section 218/219.205 "does not apply to the final repair coat limitation." Prop. 218 at 46; Prop. 219 at 44; *see* SR at 12; *see* USEPA Attachment at 5; *see also* 35 Ill. Adm. Code 218.205, 219.205 (Daily-Weighted Average Limitations). Finally, the Agency also proposed in Section 218.204(a)(2) to correct the compliance date from May 1, 2011, to May 1, 2012. SR at 12; *see* Prop. 218 at 43.

Subsection (q)(1). In this subsection addressing metal parts and products, the Agency proposed to strike the definition of "marine engine coating." SR at 12; Prop. 218 at 59; Prop. 219 at56. The Agency separately proposed to delete this category and limitations applicable to it because "USEPA indicated that the extreme performance coatings category is sufficient to address such coatings." SR at 13; *see* Prop. 218 at 62; Prop. 219 at 59.

Subsection (q)(1)(A). In this subsection addressing general one component coatings, the Agency proposed to delete subsection (q)(1)(A)(iii) providing limitations applicable to clear coatings, effectively changing the limitations to those established by the CTG. SR at 12; *see* Prop. 218 at 59; *see* USEPA Attachment at 5. The Agency noted that the Board has adopted these limitations in rulemaking docket R10-20 in response to comments by Electro-Motive Diesel. SR at 12; *see* Reasonably Available Control Technology (RACT) for Volatile Organic Material Emissions from Group IV Consumer & Commercial Products: Proposed Amendments to 35 Il. Adm. Code 211, 218, and 219, R10-20, slip op at 66-67, 188 (Sept. 2, 2010). The Agency noted USEPA's position "that the limit must conform to the recommendations in the CTG." SR at 12.

Subsection (q)(1)(H). In Section 218.204(q)(1)(H) establishing limitations applicable to heat-resistant coatings, the Agency proposed "to delete the previously-applicable VOM content limitation, which was inadvertently left in the rule." SR at 12; *see* Prop. 218 at 60; *see* USEPA Attachment at 5.

Subsection (q)(1)(I). In this subsection addressing high performance architectural coatings, the Agency proposed to amend VOM limitations. The Agency stated that, although the current limitations reflect the recommendations of the CTG, "USEPA has indicated that such limits constitute backsliding, and that the proposed, stricter limits are therefore necessary." SR at 12; *see* Prop. 218 at 60; Prop. 219 at 57; *see* USEPA Attachment at 5.

Subsection (q)(1)(Z). The Agency proposed to delete this subsection addressing steel pail and drum interior coatings, "as such coatings fall within other categories contained in the CTG." SR at 12; *see* Prop. 218 at 62; Prop. 219 at 59; USEPA Attachment at 5; *see also* 35 Ill. Adm. Code 218.204(q)(1)(Y), 219.204(q)(1)(Y).

Subsection (q)(1)(AA). The Agency proposed to delete this subsection addressing marine engine coatings, "as the USEPA indicated that the extreme performance coatings category is sufficient to address such coatings." SR at 13; *see* Prop. 218 at 62; Prop. 219 at 59; *see* USEPA Attachment at 5.

Subsection (q)(3)(E). In this subsection addressing automotive/transportation plastic parts and products, the Agency proposed "to delete certain specialty coating categories that were carried over from existing regulations, as they are encompassed by categories contained in the CTG." SR at 13; *see* Prop. 218 at 65-66; Prop. 219 at 62-63; *see* USEPA Attachment at 5. The Agency reports that "USEPA determined that it had not been sufficiently demonstrated that such coatings could not meet the limitations set forth in the CTG." SR at 13.

In the motion to amend its proposal, the Agency noted that it had proposed to delete "the specialty coating category and limit for texture basecoats" in response to a USEPA comment that the limit lacked an adequate basis. Mot. Amend at 4. The Agency noted, however, that the category and limit appeared in the first-notice version published in the *Illinois Register*. *Id*., citing 35 Ill. Reg. 4887, 5185. Citing USEPA's position, the Agency recommends deleting the term "texture basecoats" from this subsection. Mot. Amend at 4-5. Having granted the Agency's motion, the Board's order below reflects this recommendation.

Subsection (q)(3)(F). The Agency proposed to amend this subsection addressing red, yellow, and black coatings by correcting an error in a cross-reference. SR at 13; *see* Prop. 218 at 66; Prop. 219 at 63; *see* USEPA Attachment at 5.

Subsection (q)(4)(A). In this subsection addressing business machine plastic parts and products, the Agency proposed "to increase the VOM content limitation for primers to the limit recommended in the CTG." SR at 13; *see* Prop. 218 at 66; Prop. 219 at 63; *see* USEPA Attachment at 5. The Agency stated that "USEPA approved the higher limit in light of the deletion of the specialty coatings categories in subsection (q)(4)(I). SR at 13.

Subsection (q)(4)(I). The Agency proposed to delete this subsection addressing specialty coatings. SR at 13; *see* Prop. 218 at 67; Prop. 219 at 64; *see* USEPA Attachment at 5. The Agency stated that "USEPA determined that it had not been sufficiently demonstrated that these specialty coatings could not meet the limitations set forth in the CTG." SR at 13.

Subsection (q)(5). Existing subsection (q)(5) establishes VOM emission limitations applicable to pleasure craft surface coatings. 35 Ill. Adm. Code 218.204(q)(5), 219.204(q)(5).

Subsection (q)(5)(A). In comments submitted on behalf of the ACA, Mr. Sell states that the category of extreme high gloss coatings is a relatively small but very important element of the pleasure craft coatings. Sell Test. at 7. He indicates, however, that low-VOM coatings "available *at this time* do not provide the appearance and functionality required. . . ." *Id.* (emphasis in original). He states that high solids topcoats have not been well-received and found "to be inferior to traditional, higher VOC containing products." *Id.* He further states that low-VOM coatings may be less durable and cost significantly more than higher-VOM products. *Id.* Mr. Sell explains that the extreme high gloss topcoat accounts for less than 10% of total coatings and less than 40% of overall VOM burden on an annualized basis. *Id.* He also emphasizes that the SCAQMD regulations were adopted for a nonattainment area characterized as "serious" and not as "moderate." *Id.*; *see* Townsend Test. at 3 (claiming regulations not RACT for other areas); Tr.2 at 13. He adds that the controlled application conditions available to industries such as aviation and car refinishing are not possible in the pleasure craft industry. Sell Test. at 7. Mr. Sell concludes by requesting that the limit for this subcategory be increased to 600 g/l on a permanent basis, as industry does not foresee development of coatings that can meet both the current standard and the expectations of the pleasure craft market. *Id.*

In its first post-hearing comment filed May 16, 2011, the Agency reported that USEPA would allow amendments to the VOM limitations for pleasure craft surface coatings, "provided that the existing averaging alternative for such coatings is eliminated." PC 2 at 10-11; PC 4 at 3. The Agency states that "[t]he averaging alternative was intended to satisfy the pleasure craft coating industry's need for higher emission limitations." PC 2 at 11. The Agency argued that, "[i]f higher limits are instead implemented, there is no further need for an averaging option." *Id.* The Agency reports that, "[b]ased on subsequent discussions with the ACA, in which the ACA expressed a preference for high VOM limitations, the Illinois EPA proposes eliminating the emissions averaging alternative and amending certain limits. . . ." *Id.*; *but see* Townsend Test at 4; Tr.2 at 14-15 (proposing consideration of averaging alternative).

Specifically, the Agency proposed to amend the limit for "extreme high gloss coating - topcoat" from 0.49 kg/l (4.1 lb/gal) coatings (35 Ill. Adm. Code 218.204(q)(5)(A), 219.204(q)(5)(A)) to 0.60 kg/l (5.0 lb/gal) coatings. PC 2 at 11, 21. The Agency also proposed to amend the limit from 1.10 kg/l (9.2 lb/gal) solids to 1.88 kg/l (15.6 lb/gal) solids. *Id.* at 11, 21. The Agency indicates that USEPA accepts this amendment, "provided that the existing emissions averaging alternative for such coatings is eliminated." PC 2 at 10-11. The Agency reports that ACA prefers higher VOM limits to maintaining the existing averaging option. *Id.* at 11. The Board concurs with this revisions, which is reflected in its order below.

Subsection (q)(5)(D). In his testimony on behalf of the ACA, Mr. Sell claims that owners expect the finish of their boats to be durable, smooth, and glossy. Sell Test. at 6. He indicates that these coatings may be applied by brush, roller, or spray and must flow out to produce the desired finish. *Id*. He argues that these effects require products with higher solvent content for primers and topcoats. *Id*. Mr. Sell claims that low-VOM products require time to develop and evaluate, may cost significantly more than high-VOM products, and often necessitate changing work practices and increased labor costs. *Id*. He proposes that, for a four-year period, the limit for this subcategory be raised from 420 g/l to 600 g/l. *Id*.

In its first post-hearing comment filed May 16, 2011, the Agency reported that USEPA would allow amendments to the VOM limitations for pleasure craft surface coatings, "provided that the existing averaging alternative for such coatings is eliminated." PC 2 at 10-11; PC 4 at 3. The Agency states that "[t]he averaging alternative was intended to satisfy the pleasure craft coating industry's need for higher emission limitations." PC 2 at 11. The Agency argued that, "[i]f higher limits are instead implemented, there is no further need for an averaging option." *Id*. The Agency reports that, "[b]ased on subsequent discussions with the ACA, in which the ACA expressed a preference for high VOM limitations, the Illinois EPA proposes eliminating the emissions averaging alternative and amending certain limits. . . ." *Id*.; *but see* Townsend Test at 4; Tr.2 at 14-15 (proposing consideration of averaging alternative).

Sepcifically, the Agency proposed to amend the limit for "finish primer/surfacer" applicable prior to January 1, 2014 from 0.42 kg/l (3.5 lb/gal) coatings (35 Ill. Adm. Code 218.204(q)(5)(D), 219.204(q)(5)(D)) to 0.60 kg/l (5.0 lb/gal) coatings. PC 2 at 11, 21. The Agency also proposed to amend the limit applicable prior to January 1, 2014, from 0.80 kg/l (6.7 lb/gal) solids (35 Ill. Adm. Code 218.204(q)(5)(D), 219.204(q)(5)(D)) to 1.88 kg/l (15.6 lb/gal) solids. PC 2 at 11, 21. Also in its post-hearing comment, the Agency proposed to amend this subsection by setting the limit for "finish primer/surfacer" applicable on and after January 1, 2014 at 0.42 kg/l (3.5 lb/gal) coatings and 0.80 kg/l (6.7 lb/gal) solids. PC 2 at 11, 21.

The Agency states that, on May 26, 2011, Mr. Sell again "requested that the stricter VOM content limitations for finish primer/surface be delayed four years, as opposed to the approximate two and a half year extension proposed by the Agency." PC 4 at 4. Noting an indication from USEPA "that extending the compliance date any further is unacceptable," the Agency "opposes this amendment." *Id*. The Board concurs with the Agency, and these recommendations are reflected in its order below.

Subsection (q)(5)(G). In his testimony on behalf of the ACA, Mr. Sell stated that the pleasure craft industry has invested significant time and effort in developing low-VOM antifoulant coatings. Sell Test. at 8. He indicated that "[f]ormulations are currently registered with the EPA on the basis of the percentage weight of biocide in the wet paint." *Id*. He argued that, as the VOM content of the solvent is reduced, it "must be replaced with something non-volatile, effectively reducing the percentage of biocide in the dry film." *Id*. He further argued that this substitution would reduce the performance and lifetime of the applied coating. *Id*. He added that low-VOM antifoulant coatings may also result in a rougher surface and increase drag. *Id*.

Mr. Sell noted that the Shipbuilding and Ship Repair NESHAPs limit antifoulant coatings to VOM content of 400 g/l. Sell Test. at 9, citing 40 C.F.R. Part 63, Subpart II. He argues that "[i]ndustry believes this limit is more suitable to represent RACT for this coating category, given the current state of the existing technology." *Id*. He indicated that a limit of 400 g/l "is therefore required." *Id*.

In its first post-hearing comment filed May 16, 2011, the Agency reported that USEPA would allow amendments to the VOM limitations for pleasure craft surface coatings, "provided that the existing averaging alternative for such coatings is eliminated." PC 2 at 10-11; PC 4 at 3. The Agency states that "[t]he averaging alternative was intended to satisfy the pleasure craft coating industry's need for higher emission limitations." PC 2 at 11. The Agency argued that, "[i]f higher limits are instead implemented, there is no further need for an averaging option." *Id*. The Agency reports that, "[b]ased on subsequent discussions with the ACA, in which the ACA expressed a preference for high VOM limitations, the Illinois EPA proposes eliminating the emissions averaging alternative and amending certain limits. . . ." *Id*.; *but see* Townsend Test at 4; Tr.2 at 14-15 (proposing consideration of averaging alternative).

Specifically, the Agency proposed to amend the limit for "other substrate antifoulant coating" from 0.33 kg/l (2.8 lb/gal) coatings (35 Ill. Adm. Code 218.204(q)(5)(G), 219.204(q)(5)(G)) to 0.40 kg/l (3.3 lb/gal) coatings. PC 2 at 12, 21. The Agency also proposed to amend the limit from 0.53 kg/l (4.4 lb/gal) solids to 0.73 kg/l (5.8 lb/gal) solids. *Id*. at 12, 21. The Board concurs with this proposal, which is reflected in its order below.

Subsection (q)(5)(H). In testimony on behalf of the ACA, Mr. Sell suggested that the SCAQMD regulations are outdated and do not fully reflect current pleasure craft coatings. Sell Test. at 10. He specified that "[a] new category is required as a result of the International Maritime Organisation Antifouling Systems convention. . . ." *Id*. He states that the convention was ratified in 2007 and lists substances banned from use in antifoulings in an Annex 1. *Id*. He indicates that Tri Butyl Tin (TBT) is the first substance listed in Annex 1, and its use "in antifoulings on the hulls of any marine vessels entering the waters of countries which are signatories to the convention is controlled. . . ." *Id*.; *see* Townsend Test. at 3-4; Tr.2 at 15-16. He added that "[a] specialized coating type is required to seal in old TBT containing antifoulings and to promote adhesion of biocide-free, non-stick foul release coatings when applied to vessels." Sell Test at 10.

Mr. Sell argues that this subcategory should be entitled "antifouling sealer/tie coat" with a VOM content limit of 420 g/l. Sell Test. at 10. He further argues that this limit is necessary "in order to facilitate adequate penetration into an underlying paint film for maximum adhesion." *Id*. He added that, because these coatings contain a high degree of polymeric material, this limit is necessary to maintain appropriate application viscosity and "so the coating can form a flexible yet complete barrier over an underlying paint film." *Id*.

In its first post-hearing comment filed May 16, 2011, the Agency proposes to add this subsection in order to establish limits for "antifoulant sealer/tie coat." The Agency proposed to set these limit at 0.42 kg/l (3.5 lb/gal) coatings and 0.80 kg/l (6.7 lb/gal) solids. PC 2 at 12, 21; *see also supra* at __ (defining term). The Agency also proposes to re-designate as subsection

(q)(5)(I) the existing subsection (q)(5)(H) addressing "all other pleasure craft surface coatings for metal or plastic." *Id*. at 12, 21. The Board concurs with these proposals, which are reflected in its order below.

Section 218/219.207: Alternative Emission Limitations.

Subsection (a). In its first post-hearing comment, the Agency proposes to strike language providing that pleasure craft surface coating operations subject to Section 218/219.204(q)(f)(A-G) "may also comply with subsection (o) of this Section" rather than Section 218/219. PC 2 at 12; *see id*. at 10-11, 22 (proposing elimination of emissions averaging alternative for pleasure craft surface coating operations); *see also* 35 Ill. Adm. Code 218.207(o), 219.207(n) (Emissions Averaging Alternative for Pleasure Craft Surface Coating Operations). The Board concurs and reflects this proposal in its order below.

Subsection (b). Section 218/219.206 addresses alternative emission limitations and provides an equation for expressing limitations in terms of kg (lbs) of VOM emissions per 1 (gal) of solids, or "S". 35 Ill. Adm. Code 218.206, 219.206 (Solids Basis Calculation). Section 218/219.207(b)(2) addresses alternative add-on control methodologies and refers to this equation in language regarding determination of overall efficiency. 35 Ill. Adm. Code 218.207(b)(2), 219.207(b)(2). The Agency proposed to amend this subsection "to clarify that, for coating lines subject to an emission limitation in Section 218/219.204 that is already expressed in terms of weight of VOM per volume of solids, 'S' is equal to such emission limitation." SR at 13; *see* Prop. 218 at 70; Prop. 219 at 66-67; *see* USEPA Attachment at 2, 5.

Subsection (n). In its first post-hearing comment, the Agency reported that USEPA would allow amendments to the VOM limitations for pleasure craft surface coatings, "provided that the existing averaging alternative for such coatings is eliminated." PC 2 at 10-11. The Agency states that "[t]he averaging alternative was intended to satisfy the pleasure craft coating industry's need for higher emission limitations." *Id*. at 11. The Agency argued that, "[i]f higher limits are instead implemented, there is not further need for an averaging option." *Id*. The Agency reports that, "[b]ased on subsequent discussions with the ACA, in which the ACA expressed a preference for high VOM limitations, the Illinois EPA proposes eliminating the emissions averaging alternative and amending certain limits. . . ." *Id*. at 11, 12-15 (Part 218), 22-24 (Part 219). The Board concurs with this proposal and reflects it in its order below.

Section 218/219.208: Exemptions from Emission Limitations.

In pre-filed testimony on behalf of the ACA, Mr. Sell argued that a number of coating regulations addressing VOM "include a small container exemption confined to not exceed a litre or a quart." Sell. Test. at 11. He stated that the basis for these exemptions "is to allow for small repairs and touches ups to existing coatings that if done in a timely manner can often avoid larger paint jobs later." *Id*. He argued that these limited uses of "the higher VOC materials actually reduce overall VOC emissions by allowing such repairs and touch ups to avoid complete overall or redo paint jobs." *Id*.

The Agency's first post-hearing comment notes ACA's pre-filed testimony requesting a "small container exemption." PC 2 at 10; *see* Sell Test. at 11. The Agency states that USEPA indicated that it would accept a small container exemption. PC 2 at 10; PC 4 at 3. Accordingly, the Agency proposed to amend Section 218/219.208(c) and (e). *See id*. at 17, 26-27 (adding references to Section 218/219.187(q)(5)). However, the Agency's original proposal did not seek to amend this section (*see* SR; Prop. 218; Prop. 219),

The Board has not submitted Section 218.208 or 219.208 to first notice publication in this proceeding. *See* Reasonably Available Control Technology (RACT) for Volatile Organic Emissions from Group II and Group IV Consumer and Commercial Products: Proposed Amendments to 35 Ill. Adm. Code 211, 218, and 219, R11-23 (Mar. 17, 2011); *see also* 5 ILCS 100/5-40(b) (2010) ("Each agency shall give at least 45 days' notice of its intended action to the general public. This first notice period shall commence on the first day the notice appears in the Illinois Register."); 35 Ill. Reg. 4887 (Apr. 1, 2011). Accordingly, the Board cannot move these two sections to second notice, as it does below with the remainder of the proposal. Under these circumstances, the Board believes that the best procedure is to open a subdocket A to provide first notice of Sections 218.208 and 219.208 while allowing the remainder of the proposal to proceed to second notice. *See* Steel and Foundry Industry Amendments to the Landfill Regulations (Parts 810 through 815 and 817), R90-26 (A, B), slip op. at 3 (Mar. 31, 1994). Interested participants may view the Board's opinion and order of this same date in subdocket A, which directs the Clerk to cause first-notice publication of the proposed small container exemption.

Section 218/219.211: Recordkeeping and Reporting.

Subsection (c). The Agency proposed "to clarify that certain recordkeeping requirements pertain to each coating applied each day on each coating line." SR at 14; *see* Prop. 218 at 79, 81; Prop. 219 at 76, 78; *see* USEPA Attachment at 3, 5. The Agency also proposed amendments requiring "additional recordkeeping for sources subject to the final repair coating limitation set forth in Section 218/219.204(a)(2)(E)." SR at 14; *see* Prop. 218 at 80-81; Prop. 219 at 77-78; *see* USEPA Attachment at 6.

Subsection (d). In this subsection addressing compliance through daily-weighted average limitations, the Agency proposed "to clarify that certain recordkeeping requirements pertain to each coating applied each day on each coating line." SR at 14; *see* Prop. 218 at 83-84; Prop. 219 at 80-81; *see* USEPA Attachment at 3.

Subsection (f). In this subsection addressing primer surfacer operations, topcoat operations, and combined primer surface and topcoat operations, the Agency proposed to add language requiring "that sources collect and record all information necessary to demonstrate compliance with the topcoat protocol referenced in Section 218/219.105(b)." SR at 14; *see* Prop. 218 at 87; Prop. 219 at 84; *see* USEPA Attachment at 6; *see also* 35 Ill. Adm. Code 218.105(b), 219.105(b) (Test Methods and Procedures).

Subsection (j). In this provision addressing pleasure craft surface coating operations complying through an emissions averaging alternative, the Agency proposed an amendment

specifying "that subject sources shall collect and record the coating category of each pleasure craft surface coating used in each subject coating operation." SR at 14; *see* Prop. 218 at 90; Prop. 219 at 87; *see* USEPA Attachment at 6.

In its first post-hearing comment, the Agency reported that USEPA would allow amendments to the VOM limitations for pleasure craft surface coatings, "provided that the existing averaging alternative for such coatings is eliminated." PC 2 at 10-11. The Agency states that "[t]he averaging alternative was intended to satisfy the pleasure craft coating industry's need for higher emission limitations." *Id*. at 11. The Agency argued that, "[i]f higher limits are instead implemented, there is no further need for an averaging option." *Id*. The Agency reports that, "[b]ased on subsequent discussions with the ACA, in which the ACA expressed a preference for high VOM limitations, the Illinois EPA proposes eliminating the emissions averaging alternative and amending certain limits. . . ." *Id*. The Agency proposes to strike the entire subsection (j), which addresses recordkeeping and reporting requirements applicable to the owner or operator of a pleasure craft surface coating operation complying through an emissions averaging alternative. *Id*. at 19-20, 29-30. The Board concurs and reflects this proposal in its order below.

Section 218/219.217: Wood Furniture Coating Work Practice Standards.

The Agency first proposed to correct an error in the title of this section in Part 218 by referring to work practice standards for flat wood paneling coatings in addition to wood furniture coatings. SR at 14; *see* Prop. 218 at 91. In addition, the Agency proposed to amend subsection (d) "by adding an additional work product requirement regarding conveying coatings, thinners, and cleaning materials, as recommended in the CTG." SR at 14; *see* Prop. 218 at 92; Prop. 219 at 89; *see* USEPA Attachment at 3.

Subpart H: Printing and Publishing.

Section 218/219.401: Flexographic and Rotogravure Printing.

In subsection (b)(3) addressing a weighted averaging alternative, the Agency proposed to amend certain terms in equations to refer only to units of weight. SR at 15; *see* Prop. 218 at 96-97; Prop. 219 at 94; *see* USEPA Attachment at 3.

Section 218.402: Applicability.

In Section 218.402(a), the Agency proposed an amendment specifying "that the 25 tons per year applicability threshold regards combined emissions from all flexographic and rotogravure printing lines at the source." SR at 15; *see* Prop. 218 at 101; *see* USEPA Attachment at 3.

Section 218/219.404: Recordkeeping and Reporting.

Subsection (b). In this subsection addressing exempt printing lines, the Agency first proposed amending the compliance date to January 1, 2012. SR at 15; *see* Prop. 218 at 102-03;

Prop. 219 at 99-100; *see* USEPA Attachment at 3. The Agency also proposed to amend subsection (b) "by requiring that exempt sources include in their certification calculations that demonstrate that the source does not exceed the 25 tons per year threshold, and notify the Illinois EPA of any record showing that the source exceeded the 25 tons per year applicability threshold." SR at 15; *see* Prop. 218 at 102-04; *see* USEPA Attachment at 3; *see also* Prop. 219 at 100.

Subsection (d). In this subsection addressing a weighted averaging alternative, the Agency proposed to add a requirement "that sources identify in their certifications the method used to calculate the weight of each coating or ink." SR at 15; *see* Prop. 218 at 106; Prop. 219 at 102-03; *see* USEPA Attachment at 3.

Subsection (f). The Agency proposed to amend this subsection "to add more specific recordkeeping requirements for sources that are exempt pursuant to the 15 lb/day applicability threshold." SR at 15; *see* Prop. 218 at 109; Prop. 219 at 106; *see* USEPA Attachment at 3.

Section 218/219.409: Testing for Lithographic Printing.

The Agency proposed to amend subsection (a) "by clarifying that testing must be done by the compliance date." SR at 15; *see* Prop. 218 at 110; *see* Prop. 219 at 107; *see* USEPA Attachment at 4.

In their public comment filed April 15, 2011, SGIA and PII state that the Agency's proposal to require testing of oxidizers on heatset web offset presses by January 1, 2012 unless they had been tested since January 1, 2010, "needs to be revised." PC 1 at 4. They argue that these presses have been required to obtain operating permits, which "rely on an oxidizer's operating temperature to gauge if the control device is operating within permitted emission control limits." *Id*. SGIA and PII also cite the $10,000-15,000 cost of stack testing to demonstrate compliance to claim that duplicate testing is not economically reasonable, particularly when temperature monitoring data exists. *Id*. SGIA and PII also argue that USEPA documents support a revision. *Id*. (citation omitted). Finally, SGIA and PII argue that, "since the effective date of compliance with the proposed rule for new presses is the installation date of the new press, the proposed rule needs to be revised to provide 180 days to demonstrate compliance. . . . " *Id*. They indicate that this additional time would allow owners and operators to establish typical operating conditions for testing. *Id*., citing 35 Ill. Adm. Code 218.409(b)(5).

Specifically, SGIA and PII propose to amend subsection (a) as follows:

> [t]esting to demonstrate compliance with the requirements of Section 218.407 of this Subpart shall be conducted by January 1, 2012, unless ~~such~~ prior testing ~~has been conducted within the two years immediately preceding January 1, 2012~~ demonstrating compliance with the requirements of Section 218.407 has been conducted in accordance with an existing operating permit.. Thereafter, testing shall be conducted by the owner or operator within ~~90~~ 180 days after a request by the Agency, or as otherwise specified in this Subpart. Such testing shall be conducted at the expense of the owner of operator and the owner or operator shall

> notify the Agency in writing 30 days in advance of conducting such testing to allow the Agency to be present during such testing. PC 1 at 4-5.

In its motion to amend, the Agency responds to a comment by an industry representative by recommending revision of this subsection. Mot. Amend at 2-3. Specifically, the Agency seeks "to specify that lithographic printing lines that conducted testing to demonstrate compliance with the requirements in Section 218/219.407 on or after May 9, 1995, and that satisfy certain other requirements, are not required to retest by January 1, 2012." *Id*. at 2. The Agency also seeks to specify "that sources that conducted testing prior to May 9, 1995, are also not required to retest if such sources submit specified information" to the Agency. *Id*. The Agency proposes that subsection (a) provide in its entirety that

> [t]esting to demonstrate compliance with the requirements of Section 218.407 of this Subpart shall be conducted by January 1, 2012, unless such testing was conducted on or after May 9, 1995, the test was conducted pursuant to a test method approved by USEPA, the current operating conditions and operating capacity of the press are consistent with the operation of the press during such testing, and the test results were submitted to the Agency~~has been conducted within the two years immediately preceding January 1, 2012~~. If an owner or operator of a printing line performed such testing prior to May 9, 1995, the owner or operator shall either retest pursuant to this Section, or submit to the Illinois EPA all information necessary to demonstrate that the prior testing was conducted pursuant to a test method approved by the USEPA, and that the current operating conditions and operating capacity of the press are consistent with the operation of the press during prior testing. Thereafter, testing shall be conducted by the owner of operator within 90 days after a request by the Agency, or as otherwise specified in this Subpart. Such testing shall be conducted at the expense of the owner or operator and the owner or operator shall notify the Agency in writing 30 days in advance of conducting such testing to allow the Agency to be present during such testing. *Id*. at 2-3.

The Board concurs and reflects this language n its order below.

The Agency notes that SGIA and PII had proposed a revision "to eliminate retesting requirements completely for printing lines that have previously tested 'in accordance with an existing operating permit.'" Mot. Amend at 3. The Agency reports that USEPA has indicated "that the applicable 'cut-off date' for retesting requirements is May 9, 1995, the original effective date of the requirements in Section 218/219.407." *Id*. The Agency also indicates that USEPA "advised that other requirements must be met as well to ensure that prior tests still accurately reflect the current operation of the press." *Id*. Based on USEPA's insistence upon and approval of its proposed subsection (a) above, the Agency requests that the Board not adopt the language proposed by SGIA and PII. *Id*.; *see* PC 2 at 1.

The Agency also notes that SGIA and PII had recommended increasing from 90 days to 180 days "the amount of time sources are given to conduct a test after a request by the Agency or after startup of a new press/control device." Mot. Amend at 3. The Agency stresses that the 90-

day requirement has been in effect "for many years" and argues that SGIA and PII have not shown that an additional 90 days are warranted. *Id*. at 4. The Agency adds that "it is unclear whether this change would be acceptable to the USEPA." PC 2 at 1-2. The Agency states that it "opposes this revision." *Id*. at 3; *see* PC 2 at 1. The Board concurs with the Agency on these issues, and the proposed changes are not reflected in its order below.

Section 218/219.411: Recordkeeping and Reporting for Lithographic Printing.

Subsection (b). The Agency proposed to amend this subsection "to add more specific recordkeeping requirements for sources that utilize the material use threshold alternative to demonstrate that they are exempt." SR at 16; *see* Prop. 218 at 118; Prop. 219 at 115; *see* USEPA Attachment at 4.

In their public comment filed April 15, 2011, SGIA and PII argued that the Agency's proposed amendment to subsection (b)(1)(F) "creates a burden that contradicts the purpose of allowing facilities to determine exemption based on material use thresholds." PC 1 at 5. They elaborate that requiring recordkeeping beyond the amount of materials used "creates a significant recordkeeping burden while providing no additional benefit." *Id*. SGIA and PII suggest that, if a facility must demonstrate that it has not exceeded the material use threshold, then subsection (b)(1)(B) includes the calculations to do so. *See* PC 1 at 5. SGIA and PII request that the proposal delete references to "the name, identification number, and VOM content of each cleaning solvent and fountain solution additive used per calendar month." PC 1 at 5.

In its first post-hearing comment, the Agency notes the recommendation by SGIA and PII to "delete the requirement that sources' material use records include the name, identification number, and VOM content of each cleaning solvent and fountain solution additive used per calendar month." PC 2 at 4-5. The Agency states that USEPA requires these records "in order to determine whether the material use thresholds are exceeded." *Id*. at 5, citing USEPA Attach. Based on the USEPA's position, the Agency opposed the recommendation by SGIA and PII. PC 2 at 5. The Board concurs with the Agency, and the order below does not reflect the recommendation of SGIA and PII.

Also in its first post-hearing comment filed May 16, 2011, the Agency noted that it had proposed to add an adjustment factor for industrial solvent cleaning operations "based upon a similar provision in the existing rule for lithographic printing operations." PC 2 at 5; *see id*. at 2-4 (proposing amendment to Section 218/219.187(e)(1)(A)(ii)). The Agency states that,

> [t]o remain consistent with the language recommended by the Illinois EPA above for industrial cleaning solvents, and in compliance with a recommendation by the USEPA, the Illinois EPA proposes amending Section 218/219.411(b)(1) and (2) to specify that lithographic printing sources wishing to utilize the emission adjustment factor for cleaning materials must demonstrate that the vapor pressure falls below the specified threshold. PC 2 at 5-8; *see* Tr.2 at 23-24.

During the second hearing on May 18, 2011, the Agency indicated that it would respond in post-hearing comments to a question by the Board about any requirement to demonstrate that

vapor pressure falls below a specified threshold. Tr.2 at 22-23. The Agency's post-haering comment filed on June 1, 2011, states that the proposal simply requires "that sources be able to demonstrate, through recordkeeping, that their cleaning solutions satisfy the criteria for use of the emission adjustment factor, *i.e.*, that the solution have a vapor pressure below the applicable threshold." PC 4 at 6. The Agency believes that this proposed language would not subject sources to additional requirements. *Id*. The Agency elaborates that existing language requires exempt sources

> to submit a certification to the Agency setting forth calculations that demonstrate that the source does not exceed the applicability threshold. Complying with this requirement necessarily entails maintaining sufficient record to support emissions calculations, including those necessary to demonstrate that cleaning solutions satisfy the criteria for use of the emission adjustment factor. *Id*.

The Agency adds that, even in the absence of this requirement, "sources are always required to demonstrate compliance." *Id*. at 6-7. The Agency argues that its amendment "simply clarifies this obligation, as required by the USEPA." *Id*. at 7.

Subsection (q). The Agency proposed to amend this subsection "by adding recordkeeping requirements for sources making use of the exclusions set forth in Section 218/219.405(c)(3)." Prop. at 16; *see* Prop. 218 at 129-30; Prop, 219 at 126-27; *see* USEPA Attachment at 4; *see also* 35 Ill. Adm. Code 218.405(c)(3), 219.405(c)(3) (exclusions for lithographic printing lines).

Section 218/219.415: Testing for Letterpress Printing Lines.

The Agency proposed to amend subsection (a) by clarifying "that testing shall be performed by the compliance date." SR at 16; *see* Prop. 218 at 132; Prop. 219 at 129; *see* USEPA Attachment at 4.

Section 218/219.417: Recordkeeping and Reporting for Letterpress Printing Lines.

Subsection (b). The Agency proposed to amend this subsection by adding "more specific recordkeeping requirements for sources that utilize the material use threshold alternative to demonstrate that they are exempt." SR at 16; *see* Prop. at 137; Prop. 219 at 134; *see* USEPA Attachment at 4.

Subsection (c). The Agency proposes to amend this subsection by clarifying which sources are subject to its recordkeeping requirements. SR at 16; *see* Prop. 218 at 137; Prop. 219 at 134; *see* USEPA Attachment at 4.

Subpart II: Fiberglass Boat Manufacturing Materials.

Section 218/219.891: Emission Limitations and Control Requirements.

Subsection (a). The Agency proposed to amend this subsection addressing emission limitations and control requirements by deleting an unnecessary equation and adding "an equation specifying how excess non-monomer will be calculated." SR at 16; *see* Prop. 218 at 144; Prop. 219 at 141-42; *see* USEPA Attachment at 6.

Subsection (c). The Agency proposed to amend this subsection addressing an emissions averaging alternative by clarifying "that the monomer VOM emissions calculated using Equation 3 cannot exceed the limit calculated using Equation 2." SR at 16; *see* Prop. 218 at 147; Prop, 219 at 144; *see* USEPA Attachment at 7. The Agency also proposed "to clarify that the formulas in subsection (c)(3) calculate emission rates in terms of VOM/Mg resin or gel coat." SR at 16-17; *see* Prop. 218 at 150; Prop. 219 at 146. In addition, the Agency proposed to define "VOM%" as "the monomer VOM content as supplied, expressed as a weight percent value between 0 and 100 percent." Prop. 218 at 150; Prop. 219 at 146; *see* SR at 17; *see* USEPA Attachment at 7.

In its post-hearing comment, the Agency states that "it recently noticed that plus sign ("+") is missing between the third and fourth terms of Equation 3" in this subsection. PC 2 at 30. The Agency recommends amending the subsection by adding that plus sign. *Id*. at 30, 31. The Board concurs with the addition, which is reflected in its order below.

Subsection (d). The Agency proposed to amend this subsection addressing capture system and control device requirements "to provide that control device alternatives must be approved as a SIP revision." SR at 17; *see* Prop. 218 at 151; Prop. 219 at 147; *see* USEPA Attachment at 7.

Subsection (e). The Agency proposed to amend this subsection addressing filled resins "to reiterate that, if a source is complying with subsection (c), the value of a certain term in Equation 5 shall also be used as the value of a certain term in Equation 4." SR at 17; *see* Prop. 218 at 151; Prop. 219 at 148; *see* USEPA Attachment at 7. The Agency also proposed to correct a cross-reference. SR at 17; *see* Prop. 218 at 152; Prop. 219 at 148.

Section 218/219.892: Testing and Monitoring Requirements.

Subsection (a). The agency proposed to amend this subsection "to clarify when testing must occur." SR at 17; *see* Prop. 218 at 153; Prop. 219 at 149; *see* USEPA Attachment at 7.

Subsection (c). The Agency proposed to amend this subsection "to clarify the monitoring requirements applicable to sources utilizing an afterburner versus those utilizing a carbon adsorber." SR at 17; *see* Prop. 218 at 155-56; Prop. 219 at 152; *see* USEPA Attachment at 7.

Subsection (d). The Agency proposed to amend this subsection "to further clarify when a Method 24 test must be used." SR at 17; *see* Prop. 218 at 156; Prop. 219 at 153. The Agency

sought to add language providing that, "[i]n the event of any inconsistency between a Method 24 test and the manufacturer's specifications, the Method 24 test shall govern." Prop. 218 at 156; Prop. 219 at 153.

Section 218/219.894: Recordkeeping and Reporting Requirements.

Subsection (a). The Agency proposed to amend this subsection to add "recordkeeping requirements for exempt sources." SR at 17; *see* Prop. 218 at 157-58; Prop. 219 at 154; *see* USEPA Attachment at 7.

Subsection (c). The Agency proposed to amend this subsection deleting the word "daily" and providing "that sources shall collect and record the mass of each open molding resin or gel coat as applied each day by each subject fiberglass boat manufacturing operation." SR at 17; *see* Prop. 218 at 159-60; Prop. 219 at 156; *see* USEPA Attachment at 7.

Subsection (g). The Agency proposed to amend this subsection "by adding 'including water' to the recordkeeping provision concerning cleaning solvents used in fiberglass boat manufacturing operations." SR at 18; *see* Prop. 218 at 163; Prop. 219 at 160; *see* USEPA Attachment at 7.

Subpart JJ: Miscellaneous Industrial Adhesives.

Section 218/219.901: Emission Limitations and Control Requirements.

Subsection (b). The Agency proposed to amend this subsection "to provide that the emission limitations are in terms of mass of VOM per volume of adhesives or adhesive primer, excluding water and compounds exempted from the definition of VOM." SR at 18; *see* Prop. 218 at 164; Prop. 219 at 160; *see* USEPA Attachment at 6.

Subsection (c). The Agency proposed to amend this subsection addressing daily-weighted averaging "to correct two equations in which 'mass' should have been 'volume,' and to correct a subscript error." SR at 18; *see* Prop. 218 at 166-67; Prop. 219 at 162-63; *see* USEPA Attachment at 6.

In subsection (c)(2), the Agency states that its original proposal "recommended changing 'M_i' to 'V_i' in the equation and changing the definition of 'V_i' to reference only units of volume, not units of mass." Mot. Amend at 4. The Agency notes, however, that the first-notice version of the proposal published in the *Illinois Register* deleted the units of volume from the definition of 'V_i' instead of the units of mass. *Id*., citing 35 Ill. Reg. 4887, 5101. The Agency assumes "that this was an unintentional transcription error" and recommends correction. Mot. Amend at 4. Having granted the Agency's motion, the Board includes this correction in its order below.

Subsection (d). The Agency proposed to amend this subsection addressing capture systems and control devices "to provide that control device alternatives must be approved as a SIP revision." SR at 18; *see* Prop. 218 at 167; Prop. 219 at 164; *see* USEPA Attachment at 6.

Section 218/219.902: Testing Requirements.

The Agency proposed to amend subsection (a) addressing testing to determine compliance "to clarify when testing must occur." SR at 18; *see* Prop. 218 at 169; Prop. 219 at 165; *see* USEPA Attachment at 6.

Section 218/219.903: Monitoring Requirements.

The Agency proposed to amend subsections (a) and (b) "to clarify the monitoring requirements applicable to sources utilizing an afterburner versus those utilizing a carbon adsorber." SR at 18; *see* Prop. 218 at 171; Prop. 219 at 167; *see* USEPA Attachment at 6.

Section 218/219.904: Recordkeeping and Reporting Requirements

The Agency proposed to amend subsection (d) addressing daily-weighted averaging "to require that sources collect and record the volume of each adhesive applied by each subject adhesive application operation." SR at 18; *see* Prop. 218 at 174; Prop. 219 at 17; *see* USEPA Attachment at 6.

CONCLUSION

The Board proposes for second notice review by JCAR amendments to its air pollution regulations in Parts 211, 218, and 219 (35 Ill. Adm. Code 211, 218, 219) governing VOM emissions contained in its order below.

In addition, after reviewing comments by ACA and the Agency, the Board today opens a subdocket A in this rulemaking. *See* Proposed Amendments to Regulation of Petroleum Leaking Underground Storage Tanks (35 Ill. Adm. Code 732), R04-22, 04-23 (A,B) (consolidated) (Dec. 1, 2005); Livestock Waste Regulations, 35 Ill. Adm. Code 506, R97-15 (A,B) (Mar. 20, 1997); Steel and Foundry Industry Amendments to the Landfill Regulations (Parts 810 through 815 and 817), R90-26 (A,B), slip op. at 3 (Mar. 31, 1994). In subdocket A, the Board intends specifically to address only a proposed small container exemption in Sections 218.208 and 219.208, neither of which the Board included in its first-notice opinion and order. *See* 35 Ill. Adm. Code 218.208, 219.208; Reasonably Available Control Technology (RACT) for Volatile Organic Emissions from Group II and Group IV Consumer and Commercial Products: Proposed Amendments to 35 Ill. Adm. Code 211, 218, and 219, R11-23 (Mar. 17, 2011); *see also* 5 ILCS 100/5-40(b) (2010); 35 Ill. Reg. 4887 (Apr. 1, 2011).

ORDER

The Board directs the Clerk to file the following proposed amendments with JCAR for second-notice review. The Board has underlined proposed additions and struck through proposed deletions.

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: EMISSION STANDARDS AND LIMITATIONS FOR STATIONARY SOURCES

PART 211
DEFINITIONS AND GENERAL PROVISIONS

SUBPART A: GENERAL PROVISIONS

Section

SUBPART B: DEFINITIONS

Section

211.485 Animal Pathological Waste
211.490 Annual Grain Through-Put
211.492 Antifoulant Coating
211.493 Antifouling Sealer/Tie Coat
211.495 Anti-Glare/Safety Coating
211.510 Application Area
211.530 Architectural Coating
211.540 Architectural Structure
211.550 As Applied
211.560 As-Applied Fountain Solution
211.570 Asphalt
211.590 Asphalt Prime Coat
211.610 Automobile
211.630 Automobile or Light-Duty Truck Assembly Source or Automobile or Light-Duty Truck Manufacturing Plant
211.650 Automobile or Light-Duty Truck Refinishing
211.660 Automotive/Transportation Plastic Parts
211.665 Auxiliary Boiler
211.670 Baked Coatings
211.680 Bakery Oven
211.685 Basecoat/Clearcoat System
211.690 Batch Loading
211.695 Batch Operation
211.696 Batch Process Train
211.710 Bead-Dipping
211.715 Bedliner
211.730 Binders
211.735 Black Coating
211.740 Brakehorsepower (rated-bhp)
211.750 British Thermal Unit
211.770 Brush or Wipe Coating
211.790 Bulk Gasoline Plant
211.810 Bulk Gasoline Terminal
211.820 Business Machine Plastic Parts
211.825 Camouflage Coating
211.830 Can
211.850 Can Coating
211.870 Can Coating Line
211.880 Cap Sealant
211.890 Capture
211.910 Capture Device
211.930 Capture Efficiency
211.950 Capture System
211.953 Carbon Adsorber
211.954 Cavity Wax
211.955 Cement

211.1550 Conveyorized Degreasing
211.1560 Cove Base
211.1565 Cove Base Installation Adhesive
211.1570 Crude Oil
211.1590 Crude Oil Gathering
211.1610 Crushing
211.1630 Custody Transfer
211.1650 Cutback Asphalt
211.1655 Cyanoacrylate Adhesive
211.1670 Daily-Weighted Average VOM Content
211.1690 Day
211.1700 Deadener
211.1710 Degreaser
211.1730 Delivery Vessel
211.1740 Diesel Engine
211.1745 Digital Printing
211.1750 Dip Coating
211.1770 Distillate Fuel Oil
211.1780 Distillation Unit
211.1790 Drum
211.1810 Dry Cleaning Operation or Dry Cleaning Facility
211.1830 Dump-Pit Area
211.1850 Effective Grate Area
211.1870 Effluent Water Separator
211.1872 Ejection Cartridge Sealant
211.1875 Elastomeric Materials
211.1876 Electric Dissipating Coating
211.1877 Electric-Insulating Varnish
211.1878 Electrical Apparatus Component
211.1880 Electrical Switchgear Compartment Coating
211.1882 Electrodeposition Primer (EDP)
211.1883 Electromagnetic Interference/Radio Frequency Interference (EMI/RFI) Shielding Coatings
211.1885 Electronic Component
211.1890 Electrostatic Bell or Disc Spray
211.1900 Electrostatic Prep Coat
211.1910 Electrostatic Spray
211.1920 Emergency or Standby Unit
211.1930 Emission Rate
211.1950 Emission Unit
211.1970 Enamel
211.1990 Enclose
211.2010 End Sealing Compound Coat
211.2030 Enhanced Under-the-Cup Fill
211.2040 Etching Filler
211.2050 Ethanol Blend Gasoline

211.2055 Ethylene Propylenediene Monomer (DPDM) Roof Membrane
211.2070 Excess Air
211.2080 Excess Emissions
211.2090 Excessive Release
211.2110 Existing Grain-Drying Operation (Repealed)
211.2130 Existing Grain-Handling Operation (Repealed)
211.2150 Exterior Base Coat
211.2170 Exterior End Coat
211.2190 External Floating Roof
211.2200 Extreme High-Gloss Coating
211.2210 Extreme Performance Coating
211.2230 Fabric Coating
211.2250 Fabric Coating Line
211.2270 Federally Enforceable Limitations and Conditions
211.2285 Feed Mill
211.2290 Fermentation Time
211.2300 Fill
211.2310 Final Repair Coat
211.2320 Finish Primer Surfacer
211.2330 Firebox
211.2350 Fixed-Roof Tank
211.2355 Flare
211.2357 Flat Glass
211.2358 Flat Wood Paneling
211.2359 Flat Wood Paneling Coating Line
211.2360 Flexible Coating
211.2365 Flexible Operation Unit
211.2368 Flexible Packaging
211.2369 Flexible Vinyl
211.2370 Flexographic Printing
211.2390 Flexographic Printing Line
211.2410 Floating Roof
211.2415 Fog Coat
211.2420 Fossil Fuel
211.2425 Fossil Fuel-Fired
211.2430 Fountain Solution
211.2450 Freeboard Height
211.2470 Fuel Combustion Emission Unit or Fuel Combustion Emission Source
211.2490 Fugitive Particulate Matter
211.2510 Full Operating Flowrate
211.2525 Gasket/Gasket Sealing Material
211.2530 Gas Service
211.2550 Gas/Gas Method
211.2570 Gasoline
211.2590 Gasoline Dispensing Operation or Gasoline Dispensing Facility
211.2610 Gel Coat

211.3190 Internal-Floating Roof
211.3210 Internal Transferring Area
211.3215 Janitorial Cleaning
211.3230 Lacquers
211.3240 Laminate
211.3250 Large Appliance
211.3270 Large Appliance Coating
211.3290 Large Appliance Coating Line
211.3300 Lean-Burn Engine
211.3305 Letterpress Printing Line
211.3310 Light Liquid
211.3330 Light-Duty Truck
211.3350 Light Oil
211.3355 Lime Kiln
211.3370 Liquid/Gas Method
211.3390 Liquid-Mounted Seal
211.3410 Liquid Service
211.3430 Liquids Dripping
211.3450 Lithographic Printing Line
211.3470 Load-Out Area
211.3475 Load Shaving Unit
211.3480 Loading Event
211.3483 Long Dry Kiln
211.3485 Long Wet Kiln
211.3487 Low-NO_x Burner
211.3490 Low Solvent Coating
211.3500 Lubricating Oil
211.3505 Lubricating Wax/Compound
211.3510 Magnet Wire
211.3530 Magnet Wire Coating
211.3550 Magnet Wire Coating Line
211.3555 Maintenance Cleaning
211.3570 Major Dump Pit
211.3590 Major Metropolitan Area (MMA)
211.3610 Major Population Area (MPA)
211.3620 Manually Operated Equipment
211.3630 Manufacturing Process
211.3650 Marine Terminal
211.3660 Marine Vessel
211.3665 Mask Coating
211.3670 Material Recovery Section
211.3690 Maximum Theoretical Emissions
211.3695 Maximum True Vapor Pressure
211.3705 Medical Device
211.3707 Medical Device and Pharmaceutical Manufacturing
211.3710 Metal Furniture

211.3730 Metal Furniture Coating
211.3750 Metal Furniture Coating Line
211.3760 Metallic Coating
211.3770 Metallic Shoe-Type Seal
211.3775 Metal to Urethane/Rubber Molding or Casting Adhesive
211.3780 Mid-Kiln Firing
211.3785 Military Specification Coating
211.3790 Miscellaneous Fabricated Product Manufacturing Process
211.3810 Miscellaneous Formulation Manufacturing Process
211.3820 Miscellaneous Industrial Adhesive Application Operation
211.3830 Miscellaneous Metal Parts and Products
211.3850 Miscellaneous Metal Parts and Products Coating
211.3870 Miscellaneous Metal Parts or Products Coating Line
211.3890 Miscellaneous Organic Chemical Manufacturing Process
211.3910 Mixing Operation
211.3915 Mobile Equipment
211.3925 Mold Seal Coating
211.3930 Monitor
211.3950 Monomer
211.3960 Motor Vehicles
211.3961 Motor Vehicle Adhesive
211.3965 Motor Vehicle Refinishing
211.3966 Motor Vehicle Weatherstrip Adhesive
211.3967 Mouth Waterproofing Sealant
211.3968 Multi-Colored Coating
211.3969 Multi-Component Coating
211.3970 Multiple Package Coating
211.3975 Multipurpose Construction Adhesive
211.3980 Nameplate Capacity
211.3985 Natural Finish Hardwood Plywood Panel
211.3990 New Grain-Drying Operation (Repealed)
211.4010 New Grain-Handling Operation (Repealed)
211.4030 No Detectable Volatile Organic Material Emissions
211.4050 Non-Contact Process Water Cooling Tower
211.4052 Non-Convertible Coating
211.4055 Non-Flexible Coating
211.4065 Non-Heatset
211.4067 NO_x Trading Program
211.4070 Offset
211.4080 One-Component Coating
211.4090 One Hundred Percent Acid
211.4110 One-Turn Storage Space
211.4130 Opacity
211.4150 Opaque Stains
211.4170 Open Top Vapor Degreasing
211.4190 Open-Ended Valve

211.4210 Operator of a Gasoline Dispensing Operation or Operator of a Gasoline Dispensing Facility
211.4220 Optical Coating
211.4230 Organic Compound
211.4250 Organic Material and Organic Materials
211.4260 Organic Solvent
211.4270 Organic Vapor
211.4280 Other Glass
211.4285 Outdoor Floor Covering Installation Adhesive
211.4290 Oven
211.4310 Overall Control
211.4330 Overvarnish
211.4350 Owner of a Gasoline Dispensing Operation or Owner of a Gasoline Dispensing Facility
211.4370 Owner or Operator
211.4390 Packaging Rotogravure Printing
211.4410 Packaging Rotogravure Printing Line
211.4430 Pail
211.4450 Paint Manufacturing Source or Paint Manufacturing Plant
211.4455 Pan-Backing Coating
211.4460 Panel
211.4470 Paper Coating
211.4490 Paper Coating Line
211.4510 Particulate Matter
211.4530 Parts Per Million (Volume) or PPM (Vol)
211.4540 Perimeter Bonded Sheet Flooring
211.4550 Person
211.4590 Petroleum
211.4610 Petroleum Liquid
211.4630 Petroleum Refinery
211.4650 Pharmaceutical
211.4670 Pharmaceutical Coating Operation
211.4690 Photochemically Reactive Material
211.4710 Pigmented Coatings
211.4730 Plant
211.4735 Plastic
211.4740 Plastic Part
211.4750 Plasticizers
211.4760 Plastic Solvent Welding Adhesive
211.4765 Plastic Solvent Welding Adhesive Primer
211.4768 Pleasure Craft
211.4769 Pleasure Craft Surface Coating
211.4770 PM-10
211.4790 Pneumatic Rubber Tire Manufacture
211.4810 Polybasic Organic Acid Partial Oxidation Manufacturing Process
211.4830 Polyester Resin Material(s)

211.4850 Polyester Resin Products Manufacturing Process
211.4870 Polystyrene Plant
211.4890 Polystyrene Resin
211.4895 Polyvinyl Chloride Plastic (PVC Plastic)
211.4900 Porous Material
211.4910 Portable Grain-Handling Equipment
211.4930 Portland Cement Manufacturing Process Emission Source
211.4950 Portland Cement Process or Portland Cement Manufacturing Plant
211.4960 Potential Electrical Output Capacity
211.4970 Potential to Emit
211.4990 Power Driven Fastener Coating
211.5010 Precoat
211.5012 Prefabricated Architectural Coating
211.5015 Preheater Kiln
211.5020 Preheater/Precalciner Kiln
211.5030 Pressure Release
211.5050 Pressure Tank
211.5060 Pressure/Vacuum Relief Valve
211.5061 Pretreatment Coating
211.5062 Pretreatment Wash Primer
211.5065 Primary Product
211.5070 Prime Coat
211.5075 Primer Sealant
211.5080 Primer Sealer
211.5090 Primer Surfacer Coat
211.5110 Primer Surfacer Operation
211.5130 Primers
211.5140 Printed Interior Panel
211.5150 Printing
211.5170 Printing Line
211.5185 Process Emission Source
211.5190 Process Emission Unit
211.5195 Process Heater
211.5210 Process Unit
211.5230 Process Unit Shutdown
211.5245 Process Vent
211.5250 Process Weight Rate
211.5270 Production Equipment Exhaust System
211.5310 Publication Rotogravure Printing Line
211.5330 Purged Process Fluid
211.5335 Radiation Effect Coating
211.5340 Rated Heat Input Capacity
211.5350 Reactor
211.5370 Reasonably Available Control Technology (RACT)
211.5390 Reclamation System
211.5400 Red Coating

211.5410 Refiner
211.5430 Refinery Fuel Gas
211.5450 Refinery Fuel Gas System
211.5470 Refinery Unit or Refinery Process Unit
211.5480 Reflective Argent Coating
211.5490 Refrigerated Condenser
211.5500 Regulated Air Pollutant
211.5510 Reid Vapor Pressure
211.5520 Reinforced Plastic Composite
211.5530 Repair
211.5535 Repair Cleaning
211.5550 Repair Coat
211.5570 Repaired
211.5580 Repowering
211.5585 Research and Development Operation
211.5590 Residual Fuel Oil
211.5600 Resist Coat
211.5610 Restricted Area
211.5630 Retail Outlet
211.5640 Rich-Burn Engine
211.5650 Ringelmann Chart
211.5670 Roadway
211.5690 Roll Coater
211.5710 Roll Coating
211.5730 Roll Printer
211.5750 Roll Printing
211.5770 Rotogravure Printing
211.5790 Rotogravure Printing Line
211.5800 Rubber
211.5810 Safety Relief Valve
211.5830 Sandblasting
211.5850 Sanding Sealers
211.5860 Scientific Instrument
211.5870 Screening
211.5875 Screen Printing
211.5880 Screen Printing on Paper
211.5885 Screen Reclamation
211.5890 Sealer
211.5910 Semi-Transparent Stains
211.5930 Sensor
211.5950 Set of Safety Relief Valves
211.5970 Sheet Basecoat
211.5980 Sheet-Fed
211.5985 Sheet Rubber Lining Installation
211.5987 Shock-Free Coating
211.5990 Shotblasting

211.6010 Side-Seam Spray Coat
211.6012 Silicone-Release Coating
211.6015 Single-Ply Roof Membrane
211.6017 Single-Ply Roof Membrane Adhesive Primer
211.6020 Single-Ply Roof Membrane Installation and Repair Adhesive
211.6025 Single Unit Operation
211.6030 Smoke
211.6050 Smokeless Flare
211.6060 Soft Coat
211.6063 Solar-Absorbent Coating
211.6065 Solids Turnover Ratio (R_T)
211.6070 Solvent
211.6090 Solvent Cleaning
211.6110 Solvent Recovery System
211.6130 Source
211.6140 Specialty Coatings
211.6145 Specialty Coatings for Motor Vehicles
211.6150 Specialty High Gloss Catalyzed Coating
211.6170 Specialty Leather
211.6190 Specialty Soybean Crushing Source
211.6210 Splash Loading
211.6230 Stack
211.6250 Stain Coating
211.6270 Standard Conditions
211.6290 Standard Cubic Foot (scf)
211.6310 Start-Up
211.6330 Stationary Emission Source
211.6350 Stationary Emission Unit
211.6355 Stationary Gas Turbine
211.6360 Stationary Reciprocating Internal Combustion Engine
211.6370 Stationary Source
211.6390 Stationary Storage Tank
211.6400 Stencil Coat
211.6405 Sterilization Indicating Ink
211.6410 Storage Tank or Storage Vessel
211.6420 Strippable Spray Booth Coating
211.6425 Stripping
211.6427 Structural Glazing
211.6430 Styrene Devolatilizer Unit
211.6450 Styrene Recovery Unit
211.6460 Subfloor
211.6470 Submerged Loading Pipe
211.6490 Substrate
211.6510 Sulfuric Acid Mist
211.6530 Surface Condenser
211.6535 Surface Preparation

211.6540 Surface Preparation Materials
211.6550 Synthetic Organic Chemical or Polymer Manufacturing Plant
211.6570 Tablet Coating Operation
211.6580 Texture Coat
211.6585 Thin Metal Laminating Adhesive
211.6587 Thin Particleboard
211.6590 Thirty-Day Rolling Average
211.6610 Three-Piece Can
211.6620 Three or Four Stage Coating System
211.6630 Through-the-Valve Fill
211.6635 Tileboard
211.6640 Tire Repair
211.6650 Tooling Resin
211.6670 Topcoat
211.6690 Topcoat Operation
211.6695 Topcoat System
211.6710 Touch-Up
211.6720 Touch-Up Coating
211.6730 Transfer Efficiency
211.6740 Translucent Coating
211.6750 Tread End Cementing
211.6770 True Vapor Pressure
211.6780 Trunk Interior Coating
211.6790 Turnaround
211.6810 Two-Piece Can
211.6825 Underbody Coating
211.6830 Under-the-Cup Fill
211.6850 Undertread Cementing
211.6860 Uniform Finish Blender
211.6870 Unregulated Safety Relief Valve
211.6880 Vacuum Metallizing
211.6885 Vacuum Metalizing Coating
211.6890 Vacuum Producing System
211.6910 Vacuum Service
211.6930 Valves Not Externally Regulated
211.6950 Vapor Balance System
211.6970 Vapor Collection System
211.6990 Vapor Control System
211.7010 Vapor-Mounted Primary Seal
211.7030 Vapor Recovery System
211.7050 Vapor-Suppressed Polyester Resin
211.7070 Vinyl Coating
211.7090 Vinyl Coating Line
211.7110 Volatile Organic Liquid (VOL)
211.7130 Volatile Organic Material Content (VOMC)
211.7150 Volatile Organic Material (VOM) or Volatile Organic Compound (VOC)

AUTHORITY: Implementing Sections 9, 9.1, 9.9 and 10 and authorized by Sections 27, 28, and 28.5 of the Environmental Protection Act [415 ILCS 5/9, 9.1, 9.9, 10, 27, 28, and 28.5].

SOURCE: Adopted as Chapter 2: Air Pollution, Rule 201: Definitions, R71-23, 4 PCB 191, filed and effective April 14, 1972; amended in R74-2 and R75-5, 32 PCB 295, at 3 Ill. Reg. 5, p. 777, effective February 3, 1979; amended in R78-3 and 4, 35 PCB 75 and 243, at 3 Ill. Reg. 30, p. 124, effective July 28, 1979; amended in R80-5, at 7 Ill. Reg. 1244, effective January 21, 1983; codified at 7 Ill. Reg. 13590; amended in R82-1 (Docket A) at 10 Ill. Reg. 12624, effective July 7, 1986; amended in R85-21(A) at 11 Ill. Reg. 11747, effective June 29, 1987; amended in R86-34 at 11 Ill. Reg. 12267, effective July 10, 1987; amended in R86-39 at 11 Ill. Reg. 20804, effective December 14, 1987; amended in R82-14 and R86-37 at 12 Ill. Reg. 787, effective December 24, 1987; amended in R86-18 at 12 Ill. Reg. 7284, effective April 8, 1988; amended in R86-10 at 12 Ill. Reg. 7621, effective April 11, 1988; amended in R88-23 at 13 Ill. Reg. 10862, effective June 27, 1989; amended in R89-8 at 13 Ill. Reg. 17457, effective January 1, 1990; amended in R89-16(A) at 14 Ill. Reg. 9141, effective May 23, 1990; amended in R88-30(B) at 15 Ill. Reg. 5223, effective March 28, 1991; amended in R88-14 at 15 Ill. Reg. 7901, effective May 14, 1991; amended in R91-10 at 15 Ill. Reg. 15564, effective October 11, 1991; amended in R91-6 at 15 Ill. Reg. 15673, effective October 14, 1991; amended in R91-22 at 16 Ill. Reg. 7656, effective May 1, 1992; amended in R91-24 at 16 Ill. Reg. 13526, effective August 24, 1992; amended in R93-9 at 17 Ill. Reg. 16504, effective September 27, 1993; amended in R93-11 at 17 Ill. Reg. 21471, effective December 7, 1993; amended in R93-14 at 18 Ill. Reg. 1253, effective January 18, 1994; amended in R94-12 at 18 Ill. Reg. 14962, effective September 21, 1994; amended in R94-14 at 18 Ill. Reg. 15744, effective October 17, 1994; amended in R94-15 at 18 Ill. Reg. 16379, effective October 25, 1994; amended in R94-16 at 18 Ill. Reg. 16929, effective November 15, 1994; amended in R94-21, R94-31 and R94-32 at 19 Ill. Reg. 6823, effective May 9, 1995; amended in R94-33 at 19 Ill. Reg. 7344, effective May 22, 1995; amended in R95-2 at 19 Ill. Reg. 11066, effective July 12, 1995; amended in R95-16 at 19 Ill. Reg. 15176, effective October 19, 1995; amended in R96-5 at 20 Ill. Reg. 7590, effective May

22, 1996; amended in R96-16 at 21 Ill. Reg. 2641, effective February 7, 1997; amended in R97-17 at 21 Ill. Reg. 6489, effective May 16, 1997; amended in R97-24 at 21 Ill. Reg. 7695, effective June 9, 1997; amended in R96-17 at 21 Ill. Reg. 7856, effective June 17, 1997; amended in R97-31 at 22 Ill. Reg. 3497, effective February 2, 1998; amended in R98-17 at 22 Ill. Reg. 11405, effective June 22, 1998; amended in R01-9 at 25 Ill. Reg. 108, effective December 26, 2000; amended in R01-11 at 25 Ill. Reg. 4582, effective March 15, 2001; amended in R01-17 at 25 Ill. Reg. 5900, effective April 17, 2001; amended in R05-16 at 29 Ill. Reg. 8181, effective May 23, 2005; amended in R05-11 at 29 Ill. Reg. 8892, effective June 13, 2005; amended in R04-12/20 at 30 Ill. Reg. 9654, effective May 15, 2006; amended in R07-18 at 31 Ill. Reg. 14254, effective September 25, 2007; amended in R08-6 at 32 Ill. Reg. 1387, effective January 16, 2008; amended in R07-19 at 33 Ill. Reg. 11982, effective August 6, 2009; amended in R08-19 at 33 Ill. Reg. 13326, effective August 31, 2009; amended in R10-7 at 34 Ill. Reg. 1391, effective January 11, 2010; amended in R10-8 at 34 Ill. Reg. 9069, effective June 25, 2010; amended in R10-20 at 34 Ill. Reg. 14119, effective September 14, 2010; amended in ~~R11-12~~R11-23 at 35 Ill. Reg. _____, effective _____.

SUBPART B: DEFINITIONS

Section 211.493 Antifouling Sealer/Tie Coat

"Antifouling Sealer/Tie Coat" means a coating applied over biocidal antifouling coating for the purpose of preventing release of biocides into the environment and/or to promote adhesion between an antifouling and a primer or other antifoulings.

Section 211.2200 Extreme High-Gloss Coating

"Extreme high-gloss coating" means:

For purposes of 35 Ill. Adm. Code 218.204(q)(1) regarding metal parts and products coatings, a coating that, when tested by ASTM D 523-80, incorporated by reference in Section 211.101 of this Part, shows a reflectance of 75 or more on a 60° meter;

For purposes of 35 Ill. Adm. Code 218.204(q)(5) regarding pleasure craft coatings, any coating that achieves greater than 90 ~~at least 95~~ percent reflectance on a 60° meter when tested using ASTM D 523-89, incorporated by reference in Section 211.101 of this Part.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 211.2358 Flat Wood Paneling

"Flat Wood Paneling" means natural finish hardwood plywood panels, hardwood panels with Class II finishes, tileboard, exterior siding, and printed interior panels made of hardwood plywood or thin particleboard.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 211.2800 Hardwood Plywood

"Hardwood Plywood" means plywood whose surface layer is a veneer of hardwood.

(Source: Added at 35 Ill. Reg. _____, effective _____)

Section 211.3985 Natural Finish Hardwood Plywood Panel

"Natural Finish Hardwood Plywood Panel" means a panel whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by filters and toners.

(Source: Added at 35 Ill. Reg. _____, effective _____)

Section 211.4460 Panel

"Panel" means a flat piece of wood or wood product usually rectangular and used inside homes and mobile homes for wall decorations.

(Source: Added at 35 Ill. Reg. _____, effective _____)

Section 211.5140 Printed Interior Panel

"Printed Interior Panel" mean a panel whose grain or natural surface is obscured by fillers and basecoats upon which a simulated grain or decorative pattern is printed.

(Source: Added at 35 Ill. Reg. _____, effective _____)

Section 211.6587 Thin Particleboard

"Thin Particleboard" is a manufactured board ¼ inch or less in thickness made of individual wood particles that have been coated with a binder and formed into flat sheets by pressure.

(Source: Added at 35 Ill. Reg. _____, effective _____)

Section 211.6635 Tileboard

"Tileboard" means paneling that has a colored waterproof surface coating.

(Source: Added at 35 Ill. Reg. _____, effective _____)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: EMISSIONS STANDARDS AND LIMITATIONS FOR STATIONARY SOURCES

PART 218
ORGANIC MATERIAL EMISSION STANDARDS AND LIMITATIONS FOR THE CHICAGO AREA

SUBPART A: GENERAL PROVISIONS

SUBPART B: ORGANIC EMISSIONS FROM STORAGE AND LOADING OPERATIONS

SUBPART C: ORGANIC EMISSIONS FROM MISCELLANEOUS EQUIPMENT

SUBPART E: SOLVENT CLEANING

SUBPART F: COATING OPERATIONS

SUBPART G: USE OF ORGANIC MATERIAL

SUBPART H: PRINTING AND PUBLISHING

SUBPART Q: SYNTHETIC ORGANIC CHEMICAL AND POLYMER MANUFACTURING PLANT

SUBPART R: PETROLEUM REFINING AND RELATED INDUSTRIES; ASPHALT MATERIALS

SUBPART S: RUBBER AND MISCELLANEOUS PLASTIC PRODUCTS

SUBPART T: PHARMACEUTICAL MANUFACTURING

SUBPART V: BATCH OPERATIONS AND AIR OXIDATION PROCESSES

SUBPART W: AGRICULTURE

SUBPART X: CONSTRUCTION

SUBPART Y: GASOLINE DISTRIBUTION

SUBPART Z: DRY CLEANERS

SUBPART AA: PAINT AND INK MANUFACTURING

SUBPART BB: POLYSTYRENE PLANTS

SUBPART CC: POLYESTER RESIN PRODUCT MANUFACTURING PROCESS

SUBPART DD: AEROSOL CAN FILLING

SUBPART FF: BAKERY OVENS (REPEALED)

SUBPART GG: MARINE TERMINALS

SUBPART HH: MOTOR VEHICLE REFINISHING

SUBPART II: FIBERGLASS BOAT MANUFACTURING MATERIALS

SUBPART JJ: MISCELLANEOUS INDUSTRIAL ADHESIVES

SUBPART PP: MISCELLANEOUS FABRICATED PRODUCT MANUFACTURING PROCESSES

SUBPART QQ: MISCELLANEOUS FORMULATION MANUFACTURING PROCESSES

SUBPART RR: MISCELLANEOUS ORGANIC CHEMICAL MANUFACTURING PROCESSES

SUBPART TT: OTHER EMISSION UNITS

SUBPART UU: RECORDKEEPING AND REPORTING

AUTHORITY: Implementing Section 10 and authorized by Sections 27, 28, and 28.5 of the Environmental Protection Act [415 ILCS 5/10, 27, 28, and 28.5].

SOURCE: Adopted at R91-7 at 15 Ill. Reg. 12231, effective August 16, 1991; amended in R91-24 at 16 Ill. Reg. 13564, effective August 24, 1992; amended in R91-28 and R91-30 at 16 Ill. Reg. 13864, effective August 24, 1992; amended in R93-9 at 17 Ill. Reg. 16636, effective September 27, 1993; amended in R93-14 at 18 Ill. Reg. 1945, effective January 24, 1994; amended in R94-12 at 18 Ill. Reg. 14973, effective September 21, 1994; amended in R94-15 at 18 Ill. Reg. 16392, effective October 25, 1994; amended in R94-16 at 18 Ill. Reg. 16950, effective November 15, 1994; amended in R94-21, R94-31 and R94-32 at 19 Ill. Reg. 6848, effective May 9, 1995; amended in R94-33 at 19 Ill. Reg. 7359, effective May 22, 1995; amended in R96-13 at 20 Ill. Reg. 14428, effective October 17, 1996; amended in R97-24 at 21 Ill. Reg. 7708, effective June 9, 1997; amended in R97-31 at 22 Ill. Reg. 3556, effective February 2, 1998; amended in R98-16 at 22 Ill. Reg. 14282, effective July 16, 1998; amended in R02-20 at 27 Ill. Reg. 7283, effective April 8, 2003; amended in R04-12/20 at 30 Ill. Reg. 9684, effective May 15, 2006; amended in R06-21 at 31 Ill. Reg. 7086, effective April 30, 2007; amended in R08-8 at 32 Ill. Reg. 14874, effective August 26, 2008; amended in R10-10 at 34 Ill. Reg. 5330, effective March 23, 2010; amended in R10-8 at 34 Ill. Reg. 9096, effective June 25, 2010; amended in R10-20 at 34 Ill. Reg. 14174, effective September 14, 2010; amended in R10-8(A) at 35 Ill. Reg. 469, effective December 21, 2010; amended in R11-23 at 35 Ill. Reg. _____, effective _____.

SUBPART A: GENERAL PROVISIONS

Section 218.105 Test Methods and Procedures

a) Coatings, Inks and Fountain Solutions
The following test methods and procedures shall be used to determine compliance of as applied coatings, inks, and fountain solutions with the limitations set forth in this Part.

1) Sampling: Samples collected for analyses shall be one-liter taken into a one-liter container at a location and time such that the sample will be representative of the coating as applied (i.e., the sample shall include any dilution solvent or other VOM added during the manufacturing process). The container must be tightly sealed immediately after the sample is taken. Any solvent or other VOM added after the sample is taken must be measured and accounted for in the calculations in subsection (a)(3) of this Section. For multiple package coatings, separate samples of each component shall be obtained. A mixed sample shall not be obtained as it will cure in the container. Sampling procedures shall follow the guidelines presented in:

A) ASTM D 3925-81 (1985) standard practice for sampling liquid paints and related pigment coating. This practice is incorporated by reference in Section 218.112 of this Part.

B) ASTM E 300-86 standard practice for sampling industrial chemicals. This practice is incorporated by reference in Section 218.112 of this Part.

2) Analyses: The applicable analytical methods specified below shall be used to determine the composition of coatings, inks, or fountain solutions as applied.

A) Method 24 of 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part, shall be used to determine the VOM content and density of coatings. If it is demonstrated to the satisfaction of the Agency and the USEPA that plant coating formulation data are equivalent to Method 24 results, formulation data may be used. In the event of any inconsistency between a Method 24 test and a facility's formulation data, the Method 24 test will govern.

B) Method 24A of 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part, shall be used to determine the VOM content and density of rotogravure printing inks and related coatings. If it is demonstrated to the satisfaction of the Agency and USEPA that the plant coating formulation data are equivalent to Method 24A results, formulation data may be used. In the event

of any inconsistency between a Method 24A test and formulation data, the Method 24A test will govern.

C) The following ASTM methods are the analytical procedures for determining VOM:

i) ASTM D 1475-85: Standard test method for density of paint, varnish, lacquer and related products. This test method is incorporated by reference in Section 218.112 of this Part.

ii) ASTM D 2369-87: Standard test method for volatile content of a coating. This test method is incorporated by reference in Section 218.112 of this Part.

iii) ASTM D 3792-86: Standard test method for water content of water-reducible paints by direct injection into a gas chromatograph. This test method is incorporated by reference in Section 218.112 of this Part.

iv) ASTM D 4017-81 (1987): Standard test method for water content in paints and paint materials by the Karl Fischer method. This test method is incorporated by reference in Section 218.112 of this Part.

v) ASTM D 4457-85: Standard test method for determination of dichloromethane and 1,1,1, trichloroethane in paints and coatings by direct injection into a gas chromatograph. (The procedure delineated above can be used to develop protocols for any compounds specifically exempted from the definition of VOM.) This test method is incorporated by reference in Section 218.112 of this Part.

vi) ASTM D 2697-86: Standard test method for volume non-volatile matter in clear or pigmented coatings. This test method is incorporated by reference in Section 218.112 of this Part.

vii) ASTM D 3980-87: Standard practice for interlaboratory testing of paint and related materials. This practice is incorporated by reference in Section 218.112 of this Part.

viii) ASTM E 180-85: Standard practice for determining the precision data of ASTM methods for analysis of and testing of industrial chemicals. This practice is incorporated by reference in Section 218.112 of this Part.

ix) ASTM D 2372-85: Standard method of separation of vehicle from solvent-reducible paints. This method is incorporated by reference in Section 218.112 of this Part.

D) Use of an adaptation to any of the analytical methods specified in subsections (a)(2)(A), (B), and (C) of this Section may not be used unless approved by the Agency and USEPA. An owner or operator must submit sufficient documentation for the Agency and USEPA to find that the analytical methods specified in subsections (a)(2)(A), (B), and (C) of this Section will yield inaccurate results and that the proposed adaptation is appropriate.

3) Calculations: Calculations for determining the VOM content, water content and the content of any compounds which are specifically exempted from the definition of VOM of coatings, inks and fountain solutions as applied shall follow the guidance provided in the following documents:

A) "A Guide for Surface Coating Calculation", EPA-340/1-86-016, incorporated by reference in Section 218.112 of this Part.

B) "Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink and Other Coatings" (revised June 1986), EPA-450/3-84-019, incorporated by reference in Section 218.112 of this Part.

C) "A Guide for Graphic Arts Calculations", August 1988, EPA-340/1-88-003, incorporated by reference in Section 218.112 of this Part.

b) Automobile or Light-Duty Truck Test Protocol

1) The protocol for testing, including determining the transfer efficiency of coating applicators, at primer surfacer operations and topcoat operations at an automobile or light-duty truck assembly source shall follow the procedures in the following:

A) Prior to May 1, 2012: "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations" ("topcoat protocol"), December 1988, EPA-450/3-88-018, incorporated by reference in Section 218.112 of this Part.

B) On and after May 1, 2012: "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and

Light-Duty Truck Primer-Surfacer and Topcoat Operations" (topcoat protocol), September 2008, EPA-453/R-08-002, incorporated by reference in Section 218.112 of this Part.

2) Prior to testing pursuant to the applicable topcoat protocol, the owner or operator of a coating operation subject to the topcoat or primer surfacer limit in Section 218.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(E) shall submit a detailed testing proposal specifying the method by which testing will be conducted and how compliance will be demonstrated consistent with the applicable topcoat protocol. The proposal shall include, at a minimum, a comprehensive plan (including a rationale) for determining the transfer efficiency at each booth through the use of in-plant or pilot testing, the selection of coatings to be tested (for the purpose of determining transfer efficiency) including the rationale for coating groupings, the method for determining the analytic VOM content of as applied coatings and the formulation solvent content of as applied coatings, and a description of the records of coating VOM content as applied and coating's usage that will be kept to demonstrate compliance. Upon approval of the proposal by the Agency and USEPA, the compliance demonstration for a coating line may proceed.

c) Capture System Efficiency Test Protocols

1) Applicability
The requirements of subsection (c)(2) of this Section shall apply to all VOM emitting process emission units employing capture equipment (e.g., hoods, ducts), except those cases noted in this subsection (c)(1).

A) If an emission unit is equipped with (or uses) a permanent total enclosure (PTE) that meets Agency and USEPA specifications, and which directs all VOM to a control device, then the emission unit is exempted from the requirements described in subsection (c)(2) of this Section. The Agency and USEPA specifications to determine whether a structure is considered a PTE are given in Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part. In this instance, the capture efficiency is assumed to be 100 percent and the emission unit is still required to measure control efficiency using appropriate test methods as specified in subsection (d) of this Section.

B) If an emission unit is equipped with (or uses) a control device designed to collect and recover VOM (e.g., carbon adsorber), an explicit measurement of capture efficiency is not necessary provided that the conditions given below are met. The overall control of the system can be determined by directly comparing the input liquid VOM to the recovered liquid VOM. The general

procedure for use in this situation is given in 40 CFR 60.433, incorporated by reference in Section 218.112 of this Part, with the following additional restrictions:

i) Unless otherwise specified in subsection (c)(1)(B)(ii), the owner or operator shall obtain data each operating day for the solvent usage and solvent recovery to permit the determination of the solvent recovery efficiency of the system each operating day using a 7-day rolling period. The recovery efficiency for each operating day is computed as the ratio of the total recovered solvent for that day and the most recent prior 6 operating days to the total solvent usage for the same 7-day period used for the recovered solvent, rather than a 30-day weighted average as given in 40 CFR 60.433 incorporated by reference at Section 218.112 of this Part. This ratio shall be expressed as a percentage. The ratio shall be computed within 72 hours following each 7-day period. A source that believes that the 7-day rolling period is not appropriate may use an alterative multi-day rolling period not to exceed 30 days, with the approval of the Agency and USEPA. In addition, the criteria in subsection (c)(1)(B)(iii) or subsection (c)(1)(B)(iv) must be met.

ii) The owner or operator of the source engaged in printing located at 350 E. 22nd Street, Chicago, Illinois, shall obtain data each operating day for the solvent usage and solvent recovery to permit the determination of the solvent recovery efficiency of the system each operating day using a 14-day rolling period. The recovery efficiency for each operating day is computed as the ratio of the total recovered solvent for that day and the most recent prior 13 operating days to the total solvent usage for the same 14-day period used for the recovered solvent, rather than a 30-day weighted average as given in 40 CFR 60.433, incorporated by reference in Section 218.112 of this Part. This ratio shall be expressed as a percentage. The ratio shall be computed within 17 days following each 14-day period. In addition, the criteria in subsection (c)(1)(B)(iii) or subsection (c)(1)(B)(iv) must be met.

iii) The solvent recovery system (i.e., capture and control system) must be dedicated to a single coating line, printing line, or other discrete activity that by itself is subject to an applicable VOM emission standard, or

iv) If the solvent recovery system controls more than one coating line, printing line or other discrete activity that by itself is subject to an applicable VOM emission standard, the overall control (i.e., the total recovered VOM divided by the sum of liquid VOM input from all lines and other activities venting to the control system) must meet or exceed the most stringent standard applicable to any line or other discrete activity venting to the control system.

2) Capture Efficiency Protocols

The capture efficiency of an emission unit shall be measured using one of the protocols given below. Appropriate test methods to be utilized in each of the capture efficiency protocols are described in appendix M of 40 CFR 51, incorporated by reference at Section 218.112 of this Part. Any error margin associated with a test method or protocol may not be incorporated into the results of a capture efficiency test. If these techniques are not suitable for a particular process, then an alternative capture efficiency protocol may be used, pursuant to the provisions of Section 218.108(b) of this Part.

A) Gas/gas method using temporary total enclosure (TTE). The Agency and USEPA specifications to determine whether a temporary enclosure is considered a TTE are given in Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part. The capture efficiency equation to be used for this protocol is:

$$CE = \frac{G_w}{G_w + F_w}$$

where:

CE = Capture efficiency, decimal fraction;
G_w = Mass of VOM captured and delivered to control device using a TTE;
F_w = Mass of uncaptured VOM that escapes from a TTE.

Method 204B or 204C contained in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part, is used to obtain G_w. Method 204D in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part, is used to obtain F_w.

B) Liquid/gas method using TTE. The Agency and USEPA specifications to determine whether a temporary enclosure is considered a TTE are given in Method 204 of appendix M of 40

CFR 51, incorporated by reference in Section 218.112 of this Part. The capture efficiency equation to be used for this protocol is:

$$CE = \frac{L - F_w}{L}$$

where:

CE = Capture efficiency, decimal fraction;
L = Mass of liquid VOM input to process emission unit;
F_w = Mass of uncaptured VOM that escapes from a TTE.

Method 204A or 204F contained in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part, is used to obtain L. Method 204 D in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part, is used to obtain F_w.

C) Gas/gas method using the building or room (building or room enclosure), in which the affected coating line, printing line or other emission unit is located, as the enclosure as determined by Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part, and in which "F_B" and "G" are measured while operating only the affected line or emission unit. All fans and blowers in the building or room must be operated as they would under normal production. The capture efficiency equation to be used for this protocol is:

$$CE = \frac{G}{G + F_B}$$

where:

CE = Capture efficiency, decimal fraction;
G = Mass of VOM captured and delivered to control device;
F_B = Mass of uncaptured VOM that escapes from building enclosure.

Method 204B or 204C contained in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part is used to obtain G. Method 204E in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part is used to obtain F_B.

D) Liquid/gas method using the building or room (building or room enclosure), in which the affected coating line, printing line or other

emission unit is located, as the enclosure as determined by Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part, and in which "F_B" and "L" are measured while operating only the affected line or emission unit. All fans and blowers in the building or room must be operated as they would under normal production. The capture efficiency equation to be used for this protocol is:

$$CE = \frac{L - F_B}{L}$$

where:

CE = Capture efficiency, decimal fraction;
L = Mass of liquid VOM input to process emission unit;
F_B = Mass of uncaptured VOM that escapes from building enclosure.

Method 204A or 204F contained in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part is used to obtain L. Method 204E in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part is used to obtain F_B.

E) Mass balance using Data Quality Objective (DQO) or Lower Confidence Limit (LCL) protocol. For a liquid/gas input where an owner or operator is using the DQO/LCL protocol and not using an enclosure as described in Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part, the VOM content of the liquid input (L) must be determined using Method 204A or 204F in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part. The VOM content of the captured gas stream (G) to the control device must be determined using Method 204B or 204C in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part. The results of capture efficiency calculations (G/L) must satisfy the DQO or LCL statistical analysis protocol as described in Section 3 of USEPA's "Guidelines for Determining Capture Efficiency," incorporated by reference at Section 218.112 of this Part. Where capture efficiency testing is done to determine emission reductions for the purpose of establishing emission credits for offsets, shutdowns, and trading, the LCL protocol cannot be used for these applications. In enforcement cases, the LCL protocol cannot confirm non-compliance; capture efficiency must be determined using a protocol under subsection (c)(2)(A), (B), (C) or (D) of this Section, the DQO protocol of this subsection (c)(2)(E), or an alternative protocol pursuant to Section 218.108(b) of this Part.

BOARD NOTE: Where LCL was used in testing emission units that are the subject of later requests for establishing emission credits for offsets, shutdowns, and trading, prior LCL results may not be relied upon to determine the appropriate amount of credits. Instead, to establish the appropriate amount of credits, additional testing may be required that would satisfy the protocol of Section 218.105(c)(2)(A), (B), (C) or (D), the DQO protocol of Section 218.105(c)(2)(E), or an alternative protocol pursuant to Section 218.108(b) of this Part.

3) Simultaneous testing of multiple lines or emission units with a common control device. If an owner or operator has multiple lines sharing a common control device, the capture efficiency of the lines may be tested simultaneously, subject to the following provisions:

A) Multiple line testing must meet the criteria of Section 4 of USEPA's "Guidelines for Determining Capture Efficiency, " incorporated by reference at Section 218.112 of this Part;

B) The most stringent capture efficiency required for any individual line or unit must be met by the aggregate of lines or units; and

C) Testing of all the lines of emission units must be performed with the same capture efficiency test protocol.

4) Recordkeeping and Reporting

A) All owners or operators affected by this subsection must maintain a copy of the capture efficiency protocol submitted to the Agency and the USEPA on file. All results of the appropriate test methods and capture efficiency protocols must be reported to the Agency within 60 days after the test date. A copy of the results must be kept on file with the source for a period of 3 years.

B) If any changes are made to capture or control equipment, then the source is required to notify the Agency and the USEPA of these changes and a new test may be required by the Agency or the USEPA.

C) The source must notify the Agency 30 days prior to performing any capture efficiency or control test. At that time, the source must notify the Agency which capture efficiency protocol and control device test methods will be used. Notification of the actual date and expected time of testing must be submitted a minimum of 5 working days prior to the actual date of the test. The Agency may

at its discretion accept notification with shorter advance notice provided that such arrangements do not interfere with the Agency's ability to review the protocol or observe testing.

D) Sources utilizing a PTE must demonstrate that this enclosure meets the requirements given in Method 204 in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part, for a PTE during any testing of their control device.

E) Sources utilizing a TTE must demonstrate that their TTE meets the requirements given in Method 204 in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part, for a TTE during testing of their control device. The source must also provide documentation that the quality assurance criteria for a TTE have been achieved.

F) Any source utilizing the DQO or LCL protocol must submit the following information to the Agency with each test report:

i) A copy of all test methods, Quality Assurance/Quality Control procedures, and calibration procedures to be used from those described in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part;

ii) A table with information on each sample taken, including the sample identification and the VOM content of the sample;

iii) The quantity of material used for each test run;

iv) The quantity of captured VOM for each test run;

v) The capture efficiency calculations and results for each test run;

vi) The DQO and/or LCL calculations and results; and

vii) The Quality Assurance/Quality Control results, including how often the instruments were calibrated, the calibration results, and the calibration gases used.

d) Control Device Efficiency Testing and Monitoring

1) The control device efficiency shall be determined by simultaneously measuring the inlet and outlet gas phase VOM concentrations and gas volumetric flow rates in accordance with the gas phase test methods

specified in subsection (f) of this Section.

2) An owner or operator:

A) That uses an afterburner or carbon adsorber to comply with any Section of Part 218 shall use Agency and USEPA approved continuous monitoring equipment which is installed, calibrated, maintained, and operated according to vendor specifications at all times the control device is in use except as provided in subsection (d)(3) of this Section. The continuous monitoring equipment must monitor the following parameters:

i) For each afterburner which does not have a catalyst bed, the combustion chamber temperature of each afterburner.

ii) For each afterburner which has a catalyst bed, commonly known as a catalytic afterburner, the temperature rise across each catalytic afterburner bed or VOM concentration of exhaust.

iii) For each carbon adsorber, the VOM concentration of each carbon adsorption bed exhaust or the exhaust of the bed next in sequence to be desorbed.

B) Must install, calibrate, operate and maintain, in accordance with manufacturer's specifications, a continuous recorder on the temperature monitoring device, such as a strip chart, recorder or computer, having an accuracy of ± 1 percent of the temperature measured in degrees Celsius or ± 0.5^{o} C, whichever is greater.

C) Of an automobile or light-duty truck primer surfacer operation or topcoat operation subject to subsection (d)(2)(A), shall keep a separate record of the following data for the control devices, unless alternative provisions are set forth in a permit pursuant to Title V of the Clean Air Act:

i) For thermal afterburners for which combustion chamber temperature is monitored, all 3-hour periods of operation in which the average combustion temperature was more than 28°C (50°F) below the average combustion temperature measured during the most recent performance test that demonstrated that the operation was in compliance.

ii) For catalytic afterburners for which temperature rise is monitored, all 3-hour periods of operation in which the average gas temperature before the catalyst bed is more

than 28°C (50°F) below the average gas temperature immediately before the catalyst bed measured during the most recent performance test that demonstrated that the operation was in compliance.

iii) For catalytic afterburners and carbon adsorbers for which VOM concentration is monitored, all 3-hour periods of operation during which the average VOM concentration or the reading of organics in the exhaust gases is more than 20 percent greater than the average exhaust gas concentration or reading measured by the organic monitoring device during the most recent determination of the recovery efficiency of a carbon adsorber or performance test for a catalytic afterburner, which determination or test demonstrated that the operation was in compliance.

3) An owner or operator that uses a carbon adsorber to comply with Section 218.401 of this Part may operate the adsorber during periods of monitoring equipment malfunction, provided that:

A) The owner or operator notifies in writing the Agency within, 10 days after the conclusion of any 72 hour period during which the adsorber is operated and the associated monitoring equipment is not operational, of such monitoring equipment failure and provides the duration of the malfunction, a description of the repairs made to the equipment, and the total to date of all hours in the calendar year during which the adsorber was operated and the associated monitoring equipment was not operational;

B) During such period of malfunction the adsorber is operated using timed sequences as the basis for periodic regeneration of the adsorber;

C) The period of such adsorber operation does not exceed 360 hours in any calendar year without the approval of the Agency and USEPA; and

D) The total of all hours in the calendar year during which the adsorber was operated and the associated monitoring equipment was not operational shall be reported, in writing, to the Agency and USEPA by January 31 of the following calendar year.

e) Overall Efficiency

1) The overall efficiency of the emission control system shall be determined as the product of the capture system efficiency and the control device

efficiency or by the liquid/liquid test protocol as specified in 40 CFR 60.433, incorporated by reference in Section 218.112 of this Part, (and revised by subsection (c)(1)(B) of this Section) for each solvent recovery system. In those cases in which the overall efficiency is being determined for an entire line, the capture efficiency used to calculate the product of the capture and control efficiency is the total capture efficiency over the entire line.

2) For coating lines which are both chosen by the owner or operator to comply with Section 218.207(c), (d), (e), (f), (g), (m), or (n) of this Part by the alternative in Section 218.207(b)(2) of this Part and meet the criteria allowing them to comply with Section 218.207 of this Part instead of Section 218.204 of this Part, the overall efficiency of the capture system and control device, as determined by the test methods and procedures specified in subsections (c), (d) and (e)(1) of this Section, shall be no less than the equivalent overall efficiency which shall be calculated by the following equation:

$$E = \frac{VOM_a - VOM_l}{VOM_a} \times 100$$

where:

E = Equivalent overall efficiency of the capture system and control device as a percentage;

VOM_a = Actual VOM content of a coating, or the daily-weighted average VOM content of two or more coatings (if more than one coating is used), as applied to the subject coating line as determined by the applicable test methods and procedures specified in subsection (a) of this Section in units of kg VOM/1 (lb VOM/gal) of coating solids as applied;

VOM_l = The VOM emission limit specified in Section 218.204 or 218.205 of this Part in units of kg VOM/ℓ (lb VOM/gal) of coating solids as applied.

f) Volatile Organic Material Gas Phase Source Test Methods.
The methods in 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part delineated below shall be used to determine control device efficiencies.

1) 40 CFR 60, appendix A, Method 18, 25 or 25A, incorporated by reference in Section 218.112 of this Part as appropriate to the conditions at the site, shall be used to determine VOM concentration. Method selection shall be

based on consideration of the diversity of organic species present and their total concentration and on consideration of the potential presence of interfering gases. Except as indicated in subsections (f)(1)(A) and (B) below, the test shall consist of three separate runs, each lasting a minimum of 60 minutes, unless the Agency and the USEPA determine that process variables dictate shorter sampling times.

A) When the method is to be used to determine the efficiency of a carbon adsorption system with a common exhaust stack for all the individual adsorber vessels, the test shall consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all the individual absorber vessels.

B) When the method is to be used to determine the efficiency of a carbon adsorption system with individual exhaust stacks for each absorber vessel, each adsorber vessel shall be tested individually. The test for each absorber vessel shall consist of three separate runs. Each run shall coincide with one or more complete adsorption cycles.

2) 40 CFR 60, appendix A, Method 1 or 1A, incorporated by reference in Section 218.112 of this Part, shall be used for sample and velocity traverses.

3) 40 CFR 60, appendix A, Method 2, 2A, 2C or 2D, incorporated by reference in Section 218.112 of this Part, shall be used for velocity and volumetric flow rates.

4) 40 CFR 60, appendix A, Method 3, incorporated by reference in Section 218.112 of this Part, shall be used for gas analysis.

5) 40 CFR 60, appendix A, Method 4, incorporated by reference in Section 218.112 of this Part, shall be used for stack gas moisture.

6) 40 CFR 60, appendix A, Methods 2, 2A, 2C, 2D, 3 and 4, incorporated by reference in Section 218.112 of this Part, shall be performed, as applicable, at least twice during each test run.

7) Use of an adaptation to any of the test methods specified in subsections (f)(1), (2), (3), (4), (5) and (6) of this Section may not be used unless approved by the Agency and the USEPA on a case by case basis. An owner or operator must submit sufficient documentation for the Agency and the USEPA to find that the test methods specified in subsections (f)(1), (2), (3), (4), (5) and (6) of this Section will yield inaccurate results and that the proposed adaptation is appropriate.

g) Leak Detection Methods for Volatile Organic Material
Owners or operators required by this Part to carry out a leak detection monitoring program shall comply with the following requirements:

1) Leak Detection Monitoring

A) Monitoring shall comply with 40 CFR 60, appendix A, Method 21, incorporated by reference in Section 218.112 of this Part.

B) The detection instrument shall meet the performance criteria of Method 21.

C) The instrument shall be calibrated before use on each day of its use by the methods specified in Method 21.

D) Calibration gases shall be:

i) Zero air (less than 10 ppm of hydrocarbon in air); and

ii) A mixture of methane or n-hexane and air at a concentration of approximately, but no less than, 10,000 ppm methane or n-hexane.

E) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21.

2) When equipment is tested for compliance with no detectable emissions as required, the test shall comply with the following requirements:

A) The requirements of subsections (g)(1)(A) through (g)(1)(E) of this Section shall apply.

B) The background level shall be determined as set forth in Method 21.

3) Leak detection tests shall be performed consistent with:

A) "APTI Course SI 417 controlling Volatile Organic Compound Emissions from Leaking Process Equipment", EPA-450/2-82-015, incorporated by reference in Section 218.112 of this Part.

B) "Portable Instrument User's Manual for Monitoring VOC Sources", EPA-340/1-86-015, incorporated by reference in Section 218.112 of this Part.

C) "Protocols for Generating Unit-Specific Emission Estimates for Equipment Leaks of VOC and VHAP", EPA-450/3-88-010, incorporated by reference in Section 218.112 of this Part.

D) "Petroleum Refinery Enforcement Manual", EPA-340/1-80-008, incorporated by reference in Section 218.112 of this Part.

h) Bulk Gasoline Delivery System Test Protocol

1) The method for determining the emissions of gasoline from a vapor recovery system are delineated in 40 CFR 60, Subpart XX, section 60.503, incorporated by reference in Section 218.112 of this Part.

2) Other tests shall be performed consistent with:

A) "Inspection Manual for Control of Volatile Organic Emissions from Gasoline Marketing Operations: Appendix D", EPA-340/1-80-012, incorporated by reference in Section 218.112 of this Part.

B) "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals: Appendix A", EPA-450/2-77-026, incorporated by reference in Section 218.112 of this Part.

i) Notwithstanding other requirements of this Part, upon request of the Agency where it is necessary to demonstrate compliance, an owner or operator of an emission unit which is subject to this Part shall, at his own expense, conduct tests in accordance with the applicable test methods and procedures specific in this Part. Nothing in this Section shall limit the authority of the USEPA pursuant to the Clean Air Act, as amended, to require testing.

j) Stage II Gasoline Vapor Recovery Test Methods
The methods for determining the acceptable performance of Stage II Gasoline Vapor Recovery System are delineated in "Technical Guidance-Stage II Vapor Recovery Systems for Control of Vehicle Refueling Emissions at Gasoline Dispensing Facilities," found at EPA 450/3-91-022b and incorporated by reference in Section 218.112 of this Part. Specifically, the test methods are as follows:

1) Dynamic Backpressure Test is a test procedure used to determine the pressure drop (flow resistance) through balance vapor collection and control systems (including nozzles, vapor hoses, swivels, dispenser piping and underground piping) at prescribed flow rates.

2) Pressure Decay/Leak Test is a test procedure used to quantify the vapor tightness of a vapor collection and control system installed at gasoline dispensing facilities.

3) Liquid Blockage Test is a test procedure used to detect low points in any vapor collection and control system where condensate may accumulate.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

SUBPART E: SOLVENT CLEANING

Section 218.187 Other Industrial Solvent Cleaning Operations

a) Applicability. On and after January 1, 2012:

1) Except as provided in subsection (a)(2) of this Section, the requirements of this Section shall apply to all cleaning operations that use organic materials at sources that emit a total of 226.8 kg per calendar month (500 lbs per calendar month) or more of VOM, in the absence of air pollution control equipment, from cleaning operations at the source other than cleaning operations identified in subsection (a)(2) of this Section. For purposes of this Section, "cleaning operation" means the process of cleaning products, product components, tools, equipment, or general work areas during production, repair, maintenance, or servicing, including but not limited to spray gun cleaning, spray booth cleaning, large and small manufactured components cleaning, parts cleaning, equipment cleaning, line cleaning, floor cleaning, and tank cleaning, at sources with emission units;

2) Notwithstanding subsection (a)(1) of this Section:

A) The following cleaning operations shall be exempt from the requirements of subsections (b), (c), (d), (e), (f), and (g) of this Section:

i) Cleaning operations subject to the limitations in Sections 218.182, 218.183, or 218.184;

ii) Janitorial cleaning;

iii) Stripping of cured coatings, inks, or adhesives;

iv) Cleaning operations in printing pre-press areas, including the cleaning of film processors, color scanners, plate processors, film cleaning, and plate cleaning;

B) Cleaning operations for emission units within the following ~~source~~ categories shall be exempt from the requirements of subsections (b), (c), (d), (e), (f), and (g) of this Section:

i) Flexible package printing;

ii) Lithographic printing;

iii) Letterpress printing;

iv) Flat wood paneling coating;

v) Large appliance coating;

vi) Metal furniture coating;

vii) Paper, film, and foil coating;

viii) Wood furniture coating;

ix) Plastic parts coating;

x) Miscellaneous metal parts coating;

xi) Fiberglass boat manufacturing;

xii) Miscellaneous industrial adhesives; and

xiii) Auto and light-duty truck assembly coating;

C) The following cleaning operations shall be exempt from the requirements of subsections (b), (c), (f), and (g) of this Section:

i) Cleaning of solar cells, laser hardware, scientific instruments, and high-precision optics;

ii) Cleaning conducted as part of performance laboratory tests on coatings, adhesives, or inks; research and development operations; or laboratory tests in quality assurance laboratories;

iii) Cleaning of paper-based gaskets and clutch assemblies where rubber is bonded to metal by means of an adhesive;

iv) Cleaning of cotton swabs to remove cottonseed oil before cleaning of high-precision optics;

v) Cleaning of medical device and pharmaceutical manufacturing operations if the facility uses no more than 5.7 liters (1.5 gallons) per day of solvents for such cleaning;

vi) Cleaning of adhesive application equipment used for thin metal laminating;

vii) Cleaning of electronic or electrical cables;

viii) Touch-up cleaning performed on printed circuit boards where surface mounted devices have already been attached;

ix) Cleaning of coating and adhesive application processes utilized to manufacture transdermal drug delivery products using no more than three gallons per day of ethyl acetate;

x) Cleaning of application equipment used to apply coatings on satellites and radiation effect coatings;

xi) Cleaning of application equipment used to apply solvent-borne fluoropolymer coatings;

xii) Cleaning of ultraviolet or electron beam adhesive application;

xiii) Cleaning of sterilization indicating ink application equipment if the facility uses no more than 5.7 liters (1.5 gallons) per day of solvents for such cleaning;

xiv) Cleaning of metering rollers, dampening rollers, and printing plates;

xv) Cleaning of numismatic dies; and

xvi) Cleaning operations associated with digital printing;~~.~~

xvii) Cleaning with aerosol products if the facility uses no more than 4.7 liters (1.25 gallons) per day of such products;

xviii) Cleaning of plastic-based or vinyl-based substrates for use in the screen printing process when using UV curable ink and coating systems;

xix) Cleaning conducted as part of performance tests on coatings, adhesives, or inks that are in research and

development and that are not yet commercially used for the applications for which they are being tested. This exemption is limited to the use of up to a total of 90.9 liters (24 gallons) of cleaning solvent per calendar month and 416.3 liters (110 gallons) per calendar year for such cleaning.

b) Material and Control Requirements. No owner or operator of a source subject to this Section, other than manufacturers of coatings, inks, adhesives, or resins, shall perform any cleaning operation subject to this Section unless the owner or operator meets the requirements in subsection (b)(1), (b)(2), or (b)(3). No owner or operator of a source that manufactures coatings, inks, adhesives, or resins shall perform any cleaning operation subject to this Section unless the owner or operator meets the requirements in at least one of the following subsections: (b)(1), (b)(2), (b)(3), (b)(4), or (b)(5).

1) The VOM content of the as-used cleaning solutions does not exceed the following emissions limitations:

A) Product cleaning during manufacturing process or surface preparation for coating, adhesive, or ink application:

		kg/l	lb/gal
i)	Electrical apparatus components and electronic components	0.10	0.83
ii)	Medical device and pharmaceutical manufacturing	0.80	6.7

B) Repair and maintenance cleaning:

		kg/l	lb/gal
i)	Electrical apparatus components and electronic components	0.10	0.83
ii)	Medical device and pharmaceutical manufacturing tools, equipment, and machinery	0.80	6.7
iii)	Medical device and pharmaceutical manufacturing general work surfaces	0.60	5.0

C) Cleaning of ink application equipment:

		kg/l	lb/gal
i)	Rotogravure printing that does not print flexible packaging	0.10	0.83
ii)	Screen printing, including screen reclamation activities	0.50	4.2
iii)	Ultraviolet ink and electron beam ink application equipment, except screen printing	0.65	5.4
iv)	Flexographic printing that does not print flexible packaging	0.10	0.83

		kg/l	lb/gal
D)	Cleaning of equipment used in the manufacture of coatings, inks, adhesives, or resins	0.20	1.67

		kg/1	lb/gal
E)	All other cleaning operations not subject to a specific limitation in subsections (b)(1)(A) through (b)(1)(D) of this Section	0.050	0.42

2) The VOM composite vapor pressure of each as-used cleaning solution used does not exceed 8.0 mmHg measured at 20°C (68°F);

3) An afterburner or carbon adsorber is installed and operated that reduces VOM emissions from the subject cleaning operation by at least 85 percent overall, or for sources that manufacture coatings, inks, adhesives, or resins, an afterburner or carbon adsorber is installed and operated that reduces VOM emissions from the subject cleaning operation by at least 80 percent overall and has a 90 percent efficiency. The owner or operator may use an emissions control system other than an afterburner or carbon adsorber if such device reduces VOM emissions from the subject cleaning operation in accordance with the applicable capture and control requirements above, the owner or operator submits a plan to the Agency detailing appropriate monitoring devices, test methods, recordkeeping requirements, and operating parameters for such control device, and such plan is approved by the Agency and USEPA within federally enforceable permit conditions;

4) For sources that manufacture coatings, inks, adhesives, or resins, the owner or operator complies with the following work practices:

A) Equipment being cleaned is maintained leak-free;

B) VOM-containing cleaning materials are drained from the cleaned equipment upon completion of cleaning;

C) VOM-containing cleaning materials, including waste solvent, are not stored or disposed of in such a manner that will cause or allow evaporation into the atmosphere; and

D) VOM-containing cleaning materials are stored in closed containers;

5) Sources that manufacture coatings, inks, adhesives, or resins may utilize solvents that do not comply with subsection (b)(1) or (b)(2) of this Section provided that all of the following requirements are met:

A) No more than 228 l (60 gal) of fresh solvent is used per calendar month. Solvent that is reused or recycled, either onsite or offsite, for further use in equipment cleaning or in the manufacture of coatings, inks, adhesives, or resins, shall not be included in this limit;

B) Solvents, including cleanup solvents, are collected and stored in closed containers; and

C) Records are maintained in accordance with subsection (e)(6).

c) The owner or operator of a subject source shall demonstrate compliance with this Section by using the applicable test methods and procedures specified in subsection (g) of this Section and by complying with the recordkeeping and reporting requirements specified in subsection (e) of this Section.

d) Operating Requirements. The owner or operator of a source subject to the requirements of this Section shall comply with the following for each subject cleaning operation. Such requirements are in addition to work practices set forth in subsections (b)(4) and (b)(5) of this Section, as applicable:

1) Cover open containers and properly cover and store applicators used to apply cleaning solvents;

2) Minimize air circulation around the cleaning operation;

3) Dispose of all used cleaning solutions, cleaning towels, and applicators used to apply cleaning solvents in closed containers;

4) Utilize equipment practices that minimize emissions;

5) When using cleaning solvent for wipe cleaning, sources that manufacture coatings, inks, adhesives, or resins shall:

A) Cover open containers used for the storage of spent or fresh organic compounds used for cleanup or coating, ink, adhesive, or resin removal; and

B) Cover open containers used for the storage or disposal of cloth or paper impregnated with organic compounds that are used for cleanup or coating, ink, adhesive, or resin removal.

e) Recordkeeping and Reporting Requirements

1) The owner or operator of a source exempt from the limitations of this Section because of the criteria in subsection (a)(1) of this Section shall comply with the following:

A) By January 1, 2012, or upon initial start-up of the source, whichever is later, submit a certification to the Agency that includes:

i) A declaration that the source is exempt from the requirements of this Section because of the criteria in subsection (a)(1);

ii) Calculations that demonstrate that combined emissions of VOM from cleaning operations at the source, other than cleaning operations identified in subsection (a)(2) of this Section, never equal or exceed 226.8 kg/month (500 lbs/month), in the absence of air pollution control ~~equipment;~~equipment. An emission adjustment factor of 0.50 shall be used in calculating emissions from used ship towels if the VOM composite vapor pressure of each associated cleaning solution is demonstrated to be less than 10 mmHg at 20ºC (68ºF) and the used shop towels are kept in closed containers, For cleaning solutions with VOM composite vapor pressures of equal to or greater than 10 mmHG measured at 20ºC (68ºF) and for shop towels that are not kept in closed containers, no emission adjustment factor shall be used.

B) On and after January 1, 2012, collect and record the following information each month for each cleaning operation, other than cleaning operations identified in subsection (a)(2) of this Section:

i) The name and identification of each VOM-containing cleaning solution as applied in each cleaning operation;

ii) The VOM content of each cleaning solution as applied in each cleaning operation;

iii) The weight of VOM per volume and the volume of each as-used cleaning solution; and

iv) The total monthly VOM emissions from cleaning operations at the source;

C) Notify the Agency of any record that shows that the combined emissions of VOM from cleaning operations at the source, other than cleaning operations identified in subsection (a)(2) of this Section, ever equal or exceed 226.8 kg/month (500 lbs/month), in the absence of air pollution control equipment, within 30 days after the event occurs.

2) All sources subject to the requirements of this Section shall:

A) By January 1, 2012, or upon initial start-up of the source, whichever is later, submit a certification to the Agency that includes:

i) A declaration that all subject cleaning operations are in compliance with the requirements of this Section;

ii) Identification of each subject cleaning operation and each VOM-containing cleaning solution used as of the date of certification in such operation;

iii) If complying with the emissions control system requirement, what type of emissions control system will be used;

iv) Initial documentation that each subject cleaning operation will comply with the applicable limitation, including copies of manufacturer's specifications, test results (if any), formulation data, and calculations;

v) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitations;

vi) A description of the practices and procedures that the source will follow to ensure compliance with the limitations in subsection (d), and, if applicable, subsection (b)(4); and

vii) A description of each cleaning operation exempt pursuant to subsection (a)(2), if any, and a listing of the emission units on which the exempt cleaning operation is performed;

B) At least 30 calendar days before changing the method of compliance between subsections (b)(1), (b)(2), (b)(4), or (b)(5) and subsection (b)(3) of this Section, notify the Agency in writing of such change. The notification shall include a demonstration of compliance with the newly applicable subsection;

3) All sources complying with this Section pursuant to the requirements of subsection (b)(1) of this Section shall collect and record the following information for each cleaning solution used:

A) For each cleaning solution that is prepared at the source with automatic equipment:

i) The name and identification of each cleaning solution;

ii) The VOM content of each cleaning solvent in the cleaning solution;

iii) Each change to the setting of the automatic equipment, with date, time, description of changes in the cleaning solution constituents (e.g., cleaning solvents), and a description of changes to the proportion of cleaning solvent and water (or other non-VOM);

iv) The proportion of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution;

v) The VOM content of the as-used cleaning solution, with supporting calculations; and

vi) A calibration log for the automatic equipment, detailing periodic checks;

B) For each batch of cleaning solution that is not prepared at the source with automatic equipment:

i) The name and identification of each cleaning solution;

ii) Date, time of preparation, and each subsequent modification of the batch;

iii) The VOM content of each cleaning solvent in the cleaning solution;

iv) The total amount of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution; and

v) The VOM content of the as-used cleaning solution, with supporting calculations. For cleaning solutions that are not prepared at the site but are used as purchased, the manufacturer's specifications for VOM content may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 218.105(a) of this Part;

4) All sources complying with this Section pursuant to the requirements of subsection (b)(2) of this Section shall collect and record the following information for each cleaning solution used:

A) The name and identification of each cleaning solution;

B) Date, time of preparation, and each subsequent modification of the batch;

C) The molecular weight, density, and VOM composite partial vapor pressure of each cleaning solvent, as determined in accordance with the applicable methods and procedures specified in Section 218.110 of this Part;

D) The total amount of each cleaning solvent used to prepare the as-used cleaning solution; and

E) The VOM composite partial vapor pressure of each as-used cleaning solution, as determined in accordance with the applicable methods and procedures specified in Section 218.110 of this Part;

5) All sources complying with this Section pursuant to the requirements of subsection (b)(3) of this Section shall comply with the following:

A) By January 1, 2012, or upon initial start-up of the source, whichever is later, and upon initial start-up of a new emissions

control system, include in the certification required by subsection (e)(3) of this Section a declaration that the monitoring equipment required under subsection (f) of this Section has been properly installed and calibrated according to manufacturer's specifications;

B) If testing of an emissions control system is conducted pursuant to subsection (g) of this Section, the owner or operator shall, within 90 days after conducting such testing, submit a copy of all test results to the Agency and shall submit a certification to the Agency that includes the following:

i) A declaration that all tests and calculations necessary to demonstrate compliance with subsection (b)(3) of this Section have been properly performed;

ii) A statement whether the subject cleaning operation is or is not in compliance with subsection (b)(3) of this Section; and

iii) The operating parameters of the emissions control system during testing, as monitored in accordance with subsection (f) of this Section;

C) Collect and record daily the following information for each cleaning operation subject to the requirements of subsection (b)(3) of this Section:

i) Emissions control system monitoring data in accordance with subsection (f) of this Section, as applicable;

ii) A log of operating time for the emissions control system, monitoring equipment, and the associated cleaning equipment;

iii) A maintenance log for the emissions control system and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and duration of any outages;

D) Maintain records documenting the use of good operating practices consistent with the equipment manufacturer's specifications for the cleaning equipment being used and the emissions control system equipment. At a minimum, these records shall include:

i) Records for periodic inspection of the cleaning equipment and emissions control system equipment with date of

inspection, individual performing the inspection, and nature of inspection;

ii) Records for repair of malfunctions and breakdowns with identification and description of incident, date identified, date repaired, nature of repair, and the amount of VOM released into the atmosphere as a result of the incident;

6) All sources complying with this Section pursuant to the requirements of subsection (b)(5) of this Section shall collect and record monthly the following information for each cleaning operation subject to the requirements of subsection (b)(5) of this Section:

A) The name, identification, and volume of each VOM-containing cleaning solution as applied in each cleaning operation;

B) The volume of each fresh cleaning solvent used for cleaning coating, ink, adhesive, or resin manufacturing equipment;

C) The volume of cleaning solvent recovered for either offsite or onsite reuse or recycling for further use in the cleaning of coating, ink, adhesive, or resin manufacturing equipment;

7) The owner or operator of a source with cleaning operations that fall ~~subject to~~ one or more of the exclusions set forth in subsection (a)(2)(C)(v), ~~or~~ (a)(2)(C)(xiii), or (a)(2)(C)(xvii) including sources exempt from the limitations of this Section because of the criteria in subsection (a)(1), shall:

A) By January 1, 2012, or upon initial start-up of the source, whichever is later, submit a certification to the Agency that includes a declaration that the source has cleaning operations that fall ~~subject to~~ one or more of the exclusions set forth in subsection (a)(2)(C)(v), ~~or~~ (a)(2)(C)(xiii), or (a)(2)(C)(xvii) and a statement identifying each such cleaning operation and the exclusion applicable to each cleaning operation;

B) Collect and record the name, identification, and volume of each cleaning solvent as applied each day in each cleaning operation that falls ~~subject to~~ one or more of the exclusions set forth in subsection (a)(2)(C)(v), ~~or~~ (a)(2)(C)(xiii), or (a)(2)(C)(xvii); and

C) Notify the Agency in writing if the amount of cleaning solvent used in the cleaning of medical device and pharmaceutical manufacturing operations or of sterilization indicating ink application equipment at the source ever exceeds 5.7 liters (1.5

gallons) per day, or if the amount of serosol cleaning products used at the source ever exceeds 4.7 liters (1.25 gallons) per day, within 30 days after the exceedance occurs;

8) The owner or operator of a source with cleaning operations that fall under one or more of the exclusions set forth in Section 218.187(a)(2)(C)(xviii) or (a)(2)(C)(xix), including sources exempt from the limitations of this Section because of the criteria in Section 218.187(a)(1) of this Subpart, shall:

A) By January 1, 2012, or upon initial start-up of the source, whichever is later, submit a certification to the Agency that includes a declaration that the source has cleaning operations that fall under one or more of the exclusions set forth in Section 218.187(a)(2)(C)(xviii) or (a)(2)(C)(xix), and a statement identifying each such cleaning operation and the exclusion applicable to each cleaning operation;

B) Collect and record the name, identification, volume, and VOM content of each cleaning solvent as applied each month in each cleaning operation that falls under one or more of the exclusions set forth in Section 218.187(a)(2)(C)(xviii) or (a)(2)(C)(xix);

C) For cleaning operations that fall under the exclusion set forth in Section 218.187(a)(2)(C)(xviii), collect and record each month information demonstrating that the exempt cleaning solvent is being used exclusively for the cleaning of plastic-based or vinyl-based substrates for use in the screen printing process when using UV curable ink and coating systems; and

D) For cleaning operations that fall under the exclusion set forth in Section 218.187(a)(2)(C)(xix), collect and record each month information demonstrating that the exempt cleaning solvent is being used exclusively for production line performance testing of coatings that are in research and development and are not yet commercially used for the applications for which they are being tested;

9)~~8~~) All sources subject to the requirements of subsections (b) and (d) of this Section shall notify the Agency of any violation of subsection (b) or (d) by providing a description of the violation and copies of records documenting the violation to the Agency within 30 days following the occurrence of the violation;

10)~~9~~) All records required by this subsection (e) shall be retained by the source for at least three years and shall be made available to the Agency upon request.

f) Monitoring Requirements

1) If an afterburner ~~or carbon adsorber~~ is used to demonstrate compliance, the owner or operator of a source subject to subsection (b)(3) of this Section shall:

A) Install, calibrate, operate, and maintain temperature monitoring devices with an accuracy of $3^{o}C$ or $5^{o}F$ on the emissions control system in accordance with Section 218.105(d)(2) of this Part and in accordance with the manufacturer's specifications. Monitoring shall be performed at all times when the emissions control system is operating; and

B) Install, calibrate, operate and maintain, in accordance with manufacturer's specifications, a continuous recorder on the temperature monitoring devices, such as a strip chart, recorder or computer, with at least the same accuracy as the temperature monitor;

2) If a carbon adsorber is used to demonstrate compliance, the owner or operator of a source subject to Section 219.187(b)(3) of this Subpart shall use Agency and USEPA approved continuous monitoring equipment which is installed, calibrated, maintained, and operated according to vendor specifications at all times the control device is in use. The continuous monitoring equipment shall monitor the VOM concentration of each carbon adsorption bed or the exhaust of the bed next in sequence to be desorbed;

3)~~2~~) If an emissions control system other than an afterburner or carbon adsorber is used to demonstrate compliance, the owner or operator of a source subject to subsection (b)(3) of this Section shall install, maintain, calibrate, and operate such monitoring equipment as set forth in the owner's or operator's plan approved by the Agency and USEPA pursuant to subsection (b)(3).

g) Testing Requirements

1) Testing to demonstrate compliance with the requirements of this Section shall be conducted by the owner or operator within 90 days after a request by the Agency, or as otherwise specified in this Section. Such testing shall be conducted at the expense of the owner or operator and the owner or operator shall notify the Agency in writing 30 days in advance of

conducting the testing to allow the Agency to be present during the testing;

2) Testing to demonstrate compliance with the VOM content limitations in subsection (b)(1) of this Section, and to determine the VOM content of cleaning solvents and cleaning solutions, shall be conducted as follows:

A) The applicable test methods and procedures specified in Section 218.105(a) of this Part shall be used, provided; however, Method 24, incorporated by reference in Section 218.112 of this Part, shall be used to demonstrate compliance; or

B) The manufacturer's specifications for VOM content for cleaning solvents may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 218.105(a) of this Part; provided, however, Method 24 shall be used to determine compliance. In the event of any inconsistency between a Method 24 test and the manufacturer's specifications, the Method 24 test shall govern;

3) Testing to determine the VOM composite partial vapor pressure of cleaning solvents, cleaning solvent concentrates, and as-used cleaning solutions shall be conducted in accordance with the applicable methods and procedures specified in Section 218.110 of this Part;

4) For afterburners and carbon adsorbers, the methods and procedures of Section 218.105(d) through (f) shall be used for testing to demonstrate compliance with the requirements of subsection (b)(3) of this Section, as follows:

A) To select the sampling sites, Method 1 or 1A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part;

B) To determine the volumetric flow rate of the exhaust stream, Method 2, 2A, 2C, or 2D, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part;

C) To determine the VOM concentration of the exhaust stream entering and exiting the emissions control system, Method 25 or 25A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part. For thermal and catalytic afterburners, Method 25 must be used except under the following circumstances, in which case Method 25A must be used:

i) The allowable outlet concentration of VOM from the emissions control system is less than 50 ppmv, as carbon;

ii) The VOM concentration at the inlet of the emissions control system and the required level of control result in exhaust concentrations of VOM of 50 ppmv, or less, as carbon; and

iii) Due to the high efficiency of the emissions control system, the anticipated VOM concentration at the emissions control system exhaust is 50 ppmv or less, as carbon, regardless of inlet concentration. If the source elects to use Method 25A under this option, the exhaust VOM concentration must be 50 ppmv or less, as carbon, and the required destruction efficiency must be met for the source to have demonstrated compliance. If the Method 25A test results show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, a retest is required. The retest shall be conducted using either Method 25 or Method 25A. If the retest is conducted using Method 25A and the test results again show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, the source must retest using Method 25;

D) During testing, the cleaning equipment shall be operated at representative operating conditions and flow rates;

5) An owner or operator using an emissions control system other than an afterburner or carbon adsorber shall conduct testing to demonstrate compliance with the requirements of subsection (b)(3) of this Section as set forth in the owner's or operator's plan approved by the Agency and USEPA as federally enforceable permit conditions pursuant to subsection (b)(3).

(Source: Amended at 35 Ill. Reg. _____, effective _____)

SUBPART F: COATING OPERATIONS

Section 218.204 Emission Limitations

Except as provided in Sections 218.205, 218.207, 218.208, 218.212, 218.215 and 218.216 of this Subpart, no owner or operator of a coating line shall apply at any time any coating in which the VOM content exceeds the following emission limitations for the specified coating. Except as otherwise provided in subsections (a), (c), (g), (h), (j), (l), (n), (p), and (q) of this Section, compliance with the emission limitations marked with an asterisk in this Section is required on

and after March 15, 1996, and compliance with emission limitations not marked with an asterisk is required until March 15, 1996. The following emission limitations are expressed in units of VOM per volume of coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied at each coating applicator, except where noted. Compounds which are specifically exempted from the definition of VOM should be treated as water for the purpose of calculating the "less water" part of the coating composition. Compliance with this Subpart must be demonstrated through the applicable coating analysis test methods and procedures specified in Section 218.105(a) of this Part and the recordkeeping and reporting requirements specified in Section 218.211(c) of this Subpart except where noted. (Note: The equation presented in Section 218.206 of this Part shall be used to calculate emission limitations for determining compliance by add-on controls, credits for transfer efficiency, emissions trades and cross-line averaging.) The emission limitations are as follows:

			kg/l	lb/gal
a)	Automobile or Light-Duty Truck Coating			
	1)	Prior to May 1, 2012:		
		A) Prime coat	0.14	(1.2)
			0.14*	(1.2)*
		B) Primer surface coat	1.81	(15.1)
			1.81*	(15.1)*

BOARD NOTE: The primer surface coat limitation is in units of kg (lbs) of VOM per l (gal) of coating solids deposited. Compliance with the limitation shall be based on the daily-weighted average from an entire primer surfacer operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 218.105(b)(1)(A) and the recordkeeping and reporting requirements specified in Section 218.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 218.205 does not apply to the primer surfacer limitation.

		kg/l	lb/gal
C)	Topcoat		
		1.81	(15.1)
		1.81*	(15.1)*

BOARD NOTE: The topcoat limitation is in units of kg (lbs) of VOM per l (gal) of coating solids deposited. Compliance with the limitation shall be based on the daily-weighted average from an entire topcoat operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 218.105(b)(1)(A) of this Part and the recordkeeping and reporting requirements specified in Section 218.211(f). Testing to demonstrate compliance shall be performed in

accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 218.205 of this Part does not apply to the topcoat limitation.

D)	Final repair coat	kg/l 0.58 0.58*	lb/gal (4.8) (4.8)*

2) On and after May 1, 2012, subject automobile and light-duty truck coating lines shall comply with the following limitations. These limitations shall not apply to materials supplied in containers with a net volume of 0.47 liters (16 oz) or less, or a net weight of 0.45 kg (1 lb) or less:

A) Electrodeposition primer (EDP) operations. For purposes of this subsection (a)(2)(A), "electrodeposition" means a water-borne dip coating process in which opposite electrical charges are applied to the substrate and the coating. The coating is attracted to the substrate due to the electrochemical potential difference that is created.

		kg VOM/l coating solids applied	lb VOM/gal coating solids applied
i)	When solids turnover ratio (R_T) is greater than or equal to 0.160	0.084	(0.7)
ii)	When R_T is greater than or equal to 0.040 and less than 0.160	$0.084 \times 350^{0.160-R_T}$	$(0.084 \times 350^{0.160-R_T} \times 8.34)$

			kg VOM/l coating solids deposited	lb VOM/gal coating solids deposited
B)	Primer surfacer operations			
	i)	VOM content limitation	1.44	(12.0)

ii) Compliance with the limitation set forth in subsection (a)(2)(B)(i) shall be based on the daily-weighted average from an entire primer surfacer operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 218.105(b)(1)(B) and the recordkeeping

and reporting requirements specified in Section 218.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 218.205 does not apply to the primer surfacer limitation.

C)	Topcoat operations		kg VOM/l coating solids deposited	lb VOM/gal coating solids deposited
	i)	VOM content limitation	1.44	(12.0)

ii) Compliance with the limitation set forth in subsection (a)(2)(C)(i) shall be based on the daily-weighted average from an entire topcoat operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 218.105(b)(1)(B) and the recordkeeping and reporting requirements specified in Section 218.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 218.205 does not apply to the topcoat limitation.

D)	Combined primer surfacer and topcoat operations		kg VOM/l coating solids deposited	lb VOM/gal coating solids deposited
	i)	VOM content limitation	1.44	(12.0)

ii) Compliance with the limitation set forth in subsection (a)(2)(D)(i) shall be based on the daily-weighted average from the combined primer surfacer and topcoat operations. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 218.105(b)(1)(B) and the recordkeeping and reporting requirements specified in Section 218.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 218.205 does not apply to the combined primer surfacer and topcoat limitation.

		kg/l coatings	lb/gal coatings
E)	Final repair coat operations		
i)	VOM content limitation	0.58	(4.8)

ii) Compliance with the final repair operations limitation set forth in subsection (a)(2)(E)(i) shall be on an occurrence-weighted average basis, calculated in accordance with the equation below, in which clear coatings shall have a weighting factor of 2 and all other coatings shall have a weighting factor of 1. For purposes of this subsection (a)(2)(E)(ii), an "occurrence" is the application of the combination of coatings that constitute a final repair coat for a single automobile or light-duty truck. Section 218.205 does not apply to the final repair coat limitation.

$$VOM_{tot} = \frac{2VOM_{cc} + \sum_{i=1}^{n} VOM_i}{n+2}$$

where:

VOM_{tot} = Total VOM content of all coatings, as applied, on an occurrence weighted average basis, and used to determine compliance with this subsection (a)(2)(E).

i = Subscript denoting a specific coating applied.

n = Total number of coatings applied in the final repair operation, other than clear coatings.

VOM_{cc} = The VOM content, as applied, of the clear coat used in the final repair operation.

VOM_i = The VOM content of each coating used in the final repair operation, as applied, other than clear coatings.

F) Miscellaneous Materials. For reactive adhesives subject to this subsection (a)(2)(F), compliance shall be demonstrated in accordance with the methods and procedures set forth in appendix A to Subpart PPPP of 40 CFR 63, incorporated by reference in Section 218.112 of this Part.

			kg/l	lb/gal
i)	Glass bonding primer		0.90	(7.51)
ii)	Adhesive		0.25	(2.09)
iii)	Cavity wax		0.65	(5.42)
iv)	Trunk sealer		0.65	(5.42)
v)	Deadener		0.65	(5.42)
vi)	Gasket/gasket sealing material		0.20	(1.67)
vii)	Underbody coating		0.65	(5.42)
viii)	Trunk interior coating		0.65	(5.42)
ix)	Bedliner		0.20	(1.67)
x)	Weatherstrip adhesive		0.75	(6.26)
xi)	Lubricating wax/compound		0.70	(5.84)

				kg/l	lb/gal
b)	Can Coating				
1)	Sheet basecoat and overvarnish				
	A)	Sheet basecoat		0.34 0.26*	(2.8) (2.2)*
	B)	Overvarnish		0.34 0.34	(2.8) (2.8)*
2)	Exterior basecoat and overvarnish			0.34 0.25*	(2.8) (2.1)*
3)	Interior body spray coat				
	A)	Two piece		0.51 0.44*	(4.2) (3.7)*
	B)	Three piece		0.51 0.51*	(4.2) (4.2)*
4)	Exterior end coat			0.51 0.51*	(4.2) (4.2)*

5)	Side seam spray coat	0.66 0.66*	(5.5) (5.5)*
6)	End sealing compound coat	0.44 0.44*	(3.7) (3.7)*

c) Paper Coating

1)	Prior to May 1, 2011:	kg/l 0.28	lb/gal (2.3)

2)	On and after May 1, 2011:		kg VOM/kg (lb VOM/lb) solids applied	kg VOM/kg (lb VOM/lb) coatings applied
	A)	Pressure sensitive tape and label surface coatings	0.20	(0.067)
	B)	All other paper coatings	0.40	(0.08)

3) The paper coating limitation set forth in this subsection (c) shall not apply to any owner or operator of any paper coating line on which flexographic, rotogravure, lithographic, or letterpress printing is performed if the paper coating line complies with the applicable emissions limitations in Subpart H of this Part. In addition, screen printing on paper is not regulated as paper coating, but is regulated under Subpart TT of this Part. On and after May 1, 2011, the paper coating limitation shall also not apply to coating performed on or in-line with any digital printing press, or to size presses and on-machine coaters on papermaking machines applying sizing or water-based clays.

d)	Coil Coating	kg/l 0.31 0.20*	lb/gal (2.6) (1.7)*
e)	Fabric Coating	0.35 0.28*	(2.9) (2.3)*
f)	Vinyl Coating	0.45 0.28*	(3.8) (2.3)*

g) Metal Furniture Coating

1) Prior to May 1, 2011:

		kg/l	lb/gal
A)	Air dried	0.34	(2.8)
B)	Baked	0.28	(2.3)

2) On and after May 1, 2011:

		kg/l (lb/gal)	kg/l (lb/gal) solids applied
A)	General, One-Component	0.275 (2.3)	0.40 (3.3)
B)	General, Multi-Component		
	i) Air dried	0.340 (2.8)	0.55 (4.5)
	ii) Baked	0.275 (2.3)	0.40 (3.3)
C)	Extreme High Gloss		
	i) Air dried	0.340 (2.8)	0.55 (4.5)
	ii) Baked	0.360 (3.0)	0.61 (5.1)
D)	Extreme Performance		
	i) Air dried	0.420 (3.5)	0.80 (6.7)
	ii) Baked	0.360 (3.0)	0.61 (5.1)
E)	Heat Resistant		
	i) Air dried	0.420 (3.5)	0.80 (6.7)
	ii) Baked	0.360 (3.0)	0.61 (5.1)
F)	Metallic	0.420 (3.5)	0.80 (6.7)

G)	Pretreatment Coatings	0.420 (3.5)	0.80 (6.7)
H)	Solar Absorbent		
i)	Air dried	0.420 (3.5)	0.80 (6.7)
ii)	Baked	0.360 (3.0)	0.61 (5.1)

3) On and after May 1, 2011, the limitations set forth in this subsection (g) shall not apply to stencil coatings, safety-indicating coatings, solid-film lubricants, electric-insulating and thermal-conducting coatings, touch-up and repair coatings, or coating applications utilizing hand-held aerosol cans.

h) Large Appliance Coating

1) Prior to May 1, 2011:

		kg/l	lb/gal
A)	Air dried	0.34	(2.8)
B)	Baked	0.28	(2.3)

2) On and after May 1, 2011:

		kg/l (lb/gal)	kg/l (lb/gal) solids applied
A)	General, One Component	0.275 (2.3)	0.40 (3.3)
B)	General, Multi-Component		
i)	Air dried	0.340 (2.8)	0.55 (4.5)
ii)	Baked	0.275 (2.3)	0.40 (3.3)
C)	Extreme High Gloss		
i)	Air dried	0.340 (2.8)	0.55 (4.5)
ii)	Baked	0.360 (3.0)	0.61 (5.1)
D)	Extreme Performance		

i) Air dried	0.420 (3.5)	0.80 (6.7)
ii) Baked	0.360 (3.0)	0.61 (5.1)
E) Heat Resistant		
i) Air dried	0.420 (3.5)	0.80 (6.7)
ii) Baked	0.360 (3.0)	0.61 (5.1)
F) Metallic	0.420 (3.5)	0.80 (6.7)
G) Pretreatment Coatings	0.420 (3.5)	0.80 (6.7)
H) Solar Absorbent		
i) Air dried	0.420 (3.5)	0.80 (6.7)
ii) Baked	0.360 (3.0)	0.61 (5.1)

3) The limitations set forth in this subsection (h) shall not apply to the use of quick-drying lacquers for repair of scratches and nicks that occur during assembly, provided that the volume of coating does not exceed 0.95 1 (1 quart) in any one rolling eight-hour period. On and after May 1, 2011, these limitations shall also not apply to stencil coatings, safety-indicating coatings, solid-film lubricants, electric-insulating and thermal-conducting coatings, touch-up and repair coatings, or coating applications utilizing hand-held aerosol cans.

i) Magnet Wire Coating	kg/1 0.20 0.20*	lb/gal (1.7) (1.7)*
j) Prior to May 1, 2012: Miscellaneous Metal Parts and Products Coating		
1) Clear coating	0.52 0.52*	(4.3) (4.3)*
2) Extreme performance coating		

	A)	Air dried	0.42 0.42*	(3.5) (3.5)*
	B)	Baked	0.42 0.40*	(3.5) (3.3)*
3)	Steel pail and drum interior coating		0.52 0.52*	(4.3) (4.3)*
4)	All other coatings			
	A)	Air dried	0.42 0.40*	(3.5) (3.3)*
	B)	Baked	0.36 0.34*	(3.0) (2.8)*
5)	Marine engine coating			
	A)	Air dried	0.42 0.42*	(3.5) (3.5)*
	B)	Baked		
		i) Primer/Topcoat	0.42 0.42*	(3.5) (3.5)*
		ii) Corrosion resistant basecoat	0.42 0.28*	(3.5) (2.3)*
	C)	Clear Coating	0.52 0.52*	(4.3) (4.3)*
6)	Metallic Coating			
	A)	Air dried	0.42 0.42*	(3.5) (3.5)*
	B)	Baked	0.36 0.36	(3.0) (3.0)*

7) Definitions

A) For purposes of subsection (j)(5) of this Section, the following terms are defined:

i) "Corrosion resistant basecoat" means, for purposes of

subsection (j)(5)(B)(ii) of this Section, a water-borne epoxy coating applied via an electrodeposition process to a metal surface prior to spray coating, for the purpose of enhancing corrosion resistance.

ii) "Electrodeposition process" means, for purposes of subsection (j)(5) of this Section, a water-borne dip coating process in which opposite electrical charges are applied to the substrate and the coating. The coating is attracted to the substrate due to the electrochemical potential difference that is created.

iii) "Marine engine coating" means, for purposes of subsection (j)(5) of this Section, any extreme performance protective, decorative or functional coating applied to an engine that is used to propel watercraft.

B) For purposes of subsection (j)(6) of this Section, "metallic coating" means a coating which contains more than ¼ lb/gal of metal particles, as applied.

BOARD NOTE: On and after May 1, 2012, the limitations in Section 218.204(q) shall apply to this category of coating.

		kg/l	lb/gal
k)	Heavy Off-Highway Vehicle Products Coating		
1)	Extreme performance prime coat	0.42	(3.5)
		0.42*	(3.5)*
2)	Extreme performance topcoat (air dried)	0.42	(3.5)
		0.42*	(3.5)*
3)	Final repair coat (air dried)	0.42	(3.5)
		0.42*	(3.5)*
4)	All other coatings are subject to the emission limitations for miscellaneous metal parts and products coatings in subsection (j).		
l)	Wood Furniture Coating		
1)	Limitations before March 15, 1998:	kg/l	lb/gal
A)	Clear topcoat	0.67	(5.6)
B)	Opaque stain	0.56	(4.7)

C)	Pigmented coat	0.60	(5.0)
D)	Repair coat	0.67	(5.6)
E)	Sealer	0.67	(5.6)
F)	Semi-transparent stain	0.79	(6.6)
G)	Wash coat	0.73	(6.1)

BOARD NOTE: Prior to March 15, 1998, an owner or operator of a wood furniture coating operation subject to this Section shall apply all coatings, with the exception of no more than 37.8 l (10 gal) of coating per day used for touch-up and repair operations, using one or more of the following application systems: airless spray application system, air-assisted airless spray application system, electrostatic spray application system, electrostatic bell or disc spray application system, heated airless spray application system, roller coating, brush or wipe coating application system, dip coating application system or high volume low pressure (HVLP) application system.

2) On and after March 15, 1998, wood furniture sealers and topcoats must comply with one of the limitations specified in subsections (l)(2)(A) through (E):

			kg VOM/ kg solids	lb VOM/ lb solids
A)	Topcoat		0.8	(0.8)
B)	Sealers and topcoats with the following limits:			
	i)	Sealer other than acid-cured alkyd amino vinyl sealer	1.9	(1.9)
	ii)	Topcoat other than acid-cured alkyd amino conversion varnish topcoat	1.8	(1.8)
	iii)	Acid-cured alkyd amino vinyl sealer	2.3	(2.3)
	iv)	Acid-cured alkyd amino conversion varnish topcoat	2.0	(2.0)

C) Meet the provisions of Section 218.215 of this Subpart for use of an averaging approach;

D) Achieve a reduction in emissions equivalent to the requirements of subsection (l)(2)(A) or (B) of this Section, as calculated using Section 218.216 of this Subpart; or

E) Use a combination of the methods specified in subsections (l)(2)(A) through (D) of this Section.

3) Other wood furniture coating limitations on and after March 15, 1998:

		kg/l	lb/gal
A)	Opaque stain	0.56	(4.7)
B)	Non-topcoat pigmented coat	0.60	(5.0)
C)	Repair coat	0.67	(5.6)
D)	Semi-transparent stain	0.79	(6.6)
E)	Wash coat	0.73	(6.1)

4) Other wood furniture coating requirements on and after March 15, 1998:

A) No source subject to the limitations of subsection (l)(2) or (3) of this Section and utilizing one or more wood furniture coating spray booths shall use strippable spray booth coatings containing more than 0.8 kg VOM/kg solids (0.8 lb VOM/lb solids), as applied.

B) Any source subject to the limitations of subsection (l)(2) or (3) of this Section shall comply with the requirements of Section 218.217 of this Subpart.

C) Any source subject to the limitations of subsection (l)(2)(A) or (B) of this Section and utilizing one or more continuous coaters shall, for each continuous coater, use an initial coating which complies with the limitations of subsection (l)(2)(A) or (B) of this Section. The viscosity of the coating in each reservoir shall always be greater than or equal to the viscosity of the initial coating in the reservoir. The owner or operator shall:

i) Monitor the viscosity of the coating in the reservoir with a viscosity meter or by testing the viscosity of the initial coating and retesting the coating in the reservoir each time

solvent is added;

ii) Collect and record the reservoir viscosity and the amount and weight of VOM per weight of solids of coating and solvent each time coating or solvent is added; and

iii) Maintain these records at the source for a period of three years.

		kg/l	lb/gal
m)	Existing Diesel-Electric Locomotive Coating Lines in Cook County		
1)	Extreme performance prime coat	0.42 0.42*	(3.5) (3.5)*
2)	Extreme performance top-coat (air dried)	0.42 0.42*	(3.5) (3.5)*
3)	Final repair coat (air dried)	0.42 0.42*	(3.5) (3.5)*
4)	High-temperature aluminum coating	0.72 0.72*	(6.0) (6.0)*
5)	All other coatings	0.36 0.36*	(3.0) (3.0)*
n)	Prior to May 1, 2012: Plastic Parts Coating: Automotive/Transportation	kg/l	lb/gal
1)	Interiors		
A)	Baked		
i)	Color coat	0.49*	(4.1)*
ii)	Primer	0.46*	(3.8)*
B)	Air dried		
i)	Color coat	0.38*	(3.2)*
ii)	Primer	0.42*	(3.5)*
2)	Exteriors (flexible and non-flexible)		

	A)	Baked			
		i)	Primer	0.60*	(5.0)*
		ii)	Primer non-flexible	0.54*	(4.5)*
		iii)	Clear coat	0.52*	(4.3)*
		iv)	Color coat	0.55*	(4.6)*
	B)	Air dried			
		i)	Primer	0.66*	(5.5)*
		ii)	Clear coat	0.54*	(4.5)*
		iii)	Color coat (red & black)	0.67*	(5.6)*
		iv)	Color coat (others)	0.61*	(5.1)*
3)	Specialty				
	A)	Vacuum metallizing basecoats, texture base coats		0.66*	(5.5)*
	B)	Black coatings, reflective argent coatings, air bag cover coatings, and soft coatings		0.71*	(5.9)*
	C)	Gloss reducers, vacuum metallizing topcoats, and texture topcoats		0.77*	(6.4)*
	D)	Stencil coatings, adhesion primers, ink pad coatings, electrostatic prep coatings, and resist coatings		0.82*	(6.8)*
	E)	Headlamp lens coatings		0.89*	(7.4)*

BOARD NOTE: On and after May 1, 2012, the limitations in Section 218.240(q) shall apply to this category of coating.

o)	Prior to May 1, 2012: Plastic Parts Coating: Business Machine		kg/l	lb/gal
1)	Primer		0.14*	(1.2)*

2)	Color coat (non-texture coat)		0.28*	(2.3)*
3)	Color coat (texture coat)		0.28*	(2.3)*
4)	Electromagnetic interference/radio frequency interference (EMI/RFI) shielding coatings		0.48*	(4.0)*
5)	Specialty coatings			
	A)	Soft coat	0.52*	(4.3)*
	B)	Plating resist	0.71*	(5.9)*
	C)	Plating sensitizer	0.85*	(7.1)*

BOARD NOTE: On and after May 1, 2012, the limitations in Section 218.204(q) shall apply to this category of coating.

p) Flat Wood Paneling Coatings. On and after August 1, 2010, flat wood paneling coatings shall comply with one of the following limitations:

1) 0.25 kg VOM/1 of coatings (2.1 lb VOM/gal coatings); or

2) 0.35 kg VOM/1 solids (2.9 lb VOM/gal solids).

q) Miscellaneous Metal Parts and Products Coatings and Plastic Parts and Products Coatings On and After May 1, 2012. On and after May 1, 2012, the owner or operator of a miscellaneous metal or plastic parts coating line shall comply with the limitations in this subsection (q). The limitations in this subsection (q) shall not apply to aerosol coating products, powder coatings, or primer sealants and ejection cartridge sealants used in ammunition manufacturing. Primer sealants and ejection cartridge sealants shall instead be regulated under Subpart TT of this Part.

1) Metal Parts and Products. For purposes of this subsection (q)(1), "corrosion resistant basecoat" means a water-borne epoxy coating applied via an electrodeposition process to a metal surface prior to spray coating, for the purpose of enhancing corrosion resistance. The limitations in this subsection (q)(1) shall not apply to stencil coats, safety-indicating coatings, solid-film lubricants, electric-insulating and thermal-conducting coatings, magnetic data storage disk coatings, and plastic extruded onto metal parts to form a coating. The limitations in Section 218.219, however, shall apply to these coatings unless specifically excluded in Section 218.219.

			kg/l (lb/gal) coatings	kg/l (lb/gal) solids
A)	General one component coating			
	i)	Air dried	0.34 (2.8)	0.54 (4.52)
	ii)	Baked	0.28 (2.3)	0.40 (3.35)
B)	General multi-component coating			
	i)	Air dried	0.34 (2.8)	0.54 (4.52)
	ii)	Baked	0.28 (2.3)	0.40 (3.35)
C)	Camouflage coating		0.42 (3.5)	0.80 (6.67)
D)	Electric-insulating varnish		0.42 (3.5)	0.80 (6.67)
E)	Etching filler		0.42 (3.5)	0.80 (6.67)
F)	Extreme high-gloss coating			
	i)	Air dried	0.42 (3.5)	0.80 (6.67)
	ii)	Baked	0.36 (3.0)	0.61 (5.06)
G)	Extreme performance coating			
	i)	Air dried	0.42 (3.5)	0.80 (6.67)
	ii)	Baked	0.36 (3.0)	0.61 (5.06)

H)	Heat-resistant coating			
	i)	Air dried	0.42 (3.5)	0.80 (6.67)
	ii)	Baked	0.36 (3.0)	0.61 (5.06)
I)	High performance architectural coating		0.42 (3.5)	0.80 (6.67)
J)	High temperature coating		0.42 (3.5)	0.80 (6.67)
K)	Metallic coating			
	i)	Air dried	0.42 (3.5)	0.80 (6.67)
	ii)	Baked	0.36 (3.0)	0.61 (5.06)
L)	Military specification coating			
	i)	Air dried	0.34 (2.8)	0.54 (4.52)
	ii)	Baked	0.28 (2.3)	0.40 (3.35)
M)	Mold-seal coating		0.42 (3.5)	0.80 (6.67)
N)	Pan backing coating		0.42 (3.5)	0.80 (6.67)
O)	Prefabricated architectural coating: multi-component			
	i)	Air dried	0.42 (3.5)	0.80 (6.67)
	ii)	Baked	0.28 (2.3)	0.40 (3.35)

P)	Prefabricated architectural coating: one-component			
	i)	Air dried	0.42 (3.5)	0.80 (6.67)
	ii)	Baked	0.28 (2.3)	0.40 (3.35)
Q)	Pretreatment coating		0.42 (3.5)	0.80 (6.67)
R)	Repair coats and touch-up coatings			
	i)	Air dried	0.42 (3.5)	
	ii)	Baked	0.36 (3.01)	
S)	Silicone release coating		0.42 (3.5)	0.80 (6.67)
T)	Solar-absorbent coating			
	i)	Air dried	0.42 (3.5)	0.80 (6.67)
	ii)	Baked	0.36 (3.0)	0.61 (5.06)
U)	Vacuum-metalizing coating		0.42 (3.5)	0.80 (6.67)
V)	Drum coating, new, exterior		0.34 (2.8)	0.54 (4.52)
W)	Drum coating, new, interior		0.42 (3.5)	0.80 (6.67)
X)	Drum coating, reconditioned, exterior		0.42 (3.5)	0.80 (6.67)
Y)	Drum coating, reconditioned, interior		0.50 (4.2)	1.17 (9.78)

Z)	Ammunition Sealants			
	i)	Air dried	0.42 (3.5)	0.80 (6.67)
	ii)	Baked	0.36 (3.0)	0.61 (5.06)
AA)	Electrical switchgear compartment coatings			
	i)	Air dried	0.42 (3.5)	0.80 (6.67)
	ii)	Baked	0.36 (3.0)	0.61 (5.06)
BB)	All other coatings			
	i)	Air dried	0.40 (3.3)	0.73 (5.98)
	ii)	Baked	0.34 (2.8)	0.54 (4.52)

2) Plastic Parts and Products: Miscellaneous. For purposes of this subsection (q)(2), miscellaneous plastic parts and products are plastic parts and products that are not subject to subsection (q)(3), (q)(4), (q)(5), or (q)(6) of this Section. The limitations in subsection (q)(2) shall not apply to touch-up and repair coatings; stencil coats applied on clear or transparent substrates; clear or translucent coatings; coatings applied at a

paint manufacturing facility while conducting performance tests on the coatings; any individual coating category used in volumes less than 189.2 liters (50 gallons) in any one calendar year, if the total usage of all such coatings does not exceed 756.9 liters (200 gallons) per calendar year per source and substitute compliant coatings are not available; reflective coatings applied to highway cones; mask coatings that are less than 0.5 mm thick (dried) if the area coated is less than 25 square inches; electromagnetic interference/radio frequency interference (EMI/RFI) shielding coatings; and heparin-benzalkonium chloride (HBAC)-containing coatings applied to medical devices if the total usage of all such coatings does not exceed 378.4 liters (100 gallons) per calendar year per source. The limitations in Section 218.219, however, shall apply to such coatings unless specifically excluded in Section 218.219.

		kg/l (lb/gal) coatings	kg/l (lb/gal) solids
A)	General one component coating	0.28 (2.3)	0.40 (3.35)
B)	General multi-component	0.42 (3.5)	0.80 (6.67)
C)	Electric dissipating coatings and shock-free coatings	0.80 (6.7)	8.96 (74.7)
D)	Extreme performance (2-pack coatings)	0.42 (3.5)	0.80 (6.67)
E)	Metallic coating	0.42 (3.5)	0.80 (6.67)
F)	Military specification coating		
	i) 1-pack coatings	0.28 (2.3)	0.54 (4.52)
	ii) 2-pack coatings	0.42 (3.5)	0.80 (6.67)
G)	Mold-seal coating	0.76 (6.3)	5.24 (43.7)
H)	Multi-colored coating	0.68 (5.7)	3.04 (25.3)

I)	Optical coating	0.80 (6.7)	8.96 (74.7)
J)	Vacuum-metalizing coating	0.80 (6.7)	8.96 (74.7)

3) Plastic Parts and Products: Automotive/Transportation

			kg/l (lb/gal) coatings	kg/l (lb/gal) solids
A)	High bake coatings − interior and exterior parts			
	i)	Flexible primer	0.54 (4.5)	1.39 (11.58)
	ii)	Non-flexible primer	0.42 (3.5)	0.80 (6.67)
	iii)	Basecoats	0.52 (4.3)	1.24 (10.34)
	iv)	Clear coat	0.48 (4.0)	1.05 (8.76)
	v)	Non-basecoat/clear coat	0.52 (4.3)	1.24 (10.34)
B)	Low bake/air dried coatings − exterior parts			
	i)	Primers	0.58 (4.8)	1.66 (13.80)
	ii)	Basecoat	0.60 (5.0)	1.87 (15.59)
	iii)	Clear coats	0.54 (4.5)	1.39 (11.58)
	iv)	Non-basecoat/clear coat	0.60 (5.0)	1.87 (15.59)

C)	Low bake/air dried coatings − interior parts			
	i)	Color coat	0.38 (3.2)	0.67 (5.66)
	ii)	Primer	0.42 (3.5)	0.80 (6.67)
D)	Touchup and repair coatings		0.62 (5.2)	2.13 (17.72)
E)	Specialty			
	i)	Vacuum metallizing basecoats	0.66 (5.5)	2.62 (21.8)
	ii)	Vacuum metallizing topcoats	0.77 (6.4)	6.06 (49.1)

F) Red, yellow, and black coatings: Subject coating lines shall comply with a limit determined by multiplying the appropriate limit in subsections (q)(3)(A) through (q)(3)(C) of this Section by 1.15.

4) Plastic Parts and Products: Business Machine. The limitations of this subsection (q)(4) shall not apply to vacuum metallizing coatings, gloss reducers, texture topcoats, adhesion primers, electrostatic preparation coatings, stencil coats, and resist coats other than plating resist coats. The limitations in Section 218.219, however, shall apply to such coatings unless specifically excluded in Section 218.219.

		kg/l (lb/gal) coatings	kg/l (lb/gal) solids
A)	Primers	0.35 (2.9)	0.57 (4.80)

B)	Topcoat	0.35 (2.9)	0.57 (4.80)
C)	Color coat (texture coat)	0.28 (2.3)	0.40 (4.80)
D)	Color coat (non-texture coat)	0.28 (2.3)	0.40 (4.80)
E)	Texture coats other than color texture coats	0.35 (2.9)	0.57 (4.80)
F)	EMI/RFI shielding coatings	0.48 (4.0)	1.05 (8.76)
G)	Fog coat	0.26 (2.2)	0.38 (3.14)
H)	Touchup and repair	0.35 (2.9)	0.57 (4.80)

5) Pleasure Craft Surface Coatings

		kg/l (lb/gal) coatings	kg/l (lb/gal) solids
A)	Extreme high gloss coating − topcoat	0.60~~0.49~~ (5.0)~~(4.1)~~	1.88~~1.10~~ (15.6)~~(9.2)~~
B)	High gloss coating − topcoat	0.42 (3.5)	0.80 (6.7)
C)	Pretreatment wash primer	0.78 (6.5)	6.67 (55.6)

D)	Finish primer/surfacer	~~0.42~~ ~~(3.5)~~	~~0.80~~ ~~(6.7)~~
	Prior to January 1, 2014:	0.60 (5.0)	1.88 (15.6)
	On and after January 1, 2014:	0.42 (3.5)	0.80 (6.7)
E)	High build primer/surfacer	0.34 (2.8)	0.55 (4.6)
F)	Aluminum substrate antifoulant coating	0.56 (4.7)	1.53 (12.8)
G)	Other substrate antifoulant coating	0.40~~0.33~~ (3.3)~~(2.8)~~	0.73~~0.53~~ (5.8)~~(4.4)~~
H)	Antifouling Sealer/Tie Coat	0.42 (3.5)	0.80 (6.7)
I~~H~~)	All other pleasure craft surface coatings for metal or plastic	0.42 (3.5)	0.80 (6.7)

6) Motor Vehicle Materials

		kg/l (lb/gal) coatings
A)	Cavity wax	0.65 (5.42)
B)	Sealer	0.65 (5.42)
C)	Deadener	0.65 (5.42)
D)	Gasket/gasket sealing material	0.20 (1.67)
E)	Underbody coating	0.65 (5.42)
F)	Trunk interior coating	0.65 (5.42)

G)	Bedliner	0.20 (1.67)
H)	Lubricating wax/compound	0.70 (5.84)

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 218.207 Alternative Emission Limitations

a) Any owner or operator of a coating line subject to Section 218.204 of this Subpart, except coating lines subject to Section 218.204(q)(6), may comply with this Section, rather than with Section 218.204 of this Subpart, if a capture system and control device are operated at all times the coating line is in operation and the owner or operator demonstrates compliance with subsections (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m), or (n) of this Section (depending upon the source category) through the applicable coating analysis and capture system and control device efficiency test methods and procedures specified in Section 218.105 of this Part and the recordkeeping and reporting requirements specified in Section 218.211(e) of this Subpart; and the control device is equipped with the applicable monitoring equipment specified in Section 218.105(d) of this Part and the monitoring equipment is installed, calibrated, operated and maintained according to vendor specifications at all times the control device is in use. A capture system and control device, which does not demonstrate compliance with subsection (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m), or (n) of this Section may be used as an alternative to compliance with Section 218.204 of this Subpart only if the alternative is approved by the Agency and approved by the USEPA as a SIP revision. The owner or operator of a pleasure craft surface coating operation subject to Section 218.204(q)(5)(A) through (G) of this Subpart may also comply with subsection (o) of this Section, rather than with Section 218.204 of this Subpart.

b) Alternative Add-On Control Methodologies

1) The coating line is equipped with a capture system and control device that provides 81 percent reduction in the overall emissions of VOM from the coating line and the control device has a 90 percent efficiency; or

2) The system used to control VOM from the coating line is demonstrated to have an overall efficiency sufficient to limit VOM emissions to no more than what is allowed under Section 218.204 of this Subpart. Use of any control system other than an afterburner, carbon adsorption, condensation, or absorption scrubber system can be allowed only if approved by the Agency and approved by the USEPA as a SIP revision. The use of transfer efficiency credits can be allowed only if approved by the Agency and

approved by the USEPA as a SIP revision. Baseline transfer efficiencies and transfer efficiency test methods must be approved by the Agency and the USEPA. Such overall efficiency is to be determined as follows:

A) Obtain the emission limitation from the appropriate subsection in Section 218.204 of this Subpart;

B) Unless complying with an emission limitation in Section 218.204 that is already expressed in terms of weight of VOM per volume of solids, calculate "S" according to the equation in Section 218.206 of this Subpart. For coating lines subject to an emission limitation in Section 218.204 that is already expressed in terms of weight of VOM per volume of solids, "S" is equal to such emission limitation;

C) Calculate the overall efficiency required according to Section 218.105(e) of this Part. For the purposes of calculating this value, according to the equation in Section 218.105(e)(2) of this Part, VOM_l is equal to the value of "S" as determined in subsection (b)(2)(B) of this Section. If the coating line is subject to an emission limitation in Section 218.204 of this Subpart that is already expressed in terms of weight of VOM per volume of solids, VOM_1 is equal to that emission limitation.

c) No owner or operator of a coating line subject to only one of the emission limitations from among Section 218.204(a)(1)(A), (a)(1)(D), (a)(2)(A), (a)(2)(E), (a)(2)(F), (c)(1), (d), (e), (f), or (i) of this Subpart and equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met. No owner or operator of a coating line subject to Section 218.204(a)(1)(B),r (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart and equipped with a capture system and control device shall operate the coating line unless the owner or operator demonstrates compliance with such limitation in accordance with the topcoat protocol referenced in Section 218.105(b)(1)(A) or (b)(1)(B), as applicable.

d) No owner or operator of a miscellaneous metal parts and products coating line that applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(j) of this Subpart (e.g., all coatings used on the line are subject to 0.42 kg/l (3.5 lbs/gal), and that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

e) No owner or operator of a heavy off-highway vehicle products coating line that applies one or more coatings during the same day, all of which are subject to the

same numerical emission limitation within Section 218.204(k) of this Subpart (e.g., all coatings used on the line are subject to 0.42 kg/1 (3.5 lbs/gal)), and that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

f) No owner or operator of an existing diesel-electric locomotive coating line in Cook County that applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(m) of this Subpart (e.g., all coatings used on the line are subject to 0.42 kg/1 (3.5 lbs/gal)), and that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

g) No owner or operator of a wood furniture coating line that applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(l) of this Subpart (e.g., all coatings used on the line are subject to 0.67 kg/l (5.6 lbs/gal)), and that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met. If compliance is achieved by meeting the requirements in subsection (b)(2) of this Section, then the provisions in the note to Section 218.204(l) of this Subpart must also be met.

h) No owner or operator of a can coating line that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (h)(1) or (h)(2) of this Section are met.

1) An alternative daily emission limitation shall be determined for the can coating operation, i.e., for all of the can coating lines at the source, according to Section 218.205(c)(2) of this Subpart. Actual daily emissions shall never exceed the alternative daily emission limitation and shall be calculated by use of the following equation:

$$E_d = \sum_{i=1}^{n} V_i C_i \left(1 - F_i\right)$$

where:

E_d = Actual VOM emissions for the day in units of kg/day (lbs/day);

i = Subscript denoting the specific coating applied;

n = Total number of surface coatings as applied in the can coating operation;

V_i = Volume of each coating as applied for the day in units of l/day (gal/day) of coating (minus water and any compounds that are specifically exempted from the definition of VOM);

C_i = The VOM content of each coating as applied in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds that are specifically exempted from the definition of VOM); and

F_i = Fraction, by weight, of VOM emissions from the surface coating, reduced or prevented from being emitted to the ambient air. This is the overall efficiency of the capture system and control device.

2) The coating line is equipped with a capture system and control device that provide 75 percent reduction in the overall emissions of VOM from the coating line and the control device has a 90 percent efficiency.

i) No owner or operator of a plastic parts coating line, that applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(n) or (o) of this Subpart (e.g., all coatings used on the line are subject to 0.42 kg/l (3.5 lbs/gal)), and that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

j) Prior to May 1, 2011, no owner or operator of a metal furniture coating line that applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(g) of this Subpart (e.g., all coatings used on the line are subject to 0.34 kg/l (2.8 lbs/gal)), and that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

k) Prior to May 1, 2011, no owner or operator of a large appliance coating line that applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(h) of this Subpart (e.g., all coatings used on the line are subject to 0.34 kg/l (2.8 lbs/gal)), and that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

l) On and after May 1, 2011, no owner or operator of a paper coating line, metal furniture coating line, or large appliance coating line that is equipped with a capture system and control device shall operate the subject coating line unless either:

1) The capture system and control device provide at least 90 percent reduction in the overall emissions of VOM from the coating line; or

2) The owner or operator complies with the applicable limitation set forth in Section 218.204 of this Subpart by utilizing a combination of low-VOM coatings and a capture system and control device.

m) No owner or operator of a flat wood paneling coating line that is equipped with a capture system and control device shall operate the subject coating line unless either:

1) The capture system and control device provide at least 90 percent reduction in the overall emissions of VOM from the coating line; or

2) The owner or operator of the flat wood paneling coating line complies with all requirements set forth in subsection (b)(2) of this Section.

n) On and after May 1, 2012, no owner or operator of a miscellaneous metal parts and products coating line, plastic parts and products coating line, or pleasure craft surface coating line that is equipped with a capture system and control device shall operate the subject coating line unless:

1) The capture system and control device provide at least 90 percent reduction in the overall emissions of VOM from the coating line; or

2) The owner or operator of the coating line complies with all requirements set forth in subsection (b)(2) of this Section.

o) Emissions Averaging Alternative for Pleasure Craft Surface Coating Operations. The owner or operator of a source with coating operations subject to the requirements of Section 218.204(q)(5)(A) through (G) may elect to include such operations in the emissions averaging alternative. Coating operations utilizing this alternative shall comply with a source-specific VOM emission limit on a 12-month rolling average basis, calculated at the end of each calendar month. Subject coating operations that do not utilize the emissions averaging alternative, and coating operations subject to Section 218.204(q)(5)(H), shall comply with the requirements in Section 218.204(q)(5) or 218.205, or subsection (n) of this Section, as applicable, as well as with all other applicable requirements in this Subpart.

1) The total actual VOM emissions determined by Equation 2 shall be equal to or less than the total allowable VOM emissions determined by Equation 1. The owner or operator of a source subject to this subsection (o) shall use Equation 1 to determine the total allowable source-specific VOM mass

emission limit for pleasure craft coatings included in the emissions average:

Equation 1:

$$VOM_{Allowable} = \sum_{i=A}^{G} LIM_i V_i$$

where:

$VOM_{Allowable}$ = Total allowable mass of VOM that can be emitted from the pleasure craft coating operations included in the average, expressed in kilograms per 12-month period.

LIM_i = The applicable VOM content limit for a specified pleasure craft coating category from Section 218.204(q)(5)(A) through (G), expressed in kilograms per liter.

V_i = Volume of specified pleasure craft coating category from Section 218.204(q)(5)(A) through (G) used in the past 12 months, excluding water and any compounds that are exempt, expressed in liters.

i = Subscript denoting a specific pleasure craft coating category from Section 218.204(q)(5)(A) through (G).

2) At the end of the first 12-month averaging period, and at the end of each subsequent month, the owner or operator of a source subject to this subsection (o) shall use Equation 2 to calculate the total actual VOM emissions from the pleasure craft coating operations included in the emissions average.

Equation 2:

$$VOM_{Actual} = \sum_{i=A}^{G} VOM_i V_i$$

where:

VOM_{Actual} = VOM emissions calculated using the VOM content for all coatings from Section 218.204(q)(5)(A) through (G) that are included in the average and the volume of those coatings used, expressed in kilograms.

VOM_i = Weighted average of actual VOM content for a specified pleasure craft coating category from Section 218.204(q)(5)(A) through (G), expressed in kilograms per liter.

V_i = Total volume of specified pleasure craft coating category from Section 218.204(q)(5)(A) through (G) used in the past 12 months, excluding water and any compounds that are exempt, expressed in liters.

i = Subscript denoting a specific pleasure craft coating category from Section 218.204(q)(5)(A) through (G).

3) For purposes of Equation 2, the owner or operator of a source subject to this subsection (o) shall use Equation 3 to calculate the weighted average VOM content for each coating included in the emissions average for the previous 12 months.

Equation 3:

$$VOM_i = \frac{\sum_{j=i}^{n} VOM_j V_j}{\sum_{j=i}^{n} V_j}$$

where:

VOM_i = Weighted average of actual VOM content for a specified pleasure craft coating category from Section 218.204(q)(5)(A) through (G), expressed in kilograms per liter.

VOM_j = VOM content of each pleasure craft coating used over the previous 12 months within a specific pleasure craft coating category, i.

V_j = Volume of each pleasure craft coating used in the previous 12 months, excluding water and any compounds that are exempt, within a specific pleasure craft coating category, i.

i = Subscript denoting a specific pleasure craft coating category from Section 218.204(q)(5)(A) through (G).

j = Subscript denoting a specific pleasure craft coating within a specified coating category, i.

n = Number of coatings applied within a specific coating category, i.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 218.211 Recordkeeping and Reporting

a) The VOM content of each coating and the efficiency of each capture system and control device shall be determined by the applicable test methods and procedures specified in Section 218.105 of this Part to establish the records required under this Section.

b) Any owner or operator of a coating line that is exempted from the limitations of Section 218.204 of this Subpart because of Section 218.208(a) or (b) of this Subpart shall comply with the following:

1) For sources exempt under Section 218.208(a) of this Subpart, by a date consistent with Section 218.106 of this Part, the owner or operator of a coating line or a group of coating lines referenced in subsection (b) of this Section shall certify to the Agency that the coating line or group of coating lines is exempt under the provisions of Section 218.208(a) of this Subpart. Such certification shall include:

A) A declaration that the coating line or group of coating lines is exempt from the limitations of Section 218.204 of this Subpart because of Section 218.208(a) of this Subpart; and

B) Calculations that demonstrate that the combined VOM emissions from the coating lines or group of coating lines never exceed 6.8 kg (15 lbs) per day before the application of capture systems and control devices. The following equation shall be used to calculate total VOM emissions:

$$T_e = \sum_{j=1}^{m} \sum_{i=1}^{n} \left(A_i B_i \right)_j$$

where:

T_e = Total VOM emissions from coating lines each day before the application of capture systems and control devices in units of kg/day (lbs/day);

m = Number of coating lines at the source that otherwise would be subject to the same subsection of Section 218.104 of this Part (because they belong to the same category, e.g., can coating);

j = Subscript denoting an individual coating line;

n = Number of different coatings as applied each day on each coating line;

i = Subscript denoting an individual coating;

A_i = Weight of VOM per volume of each coating (minus water and any compounds that are specifically exempted from the definition of VOM) as applied each day on each coating line in units of kg VOM/l (lbs VOM/gal); and

B_i = Volume of each coating (minus water and any compounds that are specifically exempted from the definition of VOM) as applied each day on each coating line in units of l/day (gal/day). The instrument or method by which the owner or operator accurately measured or calculated the volume of each coating as applied on each coating line each day shall be described in the certification to the Agency.

2) For sources exempt under Section 218.208(b) of this Subpart, by March 15, 1998, or upon initial start-up, the owner or operator of a coating line or a group of coating lines referenced in subsection (b) of this Section shall certify to the Agency that the source is exempt under the provisions of Section 218.208(b) of this Subpart. Such certification shall include:

A) A declaration that the source is exempt from the limitations of Section 218.204(l) of this Subpart because of Section 218.208(b) of this Subpart; and

B) Calculations that demonstrate that the source meets the criteria for exemption because of Section 218.208(b) of this Subpart.

3) For sources exempt under Section 218.208(a) of this Subpart, on and after a date consistent with Section 218.106 of this Part, the owner or operator of a coating line or group of coating lines referenced in this subsection shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:

A) The name and identification number of each coating as applied on each coating line; and

B) The weight of VOM per volume and the volume of each coating (minus water and any compounds that are specifically exempted from the definition of VOM) as applied each day on each coating line.

4) For sources exempt under Section 218.208(b) of this Subpart, on and after March 15, 1998, the owner or operator of a coating line or group of coating lines referenced in this subsection (b) shall collect and record all of the following information for each coating line and maintain the information at the source for a period of three years:

A) The name and identification number of each coating as applied on each coating line; and

B) The weight of VOM per volume and the volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied on each coating line on a monthly basis.

5) On and after a date consistent with Section 218.106 of this Part, the owner or operator of a coating line or group of coating lines exempted from the limitations of Section 218.204 of this Subpart because of Section 218.208(a) of this Subpart shall notify the Agency of any record showing that total VOM emissions from the coating line or group of coating lines exceed 6.8 kg (15 lbs) in any day before the application of capture systems and control devices by sending a copy of such record to the Agency within 30 days after the exceedance occurs.

6) On and after March 15, 1998, any owner or operator of a source exempt from the limitations of Section 218.204(l) of this Subpart because of Section 218.208(b) of this Subpart shall notify the Agency if the source's VOM emissions exceed the limitations of Section 218.208(b) of this Subpart by sending a copy of calculations showing such an exceedance within 30 days after the change occurs.

c) Any owner or operator of a coating line subject to the limitations of Section 218.204 of this Subpart other than Section 218.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart and complying by means of Section 218.204 of this Subpart shall comply with the following:

1) By a date consistent with Section 218.106 of this Part, or upon initial start-up of a new coating line, or upon changing the method of compliance from an existing subject coating line from Section 218.205, Section 218.207, Section 218.215, or Section 218.216 of this Subpart to Section 218.204 of this Subpart; the owner or operator of a subject coating line shall certify to the Agency that the coating line will be in compliance with Section 218.204 of this Subpart on and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date. The certification shall include:

A) The name and identification number of each coating as applied on each coating line;

B) The weight of VOM per volume of each coating (minus water and any compounds that are specifically exempted from the definition of VOM) as applied each day on each coating line;

C) On and after March 15, 1998, for coating lines subject to the limitations of Section 218.204(l)(2)(A) or (B) of this Subpart, the weight of VOM per weight of solids in each coating as applied each day on each coating line;

D) For coating lines subject to the limitations of Section 218.204(c)(2) of this Subpart, the weight of VOM per weight of solids (or the weight of VOM per weight of coatings, as applicable) in each coating as applied each day on each coating line;

E) For coating lines subject to the limitations of Section 218.204(g)(2) or (h)(2) of this Subpart, the application methods used to apply coatings on the subject coating line and the weight of VOM per volume of each coating (or the weight of VOM per volume of solids in each coating, as applicable) as applied each day on each coating line;

F) For coating lines subject to the limitations of Section 218.204(p) of this Subpart, the weight of VOM per volume of coatings or solids, as applicable, for each coating, as applied each day on each coating line;

G) For coating lines subject to the limitations of Section 218.204(a)(2)(A) of this Subpart, the weight of VOM per volume of solids in each coating as applied each day on each coating line, and the solids turnover ratio of the EDP operation, with supporting calculations;

H) For coating lines subject to the limitations of Section 218.204(a)(2)(E), the weight of VOM per volume and volume of each coating used in the final repair coat operation, and the weight of VOM per volume of the final repair coat as applied, calculated on an occurrence weighted average basis;

I) For coating lines subject to the limitations of Section 218.204(q) of this Subpart, the weight of VOM per volume of each coating, or the weight of VOM per volume of solids in each coating, as applicable, as applied each day on each coating line.

2) On and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date, the owner or operator of a subject coating line shall collect and record all of the following information each day, unless otherwise specified, for each coating line and maintain the information at the source for a period of three years:

A) The name and identification number of each coating as applied on each coating line;

B) The weight of VOM per volume of each coating (minus water and any compounds that are specifically exempted from the definition of VOM) as applied each day on each coating line;

C) On and after March 15, 1998, for coating lines subject to the limitations of Section 218.204(l)(2)(A) or (B) of this Subpart, the weight of VOM per weight of solids in each coating as applied each day on each coating line and certified product data sheets for each coating;

D) On and after March 15, 1998, for wood furniture coating spray booths subject to the limitations of Section 218.204(l)(4)(A) of this Subpart, the weight of VOM per weight of solids in each strippable spray booth coating as applied each day on each spray booth and certified product data sheets for each coating;

E) For coating lines subject to the limitations of Section 218.204(c)(2) of this Subpart, the weight of VOM per weight of solids (or the weight of VOM per weight of coatings, as applicable) in each coating as applied each day on each coating line, and certified product data sheets for each coating;

F) For coating lines subject to the limitations of Section 218.204(g)(2) or 218.204(h)(2) of this Subpart, the weight of VOM per volume of each coating (or the weight of VOM per volume of solids in each coating, as applicable) as applied each day on each coating line, and certified product data sheets for each coating;

G) For coating lines subject to the limitations of Section 218.204(p) of this Subpart, the weight of VOM per volume of coatings or solids, as applicable, for each coating, as applied each day on each coating line;

H) For coating lines subject to the limitations of Section 218.204(a)(2)(A) of this Subpart, the weight of VOM per volume of solids in each coating as applied each day on each coating line, certified product data sheets for each coating, and the solid

turnover ratio for the EDP operation, calculated on a calendar monthly basis, with supporting calculations;

I) For coating lines subject to the limitations of Section 218.204(a)(2)(E), the weight of VOM per volume and volume of each coating used in the final repair coat operation, the weight of VOM per volume of the final repair coat as applied, calculated on an occurrence weighted average basis, and certified product data sheets for each coating;

J) For coating lines subject to the limitations of Section 218.204(q) of this Subpart, the weight of VOM per volume of each coating, or the weight of VOM per volume of solids in each coating, as applied, as applied each day on each coating line, and certified product data sheets for each coating.

3) On and after a date consistent with Section 218.106 of this Part, the owner or operator of a subject coating line shall notify the Agency in the following instances:

A) Any record showing violation of Section 218.204 of this Subpart shall be reported by sending a copy of such record to the Agency within 30 days following the occurrence of the violation.

B) At least 30 calendar days before changing the method of compliance from Section 218.204 of this Subpart to Section 218.205 or Section 218.207 of this Subpart, the owner or operator shall comply with all requirements of subsection (d)(1) or~~,~~ (e)(1)~~, or (i)(1)~~ of this Section, as applicable. Upon changing the method of compliance from Section 218.204 of this Subpart to Section 218.205 of this Subpart or Section 218.207 of this Subpart, the owner or operator shall comply with all requirements of subsection (d) or~~,~~ (e)~~, or (i)~~ of this Section, as applicable.

d) Any owner or operator of a coating line subject to the limitations of Section 218.204 of this Subpart and complying by means of Section 218.205 of this Subpart shall comply with the following:

1) By a date consistent with Section 218.106 of this Part, or upon initial start-up of a new coating line, or upon changing the method of compliance for an existing subject coating line from Section 218.204 or Section 218.207 of this Subpart to Section 218.205 of this Subpart; the owner or operator of the subject coating line shall certify to the Agency that the coating line will be in compliance with Section 218.205 of this Subpart on and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date. The certification shall include:

A) The name and identification number of each coating line which will comply by means of Section 218.205 of this Subpart.

B) The name and identification number of each coating as applied on each coating line.

C) The weight of VOM per volume and the volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating line.

D) On and after March 15, 1998, for coating lines subject to the limitations of Section 218.204(l)(2)(A) or (B) of this Subpart, the weight of VOM per weight of solids in each coating as applied each day on each coating line.

E) For coating lines subject to the limitations of Section 218.204(a)(2)(A) of this Subpart, the weight of VOM per volume of solids in each coating as applied each day on each coating line.

F) For coating lines subject to the limitations of Section 218.204(c)(2) of this Subpart, the weight of VOM per weight of solids (or the weight of VOM per weight of coatings, as applicable) in each coating as applied each day on each coating line.

G) For coating lines subject to the limitations of Section 218.204(g)(2) or (h)(2) of this Subpart, the weight of VOM per volume of each coating (or the weight of VOM per volume of solids in each coating, as applicable) as applied each day on each coating line.

H) For coating lines subject to the limitations of Section 218.204(p) of this Subpart, the weight of VOM per volume of coatings or solids, as applicable, for each coating, as applied each day on each coating line.

I) For coating lines subject to the limitations of Section 218.204(q) of this Subpart, the weight of VOM per volume of each coating, or the weight of VOM per volume of solids in each coating, as applicable, as applied each day on each coating line.

J) The instrument or method by which the owner or operator will accurately measure or calculate the volume of each coating as applied each day on each coating line.

K) The method by which the owner or operator will create and

maintain records each day as required in subsection (d)(2) of this Section.

L) An example of the format in which the records required in subsection (d)(2) of this Section will be kept.

2) On and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date, the owner or operator of a subject coating line shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:

A) The name and identification number of each coating as applied on each coating line.

B) The weight of VOM per volume and the volume of each coating (minus water and any compounds that are specifically exempted from the definition of VOM) as applied each day on each coating line.

C) On and after March 15, 1998, for coating lines subject to the limitations of Section 218.204(l)(2)(A) or (B) of this Subpart, the weight of VOM per weight of solids in each coating as applied each day on each coating line.

D) For coating lines subject to the limitations of Section 218.204(a)(2)(A) of this Subpart, the weight of VOM per volume of solids in each coating as applied each day on each coating line.

E) For coating lines subject to the limitations of Section 218.204(c)(2) of this Subpart, the weight of VOM per weight of solids (or the weight of VOM per weight of coatings, as applicable) in each coating as applied each day on each coating line.

F) For coating lines subject to the limitations of Section 218.204(g)(2) or (h)(2) of this Subpart, the weight of VOM per volume of each coating (or the weight of VOM per volume of solids in each coating, as applicable) as applied each day on each coating line.

G) For coating lines subject to the limitations of Section 218.204(p) of this Subpart, the weight of VOM per volume of coatings or solids, as applicable, for each coating, as applied each day on each coating line.

H) For coating lines subject to the limitations of Section 218.204(q) of this Subpart, the weight of VOM per volume of each coating, or

the weight of VOM per volume of solids in each coating, as applied, as applied each day on each coating line.

I) The daily-weighted average VOM content of all coatings as applied on each coating line as defined in Section 218.104 of this Part.

3) On and after a date consistent with Section 218.106 of this Part, the owner or operator of a subject coating line shall notify the Agency in the following instances:

A) Any record showing violation of Section 218.205 of this Subpart shall be reported by sending a copy of such record to the Agency within 30 days following the occurrence of the violation.

B) At least 30 calendar days before changing the method of compliance with this Subpart from Section 218.205 of this Subpart to Section 218.204 or Section 218.207 of this Subpart, the owner or operator shall comply with all requirements of subsection (c)(1), (e)(1), or (i)(1) of this Section, as applicable. Upon changing the method of compliance with this Subpart from Section 218.205 to Section 218.204 or Section 218.207 of this Subpart, the owner or operator shall comply with all requirements of subsection (c) or~~,~~ (e)~~, or (i)~~ of this Section, as applicable.

e) Any owner or operator of a coating line subject to the limitations of Section 218.207 of this Subpart and complying by means of Section 218.207(c), (d), (e), (f), (g), (h), (l), (m), or (n) of this Subpart shall comply with the following:

1) By a date consistent with Section 218.106 of this Part, or upon initial start-up of a new coating line, or upon changing the method of compliance for an existing coating line from Section 218.204 or Section 218.205 of this Subpart to Section 218.207 of this Subpart, the owner or operator of the subject coating line shall perform all tests and submit to the Agency the results of all tests and calculations necessary to demonstrate that the subject coating line will be in compliance with Section 218.207 of this Subpart on and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date.

2) On and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date, the owner or operator of a subject coating line shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:

A) The weight of VOM per volume of coating solids as applied each

day on each coating line, if complying pursuant to Section 218.207(b)(2) of this Subpart.

B) Control device monitoring data.

C) A log of operating time for the capture system, control device, monitoring equipment and the associated coating line.

D) A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.

3) On and after a date consistent with Section 218.106 of this Part, the owner or operator of a subject coating line shall notify the Agency in the following instances:

A) Any record showing violation of Section 218.207 of this Subpart shall be reported by sending a copy of such record to the Agency within 30 days following the occurrence of the violation.

B) At least 30 calendar days before changing the method of compliance with this Subpart from Section 218.207 of this Subpart to Section 218.204 or Section 218.205 of this Subpart, the owner or operator shall comply with all requirements of subsection (c)(1) or (d)(1) of this Section, respectively. Upon changing the method of compliance with this Subpart from Section 218.207 of this Subpart to Section 218.204 or Section 218.205 of this Subpart, the owner or operator shall comply with all requirements of subsection (c) or (d) of this Section, respectively.

f) Any owner or operator of a primer surfacer operation or topcoat operation, or combined primer surfacer and topcoat operation, subject to the limitations of Section 218.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart shall comply with the following:

1) By a date consistent with Section 218.106 of this Part, or upon initial start-up of a new coating operation, the owner or operator of a subject coating operation shall certify to the Agency that the operation will be in compliance with Section 218.204 of this Subpart on and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date. The certification shall include:

A) The name and identification number of each coating operation that will comply by means of Section 218.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart and the name and

identification number of each coating line in each coating operation.

B) The name and identification number of each coating as applied on each coating line in the coating operation.

C) The weight of VOM per volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating line.

D) The transfer efficiency and control efficiency measured for each coating line.

E) Test reports, including raw data and calculations documenting the testing performed to measure transfer efficiency and control efficiency.

F) The instrument or method by which the owner or operator will accurately measure or calculate the volume of each coating as applied each day on each coating line.

G) The method by which the owner or operator will create and maintain records each day as required in subsection (f)(2) of this Section.

H) An example format for presenting the records required in subsection (f)(2) of this Section.

2) On and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date, the owner or operator of a subject coating operation shall collect and record all of the following information each day for each operation and maintain the information at the source for a period of three years:

A) All information necessary to demonstrate compliance with the topcoat protocol referenced in Section 218.105(b)(1)(B) and to calculate the daily-weighted average VOM emissions from the coating operations in kg/l (lbs/gal) of coating solids deposited in accordance with the proposal submitted, and approved pursuant to Section 218.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart including:

i) The name and identification number of each coating as applied on each coating operation.

ii) The weight of VOM per volume of each coating (minus

water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating operation.

B) If a control device or devices are used to control VOM emissions, control device monitoring data; a log of operating time for the capture system, control device, monitoring equipment and the associated coating operation; and a maintenance log for the capture system, control device and monitoring equipment, detailing all routine and non-routine maintenance performed including dates and duration of any outages.

3) On and after a date consistent with Section 218.106 of this Part or on and after the initial start-up date, the owner or operator of a subject coating operation shall determine and record the daily VOM emissions in kg/l (lbs/gal) of coating solids deposited in accordance with the proposal submitted and approved pursuant to Section 218.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart within 10 days from the end of the month and maintain this information at the source for a period of three years.

4) On and after a date consistent with Section 218.106 of this Part, the owner or operator of a subject coating operation shall notify the Agency in the following instances:

A) Any record showing a violation of Section 218.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart shall be reported by sending a copy of such record to the Agency within 15 days from the end of the month in which the violation occurred.

B) The owner or operator shall notify the Agency of any change to the operation at least 30 days before the change is effected. The Agency shall determine whether or not compliance testing is required. If the Agency determines that compliance testing is required, then the owner or operator shall submit a testing proposal to the Agency within 30 days and test within 30 days after the approval of the proposal by the Agency and USEPA.

g) On and after a date consistent with Section 218.106(e) of this Part, or on and after the initial startup date, whichever is later, the owner or operator of a coating line subject to the requirements of Section 218.218 of this Subpart shall comply with the following:

1) By May 1, 2011, or upon initial startup, whichever is later, submit a certification to the Agency that includes a description of the practices and

procedures that the source will follow to ensure compliance with the applicable requirements in Section 218.218 of this Subpart;

2) Notify the Agency of any violation of Section 218.218 of this Subpart by providing a description of the violation and copies of records documenting the violation to the Agency within 30 days following the occurrence of the violation; and

3) Maintain at the source all records required by this subsection (g) for a minimum of three years from the date the document was created and make those records available to the Agency upon request.

h) On and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date, whichever is later, the owner or operator of a coating line subject to the requirements of Section 218.219 of this Subpart shall comply with the following:

1) By May 1, 2012, or upon initial start-up, whichever is later, submit a certification to the Agency that includes:

A) A description of the practices and procedures that the source will follow to ensure compliance with the applicable requirements in Section 218.219 of this Subpart;

B) For sources subject to Section 218.219(a)(6), the work practices plan specified in that Section;

C) For sources subject to Section 218.219(b)(6), the application methods used to apply coatings on the subject coating line;

2) Notify the Agency of any violation of Section 218.219 of this Subpart by providing a description of the violation and copies of records documenting the violation to the Agency within 30 days following the occurrence of the violation; and

3) Maintain at the source all records required by this subsection (h) for a minimum of three years from the date the document was created and make those records available to the Agency upon request.

i) On and after a date consistent with Section 218.106(f) of this Part, or on and after the initial start-up date, whichever is later, the owner or operator of a flat wood paneling coating line subject to the requirements in Section 218.217 of this Subpart shall comply with the following:

1) By August 1, 2010, or upon initial start-up, whichever is later, submit a certification to the Agency that includes a description of the practices and

procedures that the source will follow to ensure compliance with the applicable requirements in Section 218.217(c) and (d) of this Subpart; and

2) Notify the Agency of any violation of Section 218.217 of this Subpart by providing a description of the violation and copies of records documenting such violation to the Agency within 30 days following the occurrence of the violation.

j) Each owner or operator of a pleasure craft surface coating operation subject to the limitations in Section 218.204(q)(5)(A) through (G) of this Subpart and complying by means of Section 218.207(o) of this Subpart shall comply with the following:

1) By a date consistent with Section 218.106 of this Part, or upon initial start-up of a new pleasure craft surface coating operation, whichever is later, or upon changing the method of compliance for an existing subject coating operation from Section 218.204, 218.205, or 218.207(n) of this Subpart to Section 218.207(o) of this Subpart, the owner or operator of a subject coating operation shall perform all tests and calculations necessary to demonstrate that the subject coating line will be in compliance with Section 218.207(o) on and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date.

2) On and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date, whichever is later, the owner or operator of a subject pleasure craft coating operation shall:

A) Collect and record the following information each month:

i) The amount of each pleasure craft surface coating used in each subject coating operation;

ii) The VOM content and coating category of each pleasure craft surface coating used in each subject coating operation;

iii) Total monthly VOM emissions for all subject pleasure craft surface coating operations;

B) At the end of the first 12-month averaging period, and at the end of each subsequent month, collect and record the following information:

i) The VOM mass emission limit for all subject pleasure craft surface coating operations for the applicable 12-month averaging period, with supporting calculations;

ii) The total actual emissions of VOM from all subject pleasure craft surface coating operations for the applicable 12-month averaging period;

C) Notify the Agency in writing of any violation of the requirements of Section 218.207(o) within 30 days following the occurrence of the violation and provide records documenting the violation upon request by the Agency;

D) Notify the Agency in writing at least 30 calendar days before changing the method of compliance with this Subpart from Section 218.207(o) to Section 218.204, 218.205, or 218.207(n). Upon changing the method of compliance, the owner or operator shall comply with all requirements set forth in subsection (c), (d), or (e) of this Section, as applicable;

E) Maintain at the source all records required by this subsection (j) for a minimum of three years from the date the document was created, and provide such records to the Agency upon request.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 218.217 Wood Furniture Coating and Flat Wood Paneling Coating Work Practice Standards

a) Spray booth cleaning. Each owner or operator of a source subject to the limitations of Section 218.204(l) of this Subpart shall not use compounds containing more than 8.0 percent, by weight, of VOM for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, and metal filters, unless the spray booth is being refurbished. If the spray booth is being refurbished, that is, the spray booth coating or other material used to cover the booth is being replaced, the affected source shall use no more than 1.0 gallon of organic solvent to prepare the booth prior to applying the booth coating.

b) Application equipment requirements. No owner or operator of a source subject to the limitations of Section 218.204(l) of this Subpart shall use conventional air spray guns to apply coating materials to wood furniture under the circumstances specified in subsections (b)(1) through (4) of this Section:

1) To apply coating materials that have a VOM content no greater than 1.0 kg VOM/kg solids (1.0 lb VOM/lb solids), as applied;

2) For repair coating under the following circumstances:

A) The coating materials are applied after the completion of the coating operation; or

B) The coating materials are applied after the stain and before any other type of coating material is applied, and the coating materials are applied from a container that has a volume of no more than 2.0 gallons;

3) If the spray gun is aimed and triggered automatically, rather than manually; or

4) If emissions from the finishing application station are directed to a control device pursuant to Section 218.216 of this Subpart

c) Cleaning and storage requirements. Each owner or operator of a source subject to the limitations of Section 218.204(l) or (p) of this Subpart shall:

1) Keep, store, and dispose of all coating, cleaning, and washoff materials in closed containers;

2) Pump or drain all organic solvent used for line cleaning into closed containers;

3) Collect all organic solvent used to clean spray guns in closed containers; and

4) Control emissions from washoff operations by using closed tanks.

d) Additional cleaning and storage requirements for flat wood paneling coating lines. Every owner or operator of a source subject to the limitations of Section 218.204(p) of this Subpart shall:

1) Minimize spills of VOM-containing coatings, thinners, and cleaning materials and clean up spills immediately;

2) Minimize emissions of VOM during the cleaning of storage, mixing, and conveying equipment;

3) Keep mixing vessels that contain VOM-containing coatings and other VOM-containing materials closed except when specifically in use;

4) On and after January 1, 2012, convey VOM-containing coatings, thinners, and cleaning materials in closed containers or pipes.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

SUBPART H: PRINTING AND PUBLISHING

Section 218.401 Flexographic and Rotogravure Printing

a) No owner or operator of a subject flexographic or rotogravure printing line shall apply at any time any coating or ink unless the VOM content does not exceed the limitation specified in either subsection (a)(1) or (a)(2), as applicable. Compliance with this Section must be demonstrated through the applicable coating or ink analysis test methods and procedures specified in Section 218.105(a) of this Part and the recordkeeping and reporting requirements specified in Section 218.404(c) of this Part. As an alternative to compliance with this subsection, a subject printing line may meet the requirements of subsection (b) or (c).

1) Prior to August 1, 2010, either:

A Forty percent VOM by volume of the coating and ink (minus water and any compounds which are specifically exempted from the definition of VOM); or

B) Twenty-five percent VOM by volume of the volatile content in the coating and ink; and

2) On and after August 1, 2010:

A) For owners operators of flexographic or rotogravure printing lines that do not print flexible packaging, either:

i) Forty percent VOM by volume of the coating and ink (minus water and any compounds that are specifically exempted from the definition of VOM); or

ii) Twenty-five percent VOM by volume of the volatile content in the coating and ink;

B) For owners or operators of flexographic or rotogravure printing lines that print flexible packaging, or that print flexible packaging and non-flexible packaging on the same line, either:

i) 0.8 kg VOM/kg (0.8 lbs VOM/lb) solids applied; or

ii) 0.16 kg VOM/kg (0.16 lbs VOM/lb) inks and coatings applied.

b) Weighted Averaging Alternative

1) Prior to August 1, 2010, no owner or operator of a subject flexographic or rotogravure printing line shall apply coatings or inks on the subject

printing line unless the weighted average, by volume, VOM content of all coatings and inks as applied each day on the subject printing line does not exceed the limitation specified in either subsection (a)(1)(A) (as determined by subsection (b)(1)(A)) or subsection (a)(1)(B)) (as determined by subsection (b)(1)(B). Compliance with this subsection must be demonstrated through the applicable coating or ink analysis test methods and procedures specified in Section 218.105(a) of this Part and the recordkeeping and reporting requirements specified in Section 218.404(d) of this Part.

A) The following equation shall be used to determine if the weighted average VOM content of all coatings and inks as applied each day on the subject printing line exceeds the limitation specified in subsection (a)(1)(A) of this Section.

$$VOM_{(i)(A)} = \frac{\sum_{i=1}^{n} C_i L_i \left(V_{si} + V_{VOMi}\right)}{\sum_{i-1}^{n} L_i \left(V_{si} + V_{VOMi}\right)}$$

where:

$VOM_{(i)(A)}$ = The weighted average VOM content in units of percent VOM by volume of all coatings and inks (minus water and any compounds that are specifically exempted from the definition of VOM) used each day;

i = Subscript denoting a specific coating or ink as applied;

n = The number of different coatings and/or inks as applied each day on a printing line;

C_i = The VOM content in units of percent VOM by volume of each coating or ink as applied (minus water and any compounds that are specifically exempted from the definition of VOM);

L_i = The liquid volume of each coating or ink as applied in units of l (gal);

V_{si} = The volume fraction of solids in each coating or ink as applied; and

V_{VOMi} = The volume fraction of VOM in each coating or ink as applied.

B) The following equation shall be used to determine if the weighted average VOM content of all coatings and inks as applied each day on the subject printing line exceeds the limitation specified in subsection (a)(1)(B) of this Section.

$$VOM_{(i)(B)} = \frac{\sum_{i=1}^{n} C_i L_i V_{VMi}}{\sum_{i-1}^{n} L_i V_{VMi}}$$

where:

$VOM_{(i)(B)}$ = The weighted average VOM content in units of percent VOM by volume of the volatile content of all coatings and inks used each day;

i = Subscript denoting a specific coating or ink as applied;

n = The number of different coatings and/or inks as applied each day on each printing line;

C_i = The VOM content in units of percent VOM by volume of the volatile matter in each coating or ink as applied;

L_i = The liquid volume of each coating or ink as applied in units of l (gal) and

V_{VMi} = The volume fraction of volatile matter in each coating or ink as applied.

2) On and after August 1, 2010, no owner or operator of a subject flexographic or rotogravure printing line that does not print flexible packaging shall apply coatings or inks on the subject printing line unless the weighted average, by weight, VOM content of all coatings and inks as applied each day on the subject printing line does not exceed the limitation specified in either subsection (a)(2)(A)(i) (calculated in accordance with the equation in subsection (b)(1)(A)) or (a)(2)(A)(ii) (calculated in accordance with the equation in subsection (b)(1)(B)) of this Section. Compliance with this subsection (b)(2) shall be demonstrated through the applicable coating or ink analysis test methods and procedures specified in Section 218.105(a) of this Part and the recordkeeping and reporting requirements specified in Section 218.404(d) of this Subpart.

3) On and after August 1, 2010, no owner or operator of a subject flexographic or rotogravure printing line that prints flexible packaging, or that prints flexible packaging and non-flexible packaging on the same line, shall apply coatings or inks on the subject printing line unless the weighted average, by weight, VOM content of all coatings and inks as applied each day on the subject printing line does not exceed the limitation specified in either subsection (a)(2)(B)(i) (calculated in accordance with the equation in subsection (b)(3)(A)) or subsection (a)(2)(B)(ii) (calculated in accordance with the equation in subsection (b)(3)(B)) of this Section. Compliance with this subsection (b)(3) shall be demonstrated through the applicable coating or ink analysis test methods and procedures specified in Section 218.105(a) of this Part and the recordkeeping and reporting requirements specified in Section 218.404(d) of this Subpart.

A) The following equation shall be used to determine if the weighted average VOM content of all coatings and inks as applied each day on the subject printing line exceeds the limitation specified in subsection (a)(2)(B)(i) of this Section.

$$VOM_{(A)} = \frac{\sum_{i-1}^{n} C_i W_i}{\sum_{i=1}^{n} W_i}$$

where:

$VOM_{(A)}$ = The weighted average VOM content in units of kg VOM per kg (lbs VOM per lb) solids of all coatings and inks used each day;

i = Subscript denoting a specific coating or ink as applied;

n = The number of different coatings and/or inks as applied each day on a printing line;

C_i = The VOM content in units of kg VOM per kg (lbs VOM per lb) solids of each coating or ink as applied;

W_i = Weight of solids in each coating or ink, as applied, in units of kg~~1~~ (lb).

B) The following equation shall be used to determine if the weighted average VOM content of all coatings and inks as applied each day on the subject printing line exceeds the limitation specified in subsection (a)(2)(B)(ii) of this Section.

$$VOM_{(B)} = \frac{\sum_{i-1}^{n} C_i L_i}{\sum_{i=1}^{n} L_i}$$

where:

$VOM_{(B)}$ = The weighted average VOM content in units of kg (lbs) VOM per weight in kg (lbs) of all coatings or inks as applied each day;

i = Subscript denoting a specific coating or ink as applied;

n = The number of different coatings and/or inks as applied each day on each printing line;

C_i = The VOM content in units of kg (lbs) VOM per weight in kg (lbs) of each coating or ink as applied;

L_i = The weight of each coating or ink, as applied, in units of kg (lb).

c) Capture System and Control Device Requirements

1) Prior to August 1, 2010, no owner or operator of a subject flexographic or rotogravure printing line equipped with a capture system and control device shall operate the subject printing line unless the owner or operator meets the requirements in subsection (c)(1)(A)(i), (c)(1)(A)(ii), or (c)(1)(A)(iii), as well as subsections (c)(1)(D), (c)(5), and (c)(6).

A One of:

i) A carbon adsorption system is used that reduces the captured VOM emissions by at least 90 percent by weight; or

ii) An incineration system is used that reduces the captured VOM emissions by at least 90 percent by weight; or

iii) An alternative VOM emission reduction system is used that is demonstrated to have at least a 90 percent control device efficiency, approved by the Agency and approved by USEPA as a SIP revision; and

B) The printing line is equipped with a capture system and control device that provides an overall reduction in VOM emissions of at least:

i) 75 percent where a publication rotogravure printing line is employed; or

ii) 65 percent where a packaging rotogravure printing line is employed; or

iii) 60 percent where a flexographic printing line is employed;

2) On and after August 1, 2010, no owner or operator of a flexographic or rotogravure printing line that does not print flexible packaging and that is equipped with a capture system and control device shall operate the subject printing line unless the owner or operator meets the requirements in subsection (c)(1)(A)(i), (c)(1)(A)(ii), or (c)(1)(A)(iii), as well as subsections (c)(1)(B), (c)(5), and (c)(6) of this Section;

3) On and after August 1, 2010, no owner or operator of a flexographic or rotogravure printing line that prints flexible packaging and that is equipped with a capture system and control device shall operate the subject printing line unless the owner or operator meets the requirements in subsections (c)(5) and (c)(6) of this Section and the capture system and control device provides an overall reduction in VOM emissions of at least:

A) 65 percent in cases in which a subject printing line was first constructed at the subject source prior to March 14, 1995 and utilizes a control device that was first constructed at the subject source prior to January 1, 2010; or

B) 70 percent when a subject printing line was first constructed at the subject source prior to March 14, 1995 and utilizes a control device that was first constructed at the subject source on or after January 1, 2010; or

C) 75 percent when a subject printing line was first constructed at the subject source on or after March 14, 1995 and utilizes a control device that was first constructed at the subject source prior to January 1, 2010; or

D) 80 percent when a subject printing line was first constructed at the subject source on or after March 14, 1995 and utilizes a control device that was first constructed at the subject source on or after January 1, 2010;

4) On and after August 1, 2010, the owner or operator of a flexographic or rotogravure printing line that prints flexible packaging and non-flexible packaging on the same line and that is equipped with a control device shall be subject to the requirements of either subsection (c)(1)(B) or (c)(3) of this Section, whichever is more stringent, as well as subsections (c)(5) and (c)(6) of this Section;

5) The control device is equipped with the applicable monitoring equipment specified in Section 218.105(d)(2) of this Part and except as provided in Section 218.105(d)(3) of this Part, the monitoring equipment is installed, calibrated, operated and maintained according to vendor specifications at all times the control device is in use; and

6) The capture system and control device are operated at all times when the subject printing line is in operation. The owner or operator shall demonstrate compliance with this subsection by using the applicable capture system and control device test methods and procedures specified in Section 218.105(c) through Section 218.105(f) of this Part and by complying with the recordkeeping and reporting requirements specified in Section 218.404(e) of this Part. The owner or operator of a printing line subject to the requirements in subsection (c)(1)(B) or (c)(2) of this Section that performed all testing necessary to demonstrate compliance with subsection (c)(1)(B) prior to August 1, 2010 is not required to retest pursuant to this subsection (c)(6). The owner or operator of a printing line subject to the requirements in subsection (c)(3) shall perform testing in compliance with this subsection (c)(6), even if the owner or operator already performed such testing prior to August 1, 2010, unless the following conditions are met. Nothing in this subsection (c)(6), however, shall limit the Agency's ability to require that the owner or operator perform testing pursuant to 35 Ill. Adm. Code 201.282:

   A) On or after May 1, 2000, the owner or operator of the subject printing line performed all testing necessary to demonstrate compliance with subsection (c)(1)(B);

   B) Such testing also demonstrated an overall control efficiency equal to or greater than the applicable control efficiency requirements in subsection (c)(3);

   C) The owner or operator submitted the results of such tests to the Agency, and the tests were not rejected by the Agency;

   D) The same capture system and control device subject to the tests referenced in subsection (c)(6)(A) of this Section is still being used by the subject printing line; and

E) The owner or operator complies with all recordkeeping and reporting requirements in Section 218.404(e)(1)(B).

d) No owner or operator of subject flexographic or rotogravure printing lines that print flexible packaging or print flexible packaging and non-flexible packaging on the same line shall cause or allow VOM containing cleaning materials, including used cleaning towels, associated with the subject flexographic or rotogravure printing lines to be kept, stored, or disposed of in any manner other than in closed containers, or conveyed from one location to another in any manner other than in closed containers or pipes, except when specifically in use.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 218.402 Applicability

a) Except as otherwise provided in Section 218.401, the limitations of Section 218.401 of this Subpart apply to all flexographic and rotogravure printing lines at a subject source. Sources with flexographic and/or rotogravure printing lines are subject sources if:

1) Total maximum theoretical emissions of VOM from all flexographic and rotogravure printing lines (including solvents used for cleanup operations associated with flexographic and rotogravure printing lines) at the source ever exceed 90.7 Mg (100 tons) per calendar year and the flexographic and rotogravure printing lines (including solvents used for cleanup operations associated with flexographic and rotogravure printing lines) at the source are not limited to less than 90.7 Mg (100 tons) of VOM emissions per calendar year in the absence of air pollution control equipment through production or capacity limitations contained in a federally enforceable permit or a SIP revision; or

2) The flexographic and rotogravure printing lines (including solvents used for cleanup operations associated with flexographic and rotogravure printing lines) at the source have a combined potential to emit 22.7 Mg (25 tons) or more of VOM per year.

b) The limitations of Section 218.401(d) shall apply to all owners or operators of flexographic or rotogravure printing lines that print flexible packaging, or that print flexible packaging and non-flexible packaging on the same line, at a source where the combined emissions of VOM from all flexographic and rotogravure printing lines total 6.8 kg/day (15 lbs/day) or more (including solvents used for cleanup operations associated with flexographic and rotogravure printing lines), in the absence of air pollution control equipment.

c) Upon achieving compliance with this Subpart, the flexographic and rotogravure printing lines are not required to meet Subpart G (Section 218.301 or 218.302 of

this Part). Flexographic and rotogravure printing lines exempt from this Subpart are subject to Subpart G (Section 218.301 or 218.302 of this Part). Rotogravure or flexographic equipment used for both roll printing and paper coating is subject to this Subpart.

d) Once subject to the limitations of Section 218.401, a flexographic or rotogravure printing line is always subject to the limitations of Section 218.401 of this Part.

e) Any owner or operator of any flexographic or rotogravure printing line that is exempt from any of the limitations of Section 218.401 of this Part because of the criteria in this Section is subject to the recordkeeping and reporting requirements specified in Section 218.404(b) and (f) of this Part, as applicable.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 218.404 Recordkeeping and Reporting

a) The VOM content of each coating and ink and the efficiency of each capture system and control device shall be determined by the applicable test methods and procedures specified in Section 218.105 of this Part to establish the records required under this Section.

b) Any owner or operator of a printing line which is exempted from any of the limitations of Section 218.401 of this Part because of the criteria in Section 218.402(a) of this Part shall comply with the following:

1) By a date consistent with Section 218.106 of this Part or, for flexographic or rotogravure printing lines that print flexible packaging or that print flexible packaging and non-flexible packaging on the same line, by January 1, 2012, the owner or operator of a flexographic or rotogravure printing line to which this subsection (b) is applicable shall certify to the Agency that the flexographic and rotogravure printing line is exempt under the provisions of Section 218.402(a) of this Part. Such certification shall include:

A) A declaration that the flexographic and rotogravure printing line is exempt from the limitations of the criteria in Section 218.401 of this Part because of Section 218.402(a) of this Part; and

B) Calculations that demonstrate that the combined potential to emit of all flexographic and rotogravure printing lines at the source never equals or exceeds 22.7 Mg (25 tons) of VOM per year, and that total maximum theoretical emissions of VOM from all flexographic and rotogravure printing lines at the source never exceed 90.7 Mg (100 tons) per calendar year before the application of capture systems and control devices. Total maximum

theoretical emissions of VOM for a flexographic or rotogravure printing source is the sum of maximum theoretical emissions of VOM from each flexographic and rotogravure printing line at the source. The following equation shall be used to calculate total maximum theoretical emissions of VOM per calendar year before the application of capture systems and control devices for each flexographic and rotogravure printing line at the source:

$$E_p = A \times B + 1095\,(C \times D \times F)$$

where:

E_p = Total maximum theoretical emissions of VOM from one flexographic or rotogravure printing line in units of kg/year (lbs/year);

A = Weight of VOM per volume of solids of the coating or ink with the highest VOM content as applied each year on the printing line in units of kg VOM/l (lbs VOM/gal) of coating or ink solids;

B = Total volume of solids for all coatings and inks that can potentially be applied each year on the printing line in units of l/year (gal/year). The method by which the owner or operator accurately calculated the volume of each coating and ink as applied and the amount that can potentially be applied each year on the printing line shall be described in the certification to the Agency;

C = Weight of VOM per volume of material for the cleanup material or solvent with the highest VOM content as used each year on the printing line in units of kg/l (lbs VOM/gal);

D = The greatest volume of cleanup material or solvent used in any 8-hour period;

F = The highest fraction of cleanup material or solvent which is not recycled or recovered for offsite disposal during any 8-hour period.

2) On and after a date consistent with Section 218.106 of this Part, or, for flexographic or rotogravure printing lines that print flexible packaging or that print flexible packaging and non-flexible packaging on the same line, on and after January 1, 2012, the owner or operator of a flexographic and rotogravure printing line referenced in this subsection shall collect and record all of the following information each year for each printing line and maintain the information at the source for a period of three years:

A) The name and identification number of each coating and ink as applied on each printing line.

B) The VOM content and the volume of each coating and ink as applied each year on each printing line.

3) On and after a date consistent with Section 218.106 of this Part, or, for flexographic or rotogravure printing lines that print flexible packaging or that print flexible packaging and non-flexible packaging on the same line, on and after January 1, 2012, the owner or operator of a flexographic and rotogravure printing line exempted from the limitations of Section 218.401 of this Part because of the criteria in Section 218.402(a) of this Part shall notify the Agency of any record showing that total maximum theoretical emissions of VOM from all printing lines exceed 90.7 Mg (100 tons) in any calendar year before the application of capture systems and control devices, or that the combined potential to emit of all flexographic and rotogravure printing lines at the source equals or exceeds 22.7 Mg (25 tons) of VOM in any calendar year, by sending a copy of such record to the Agency within 30 days after the exceedance occurs.

c) Any owner or operator of a printing line subject to the limitations of Section 218.401 of this Part and complying by means of Section 218.401(a) of this Part shall comply with the following:

1) By a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, or upon initial start-up of a new printing line, or upon changing the method of compliance from an existing subject printing line from Section 218.401(b) or Section 218.401(c) of this Part to Section 218.401(a) of this Part, the owner or operator of a subject printing line shall certify to the Agency that the printing line will be in compliance with Section 218.401(a) of this Part on and after a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, or on and after the initial start-up date. The owner or operator of a printing line subject to the requirements in Section 218.401(a)(2)(B) shall certify in accordance with this subsection (c)(1) even if the owner or operator of such line submitted a certification prior to January 1, 2010. Such certification shall include:

A) The name and identification number of each coating and ink as applied on each printing line.

B) The VOM content of each coating and ink as applied each day on each printing line.

2) On and after a date consistent with Section 218.106 of this Part, or Section

218.403(e), as applicable, or on and after the initial start-up date, the owner or operator of a printing line subject to the limitations of Section 218.401 of this Part and complying by means of Section 218.401(a) of this Part shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:

A) The name and identification number of each coating and ink as applied on each printing line.

B) The VOM content of each coating and ink as applied each day on each printing line.

3) On and after a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, the owner or operator of a subject printing line shall notify the Agency in the following instances:

A) Any record showing violation of Section 218.401(a) of this Part shall be reported by sending a copy of such record to the Agency within 30 days following the occurrence of the violation.

B) At least 30 calendar days before changing the method of compliance with Section 218.401 of this Part from Section 218.401(a) of this Part to Section 218.401(b) or (c) of this Part, the owner or operator shall comply with all requirements of subsection (d)(1) or (e)(1) of this Section, respectively. Upon changing the method of compliance with Section 218.401 of this Part from Section 218.401(a) of this Part to Section 218.401(b) or (c) of this Part, the owner or operator shall comply with all requirements of subsection (d) or (e) of this Section, respectively.

d) Any owner or operator of a printing line subject to the limitations of Section 218.401 of this Part and complying by means of Section 218.401(b) shall comply with the following:

1) By a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, or upon initial start-up of a new printing line, or upon changing the method of compliance for an existing subject printing line from Section 218.401(a) or (c) of this Part to Section 218.401(b) of this Part, the owner or operator of the subject printing line shall certify to the Agency that the printing line will be in compliance with Section 218.401(b) of this Part on and after a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, or on and after the initial start-up date. The owner or operator of a printing line subject to the requirements in Section 218.401(b)(3) shall certify in accordance with this subsection (d)(1) even if the owner or operator of such line submitted a

certification prior to January 1, 2010. Such certification shall include:

A) The name and identification number of each printing line which will comply by means of Section 218.401(b) of this Part.

B) The name and identification number of each coating and ink available for use on each printing line.

C) The VOM content of each coating and ink as applied each day on each printing line.

D) The method by which the owner or operator will accurately calculate the volume, or weight of solids, as applicable, of each coating and ink as applied each day on each printing line, and on and after January 1, 2012, the weight of each coating or ink.

E) The method by which the owner or operator will create and maintain records each day as required in subsection (d)(2) of this Section.

F) An example of the format in which the records required in subsection (d)(2) of this Section will be kept.

2) On and after a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, or on and after the initial start-up date, the owner or operator of a printing line subject to the limitations of Section 218.401 of this Part and complying by means of Section 218.401(b) of this Part shall collect and record all of the following information each day for each printing line and maintain the information at the source for a period of three years:

A) The name and identification number of each coating and ink as applied on each printing line.

B) The VOM content and the volume, or weight of solids, as applicable, of each coating and ink as applied each day on each printing line, and on and after January 1, 2012, the weight of each coating or ink.

C) The daily-weighted average VOM content of all coatings and inks as applied on each printing line.

3) On and after a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, the owner or operator of a subject printing line shall notify the Agency in the following instances:

A) Any record showing violation of Section 218.401(b) of this Part shall be reported by sending a copy of such record to the Agency within 30 days following the occurrence of the violation.

B) At least 30 calendar days before changing the method of compliance with Section 218.401 of this Part from Section 218.401(b) of this Part to Section 218.401(a) or (c) of this Part, the owner or operator shall comply with all requirements of subsection (c)(1) or (e)(1) of this Section, respectively. Upon changing the method of compliance with Section 218.401 of this Part from Section 218.401(b) of this Part to Section 218.401(a) or (c) of this Part, the owner or operator shall comply with all requirements of subsection (c) or (e) of this Section, respectively.

e) Any owner or operator of a printing line subject to the limitations of Section 218.401 of this Part and complying by means of Section 218.401(c) of this Part shall comply with the following:

1) By a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, or upon initial start-up of a new printing line, or upon changing the method of compliance for an existing printing line from Section 218.401(a) or (b) of this Part to Section 218.401(c) of this Part, the owner or operator of the subject printing line shall either:

A) Perform all tests and submit to the Agency the results of all tests and calculations necessary to demonstrate that the subject printing line will be in compliance with Section 218.401(c) of this Part on and after a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, or on and after the initial start-up date; or

B) If not required to perform such testing pursuant to Section 218.401(c)(6), submit a certification to the Agency that includes:

i) A declaration that the owner or operator is not required to perform testing pursuant to Section 218.401(c)(6);

ii) The dates that testing demonstrating compliance with Section 218.401(c)(3) was performed; and

iii) The dates that the results of such testing were submitted to the Agency.

2) On and after a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, or on and after the initial start-up date, the owner or operator of a printing line subject to the limitations of Section 218.401 of this Part and complying by means of Section 218.401(c) of this

Part shall collect and record all of the following information each day for each printing line and maintain the information at the facility for a period of three years:

A) Control device monitoring data.

B) A log of operating time for the capture system, control device, monitoring equipment and the associated printing line.

C) A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.

3) On and after a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, the owner or operator of a subject printing line shall notify the Agency in the following instances:

A) Any record showing violation of Section 218.401(c) of this Part shall be reported by sending a copy of such record to the Agency within 30 days following the occurrence of the violation.

B) At least 30 calendar days before changing the method of compliance with Section 218.401 of this Part from Section 218.401(c) of this Part to Section 218.401(a) or (b) of this Part, the owner or operator shall comply with all requirements of subsection (c)(1) or (d)(1) of this Section, respectively. Upon changing the method of compliance with Section 218.401 of this Part from Section 218.401(c) of this Part to Section 218.401(a) or (b) of this Part, the owner or operator shall comply with all requirements of subsection (c) or (d) of this Section, respectively.

4) By August 1, 2010, or upon initial start-up of a new printing line, whichever is later, the owner or operator of a printing line subject to the requirements in Section 218.401(c)(3) or (c)(4) shall submit to the Agency records documenting the date the printing line was constructed at the subject source and the date the control device for such printing line was constructed at the subject source.

f) Any owner or operator of a flexographic or rotogravure printing line that prints flexible packaging, or that prints flexible packaging and non-flexible packaging on the same line, and that is exempt from the limitations of Section 218.401(d) because of the criteria in Section 218.402(b) shall:

1) By August 1, 2010, or upon initial start-up of a new printing line, whichever is later, and upon modification of a printing line, submit a certification to the Agency that includes:

A) A declaration that the source is exempt from the requirements in Section 218.401(d) because of the criteria in Section 218.402(b);

B) Calculations that demonstrate that combined emissions of VOM from all flexographic and rotogravure printing lines (including inks and solvents used for cleanup operations associated with such printing lines) at the source never equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment;

2) On and after January 1, 2012, collect and record the following information each day for each subject printing line:

A) The name and identification number of each coating, ink, and cleaning solvent as applied each day on each printing line;

B) The VOM content of each coating and ink (measured in weight of VOM per volume of coating or ink, or in weight of VOM per weight of coating or ink) as applied each day on each printing line, and the volume or weight of each coating or ink, as applicable;

C) The weight of VOM per volume of each cleaning solvent and the volume of each cleaning solvent used each day on each printing line;

D) The total daily emissions of VOM from each printing line (including solvents used for cleanup operations associated with the printing line) and the sum of daily emissions from all subject printing lines at the source; and

3) Notify the Agency in writing if the combined emissions of VOM from all flexographic and rotogravure printing lines (including inks and solvents used for cleanup operations associated with the flexographic and rotogravure lines) at the source ever equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment, within 30 days after the event occurs

g) Any owner or operator of a printing line subject to the limitations of Section 218.401(d) shall:

1) By August 1, 2010, or upon initial start-up of a new printing line, whichever is later, submit a certification to the Agency describing the

practices and procedures that the owner or operator will follow to ensure compliance with the limitations of Section 218.401(d); and

2) Notify the Agency of any violation of Section 218.401(d) by sending a description of the violation and copies of records documenting such violations to the Agency within 30 days following the occurrence of the violation.

h) All records required by subsections (f) and (g) of this Section shall be retained for at least three years and shall be made available to the Agency upon request.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 218.409 Testing for Lithographic Printing

a) Testing to demonstrate compliance with the requirements of Section 218.407 of this Subpart shall be conducted by January 1, 2012, unless such testing was conducted on or after May 9, 1995, the test was conducted pursuant to a test method approved by USEPA, the current operating conditions and operating capacity of the press are consistent with the operation of the press during such testing, and the test results were submitted to the Agency ~~has been conducted within the two years immediately preceding January 1, 2012~~. If an owner or operator of a printing line performed such testing prior to May 9, 1995, the owner or operator of a printing line performed such testing prior to May 9, 1995, the owner or operator shall either retest pursuant to this Section, or submit to the Illinois EPA all information necessary to demonstrate that the prior testing was conducted pursuant to a test method approved by the USEPA, and that the current operating conditions and operating cpactity of the press are consistent with the operation of the press during prior testing. Thereafter, testing shall be conducted by the owner or operator within 90 days after a request by the Agency, or as otherwise specified in this Subpart. Such testing shall be conducted at the expense of the owner or operator and the owner or operator shall notify the Agency in writing 30 days in advance of conducting such testing to allow the Agency to be present during such testing.

b) The methods and procedures of Section 218.105(d) and (f) shall be used for testing to demonstrate compliance with the requirements of Section 218.407(a)(1)(C) or (b)(1) of this Subpart, as follows:

1) To select the sampling sites, Method 1 or 1A, as appropriate, 40 CFR 60, appendix A, incorporated by reference at Section 218.112 of this Part. The sampling sites for determining efficiency in reducing VOM from the dryer exhaust shall be located between the dryer exhaust and the control device inlet, and between the outlet of the control device and the exhaust to the atmosphere;

2) To determine the volumetric flow rate of the exhaust stream, Method 2, 2A, 2C, or 2D, as appropriate, 40 CFR 60, appendix A, incorporated by reference at Section 218.112 of this Part;

3) To determine the VOM concentration of the exhaust stream entering and exiting the control device, Method 25 or 25A, as appropriate, 40 CFR 60, appendix A, incorporated by reference at Section 218.112 of this Part. For thermal and catalytic afterburners, Method 25 must be used except under the following circumstances, in which case Method 25A must be used:

A) The allowable outlet concentration of VOM from the control device is less than 50 ppmv, as carbon;

B) The VOM concentration at the inlet of the control device and the required level of control result in exhaust concentrations of VOM of 50 ppmv, or less, as carbon; and

C) Due to the high efficiency of the control device, the anticipated VOM concentration at the control device exhaust is 50 ppmv or less, as carbon, regardless of inlet concentration. If the source elects to use Method 25A under this option, the exhaust VOM concentration must be 50 ppmv or less, as carbon, and the required destruction efficiency must be met for the source to have demonstrated compliance. If the Method 25A test results show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, a retest is required. The retest shall be conducted using either Method 25 or Method 25A. If the retest is conducted using Method 25A and the test results again show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, the source must retest using Method 25;

4) Notwithstanding the criteria or requirements in Method 25 that specifies a minimum probe temperature of 129°C (265°F), the probe must be heated to at least the gas stream temperature of the dryer exhaust, typically close to 176.7°C (350°F);

5) During testing, the printing lines shall be operated at representative operating conditions and flow rates; and

6) During testing, an air flow direction indicating device, such as a smoke stick, shall be used to demonstrate 100 percent emissions capture efficiency for the dryer in accordance with Section 218.407(a)(1)(B) of this Subpart.

c) Testing to demonstrate compliance with the VOM content limitations in Section

218.407(a)(1)(A), (a)(2), (a)(3) and (a)(4)(A) of this Subpart, and to determine the VOM content of fountain solutions, fountain solution additives, cleaning solvents, cleaning solutions, and inks (pursuant to the requirements of Section 218.411(a)(1)(B), (b)(1)(B), or (b)(2)(B) of this Subpart, as applicable, shall be conducted upon request of the Agency or as otherwise specified in this Subpart, as follows:

1) The applicable test methods and procedures specified in Section 218.105(a) of this Part shall be used; provided, however, Method 24, incorporated by reference at Section 218.112 of this Part, shall be used to demonstrate compliance; or

2) The manufacturer's specifications for VOM content for fountain solution additives, cleaning solvents, and inks may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 218.105(a) of this Part; provided, however, Method 24 shall be used to determine compliance.

d) Testing to demonstrate compliance with the requirements of Section 218.407(b) of this Subpart shall be conducted as set forth in the owner or operator's plan approved by the Agency and USEPA as federally enforceable permit conditions pursuant to Section 218.407(b) of this Subpart.

e) Testing to determine the VOM composite partial vapor pressure of cleaning solvents, cleaning solvent concentrates, and as-used cleaning solutions shall be conducted in accordance with the applicable methods and procedures specified in Section 218.110 of this Part.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 218.411 Recordkeeping and Reporting for Lithographic Printing

a) Exempt Units prior to August 1, 2010. An owner or operator of lithographic printing lines exempt from the limitations of Section 218.407 of this Subpart prior to August 1, 2010, because of the criteria in Section 218.405(b) of this Subpart, shall comply with the following:

1) Upon initial start-up of a new lithographic printing line, and upon modification of a lithographic printing line, submit a certification to the Agency that includes:

A) A declaration that the source is exempt from the control requirements in Section 218.407 of this Part because of the criteria in Section 218.405(b) of this Subpart;

B) Calculations that demonstrate that combined emissions of VOM

from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source never exceed 45.5 kg/day (100 lbs/day) before the use of capture systems and control devices, as follows:

i) To calculate daily emissions of VOM, the owner or operator shall determine the monthly emissions of VOM from all lithographic printing lines at the source (including solvents used for cleanup operations associated with the lithographic printing lines) and divide this amount by the number of days during that calendar month that lithographic printing lines at the source were in operation;

ii) To determine the VOM content of the inks, fountain solution additives and cleaning solvents, the tests methods and procedures set forth in Section 218.409(c) of this Subpart shall be used;

iii) To determine VOM emissions from inks used on lithographic printing lines at the source, an ink emission adjustment factor of 0.05 shall be used in calculating emissions from all non-heatset inks except when using an impervious substrate, and a factor of 0.80 shall be used in calculating emissions from all heatset inks to account for VOM retention in the substrate except when using an impervious substrate. For impervious substrates such as metal or plastic, no emission adjustment factor is used. The VOM content of the ink, as used, shall be multiplied by this factor to determine the amount of VOM emissions from the use of ink on the printing lines; and

iv) To determine VOM emissions from fountain solutions and cleaning solvents used on lithographic printing lines at the source, no retention factor is used;

C) Either a declaration that the source, through federally enforceable permit conditions, has limited its maximum theoretical emissions of VOM from all heatset web offset lithographic printing lines (including solvents used for cleanup operations associated with heatset web offset printing lines) at the source to no more than 90.7 Mg (100 tons) per calendar year before the application of capture systems and control devices or calculations which demonstrate that the source's total maximum theoretical emissions of VOM do not exceed 90.7 Mg/yr (100 tons/yr). Total maximum theoretical emissions of VOM for a heatset web offset lithographic printing

source is the sum of maximum theoretical emissions of VOM from each heatset web offset lithographic printing line at the source. The following equation shall be used to calculate total maximum theoretical emissions of VOM per calendar year in the absence of air pollution control equipment for each heatset web offset lithographic printing line at the source:

$$E_p = (R \times A \times B) + (C \times D) + 1095\ \ (F \times G \times H)$$

where:

E_p = Total maximum theoretical emissions of VOM from one heatset web offset printing line in units of kg/yr (lb/yr);

A = Weight of VOM per volume of solids of ink with the highest VOM content as applied each year on the printing line in units of kg/l (lb/gal) of solids;

B = Total volume of solids for all inks that can potentially be applied each year on the printing line in units of 1/yr (gal/yr). The method by which the owner or operator accurately calculated the volume of each ink as applied and the amount that can potentially be applied each year on the printing line shall be described in the certification to the Agency;

C = Weight of VOM per volume of fountain solution with the highest VOM content as applied each year on the printing line in units of kg/l (lb/gal);

D = The total volume of fountain solution that can potentially be used each year on the printing line in units of 1/yr (gal/yr). The method by which the owner or operator accurately calculated the volume of each fountain solution used and the amount that can potentially be used each year on the printing line shall be described in the certification to the Agency;

F = Weight of VOM per volume of material for the cleanup material or solvent with the highest VOM content as used each year on the printing line in units of kg/l (lb/gal) of such material;

G = The greatest volume of cleanup material or solvent used in any 8-hour period;

H = The highest fraction of cleanup material or solvent that is not recycled or recovered for offsite disposal during any 8-hour period;

R = The multiplier representing the amount of VOM not retained in the substrate being used. For paper, R = 0.8. For metal, plastic, or other impervious substrates, R = 1.0;

D) A description and the results of all tests used to determine the VOM content of inks, fountain solution additives, and cleaning solvents, and a declaration that all such tests have been properly conducted in accordance with Section 218.409(c)(1) of this Subpart;

2) Notify the Agency in writing if the combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source ever exceed 45.5 kg/day (100 lbs/day), before the use of capture systems and control devices, within 30 days after the event occurs. Such notification shall include a copy of all records of such event.

b) Exempt Units on and after August 1, 2010

1) Lithographic Printing Lines Exempt pursuant to Section 218.405(c)(2). By August 1, 2010, or upon initial start-up of a new lithographic printing line, whichever is later, and upon modification of a lithographic printing line, an owner or operator of lithographic printing lines exempt from the limitations in Section 218.407 of this Subpart because of the criteria in Section 218.405(c)(2) of this Subpart shall submit a certification to the Agency that includes the information specified in either subsections (b)(1)(A), (b)(1)(B), and (b)(1)(D) of this Section or subsections (b)(1)(A) and (b)(1)(C) of this Section, as applicable. An owner or operator complying with subsection (b)(1)(B) shall also comply with the requirements in subsection (b)(1)(E) of this Section. An owner or operator complying with subsection (b)(1)(C) shall also comply with the requirements in subsection (b)(1)(F) of this Section:

A) A declaration that the source is exempt from the requirements in Section 218.407 of this Subpart because of the criteria in Section 218.405(c)(2) of this Subpart;

B) Calculations that demonstrate that combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source do not equal or exceed

6.8 kg/day (15 lbs/day), before the use of capture systems and control devices, as follows:

i) To calculate daily emissions of VOM, the owner or operator shall determine the monthly emissions of VOM from all lithographic printing lines at the source (including solvents used for cleanup operations associated with the lithographic printing lines) and divide this amount by the number of days during that calendar month that lithographic printing lines at the source were in operation;

ii) To determine the VOM content of the inks, fountain solution additives and cleaning solvents, the test methods and procedures set forth in Section 218.409(c) of this Subpart shall be used;

iii) To determine VOM emissions from inks used on lithographic printing lines at the source, an ink emission adjustment factor of 0.05 shall be used in calculating emissions from all non-heatset inks except when using an impervious substrate, and a factor of 0.80 shall be used in calculating emissions from all heatset inks to account for VOM retention in the substrate except when using an impervious substrate. For impervious substrates such as metal or plastic, no emission adjustment factor is used. The VOM content of the ink, as used, shall be multiplied by this factor to determine the amount of VOM emissions from the use of ink on the printing lines; and

iv) To determine VOM emissions from cleaning solutions used on lithographic printing lines at the source, an emission adjustment factor of 0.50 shall be used in calculating emissions from used shop towels if the VOM composite vapor pressure of each associated cleaning solution is demonstrated to be less than 10 mmHg measured at 20^{o}C (68^{o}F) and the shop towels are kept in closed containers. For cleaning solutions with VOM composite vapor pressures of equal to or greater than 10 mmHg measured at 20^{o}C (68^{o}F) and for shop towels that are not kept in closed containers, no emission adjustment factor is used;

C) As an alternative to the calculations in subsection (b)(1)(B), a statement that the source uses less than the amount of material specified in subsection (b)(1)(C)(i) or (ii), as applicable, during each calendar month. A source may determine that it emits below 6.8 kg/day (15 lbs/day) of VOM based upon compliance with such

material use limitations. If the source exceeds this amount of material use in a given calendar month, the owner or operator must, within 15 days after the end of that month, complete the emissions calculations of subsection (b)(1)(B) to determine daily emissions for applicability purposes. If the source ever exceeds this amount of material use for six consecutive calendar months, it is no longer eligible to use this subsection (b)(1)(C) as an alternative to the calculations in subsection (b)(1)(B). If a source has both heatset web offset and either nonheatset web offset or sheetfed lithographic printing operations, or has all three types of printing operations, the owner or operator may not make use of this alternative and must use the calculations in subsection (b)(1)(B).

i) The sum of all sheetfed and nonheatset web offset lithographic printing operations at the source: 242.3 liters (64 gallons) of cleaning solvent and fountain solution additives, combined; or

ii) The sum of all heatset web offset lithographic printing operations at the source: 204.1 kg (450 lbs) of ink, cleaning solvent, and fountain solution additives, combined;

D) A description and the results of all tests used to determine the VOM content of inks, fountain solution additives, and cleaning solvents, and a declaration that all such tests have been properly conducted in accordance with Section 218.409(c)(1) of this Subpart;

E) For sources complying with subsection (b)(1)(B) of this Section, notify the Agency in writing if the combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source ever equal or exceed 6.8 kg/day (15 lbs/day), before the use of capture systems and control devices, within 30 days after the event occurs. If such emissions of VOM at the source equal or exceed 6.8 kg/day (15 lbs/day) but do not exceed 45.5 kg/day (100 lbs/day), the source shall comply with the requirements in subsection (b)(2) of this Section;

F) For sources complying with subsection (b)(1)(C) of this Section, comply with the following:

i) Maintain material use records showing that the source uses less than the amount of material specified in subsections (b)(1)(C)(i) and (b)(1)(C)(ii) during each calendar month,

or, if the source exceeds the material use limitations, records showing that the source exceeded the limitations but did not emit 6.8 kg/day (15 lbs/day) or more of VOM, and provide such records to the Agency upon request. On and after January 1, 2012, such records shall include the name, identification number, and VOM content of each cleaning solvent and fountain solution additive used per calendar month, the volume of each cleaning solvent and fountain solution additive used per calendar month for each sheetfed and nonheatset web offset lithographic printing operation, and the weight of each cleaning solvent, ink, and fountain solution additive used per calendar month for each heatset web offset lithographic printing operation;

ii) Notify the Agency in writing if the source exceeds the material use limitations for six consecutive calendar months, or if the source changes its method of compliance from subsection (b)(1)(C) to subsection (b)(1)(B) of this Section, within 30 days after the event occurs;

2) Heatset web offset lithographic printing lines exempt pursuant to Section 218.405(c)(1) but not exempt pursuant to Section 218.405(c)(2). By August 1, 2010, or upon initial start-up of a new heatset web offset lithographic printing line, whichever is later, and upon modification of a heatset web offset lithographic printing line, an owner or operator of heatset web offset lithographic printing lines that are exempt from the limitations in Section 218.407 of this Subpart pursuant to the criteria in Section 218.405(c)(1) of this Subpart, but that are not exempt pursuant to the criteria in Section 218.405(c)(2) of this Subpart, shall submit a certification to the Agency that includes the information specified in subsections (b)(2)(A) through (b)(2)(C) of this Section. Such owner or operator shall also comply with the requirements in subsection (b)(2)(D) of this Section:

A) A declaration that the source is exempt from the control requirements in Section 218.407 of this Subpart because of the criteria in Section 218.405(c)(1) of this Subpart, but is not exempt pursuant to the criteria in Section 218.405(c)(2) of this Subpart;

B) Calculations that demonstrate that combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source never exceed 45.5 kg/day (100 lbs/day) before the use of capture systems and control devices, as follows (the following methodology shall also be used to calculate

whether a source exceeds 45.5 kg/day (100 lbs/day) for purposes of determining eligibility for the exclusions set forth in Section 218.415(c)(3), in accordance with Sections 218.411(g)(2)(A)(i):

i) To calculate daily emissions of VOM, the owner or operator shall determine the monthly emissions of VOM from all lithographic printing lines at the source (including solvents used for cleanup operations associated with the lithographic printing lines) and divide this amount by the number of days during that calendar month that lithographic printing lines at the source were in operation;

ii) To determine the VOM content of the inks, fountain solution additives and cleaning solvents, the test methods and procedures set forth in Section 218.409(c) of this Subpart shall be used;

iii) To determine VOM emissions from inks used on lithographic printing lines at the source, an ink emission adjustment factor of 0.05 shall be used in calculating emissions from all non-heatset inks except when using an impervious substrate, and a factor of 0.80 shall be used in calculating emissions from all heatset inks to account for VOM retention in the substrate except when using an impervious substrate. For impervious substrates such as metal or plastic, no emission adjustment factor is used. The VOM content of the ink, as used, shall be multiplied by this factor to determine the amount of VOM emissions from the use of ink on the printing lines;

iv) To determine VOM emissions from cleaning solvents used on lithographic printing lines at the source, an emission adjustment factor of 0.50 shall be used in calculating emissions from cleaning solution in shop towels if the VOM composite vapor pressure of such cleaning solution is demonstrated to be less than 10 mmHg measured at 20^{o}C (68^{o}F) and the shop towels are kept in closed containers. For cleaning solutions with VOM composite vapor pressures of equal to or greater than 10 mmHg measured at 20^{o}C (68^{o}F) and for

shop towels that are not kept in closed containers, no emission adjustment factor is used;

C) A description and the results of all tests used to determine the VOM content of inks, fountain solution additives, and cleaning solvents, and a declaration that all such tests have been properly conducted in accordance with Section 218.409(c)(1) of this Subpart;

D) Notify the Agency in writing if the combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source ever exceed 45.5 kg/day (100 lbs/day), before the use of capture systems and control devices, within 30 days after the event occurs.

c) Unless complying with subsections (b)(1)(C) and (b)(1)(F) of this Section, an owner or operator of lithographic printing lines subject to the requirements of subsection (a) or (b) of this Section shall collect and record either the information specified in subsection (c)(1) or (c)(2) of this Section for all lithographic printing lines at the source:

1) Standard recordkeeping, including the following:

A) The name and identification of each fountain solution additive, lithographic ink, and cleaning solvent used on any lithographic printing line, recorded each month;

B) A daily record which shows whether a lithographic printing line at the source was in operation on that day;

C) The VOM content and the volume of each fountain solution additive, lithographic ink, and cleaning solvent used on any lithographic printing line, recorded each month;

D) The total VOM emissions at the source each month, determined as the sum of the product of usage and VOM content for each fountain solution additive, cleaning solvent, and lithographic ink (with the applicable ink VOM emission adjustment) used at the source, calculated each month;

E) The VOM emissions in lbs/day for the month, calculated in accordance with subsection (a)(1)(B), (b)(1)(B), or (b)(2)(B) of this Section, as applicable;

2) Purchase and inventory recordkeeping, including the following:

A) The name, identification, and VOM content of each fountain solution additive, lithographic ink, and cleaning solvent used on any lithographic printing line, recorded each month;

B) Inventory records from the beginning and end of each month indicating the total volume of each fountain solution additive, lithographic ink, and cleaning solvent to be used on any lithographic printing line at the source;

C) Monthly purchase records for each fountain solution additive, lithographic ink, and cleaning solvent used on any lithographic printing line at the source;

D) A daily record which shows whether a lithographic printing line at the source was in operation on that day;

E) The total VOM emissions at the source each month, determined as the sum of the product of usage and VOM content for each fountain solution additive, cleaning solvent, and lithographic ink (with the applicable ink VOM emission adjustment) used at the source, calculated each month based on the monthly inventory and purchase records required to be maintained pursuant to subsections (c)(2)(A), (c)(2)(B), and (c)(2)(C) of this Section;

F) The VOM emissions in lbs/day for the month, calculated in accordance with subsection (a)(1)(B), (b)(1)(B), or (b)(2)(B) of this Section, as applicable.

d) An owner or operator of a heatset web offset lithographic printing line subject to the control requirements of Section 218.407(a)(1)(C) or (b)(1) of this Subpart shall comply with the following:

1) By August 1, 2010, upon initial start-up of a new printing line, and upon initial start-up of a new control device for a heatset web offset printing line, submit a certification to the Agency that includes the following:

A) An identification of each heatset web offset lithographic printing line at the source;

B) A declaration that each heatset web offset lithographic printing line is in compliance with the requirements of Section 218.407(a)(1)(B), (a)(1)(C), (a)(1)(D) and (a)(1)(E) or (b) of this Subpart, as appropriate;

C) The type of afterburner or other approved control device used to comply with the requirements of Section 218.407(a)(1)(C) or (b)(1) of this Subpart and the date that such device was first constructed at the source;

D) The control requirements in Section 218.407(a)(1)(C) or (b)(1) of this Subpart with which the lithographic printing line is complying;

E) The results of all tests and calculations necessary to demonstrate compliance with the control requirements of Section 218.407(a)(1)(C) or (b)(1) of this Subpart, as applicable; and

F) A declaration that the monitoring equipment required under Section 218.407(a)(1)(D) or (b) of this Subpart, as applicable, has been properly installed and calibrated according to manufacturer's specifications;

2) If testing of the afterburner or other approved control device is conducted pursuant to Section 218.409(b) of this Subpart, the owner or operator shall, within 90 days after conducting such testing, submit a copy of all test results to the Agency and shall submit a certification to the Agency that includes the following:

A) A declaration that all tests and calculations necessary to demonstrate whether the lithographic printing lines are in compliance with Section 218.407(a)(1)(C) or (b)(1) of this Subpart, as applicable, have been properly performed;

B) A statement whether the lithographic printing lines are or are not in compliance with Section 218.407(a)(1)(C) or (b)(1) of this Subpart, as applicable; and

C) The operating parameters of the afterburner or other approved control device during testing, as monitored in accordance with Section 218.410(c) or (d) of this Subpart, as applicable;

3) Except as provided in subsection (d)(3)(D)(ii) of this Section, collect and record daily the following information for each heatset web offset lithographic printing line subject to the requirements of Section 218.407(a)(1)(C) or (b)(1) of this Subpart:

A) Afterburner or other approved control device monitoring data in accordance with Section 218.410(c) or (d) of this Subpart, as applicable;

B) A log of operating time for the afterburner or other approved

control device, monitoring equipment, and the associated printing line;

C) A maintenance log for the afterburner or other approved control device and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and duration of any outages; and

D) A log detailing checks on the air flow direction or air pressure of the dryer and press room to ensure compliance with the requirements of Section 218.407(a)(1)(B) of this Subpart as follows:

i) Prior to August 1, 2010, at least once per 24-hour period while the line is operating; and

ii) On and after August 1, 2010, at least once per calendar month while the line is operating

4) Notify the Agency in writing of any violation of Section 218.407(a)(1)(C) or (b)(1) of this Subpart within 30 days after the occurrence of such violation. Such notification shall include a copy of all records of such violation;

5) If changing its method of compliance between subsections (a)(1)(C) and (b) of Section 218.407 of this Subpart, certify compliance for the new method of compliance in accordance with subsection (d)(1) of this Section at least 30 days before making such change, and perform all tests and calculations necessary to demonstrate that such printing lines will be in compliance with the requirements of Section 218.407(a)(1)(B), (a)(1)(C), (a)(1)(D) and (a)(1)(E) of this Subpart, or Section 218.407(b) of this Subpart, as applicable.

e) An owner or operator of a lithographic printing line subject to Section 218.407(a)(1)(A), (a)(2), or (a)(3) of this Subpart shall:

1) By August 1, 2010, and upon initial start-up of a new lithographic printing line, certify to the Agency that fountain solutions used on each lithographic printing line will be in compliance with the applicable VOM content limitation. Such certification shall include:

A) Identification of each lithographic printing line at the source, by type, e.g., heatset web offset, non-heatset web offset, or sheet-fed offset;

B) Identification of each centralized fountain solution reservoir and

each lithographic printing line that it serves;

C) A statement that the fountain solution will comply with the VOM content limitations in Section 218.407(a)(1)(A), (a)(2), or (a)(3), as applicable;

D) Initial documentation that each type of fountain solution will comply with the applicable VOM content limitations, including copies of manufacturer's specifications, test results, if any, formulation data and calculations;

E) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitation, e.g., a refractometer, hydrometer, conductivity meter, or recordkeeping procedures with detailed description of the compliance methodology; and

F) A sample of the records that will be kept pursuant to subsection (e)(2) of this Section.

2) Collect and record the following information for each fountain solution:

A) The name and identification of each batch of fountain solution prepared for use on one or more lithographic printing lines, the lithographic printing lines or centralized reservoir using such batch of fountain solution, and the applicable VOM content limitation for the batch;

B) If an owner or operator uses a hydrometer, refractometer, or conductivity meter, pursuant to Section 218.410(b)(1)(B), to demonstrate compliance with the applicable VOM content limit in Section 218.407(a)(1)(A), (a)(2), or (a)(3) of this Subpart:

i) The date and time of preparation, and each subsequent modification, of the batch;

ii) The results of each measurement taken in accordance with Section 218.410(b) of this Subpart;

iii) Documentation of the periodic calibration of the meter in accordance with the manufacturer's specifications, including date and time of calibration, personnel conducting, identity of standard solution, and resultant reading; and

iv) Documentation of the periodic temperature adjustment of

the meter, including date and time of adjustment, personnel conducting and results;

C) If the VOM content of the fountain solution is determined pursuant to Section 218.410(b)(1)(A) of this Subpart, for each batch of as-applied fountain solution:

i) Date and time of preparation and each subsequent modification of the batch;

ii) Volume or weight, as applicable, and VOM content of each component used in, or subsequently added to, the fountain solution batch;

iii) Calculated VOM content of the as-applied fountain solution; and

iv) Any other information necessary to demonstrate compliance with the applicable VOM content limits in Section 218.407(a)(1)(A), (a)(2) and (a)(3) of this Subpart, as specified in the source's operating permit;

D) If the VOM content of the fountain solution is determined pursuant to Section 218.410(b)(2) of this Subpart, for each setting:

i) VOM content limit corresponding to each setting;

ii) Date and time of initial setting and each subsequent setting;

iii) Documentation of the periodic calibration of the automatic feed equipment in accordance with the manufacturer's specifications; and

iv) Any other information necessary to demonstrate compliance with the applicable VOM content limits in Section 218.407(a)(1)(A), (a)(2) and (a)(3) of this Subpart, as specified in the source's operating permit;

E) If the owner or operator relies on the temperature of the fountain solution to comply with the requirements in Section 218.407(a)(1)(A)(ii) or (a)(3)(B) of this Subpart:

i) The temperature of the fountain solution at each printing line, as monitored in accordance with Section 218.410(a); and

ii) A maintenance log for the temperature monitoring devices and automatic, continuous temperature recorders detailing all routine and non-routine maintenance performed, including dates and duration of any outages.

3) Notify the Agency in writing of any violation of Section 218.407 of this Subpart within 30 days after the occurrence of such violation. Such notification shall include a copy of all records of such violation.

f) For lithographic printing line cleaning operations, an owner or operator of a lithographic printing line subject to the requirements of Section 218.407 of this Subpart shall:

1) By August 1, 2010, and upon initial start-up of a new lithographic printing line, certify to the Agency that all cleaning solutions, other than those excluded pursuant to Section 218.405(c)(3)(C), and the handling of all cleaning materials, will be in compliance with the requirements of Section 218.407(a)(4)(A) or (a)(4)(B) and (a)(5) of this Subpart, and such certification shall also include:

A) A statement that the cleaning solution will comply with the limitations in Section 218.407(a)(4);

B) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitations;

C) A sample of the records that will be kept pursuant to subsection (f)(2) of this Section; and

D) A description of the practices that ensure that VOM-containing cleaning materials are kept in closed containers;

2) Collect and record the following information for each cleaning solution used on each lithographic printing line:

A) For each cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 218.407(a)(4)(A) of this Subpart and that is prepared at the source with automatic equipment:

i) The name and identification of each cleaning solution;

ii) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 218.409(c) of this Subpart;

iii) Each change to the setting of the automatic equipment, with date, time, description of changes in the cleaning solution constituents (e.g., cleaning solvents), and a description of changes to the proportion of cleaning solvent and water (or other non-VOM);

iv) The proportion of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution;

v) The VOM content of the as-used cleaning solution, with supporting calculations; and

vi) A calibration log for the automatic equipment, detailing periodic checks;

B) For each batch of cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 218.407(a)(4)(A) of this Subpart, and that is not prepared at the source with automatic equipment:

i) The name and identification of each cleaning solution;

ii) Date and time of preparation, and each subsequent modification, of the batch;

iii) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 218.409(c) of this Subpart;

iv) The total amount of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution; and

v) The VOM content of the as-used cleaning solution, with supporting calculations. For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM content may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 218.105(a) of this Part;

C) For each batch of cleaning solution for which the owner or operator relies on the vapor pressure of the cleaning solution to demonstrate compliance with Section 218.407(a)(4)(B) of this Subpart:

i) The name and identification of each cleaning solution;

ii) Date and time of preparation, and each subsequent modification, of the batch;

iii) The molecular weight, density, and VOM composite partial vapor pressure of each cleaning solvent, as determined in accordance with Section 218.409(e) of this Subpart. For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM composite partial vapor pressure may be used if such manufacturer's specifications are based on results of tests conducted in accordance with methods specified in Sections 218.105(a) and 218.110 of this Part;

iv) The total amount of each cleaning solvent used to prepare the as-used cleaning solution; and

v) The VOM composite partial vapor pressure of each as-used cleaning solution, as determined in accordance with Section 218.409(e) of this Subpart. For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM composite partial vapor pressure may be used if such manufacturer's specifications are based on results of tests conducted in accordance with methods specified in Sections 218.105(a) and 218.110 of this Part;

D) The date, time and duration of scheduled inspections performed to confirm the proper use of closed containers to control VOM emissions, and any instances of improper use of closed containers, with descriptions of actual practice and corrective action taken, if any;

3) Notify the Agency in writing of any violation of Section 218.407 of this Subpart within 30 days after the occurrence of such violation. Such notification shall include a copy of all records of such violation.

g) The owner or operator of lithographic printing lines subject to one or more of the exclusions set forth in Section 218.405(c)(3) shall:

1) By August 1, 2010, or upon initial start-up of a new lithographic printing line that is subject to one or more of the exclusions set forth in Section 218.405(c)(3), whichever is later, submit a certification to the Agency that includes either:

A) A declaration that the source is subject to one or more of the exclusions set forth in Section 218.405(c)(3) and a statement indicating which such exclusions apply to the source; or

B) A declaration that the source will not make use of any of the exclusions set forth in Section 218.405(c)(3);

2) Unless the source has certified in accordance with subsection (g)(1)(B) of this Section that it will not make use of any of the exclusions set forth in Section 218.405(c)(3):

A) Collect and record the following information for all lithographic printing lines at the source:

i) Calculations that demonstrate that combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source never exceed 45.5 kg/day (100 lbs/day) before the use of capture systems and control devices, determined in accordance with the calculations in subsection (b)(2)(B) of this Section;

ii) The name, identification, and volume of all cleaning materials used per calendar month on lithographic printing lines at the source that do not comply with the cleaning material limitations in Section 218.407(a)(4) of this Subpart;

B) Notify the Agency in writing if the combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source ever exceed 45.5 kg/day (100 lbs/day), before the use of capture systems and control devices, within 30 days after the event occurs;

3) If changing from utilization of the exclusions set forth in Section 218.405(c)(3) to opting out of such exclusions pursuant to subsection (g)(1)(B) of this Section, or if there is a change at the source such that the exclusions no longer apply, certify compliance in accordance with subsection (g)(1)(B) of this Section within 30 days after making such change, and perform all tests and calculations necessary to demonstrate that such printing lines will be in compliance with the applicable requirements of Section 218.407 of this Subpart;

4) If changing from opting out of the exclusions set forth in Section 218.405(c)(3) pursuant to subsection (g)(1)(B) of this Section to utilization of such exclusions, certify compliance in accordance with subsection (g)(1)(A) of this Section within 30 days after making such change.

h) The owner or operator shall maintain all records required by this Section at the source for a minimum period of three years and shall make all records available to the Agency upon request.

i) Provisions for Calculation of Emissions from Heatset Web Offset Lithographic Printing Operations. To calculate VOM emissions from heatset web offset lithographic printing operations for purposes other than the applicability thresholds specified in Section 218.405 of this Subpart, sources may use the following emission adjustment factors (for Annual Emissions Reports or permit limits, for example):

1) A factor of 0.80 may be used in calculating emissions from all heatset inks to account for VOM retention in the substrate except when using an impervious substrate. For impervious substrates such as metal or plastic, no emission adjustment factor is used. The VOM content of the ink, as used, shall be multiplied by this factor to determine the amount of VOM emissions from the use of ink on the printing lines;

2) To determine VOM emissions from fountain solutions that contain no alcohol, an emission adjustment factor may be used to account for carryover into the dryer, except when using an impervious substrate.

A) The VOM emitted from the fountain solution shall be calculated using the following equation:

$$VOM_{fs} = 0.30 \times VOM_{tot} + (0.70 \times VOM_{tot}) = \times (1 - DE)$$

where:

VOM_{tot} = Total VOM in the fountain solution;

VOM_{fs} = VOM emitted from the fountain solution;

DE = Destruction efficiency of the control device on the associated dryer, in decimal form (i.e., 95% control is represented as 0.95). If no control device is present, DE = 0;

B) For fountain solutions that contain alcohol, impervious substrates such as metal or plastic, or non-heatset lithographic presses, no emission adjustment factor is used;

3) To determine VOM emissions from cleaning solutions used on heatset web offset lithographic printing lines at the source, an emission adjustment factor of 0.50 may be used in calculating emissions from used shop towels if the VOM composite vapor pressure of each associated cleaning solution is less than 10 mmHg measured at 20°C (68°F) and the shop towels are kept in closed containers. To determine VOM emissions from automatic blanket wash solution with a VOM composite vapor pressure of less than 10 mmHg measured at 20°C (68°F), an emission adjustment factor may be used to account for carryover into the dryer, except when using an impervious substrate.

A) The VOM emitted from the automatic blanket wash solution shall be calculated using the following equation.

$$VOM_{bw} = 0.60 \times VOM_{tot} + (0.40 \times VOM_{tot}) \times (1 - DE)$$

where:

VOM_{tot} = Total VOM in the blanket wash;

VOM_{tow} = VOM emitted from the blanket wash;

DE = Destruction efficiency of the control device on the associated dryer, in decimal form (i.e., 95% control is represented as 0.95). If no control device is present, DE = 0;

B) For cleaning solutions with VOM composite vapor pressures of equal to or greater than 10 mmHg measured at 20°C (68°F), for shop towels that are not kept in closed containers, and for impervious substrates such as metal or plastic, no emission adjustment factor is used.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 218.415 Testing for Letterpress Printing Lines

a) Testing to demonstrate compliance with the requirements of Section 218.413 of this Subpart shall be conducted by the owner or operator by January 1, 2012, unless such testing has been conducted within the two years immediately preceding January 1, 2012. Thereafter, testing shall be conducted by the owner or operator within 90 days after a request by the Agency, or as otherwise specified in this Subpart. Such testing shall be conducted at the expense of the owner or operator, and the owner or operator shall notify the Agency in writing 30 days in advance of conducting such testing to allow the Agency to be present during such testing.

b) The methods and procedures of Section 218.105(d) and (f) shall be used for testing to demonstrate compliance with the requirements of Section 218.413(a)(1)(B) or (b)(1) of this Subpart, as follows:

1) To select the sampling sites, Method 1 or 1A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part. The sampling sites for determining efficiency in reducing VOM from the dryer exhaust shall be located between the dryer exhaust and the control device inlet, and between the outlet of the control device and the exhaust to the atmosphere;

2) To determine the volumetric flow rate of the exhaust stream, Method 2, 2A, 2C, or 2D, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part;

3) To determine the VOM concentration of the exhaust stream entering and exiting the control device, Method 25 or 25A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part. For thermal and catalytic afterburners, Method 25 must be used except under the following circumstances, in which case Method 25A must be used:

A) The allowable outlet concentration of VOM from the control device is less than 50 ppmv, as carbon;

B) The VOM concentration at the inlet of the control device and the required level of control result in exhaust concentrations of VOM of 50 ppmv, or less, as carbon; and

C) Due to the high efficiency of the control device, the anticipated VOM concentration at the control device exhaust is 50 ppmv or less, as carbon, regardless of inlet concentration. If the source elects to use Method 25A under this option, the exhaust VOM concentration must be 50 ppmv or less, as carbon, and the required destruction efficiency must be met for the source to have demonstrated compliance. If the Method 25A test results show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, a retest is required. The retest shall be conducted using either Method 25 or Method 25A. If the retest is conducted using Method 25A and the test results again show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, the source must retest using Method 25;

4) Notwithstanding the criteria or requirements in Method 25 which specifies a minimum probe temperature of 129°C (265^{o}F), the probe must be heated

to at least the gas stream temperature of the dryer exhaust, typically close to 176.7°C (350°F);

5) During testing, the printing lines shall be operated at representative operating conditions and flow rates; and

6) During testing, an air flow direction indicating device, such as a smoke stick, shall be used to demonstrate 100 percent emissions capture efficiency for the dryer in accordance with Section 218.413(a)(1)(A) of this Subpart.

c) Testing to demonstrate compliance with the VOM content limitations in Section 218.413(a)(2)(A) of this Subpart, and to determine the VOM content of cleaning solvents, cleaning solutions, and inks (pursuant to the requirements of Section 218.417(b)(1)(B) of this Subpart), shall be conducted upon request of the Agency, or as otherwise specified in this Subpart, as follows:

1) The applicable test methods and procedures specified in Section 218.105(a) of this Part shall be used; provided, however, Method 24, incorporated by reference in Section 218.112 of this Part, shall be used to demonstrate compliance; or

2) The manufacturer's specifications for VOM content for cleaning solvents and inks may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 218.105(a) of this Part; provided, however, Method24 shall be used to determine compliance.

d) Testing to demonstrate compliance with the requirements of Section 218.413(b) of this Subpart shall be conducted as set forth in the owner or operator's plan approved by the Agency and USEPA as federally enforceable permit conditions pursuant to Section 218.413(b) of this Subpart.

e) Testing to determine the VOM composite partial vapor pressure of cleaning solvents, cleaning solvent concentrates, and as-used cleaning solutions shall be conducted in accordance with the applicable methods and procedures specified in Section 218.110 of this Part.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 218.417 Recordkeeping and Reporting for Letterpress Printing Lines

a) By August 1, 2010, or upon initial start-up of a new heatset web letterpress printing line, whichever is later, and upon modification of a heatset web letterpress printing line, an owner or operator of a heatset web letterpress printing line exempt from any of the limitations of Section 218.413 of this Subpart

because of the criteria in Section 218.412(a)(1) shall submit a certification to the Agency that includes:

1) A declaration that the source is exempt from the requirements in Section 218.413 of this Subpart because of the criteria in Section 218.412(a)(1) of this Subpart;

2) Calculations which demonstrate that the source's total potential to emit VOM does not equal or exceed 22.7 Mg (25 tons) per year.

b) An owner or operator of a letterpress printing line exempt from any of the limitations of Section 218.413 of this Subpart because of the criteria in Section 218.412(a)(2) shall:

1) By August 1, 2010, or upon initial start-up of a new letterpress printing line, whichever is later, and upon modification of a letterpress printing line, submit a certification to the Agency that includes the information specified in either subsections (b)(1)(A) through (b)(1)(C) of this Section, or subsections (b)(1)(A) and (b)(1)(D) of this Section, as applicable:

A) A declaration that the source is exempt from the control requirements in Section 218.413 of this Part because of the criteria in Section 218.412(a)(2) of this Subpart;

B) Calculations that demonstrate that combined emissions of VOM from all letterpress printing lines (including inks and solvents used for cleanup operations associated with the letterpress printing lines) at the source never equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment, as follows:

i) To calculate daily emissions of VOM, the owner or operator shall determine the monthly emissions of VOM from all letterpress printing lines at the source (including solvents used for cleanup operations associated with the letterpress printing lines) and divide this amount by the number of days during that calendar month that letterpress printing lines at the source were in operation;

ii) To determine the VOM content of the inks and cleaning solvents, the tests methods and procedures set forth in Section 218.415(c) of this Subpart shall be used;

iii) To determine VOM emissions from inks used on letterpress printing lines at the source, an ink emission adjustment factor of 0.05 shall be used in calculating emissions from all non-heatset inks except when using an impervious

substrate, and a factor of 0.80 shall be used in calculating emissions from all heatset inks to account for VOM retention in the substrate except when using an impervious substrate. For impervious substrates such as metal or plastic, no emission adjustment factor is used. The VOM content of the ink, as used, shall be multiplied by this factor to determine the amount of VOM emissions from the use of ink on the printing lines; and

iv) To determine VOM emissions from cleaning solutions used on letterpress printing lines at the source, an emission adjustment factor of 0.50 shall be used in calculating emissions from used shop towels if the VOM composite vapor pressure of each associated cleaning solution is less than 10 mmHg measured at 20°C (68°F) and the shop towels are kept in closed containers. Otherwise, no retention factor is used;

C) A description and the results of all tests used to determine the VOM content of inks and cleaning solvents, and a declaration that all such tests have been properly conducted in accordance with Section 218.415(c)(1) of this Subpart;

D) As an alternative to the calculations in subsection (b)(1)(B), a statement that the source uses less than the amount of material specified in subsections (b)(1)(D)(i) or (b)(1)(D)(ii), as applicable, during each calendar month. A source may determine that it emits below 6.8 kg/day (15 lbs/day) of VOM based upon compliance with such material use limitations. If the source exceeds this amount of material use in a given calendar month, the owner or operator must, within 15 days of the end of that month, complete the emissions calculations of subsection (b)(1)(B) to determine daily emissions for applicability purposes. If the source ever exceeds this amount of material use for six consecutive calendar months, it is no longer eligible to use this subsection as an alternative to the calculations in subsection (b)(1)(B).

i) The sum of all sheetfed and nonheatset web letterpress printing operations at the source: 242.3 liters (64 gallons) of cleaning solvent; or

ii) The sum of all heatset web letterpress printing operations at the source: 204.1 kg (450 lbs) of ink and cleaning solvent;

2) For sources complying with subsection (b)(1)(B) of this Section, notify the Agency in writing if the combined emissions of VOM from all letterpress

printing lines (including inks and solvents used for cleanup operations associated with the letterpress printing lines) at the source ever equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment, within 30 days after the event occurs;

3) For sources complying with subsection (b)(1)(D) of this Section, comply with the following:

A) Maintain material use records showing that the source uses less than the amount of material specified in subsections (b)(1)(D)(i) and (b)(1)(D)(ii) during each calendar month, or, if the source exceeds the material use limitations, records showing that the source exceeded the limitations but did not emit 6.8 kg/day (15 lbs/day) or more of VOM. On and after January 1, 2012, such records shall include the name, identification number, and VOM content of each cleaning solvent and ink used per calendar month, the volume of each cleaning solvent used per calendar month for each sheetfed and nonheatset web letterpress printing operation, and the weight of each cleaning solvent and ink used per calendar month for each heatset web letterpress printing operation;

B) Notify the Agency in writing if the source exceeds the material use limitations for six consecutive calendar months, or if the source changes its method of compliance from subsection (b)(1)(D) to subsection (b)(1)(B) of this Section, within 30 days after the event occurs.

c) Unless complying with subsections (b)(1)(D) and (b)(3) of this Section, on and after August 1, 2010, an owner or operator of a letterpress printing line exempt from any of the limitations in Section 218.413 of this Subpart because of the criteria in Section 218.412(a)(1) or (a)(2) shall collect and record either the information specified in subsection (c)(1) or (c)(2) of this Section for all letterpress printing lines at the source:

1) Standard recordkeeping, including the following:

A) The name and identification of each letterpress ink and cleaning solvent used on any letterpress printing line, recorded each month;

B) A daily record that shows whether a letterpress printing line at the source was in operation on that day;

C) The VOM content and the volume of each letterpress ink and cleaning solvent used on any letterpress printing line, recorded each month;

D) The total VOM emissions at the source each month, determined as the sum of the product of usage and VOM content for each cleaning solvent and letterpress ink (with the applicable ink VOM emission adjustment) used at the source, calculated each month; and

E) The VOM emissions in lbs/day for the month, calculated in accordance with subsection (b)(1)(B) of this Section;

2) Purchase and inventory recordkeeping, including the following:

A) The name, identification, and VOM content of each letterpress ink and cleaning solvent used on any letterpress printing line, recorded each month;

B) Inventory records from the beginning and end of each month indicating the total volume of each letterpress ink, and cleaning solvent to be used on any letterpress printing line at the source;

C) Monthly purchase records for each letterpress ink and cleaning solvent used on any letterpress printing line at the source;

D) A daily record that shows whether a letterpress printing line at the source was in operation on that day;

E) The total VOM emissions at the source each month, determined as the sum of the product of usage and VOM content for each cleaning solvent and letterpress ink (with the applicable ink VOM emission adjustment factor) used at the source, calculated each month based on the monthly inventory and purchase records required to be maintained pursuant to subsections (c)(2)(A), (c)(2)(B), and (c)(2)(C) of this Section; and

F) The VOM emissions in lbs/day for the month, calculated in accordance with subsection (b)(1)(B) of this Section;

d) An owner or operator of a heatset web letterpress printing lines subject to the control requirements of Section 218.413(a)(1)(B) or (b)(1) of this Subpart shall comply with the following:

1) By August 1, 2010, or upon initial start-up of a new printing line, whichever is later, and upon initial start-up of a new control device for a heatset web printing line, submit a certification to the Agency that includes the following:

A) An identification of each heatset web letterpress printing line at the source;

B) A declaration that each heatset web letterpress printing line is in compliance with the requirements of Section 218.413 (a)(1) or (b) of this Subpart, as appropriate;

C) The type of afterburner or other approved control device used to comply with the requirements of Section 218.413(a)(1)(B) or (b)(1) of this Subpart, and the date that such device was first constructed at the subject source;

D) The control requirements in Section 218.413(a)(1)(B) or (b)(1) of this Subpart with which the letterpress printing line is complying;

E) The results of all tests and calculations necessary to demonstrate compliance with the control requirements of Section 218.413(a)(1)(B) or (b)(1) of this Subpart, as applicable; and

F) A declaration that the monitoring equipment required under Section 218.413(a)(1)(C) or (b) of this Subpart, as applicable, has been properly installed and calibrated according to manufacturer's specifications;

2) If testing of the afterburner or other approved control device is conducted pursuant to Section 218.415(b) of this Subpart, the owner or operator shall, within 90 days after conducting such testing, submit a copy of all test results to the Agency and shall submit a certification to the Agency that includes the following:

A) A declaration that all tests and calculations necessary to demonstrate whether the letterpress printing lines is in compliance with Section 218.413(a)(1)(B) or (b)(1) of this Subpart, as applicable, have been properly performed;

B) A statement whether the heatset web letterpress printing lines are or are not in compliance with Section 218.413(a)(1)(B) or (b)(1) of this Subpart, as applicable; and

C) The operating parameters of the afterburner or other approved control device during testing, as monitored in accordance with Section 218.416(a) or (b) of this Subpart, as applicable;

3) Except as provided in subsection (d)(3)(D) of this Section, collect and record daily the following information for each heatset web letterpress

printing line subject to the requirements of Section 218.413(a)(1)(B) or (b)(1) of this Subpart:

A) Afterburner or other approved control device monitoring data in accordance with Section 218.416(a) or (b) of this Subpart, as applicable;

B) A log of operating time for the afterburner or other approved control device, monitoring equipment, and the associated printing line;

C) A maintenance log for the afterburner or other approved control device and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and duration of any outages; and

D) A log detailing checks on the air flow direction or air pressure of the dryer and press room to ensure compliance with the requirements of Section 218.413(a)(1)(A) of this Subpart at least once per calendar month while the line is operating;

4) Notify the Agency in writing of any violation of Section 218.413(a)(1)(B) or (b)(1) of this Subpart within 30 days after the occurrence of such violation. Such notification shall include a copy of all records of such violation;

5) If changing the method of compliance between Sections 218.413(a)(1)(B) and 218.413(b) of this Subpart, certify compliance for the new method of compliance in accordance with Section 218.413(b) at least 30 days before making such change, and perform all tests and calculations necessary to demonstrate that such printing lines will be in compliance with the requirements of Section 218.413(a)(1) of this Subpart, or Section 218.413(b) of this Subpart, as applicable.

e) For letterpress printing line cleaning operations, an owner or operator of a letterpress printing line subject to the requirements of Section 218.413 of this Subpart shall:

1) By August 1, 2010, or upon initial start-up of a new letterpress printing line, whichever is later, certify to the Agency that all cleaning solutions, other than those excluded pursuant to Section 218.412(b), and the handling of all cleaning materials will be in compliance with the requirements of Section 218.413(a)(2)(A) or (a)(2)(B) and (a)(3) of this Subpart. Such certification shall include:

A) A statement that the cleaning solution will comply with the limitations in Section 218.413(a)(2);

B) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitations;

C) A sample of the records that will be kept pursuant to subsection (e)(2) of this Section; and

D) A description of the practices that ensure that VOM-containing cleaning materials are kept in closed containers;

2) Collect and record the following information for each cleaning solution used on each letterpress printing line:

A) For each cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 218.413(a)(2)(A) of this Subpart and that is prepared at the source with automatic equipment:

i) The name and identification of each cleaning solution;

ii) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 218.415(c) of this Subpart;

iii) Each change to the setting of the automatic equipment, with date, time, description of changes in the cleaning solution constituents (e.g., cleaning solvents), and a description of changes to the proportion of cleaning solvent and water (or other non-VOM);

iv) The proportion of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution;

v) The VOM content of the as-used cleaning solution, with supporting calculations; and

vi) A calibration log for the automatic equipment, detailing periodic checks;

B) For each batch of cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 218.413(a)(2)(A) of this Subpart, and that is not prepared at the source with automatic equipment:

i) The name and identification of each cleaning solution;

ii) Date and time of preparation, and each subsequent modification, of the batch;

iii) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 218.415(c) of this Subpart;

iv) The total amount of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution; and

v) The VOM content of the as-used cleaning solution, with supporting calculations. For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM content may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 218.105(a) of this Part;

C) For each batch of cleaning solution for which the owner or operator relies on the vapor pressure of the cleaning solution to demonstrate compliance with Section 218.413(a)(2)(B) of this Subpart:

i) The name and identification of each cleaning solution;

ii) Date and time of preparation, and each subsequent modification, of the batch;

iii) The molecular weight, density, and VOM composite partial vapor pressure of each cleaning solvent, as determined in accordance with Section 218.415(e) of this Subpart. For cleaning solutions that are used as purchased, the manufacturer’s specifications for VOM composite partial vapor pressure may be used if such manufacturer's specifications are based on results of tests conducted in accordance with methods specified in Sections 218.105(a) and 218.110 of this Part;

iv) The total amount of each cleaning solvent used to prepare the as-used cleaning solution; and

v) The VOM composite partial vapor pressure of each as-used cleaning solution, as determined in accordance with Section

218.415(e) of this Subpart. For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM composite partial vapor pressure may be used if such manufacturer's specifications are based on results of tests conducted in accordance with methods specified in Sections 218.105(a) and 218.110 of this Part;

D) The date, time, and duration of scheduled inspections performed to confirm the proper use of closed containers to control VOM emissions, and any instances of improper use of closed containers, with descriptions of actual practice and corrective action taken, if any;

E) The amount of cleaning materials used on letterpress printing lines at the source that do not comply with the cleaning material limitations set forth in Section 218.413(a)(2) of this Subpart;

3) Notify the Agency in writing of any violation of Section 218.413 of this Subpart within 30 days after the occurrence of such violation. Such notification shall include a copy of all records of such violation.

f) The owner or operator shall maintain all records required by this Section at the source for a minimum period of three years and shall make all records available to the Agency upon request.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

SUBPART II: FIBERGLASS BOAT MANUFACTURING MATERIALS

Section 218.891 Emission Limitations and Control Requirements

a) Except as provided in subsection (f) of this Section, no owner or operator of a source subject to the requirements of this Subpart shall use a subject resin or gel coat at the source unless the resin and gel coat comply with subsection (b)(1) or (b)(2), (c), or (d) of this Section, as well as with subsections (e), (g), and (h) of this Section. For sources complying pursuant to subsection (b) or (c) of this Section, if the non-monomer VOM content of a resin or gel coat exceeds 5 percent, by weight, the excess non-monomer VOM shall be added to the monomer VOM content of the resin or gel coat. The excess non-monomer VOM shall be calculated in accordance with the following equation:

$$\text{Excess Non-Monomer VOM} = \text{Non-monomer VOM Content} - 5 \text{ percent, by weight}$$

b) VOM Content Limitations

1) Except as provided in subsection (e) of this Section, the monomer VOM content of a subject resin or gel coat shall not exceed the following limitations:

		Weighted average monomer VOM content (weight percent)
A)	Production resin	
i)	Atomized spray	28
ii)	Non-atomized	35
B)	Pigmented gel coat	33
C)	Clear gel coat	48
D)	Tooling resin	
i)	Atomized	30
ii)	Non-atomized	39
E)	Tooling gel coat	40

2) Except as provided in subsection (e) of this Section, the weighted average monomer VOM content of a subject resin or gel coat shall not exceed the applicable limitation set forth in subsection (b)(1) of this Section on a 12-month rolling average basis. Equation 1 below shall be used to determine the weighted average monomer VOM content for resin and gel coat materials.

Equation 1:

$$\text{Weighted Average Monomer VOM Content} = \frac{\sum_{i=1}^{n} M_i VOM_i}{\sum_{i=1}^{n} M_i}$$

where:

M_i = Mass of open molding resin or gel coat (i) used in the past 12 months in an operation, in megagrams;

VOM_i = Monomer VOM content, by weight percent, of open molding resin or gel coat (i) used in the past 12 months in an operation;

n = Number of different open molding resins or gel coats used in the past 12 months in an operation.

c) Emissions Averaging Alternative. The owner or operator of a source subject to the requirements of this Subpart may elect to include some or all of the subject resin and gel coat operations at the source in the emissions averaging alternative. Resin and gel coat operations utilizing the emissions averaging alternative shall comply with a source-specific monomer VOM mass emission limit on a 12-month rolling average basis, calculated at the end of each calendar month. All subject resin and gel coat operations that do not utilize the emissions averaging alternative shall comply with the requirements in subsection (b) or (d) of this Section, as well as with all other applicable requirements in this Section.

1) The owner or operator of a source subject to this subsection (c) shall use Equation 2 to determine the source-specific monomer VOM mass emission limit for resin and gel coats included in the emissions average:

Equation 2:

$$\text{Monomer VOM Limit} = 46(M_R) + 159(M_{PG}) + 291(M_{CG}) + 54(M_{TR}) + 214(M_{TG})$$

where:

Monomer VOM Limit = Total allowable monomer VOM that can be emitted from the open molding operations included in the average, expressed in kilograms per 12-month period;

M_R = Mass of production resin used in the past 12 months, excluding any materials that are exempt, expressed in

megagrams (Mg);

M_{PG} = Mass of pigmented gel coat used in the past 12 months, excluding any materials that are exempt, expressed in Mg;

M_{CG} = Mass of clear gel coat used in the past 12 months, excluding any materials that are exempt, expressed in Mg;

M_{TR} = Mass of tooling resin used in the past 12 months, excluding any materials that are exempt, expressed in Mg;

M_{TG} = Mass of tooling gel coat used in the past 12 months, excluding any materials that are exempt, expressed in Mg.

The numerical coefficients associated with each term on the right hand side of Equation 2 are the allowable monomer VOM emission rates for that particular material in units of kg VOM/Mg of material used.

2) At the end of the first 12-month averaging period, and at the end of each subsequent month, the owner or operator of a source subject to this subsection (c) shall use Equation 3 to calculate the monomer VOM emissions from the resin and gel coat operations included in the emissions average. The monomer VOM emissions calculated using Equation 3 shall not exceed the monomer VOM limit calculated using Equation 2.

Equation 3:

$$\text{Monomer VOM Emissions} = (PV_R)(M_R) + (PV_{PG})(M_{PG}) + (PV_{CG})(M_{CG}) + (PV_{TR})(M_{TR}) + (PV_{TG})(M_{TG})$$

where:

Monomer VOM Emissions = Monomer VOM emissions calculated using the monomer VOM emission equations for each operation included in the average, expressed in kilograms;

PV_R = Weighted-average monomer VOM emission rate for production resin used in the past 12 months, expressed in kg/Mg, calculated in accordance with Equation 4 in subsection (c)(3);

M_R = Mass of production resin used in the past 12 months, expressed in Mg;

PV_{PG} = Weighted-average monomer VOM emission rate for pigmented gel coat used in the past 12 months, expressed in kg/Mg, calculated pursuant to Equation 4;

M_{PG} = Mass of pigmented gel coat used in the past 12 months, expressed in Mg;

PV_{CG} = Weighted-average monomer VOM emission rate for clear gel coat used in the past 12 months, expressed in kg/Mg, calculated pursuant to Equation 4;

M_{CG} = Mass of clear gel coat used in the past 12 months, expressed in Mg;

PV_{TR} = Weighted-average monomer VOM emission rate for tooling resin used in the past 12 months, expressed in kg/Mg, calculated pursuant to Equation 4;

M_{TR} = Mass of tooling resin used in the past 12 months, expressed in Mg;

PV_{TG} = Weighted-average monomer VOM emission rate for tooling gel coat used in the past 12 months, expressed in kg/Mg, calculated pursuant to Equation 4;

M_{TG} = Mass of tooling gel coat used in the past 12 months, expressed in Mg.

3) For purposes of Equation 3, the owner or operator of a source subject to this subsection (c) shall use Equation 4 to calculate the weighted-average monomer VOM emission rate for the previous 12 months for each resin and gel coat operation included in the emissions average, except as provided in subsection (e) of this Section.

Equation 4:

$$PV_{OP} = \frac{\sum_{i=1}^{n} M_i PV_i}{\sum_{i=1}^{n} M_i}$$

where:

PV_{OP} = Weighted-average monomer VOM emission rate for each open molding operation (PV_R, PV_{PG}, PV_{CG}, PV_{TR}, and PV_{TG}) included in the average, expressed in kg of monomer VOM per Mg of material applied;

M_i = Mass of resin or gel coat (i) used within an operation in the past 12 months, expressed in Mg;

n = Number of different open molding resins and gel coats used within an operation in the past 12 months;

PV_i = The monomer VOM emission rate for resin or gel coat (i) used within an operation in the past 12 months, expressed in kg of monomer VOM per Mg of material applied. The monomer VOM emission rate formulas in subsection (c)(4) of this Section shall be used to compute PV_i. If a source includes filled resins in the emissions average, the source shall use the value of PV_F, calculated using Equation 5 in subsection (e)(3) of this Section, as the value of PV_i for those resins;

i = Subscript denoting a specific open molding resin or gel coat applied.

4) For purposes of Equation 4 and subsection (e)(3) of this Section, the following monomer VOM emission rate formulas shall apply. Such formulas calculate monomer VOM emission rates in terms of kg of monomer VOM per Mg of resin or gel coat applied. "VOM%" means the monomer VOM content as supplied, expressed as a weight percent value between 0 and 100 percent:

A) Production resin, tooling resin:

i) Atomized: $0.014 \times (\text{Resin VOM\%})^{2.425}$

ii) Atomized, plus vacuum bagging with roll-out: $0.01185 \times (\text{Resin VOM\%})^{2.425}$

iii) Atomized, plus vacuum bagging without roll-out: $0.00945 \times (\text{Resin VOM\%})^{2.425}$

iv) Nonatomized: $0.014 \times (\text{Resin VOM\%})^{2.275}$

v) Nonatomized, plus vacuum bagging with roll-out: $0.0110 \times (\text{Resin VOM\%})^{2.275}$

vi) Nonatomized, plus vacuum bagging without roll-out: $0.0076 \times (\text{Resin VOM\%})^{2.275}$

B) Pigmented gel coat, clear gel coat, tooling gel coat: $0.445 \times (\text{Gel Coat VOM\%})^{1.675}$

d) Capture System and Control Device Requirements. No owner or operator of a source subject to the requirements of this Subpart that is utilizing a capture system and control device for a subject resin or gel coat operation shall conduct that operation unless the following requirements are satisfied:

1) An afterburner or carbon adsorber is installed and operated that meets the limitations set forth in this subsection (d). The owner or operator may use an emissions control system other than an afterburner or carbon adsorber if that device complies with all limitations in this subsection (d), the owner or operator submits a plan to the Agency detailing appropriate monitoring devices, test methods, recordkeeping requirements, and operating parameters for the control device, and the plan is approved by the Agency and approved by USEPA as a SIP revision;

2) The VOM emissions at the outlet of the control device meet an emissions limitation determined using Equation 2 in subsection (c)(1) of this Section. In Equation 2, however, instead of using the mass of each material used over the past 12 months to determine the emission limitation, the owner or operator shall use the mass of each material used during the applicable control device performance test;

3) The owner or operator complies with all testing and monitoring requirements set forth in Section 218.892 of this Subpart.

e) Filled Resins. For all filled production and tooling resins, the owner or operator of a source subject to this Subpart shall adjust the monomer VOM emission rates determined pursuant to subsections (b) and (c) of this Section using Equation 5 in subsection (e)(3). If complying pursuant to subsection (b), the emission rate determined using Equation 5 shall not exceed the limitations set forth in subsections (e)(1) and (e)(2) of this Section. If complying pursuant to subsection (c), the value of PV_F, calculated using Equation 5, shall be used as the value of PV_i in Equation 4, as set forth in subsection (c)(3) of this Section. If the non-monomer VOM content of a filled resin exceeds 5 percent, by weight, based on the unfilled resin, the excess non-monomer VOM shall be added to the monomer VOM content in accordance with the equation set forth in subsection (a).

1) Tooling Resin: 54 kg (119.1 lbs) monomer VOM/Mg filled resin applied;

2) Production Resin: 46 kg (101.4 lbs) monomer VOM/Mg filled resin applied;

3) Equation 5:

$$PV_F = PV_U \times \frac{100 - \%Filler}{100}$$

where:

PV_F = The as-applied monomer VOM emission rate for the filled production resin or tooling resin, expressed in kg monomer VOM per Mg of filled material;

PV_U = The monomer VOM emission rate for the unfilled resin, before filler is added, expressed in kg monomer VOM per Mg, as calculated using the formulas in Section 218.891(c)(4) of this Subpart;

% Filler = The weight-percent of filler in the as-applied filled resin system.

f) The limitations in subsections (a) through (e) of this Section shall not apply to the following materials. These materials shall instead comply with the applicable requirements set forth in subsections (f)(1) through (f)(3).

1) Production resins, including skin coat resins, that must meet specifications for use in military vessels or must be approved by the United States Coast Guard for use in the construction of lifeboats, rescue boats, and other life-saving appliances approved under 46 CFR Subchapter Q, incorporated by reference in Section 218.112 of this Part, or for use in the construction of small passenger vessels regulated by 40 CFR Subchapter T, incorporated by reference in Section 218.112 of this Part. The owner or operator of a source subject to this Subpart shall apply all such resins with nonatomizing resin application equipment;

2) Production and tooling resins, and pigmented, clear, and tooling gel coats used for part or mold repair and touch ups. These materials shall not exceed 1 percent, by weight, of all resins and gel coats used at a subject source on a 12-month rolling average basis;

3) Pure, 100 percent vinylester resins used for skin coats. The owner or operator of a source subject to this Subpart shall apply these resins with non-atomizing resin application equipment, and the total amount of the resins shall not exceed 5 percent, by weight, of all resins used at the subject source on a 12-month rolling-average basis.

g) No owner or operator of a source subject to this Subpart shall use VOM-containing cleaning solutions to remove cured resins and gel coats from fiberglass boat manufacturing application equipment. Additionally, no owner or operator shall use VOM-containing cleaning solutions for routine cleaning of application equipment unless:

1) The VOM content of the cleaning solution is less than or equal to 5 percent, by weight; or

2) The composite vapor pressure of the cleaning solution is less than or equal to 0.50 mmHg at 68°F.

h) No owner or operator of a source subject to this Subpart shall use resin or gel coat mixing containers with a capacity equal to or greater than 208 liters (55 gallons), including those used for on-site mixing of putties and polyputties, unless such containers have covers with no visible gaps in place at all times, except when material is being manually added to or removed from a container or when mixing or pumping equipment is being placed in or removed from a container.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 218.892 Testing and Monitoring Requirements

a) Testing to demonstrate compliance with the requirements of Section 218.891 of this Subpart shall be conducted by the owner or operator by May 1, 2012. Thereafter, testing shall be conducted within 90 days after a request by the Agency, or as otherwise specified in this Subpart. The testing shall be conducted at the expense of the owner or operator and the owner or operator shall notify the Agency in writing 30 days in advance of conducting the testing to allow the Agency to be present during testing.

b) Testing to demonstrate compliance with the monomer VOM content limitations for resin and gel coat materials in Section 218.891(b) of this Subpart shall be conducted upon request of the Agency, or as otherwise specified in this Subpart, in accordance with SCAQMD 312-91, incorporated by reference in Section 218.112 of this Part.

c) The owner or operator of a source complying with this Subpart pursuant to Section 218.891(d) shall comply with the following:

1) By May 1, 2012, or upon initial start-up, whichever is later, and upon start-up of a new control device, conduct an initial performance test of the control device in accordance with this subsection (c) that demonstrates compliance with the emission limitation determined pursuant to Section 218.891(d).

2) Subsequent to the initial performance test described in subsection (c)(1) of this Section, conduct at least one performance test per calendar year. Performance tests used to demonstrate compliance with Section 218.891(d) shall be conducted at least six months apart, unless the performance test is being conducted following an exceedance of operating parameters as described in subsection (c)(3) of this Section, or per a request by the Agency.

3) Monitor and record relevant operating parameters, including the control efficiency of the control device and the amount of materials used in the fiberglass boat manufacturing process, during each control device performance test used to demonstrate compliance with Section 218.891(d). The owner or operator shall continue to operate the fiberglass boat manufacturing process within the parameters until another performance test is conducted that demonstrates compliance with Section 218.891(d). The owner or operator shall monitor the parameters at all times when the control device is in operation. If the fiberglass boat manufacturing process exceeds any operating parameter by more than 10 percent, the owner or operator shall conduct additional performance testing in accordance with this Section within 10 operating days after the exceedance.

4) The methods and procedures of Section 218.105(d) and (f) shall be used for testing to demonstrate compliance with the requirements of Section 218.891(d) of this Subpart, as follows:

A) To select the sampling sites, Method 1 or 1A, as appropriate, 40 CFR 60, appendix A, incorporated by reference at Section 218.112 of this Part. The sampling sites for determining efficiency in reducing VOM from the dryer exhaust shall be located between the dryer exhaust and the control device inlet, and between the outlet of the control device and the exhaust to the atmosphere;

B) To determine the volumetric flow rate of the exhaust stream, Method 2, 2A, 2C, or 2D, as appropriate, 40 CFR 60, appendix A, incorporated by reference at Section 218.112 of this Part;

C) To determine the VOM concentration of the exhaust stream entering and exiting the control device, Method 25 or 25A, as appropriate, 40 CFR 60, appendix A, incorporated by reference at Section 218.112 of this Part. For thermal and catalytic afterburners, Method 25 must be used except under the following circumstances, in which case Method 25A must be used:

i) The allowable outlet concentration of VOM from the control device is less than 50 ppmv, as carbon;

ii) The VOM concentration at the inlet of the control device and the required level of control result in exhaust concentrations of VOM of 50 ppmv, or less, as carbon; and

iii) Due to the high efficiency of the control device, the anticipated VOM concentration at the control device exhaust is 50 ppmv or less, as carbon, regardless of inlet concentration. If the source elects to use Method 25A under this option, the exhaust VOM concentration must be 50 ppmv or less, as carbon, and the required destruction efficiency must be met for the source to have demonstrated compliance. If the Method 25A test results show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, a retest is required. The retest shall be conducted using either Method 25 or 25A. If the retest is conducted using Method 25A and the test results again show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, the source must retest again using Method 25;

D) Notwithstanding the criteria or requirements in Method 25, which specifies a minimum probe temperature of 129°C (265°F), the probe must be heated to at least the gas stream temperature of the dryer exhaust, typically close to 176.7°C (350°F); and

E) During testing, the fiberglass boat manufacturing operation shall be operated at representative operating conditions and flow rates.

5) If an afterburner is used to demonstrate compliance, the owner or operator shall:

A) Install, calibrate, operate, and maintain temperature monitoring devices with an accuracy of 3°C or 5°F on the emissions control system in accordance with Section 218.105(d)(2) of this Part and in accordance with the manufacturer's specifications. Monitoring shall be performed at all times when the emissions control system is operating; and

B) Install, calibrate, operate and maintain, in accordance with manufacturer's specifications, a continuous recorder on the temperature monitoring devices, such as a strip chart, recorder or computer, with at least the same accuracy as the temperature monitor.

6) If a carbon adsorber is used to demonstrate compliance, the owner or operator shall use Agency and USEPA approved continuous monitoring equipment that is installed, calibrated, maintained, and operated according to vendor specifications at all times the control device is in use. The continuous monitoring equipment shall monitor the VOM concentration of each carbon adsorption bed exhaust or the exhaust of the bed next in sequence to be desorbed.

7) If an emissions control system other than an afterburner or carbon adsorber is used to demonstrate compliance, the owner or operator shall install, maintain, calibrate, and operate the monitoring equipment as set forth in the owner's or operator's plan approved by the Agency and USEPA pursuant to Section 218.891(d).

d) Testing to demonstrate compliance with the VOM content limitations for cleaning solutions in Section 218.891(g) of this Subpart, and with the non-monomer VOM content limitations for resin and gel coat materials in Section 218.891(a) of this Subpart, shall be conducted upon request of the Agency, or as otherwise specified in this Subpart, as follows:

1) The applicable test methods and procedures specified in Section 218.105(a) of this Part shall be used; provided, however, Method 24, incorporated by reference at Section 218.112 of this Part, shall be used to demonstrate compliance; or

2) For cleaning solvents, the manufacturer's specifications for VOM content may be used if the manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 218.105(a) of this Part; provided, however, Method 24 shall be used to determine compliance. In the event of any inconsistency between a Method 24 test and the manufacturer's specifications, the Method 24 test shall govern.

e) The owner or operator of a source subject to this Subpart and relying on the VOM content of the cleaning solution to comply with Section 218.891(g)(1) of this Subpart shall:

1) For cleaning solutions that are prepared at the source with equipment that automatically mixes cleaning solvent and water (or other non-VOM):

A) Install, operate, maintain, and calibrate the automatic feed equipment in accordance with manufacturer's specifications to regulate the volume of each of the cleaning solvent and water (or other non-VOM), as mixed; and

B) Pre-set the automatic feed equipment so that the consumption rates of the cleaning solvent and water (or other non-VOM), as applied, comply with Section 218.891(g)(1);

2) For cleaning solutions that are not prepared at the source with automatic feed equipment, keep records of the usage of cleaning solvent and water (or other non-VOM) as set forth in Section 218.894(g) of this Subpart.

f) Testing to demonstrate compliance with the VOM composite partial vapor pressure limitation for cleaning solvents set forth in Section 218.891(g) of this Subpart shall be conducted in accordance with the applicable methods and procedures set forth in Section 218.110 of this Part.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 218.894 Recordkeeping and Reporting Requirements

a) The owner or operator of a source exempt from the limitations of this Subpart because of the criteria in Section 218.890(a) of this Subpart shall:

1) By May 1, 2012, or upon initial start-up, whichever is later, submit a certification to the Agency that includes the following:

A) A declaration that the source is exempt from the requirements in this Subpart because of the criteria in Section 218.890(a);

B) Calculations that demonstrate that combined emissions of VOM from all subject fiberglass boat manufacturing operations (including solvents used for cleanup operations associated with the fiberglass boat manufacturing operation) at the source never equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment. To calculate daily emissions of VOM, the owner or operator shall determine the monthly emissions of VOM from fiberglass boat manufacturing operations at the source (including solvents used for cleanup operations associated with the fiberglass boat manufacturing operations) and divide the amount by the number of days during that calendar month that the fiberglass boat manufacturing operations were in operation;

2) Collect and record the following information and provide copies of the records to the Agency upon request:

A) The total pounds of all resins and gel coats used per calendar month;

B) The total gallons of all cleanup materials used per calendar month;

C) The VOM content of each resin, gel coat, and cleanup material used per calendar month;

D) The total VOM emissions, in pounds, for all resins, gel coats, and cleanup materials employed per calendar month, before the application of control systems and devices.

3) Notify the Agency of any record that shows that the combined emissions of VOM from subject fiberglass boat manufacturing operations at the source, including related cleaning activities, ever equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment, within 30 days after the event occurs, and provide copies of the record upon request by the Agency.

b) All sources subject to the requirements of this Subpart shall:

1) By May 1, 2012, or upon initial start-up of the source, whichever is later, and upon start-up of a new fiberglass boat manufacturing operation at the source, submit a certification to the Agency that includes:

A) Identification of each subject fiberglass boat manufacturing operation as of the date of certification;

B) A declaration that all subject fiberglass boat manufacturing operations, including related cleaning operations, are in compliance with the requirements of this Subpart;

C) The limitation with which each subject fiberglass boat manufacturing operation will comply (i.e., the VOM content limitation, the emissions averaging alternative, or the emissions control system alternative);

D) Initial documentation that each subject fiberglass boat manufacturing operation will comply with the applicable limitation, including copies of manufacturer's specifications, test results (if any), formulation data, and calculations;

E) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitations;

F) A description of the practices and procedures that the source will follow to ensure compliance with the limitations in Section 218.891(h) of this Subpart;

G) A description of each fiberglass boat manufacturing operation exempt pursuant to Section 218.890(b) of this Subpart, if any;

H) A description of materials subject to Section 218.891(f) of this Subpart, if any, used in each fiberglass boat manufacturing operation;

2) At least 30 calendar days before changing the method of compliance in accordance with Section 218.891(b), (c), and (d), notify the Agency in writing of the change. The notification shall include a demonstration of compliance with the newly applicable subsection;

3) Notify the Agency in writing of any violation of the requirements of this Subpart within 30 days following the occurrence of the violation and provide records documenting the violation upon request by the Agency;

4) Retain all records required by this Section for at least three years and make those records available to the Agency upon request.

c) The owner or operator of a fiberglass boat manufacturing operation subject to the limitations of Section 218.891 of this Subpart and complying by means of Section 218.891(b) shall comply with the following.

1) By May 1, 2012, or upon initial start-up, whichever is later, submit a certification to the Agency that includes the name, identification number, and VOM content of each subject resin and gel coat as applied each day by each subject fiberglass boat manufacturing operation;

2) Collect and record the following information each day for each fiberglass boat manufacturing operation complying with Section 218.891(b):

A) The name, identification number, and VOM content of each subject resin and gel coat as applied each day by each fiberglass boat manufacturing operation; and

B) If complying with Section 218.891(b)(2), the mass of each open molding resin or gel coat as applied each month by each subject fiberglass boat manufacturing operation and the weighted average VOM content of all subject resins and gel coats as applied by each subject fiberglass boat manufacturing operation.

d) The owner or operator of a fiberglass boat manufacturing operation subject to the requirements of Section 218.891 of this Subpart and complying by means of Section 218.891(c) shall:

1) On and after May 1, 2012, collect and record the following information each month:

A) The amount of production resin, pigmented gel coat, clear gel coat, tooling resin, and tooling gel coat used in each subject fiberglass boat manufacturing operation;

B) The VOM content of each production resin, pigmented gel coat, clear gel coat, tooling resin, and tooling gel coat used in each subject fiberglass boat manufacturing operation;

C) Total monthly VOM emissions for all subject fiberglass boat manufacturing operations;

2) At the end of the first 12-month averaging period, and at the end of each subsequent month, collect and record the following information:

A) The monomer VOM mass emission limit for all subject fiberglass boat manufacturing operations for the applicable 12-month averaging period, with supporting calculations;

B) The total actual emissions of VOM from all subject fiberglass boat manufacturing operations for the applicable 12-month averaging period.

e) The owner or operator of a fiberglass boat manufacturing operation subject to the requirements of Section 218.891 of this Subpart and complying by means of Section 218.891(d) shall:

1) By May 1, 2012, or upon initial start-up, whichever is later, and upon start-up of a new control device, submit a certification to the Agency that includes the following:

A) The type of control device used to comply with the requirements of Section 218.891(d);

B) The results of all tests and calculations necessary to demonstrate compliance with the requirements of Section 218.891(d); and

C) A declaration that the monitoring equipment required under Section 218.892 of this Subpart has been properly installed and calibrated according to manufacturer's specifications;

2) Within 90 days after conducting testing pursuant to Section 218.892, submit to the Agency a copy of all test results, as well as a certification that includes the following:

A) A declaration that all tests and calculations necessary to demonstrate whether the fiberglass boat manufacturing operation is in compliance with Section 218.891(d) have been properly performed;

B) A statement whether the fiberglass boat manufacturing operations are or are not in compliance with Section 218.891(d);

C) The emissions limitation applicable during the control device performance test, with supporting calculations;

D) The operating parameters of the fiberglass boat manufacturing process during testing, as monitored in accordance with Section 218.892;

3) Collect and record daily the following information for each fiberglass boat manufacturing operation subject to the requirements of Section 218.891(d), and submit that information to the Agency upon request:

A) Afterburner or other approved control device monitoring data in accordance with Section 218.892 of this Subpart;

B) A log of operating time for the control device and monitoring equipment;

C) A maintenance log for the control device and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and duration of any outages;

D) Information to substantiate that the fiberglass boat manufacturing operation is operating in compliance with the parameters determined pursuant to Section 218.892.

f) The owner or operator of a source subject to the requirements in Section 218.891(f) of this Subpart shall collect and record the following information for each fiberglass boat manufacturing operation:

1) The name and identification number of each material subject to Section 218.891(f) as applied each day by each subject fiberglass boat manufacturing operation;

2) If subject to Section 218.891(f)(2), the amount of production and tooling resins, and pigmented, clear, and tooling gel coats used for part or mold repair and touch-ups, used each month at the subject source, and the total amount of all resins and gel coats used each month at the subject source;

3) If subject to Section 218.891(f)(3), the amount of pure, 100 percent vinylester resins used for skin coats each month at the subject source, and the total amount of all resins used each month at the subject source.

g) The owner or operator of a source subject to the requirements of Section 218.891 of this Subpart shall collect and record the following information for each cleaning solution used in each fiberglass boat manufacturing operation:

1) For each cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 218.891(g) of this Subpart and that is prepared at the source with automatic equipment:

A) The name and identification of each cleaning solution;

B) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 218.892(d) of this Subpart;

C) Each change to the setting of the automatic equipment, with date, time, description of changes in the cleaning solution constituents (e.g., cleaning solvents), and a description of changes to the proportion of cleaning solvent and water (or other non-VOM);

D) The proportion of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution;

E) The VOM content of the as-used cleaning solution, with supporting calculations; and

F) A calibration log for the automatic equipment, detailing periodic checks;

2) For each batch of cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 218.891(g), and that is not prepared at the source with automatic equipment:

A) The name and identification of each cleaning solution;

B) Date and time of preparation, and each subsequent modification, of the batch;

C) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 218.892(d);

D) The total amount of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution; and

E) The VOM content of the as-used cleaning solution, with supporting calculations;

3) For each batch of cleaning solution for which the owner or operator relies on the vapor pressure of the cleaning solution to demonstrate compliance with Section 218.891(g):

A) The name and identification of each cleaning solution;

B) Date and time of preparation, and each subsequent modification, of the batch;

C) The molecular weight, density, and VOM composite partial vapor pressure of each cleaning solvent, as determined in accordance with Section 218.892(f) of this Subpart;

D) The total amount of each cleaning solvent, including water, used to prepare the as-used cleaning solution; and

E) The VOM composite partial vapor pressure of each as-used cleaning solution, as determined in accordance with Section 218.110 of this Part.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

SUBPART JJ: MISCELLANEOUS INDUSTRIAL ADHESIVES

Section 218.901 Emission Limitations and Control Requirements

a) The owner or operator of a source subject to the requirements of this Subpart shall comply with the limitations in subsection (b), (c), or (d) of this Section, as well as with the limitations in subsections (e) and (f) of this Section. Notwithstanding this requirement, sources subject to Section 218.900(b)(2) shall comply with the limitations in subsection (f) of this Section only.

b) The owner or operator of adhesive application operations listed in this subsection (b) shall comply with the following VOM emission limitations, minus water and any compounds that are specifically exempted from the definition of VOM, as applied. If an adhesive is used to bond dissimilar substrates together, the substrate category with the highest VOM emission limitation shall apply:

	kg VOM/l adhesive or	lb VOM/gal adhesive or

			adhesive primer applied	adhesive primer applied
1)	General adhesive application operations			
	A)	Reinforced plastic composite	0.200	(1.7)
	B)	Flexible vinyl	0.250	(2.1)
	C)	Metal	0.030	(0.3)
	D)	Porous material (except wood)	0.120	(1.0)
	E)	Rubber	0.250	(2.1)
	F)	Wood	0.030	(0.3)
	G)	Other substrates	0.250	(2.1)
2)	Specialty adhesive application operations			
	A)	Ceramic tile installation	0.130	(1.1)
	B)	Contact adhesive	0.250	(2.1)
	C)	Cove base installation	0.150	(1.3)
	D)	Indoor floor covering installation	0.150	(1.3)
	E)	Outdoor floor covering installation	0.250	(2.1)
	F)	Installation of perimeter bonded sheet flooring	0.660	(5.5)
	G)	Metal to urethane/rubber molding or casting	0.850	(7.1)
	H)	Motor vehicle adhesive	0.250	(2.1)
	I)	Motor vehicle weatherstrip adhesive	0.750	(6.3)
	J)	Multipurpose construction	0.200	(1.7)
	K)	Plastic solvent welding (acrylonitrile butadiene styrene	0.400	(3.3)

	(ABS) welding)		
L)	Plastic solvent welding (except ABS welding)	0.500	(4.2)
M)	Sheet rubber lining installation	0.850	(7.1)
N)	Single-ply roof membrane installation/repair (except ethylene propylenediene monomer (EPDM) roof membrane)	0.250	(2.1)
O)	Structural glazing	0.100	(0.8)
P)	Thin metal laminate	0.780	(6.5)
Q)	Tire repair	0.100	(0.8)
R)	Waterproof resorcinol glue	0.170	(1.4)

3) Adhesive primer application operations

A)	Motor vehicle glass bonding primer	0.900	(7.5)
B)	Plastic solvent welding adhesive primer	0.650	(5.4)
C)	Single-ply roof membrane adhesive primer	0.250	(2.1)
D)	Other adhesive primer	0.250	(2.1)

c) No owner or operator of a source subject to this Subpart shall operate a miscellaneous industrial adhesive application operation unless the daily-weighted average VOM content of subject adhesives as applied each day by the operation, calculated in accordance with subsection (c)(1) of this Section, is less than or equal to the emissions limitation calculated in accordance with subsection (c)(2) of this Section.

1) Weighted Average of VOM Content of Adhesives Applied Each Day

$$VOM_{WA} = \frac{\sum_{i=1}^{n} V_i VOM_i}{\sum_{i=1}^{n} V_i}$$

where:

VOM_{WA} = The weighted average VOM content in units of kg (lbs) VOM per volume in l (gal) of all subject adhesives as applied each day;

i = Subscript denoting a specific adhesive as applied;

n = The number of different adhesives as applied each day by each miscellaneous industrial adhesive application operation;

V_i = The volume of each adhesive, as applied, in units of l (gal);

VOM_i = The VOM content in units of kg (lbs) VOM per volume in l (gal) of each adhesive as applied;

2) Allowable Weighted Average VOM Limit for an Averaging Operation

$$Limit_{WA} = \frac{\sum_{i=1}^{n} V_i Limit_i}{\sum_{i=1}^{n} V_i}$$

where:

$Limit_{WA}$ = The allowable weighted average VOM limit in units of kg (lbs) VOM per volume in l (gal) of all subject adhesives as applied each day in a single operation;

i = Subscript denoting a specific adhesive as applied;

n = The number of different adhesives as applied each day by each miscellaneous industrial adhesive application operation;

V_i = The volume of each adhesive, as applied, in units of 1~~kg~~ (~~lb~~gal);

$Limit_i$ = The VOM limit, taken from subsection (b) of this Section, in units of kg (lbs) VOM per volume in l (gal) of each

adhesive as applied.

d) No owner or operator of a source subject to this Subpart shall operate a miscellaneous industrial adhesive application operation employing a capture system and control device unless either:

1) An afterburner or carbon adsorption system is used that provides at least 85 percent reduction in the overall emissions of VOM from the application operation;

2) An alternative capture and control system is used that provides at least 85 percent reduction in the overall emissions of VOM from the application operation and is approved by the Agency and approved by USEPA as a SIP revision. The owner or operator shall submit a plan to the Agency detailing appropriate monitoring devices, test methods, recordkeeping requirements, and operating parameters for the control device; or

3) The owner or operator complies with the applicable limitation set forth in subsection (b) of this Section by utilizing a combination of low-VOM adhesives and an afterburner or carbon adsorption system. The owner or operator may use an alternative capture and control system if the owner or operator submits a plan to the Agency detailing appropriate monitoring devices, test methods, recordkeeping requirements, and operating parameters for the capture and control system and the system is approved by the Agency and approved by USEPA as a SIP revision.

e) The owner or operator of a source subject to this Subpart shall apply all miscellaneous industrial adhesives using one or more of the following methods:

1) Electrostatic spray;

2) High volume low pressure (HVLP) spray;

3) Flow coating. For the purposes of this Subpart, flow coating means a non-atomized technique of applying coating to a substrate with a fluid nozzle with no air supplied to the nozzle;

4) Roll coating or hand application, including non-spray application methods similar to hand or mechanically powered caulking gun, brush, or direct hand application;

5) Dip coating, including electrodeposition. For purposes of this Subpart, "electrodeposition" means a water-borne dip coating process in which opposite electrical charges are applied to the substrate and the coating. The coating is attracted to the substrate due to the electrochemical potential difference that is created;

6) Airless spray;

7) Air-assisted airless spray; or

8) Another adhesive application method capable of achieving a transfer efficiency equal to or better than that achieved by HVLP spraying, if the method is approved in writing by the Agency.

f) The owner or operator of a source subject to this Subpart shall comply with the following work practices for each subject miscellaneous adhesive application operation at the source:

1) Store all VOM-containing adhesives, adhesive primers, process-related waste materials, cleaning materials, and used shop towels in closed containers;

2) Ensure that mixing and storage containers used for VOM-containing adhesives, adhesive primers, process-related waste materials, and cleaning materials are kept closed at all times except when depositing or removing those materials;

3) Minimize spills of VOM-containing adhesives, adhesive primers, process-related waste materials, and cleaning materials;

4) Convey VOM-containing adhesives, adhesive primers, process-related waste materials, and cleaning materials from one location to another in closed containers or pipes; and

5) Minimize VOM emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 218.902 Testing Requirements

a) Testing to demonstrate compliance with the requirements of this Subpart shall be conducted by the owner or operator by May 1, 2012. Thereafter, testing shall be conducted within 90 days after a request by the Agency, or as otherwise provided in this Subpart. The testing shall be conducted at the expense of the owner or operator and the owner or operator shall notify the Agency in writing 30 days in advance of conducting the testing to allow the Agency to be present during testing.

b) Testing to demonstrate compliance with the VOM content limitations in Section 218.901(b) of this Subpart shall be conducted as follows:

1) Method 24, incorporated by reference in Section 218.112 of this Part, shall be used for non-reactive adhesives. If it is demonstrated to the satisfaction of the Agency and the USEPA that plant adhesive formulation data are equivalent to Method 24 results, formulation data may be used. In the event of any inconsistency between a Method 24 test and a facility's formulation data, the Method 24 test will govern;

2) Appendix A of 40 CFR 63, Subpart PPPP, incorporated by reference in Section 218.112 of this Part, shall be used for reactive adhesives.

3) The manufacturer's specifications for VOM content for adhesives may be used if the specifications are based on results of tests of the VOM content conducted in accordance with methods specified in subsections (b)(1) and (b)(2) of this Section, as applicable.

c) For afterburners and carbon adsorbers, the methods and procedures of Section 218.105(d) through (f) of this Part shall be used for testing to demonstrate compliance with the requirements of Section 218.901(d) of this Subpart, as follows:

1) To select the sampling sites, Method 1 or 1A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part;

2) To determine the volumetric flow rate of the exhaust stream, Method 2, 2A, 2C, or 2D, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part;

3) To determine the VOM concentration of the exhaust stream entering and exiting the emissions control system, Method 25 or 25A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part. For thermal and catalytic afterburners, Method 25 must be used, except under the following circumstances, in which case Method 25A must be used:

A) The allowable outlet concentration of VOM from the emissions control system is less than 50 ppmv, as carbon;

B) The VOM concentration at the inlet of the emissions control system and the required level of control result in exhaust concentrations of VOM of 50 ppmv, or less, as carbon;

C) Due to the high efficiency of the emissions control system, the anticipated VOM concentration at the emissions control system

exhaust is 50 ppmv or less, as carbon, regardless of inlet concentration. If the source elects to use Method 25A under this option, the exhaust VOM concentration must be 50 ppmv or less, as carbon, and the required destruction efficiency must be met for the source to have demonstrated compliance. If the Method 25A test results show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, a retest is required. The retest shall be conducted using either Method 25 or 25A. If the retest is conducted using Method 25A and the test results again show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, the source must retest using Method 25;

D) During testing, the cleaning equipment shall be operated at representative operating conditions and flow rates.

d) An owner or operator using an emissions control system other than an afterburner or carbon adsorber shall conduct testing to demonstrate compliance with the requirements of Section 218.901(d) as set forth in the owner's or operator's plan approved by the Agency and USEPA pursuant to Section 218.901(d)(3).

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 218.903 Monitoring Requirements

a) If an afterburner is used to demonstrate compliance, the owner or operator of a source subject to Section 218.901(d) of this Subpart shall:

1) Install, calibrate, operate, and maintain temperature monitoring devices with an accuracy of $3^{o}C$ or $5^{o}F$ on the emissions control system in accordance with Section 218.105(d)(2) of this Part and in accordance with the manufacturer's specifications. Monitoring shall be performed at all times when the emissions control system is operating; and

2) Install, calibrate, operate and maintain, in accordance with manufacturer's specifications, a continuous recorder on the temperature monitoring devices, such as a strip chart, recorder or computer, with at least the same accuracy as the temperature monitor.

b) If a carbon adsorber is used to demonstrate compliance, the owner or operator of a source subject to Section 218.901(d) of this Subpart shall use Agency and USEPA approved continuous monitoring equipment that is installed, calibrated, maintained, and operated according to vendor specifications at all times the control device is in use. The continuous monitoring equipment shall monitor the

VOM concentration of each carbon adsorption bed exhaust or the exhaust of the bed next in sequence to be desorbed.

c) If an emissions control system other than an afterburner or carbon adsorber is used to demonstrate compliance, the owner or operator of a source subject to Section 218.901(d) of this Subpart shall install, maintain, calibrate, and operate the monitoring equipment as set forth in the owner's or operator's plan approved by the Agency and USEPA pursuant to Section 218.901(d)(3).

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 218.904 Recordkeeping and Reporting Requirements

a) The owner or operator of a source exempt from the limitations of this Subpart because of the criteria in Section 218.900(a) of this Subpart shall comply with the following:

1) By May 1, 2012, or upon initial start-up of the source, whichever is later, submit a certification to the Agency that includes:

A) A declaration that the source is exempt from the requirements of this Section because of the criteria in Section 218.900(a);

B) Calculations that demonstrate that combined emissions of VOM from miscellaneous industrial adhesive application operations at the source, including related cleaning activities, never equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment. To calculate daily emissions of VOM, the owner or operator shall determine the monthly emissions of VOM from miscellaneous industrial adhesive application operations at the source (including related cleaning activities) and divide this amount by the number of days during that calendar month that miscellaneous industrial adhesive application operations at the source were in operation;

2) Collect and record the following information each month for each miscellaneous industrial adhesive application operation, maintain the information at the source for a period of three years, and provide the information to the Agency upon request:

A) The name and identification number of each adhesive as applied by each miscellaneous industrial adhesive application operation; and

B) The weight of VOM per volume and the volume of each adhesive (minus water and any compounds which are specifically exempted

from the definition of VOM) as applied each month by each miscellaneous industrial adhesive application operation;

3) Notify the Agency of any record that shows that the combined emissions of VOM from miscellaneous industrial adhesive application operations at the source, including related cleaning activities, ever equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment, within 30 days after the event occurs, and provide copies of those records upon request by the Agency.

b) All sources subject to the requirements of this Subpart shall:

1) By May 1, 2012, or upon initial start-up of the source, whichever is later, submit a certification to the Agency that includes:

A) Identification of each subject adhesive application operation as of the date of certification;

B) A declaration that all subject adhesive application operations are in compliance with the requirements of this Subpart;

C) The limitation with which each subject adhesive application operation will comply (i.e., the VOM content limitation, the daily weighted averaging alternative, or the emissions control system alternative);

D) Initial documentation that each subject adhesive application operation will comply with the applicable limitation, including copies of manufacturer's specifications, test results (if any), formulation data, and calculations;

E) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitations;

F) A description of the practices and procedures that the source will follow to ensure compliance with the limitations in Section 218.901(f) of this Subpart;

G) A description of each adhesive application operation exempt pursuant to Section 218.900(b)(2) of this Subpart, if any; and

H) The application methods used by each subject adhesive application operation;

2) At least 30 calendar days before changing the method of compliance in accordance with Section 218.901(b), (c), and (d), notify the Agency in

writing of the change. The notification shall include a demonstration of compliance with the newly applicable subsection;

3) Notify the Agency in writing of any violation of the requirements of this Subpart within 30 days following the occurrence of the violation and provide records documenting the violation upon request by the Agency;

4) Retain all records required by this Section for at least three years and make those records available to the Agency upon request.

c) The owner or operator of an adhesive application operation subject to the limitations of Section 218.901 of this Subpart and complying by means of Section 218.901(b) shall comply with the following:

1) By May 1, 2012, or upon the initial start-up date, whichever is later, submit a certification to the Agency that includes the name, identification number, and VOM content of each adhesive as applied by each subject adhesive application operation;

2) Collect and record the name, identification number, and VOM content of each adhesive as applied each day by each adhesive application operation complying with Section 218.901(b).

d) The owner or operator of an adhesive application operation subject to the limitations of Section 218.901 of this Subpart and complying by means of Section 218.901(c) shall comply with the following:

1) By May 1, 2012, or upon initial start-up, whichever is later, submit a certification to the Agency that includes the name, identification number, and VOM content of each adhesive as applied by each subject adhesive application operation;

2) Collect and record the following information each day for each adhesive application operation complying by means of Section 218.901(c):

A) The name, identification number, VOM content, and volume of each adhesive as applied each day by each subject adhesive application operation;

B) The daily weighted average VOM content of all adhesives as applied by each subject adhesive application operation.

e) The owner or operator of an adhesive application operation subject to the requirements of Section 218.901 of this Subpart and complying by means of Section 218.901(d) shall:

1) By May 1, 2012, or upon the initial start-up date, whichever is later, and upon initial start-up of a new control device, submit a certification to the Agency that includes the following:

   A) The type of afterburner or other approved control device used to comply with the requirements of Section 218.901(d);

   B) The results of all tests and calculations necessary to demonstrate compliance with the control requirements of Section 218.901(d); and

   C) A declaration that the monitoring equipment required under Section 218.903 of this Subpart has been properly installed and calibrated according to manufacturer's specifications;

2) Within 90 days after conducting testing pursuant to Section 218.902 of this Subpart, submit to the Agency a copy of all test results, as well as a certification that includes the following:

   A) A declaration that all tests and calculations necessary to demonstrate whether the adhesive application operations are in compliance with Section 218.901(d) have been properly performed;

   B) A statement whether the adhesive application operations are or are not in compliance with Section 218.901(d); and

   C) The operating parameters of the afterburner or other approved control device during testing, as monitored in accordance with Section 218.903 of this Subpart;

3) Collect and record daily the following information for each adhesive application operation subject to the requirements of Section 218.901(d):

   A) Afterburner or other approved control device monitoring data in accordance with Section 218.903 of this Subpart;

   B) A log of operating time for the afterburner or other approved control device, monitoring equipment, and the associated application unit; and

   C) A maintenance log for the afterburner or other approved control device and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and duration of any outages.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: EMISSIONS STANDARDS AND LIMITATIONS FOR STATIONARY SOURCES

PART 219
ORGANIC MATERIAL EMISSION STANDARDS AND LIMITATIONS FOR THE METRO EAST AREA

SUBPART A: GENERAL PROVISIONS

Section

SUBPART B: ORGANIC EMISSIONS FROM STORAGE AND LOADING OPERATIONS

Section

SUBPART C: ORGANIC EMISSIONS FROM MISCELLANEOUS EQUIPMENT

SUBPART E: SOLVENT CLEANING

SUBPART F: COATING OPERATIONS

SUBPART G: USE OF ORGANIC MATERIAL

SUBPART H: PRINTING AND PUBLISHING

SUBPART Q: SYNTHETIC ORGANIC CHEMICAL AND POLYMER MANUFACTURING PLANT

SUBPART R: PETROLEUM REFINING AND RELATED INDUSTRIES; ASPHALT MATERIALS

SUBPART S: RUBBER AND MISCELLANEOUS PLASTIC PRODUCTS

SUBPART T: PHARMACEUTICAL MANUFACTURING

SUBPART V: BATCH OPERATIONS AND AIR OXIDATION PROCESSES

SUBPART W: AGRICULTURE

SUBPART X: CONSTRUCTION

SUBPART Y: GASOLINE DISTRIBUTION

SUBPART Z: DRY CLEANERS

SUBPART AA: PAINT AND INK MANUFACTURING

SUBPART BB: POLYSTYRENE PLANTS

SUBPART FF: BAKERY OVENS

SUBPART GG: MARINE TERMINALS

SUBPART HH: MOTOR VEHICLE REFINISHING

SUBPART II: FIBERGLASS BOAT MANUFACTURING MATERIALS

SUBPART JJ: MISCELLANEOUS INDUSTRIAL ADHESIVES

SUBPART PP: MISCELLANEOUS FABRICATED PRODUCT MANUFACTURING PROCESSES

SUBPART QQ: MISCELLANEOUS FORMULATION MANUFACTURING PROCESSES

SUBPART RR: MISCELLANEOUS ORGANIC CHEMICAL MANUFACTURING PROCESSES

SUBPART TT: OTHER EMISSION UNITS

SUBPART UU: RECORDKEEPING AND REPORTING

	Manufacturing
219.APPENDIX B	VOM Measurement Techniques for Capture Efficiency (Repealed)
219.APPENDIX C	Reference Methods and Procedures
219.APPENDIX D	Coefficients for the Total Resource Effectiveness Index (TRE) Equation
219.APPENDIX E	List of Affected Marine Terminals
219.APPENDIX G	TRE Index Measurements for SOCMI Reactors and Distillation Units
219.APPENDIX H	Baseline VOM Content Limitations for Subpart F, Section 219.212 Cross-Line Averaging

AUTHORITY: Implementing Section 10 and authorized by Sections 27, 28 and 28.5 of the Environmental Protection Act [415 ILCS 5/10, 27, 28 and 28.5].

SOURCE: Adopted in R91-8 at 15 Ill. Reg. 12491, effective August 16, 1991; amended in R91-24 at 16 Ill. Reg. 13597, effective August 24, 1992; amended in R91-30 at 16 Ill. Reg. 13883, effective August 24, 1992; emergency amendment in R93-12 at 17 Ill. Reg. 8295, effective May 24, 1993, for a maximum of 150 days; amended in R93-9 at 17 Ill. Reg. 16918, effective September 27, 1993 and October 21, 1993; amended in R93-28 at 18 Ill. Reg. 4242, effective March 3, 1994; amended in R94-12 at 18 Ill. Reg. 14987, effective September 21, 1994; amended in R94-15 at 18 Ill. Reg. 16415, effective October 25, 1994; amended in R94-16 at 18 Ill. Reg. 16980, effective November 15, 1994; emergency amendment in R95-10 at 19 Ill. Reg. 3059, effective February 28, 1995, for a maximum of 150 days; amended in R94-21, R94-31 and R94-32 at 19 Ill. Reg. 6958, effective May 9, 1995; amended in R94-33 at 19 Ill. Reg. 7385, effective May 22, 1995; amended in R96-2 at 20 Ill. Reg. 3848, effective February 15, 1996; amended in R96-13 at 20 Ill. Reg. 14462, effective October 28, 1996; amended in R97-24 at 21 Ill. Reg. 7721, effective June 9, 1997; amended in R97-31 at 22 Ill. Reg. 3517, effective February 2, 1998; amended in R04-12/20 at 30 Ill. Reg. 9799, effective May 15, 2006; amended in R06-21 at 31 Ill. Reg. 7110, effective April 30, 2007; amended in R10-10 at 34 Ill. Reg. 5392, effective March 23, 2010; amended in R10-8 at 34 Ill. Reg. 9253, effective June 25, 2010; amended in R10-20 at 34 Ill. Reg. 14326, effective September 14, 2010; amended in R10-8(A) at 35 Ill. Reg. 496, effective December 21, 2010; amended in R11-23 at 35 Ill. Reg. _____, effective _____.

SUBPART A: GENERAL PROVISIONS

Section 219.105 Test Methods and Procedures

a) Coatings, Inks and Fountain Solutions
The following test methods and procedures shall be used to determine compliance of as applied coatings, inks, and fountain solutions with the limitations set forth in this Part.

1) Sampling: Samples collected for analyses shall be one-liter taken into a one-liter container at a location and time such that the sample will be representative of the coating as applied (i.e., the sample shall include any dilution solvent or other VOM added during the manufacturing process). The container must be tightly sealed immediately after the sample is taken.

Any solvent or other VOM added after the sample is taken must be measured and accounted for in the calculations in subsection (a)(3) of this Section. For multiple package coatings, separate samples of each component shall be obtained. A mixed sample shall not be obtained as it will cure in the container. Sampling procedures shall follow the guidelines presented in:

A) ASTM D 3925-81 (1985) standard practice for sampling liquid paints and related pigment coating. This practice is incorporated by reference in Section 219.112 of this Part.

B) ASTM E 300-86 standard practice for sampling industrial chemicals. This practice is incorporated by reference in Section 219.112 of this Part.

2) Analyses: The applicable analytical methods specified below shall be used to determine the composition of coatings, inks, or fountain solutions as applied.

A) Method 24 of 40 CFR 60, appendix A, incorporated by reference in Section 219.112 of this Part, shall be used to determine the VOM content and density of coatings. If it is demonstrated to the satisfaction of the Agency and the USEPA that plant coating formulation data are equivalent to Method 24 results, formulation data may be used. In the event of any inconsistency between a Method 24 test and a facility's formulation data, the Method 24 test will govern.

B) Method 24A of 40 CFR 60, appendix Appendix A, incorporated by reference in Section 219.112, shall be used to determine the VOM content and density of rotogravure printing inks and related coatings. If it is demonstrated to the satisfaction of the Agency and USEPA that the plant coating formulation data are equivalent to Method 24A results, formulation data may be used. In the event of any inconsistency between a Method 24A test and formulation data, the Method 24A test will govern.

C) The following ASTM methods are the analytical procedures for determining VOM:

i) ASTM D 1475-85: Standard test method for density of paint, varnish, lacquer and related products. This test method is incorporated by reference in Section 219.112 of this Part.

ii) ASTM D 2369-87: Standard test method for volatile

content of a coating. This test method is incorporated by reference in Section 219.112 of this Part.

iii) ASTM D 3792-86: Standard test method for water content of water-reducible paints by direct injection into a gas chromatograph. This test method is incorporated by reference in Section 219.112 of this Part.

iv) ASTM D 4017-81 (1987): Standard test method for water content in paints and paint materials by the Karl Fischer method. This test method is incorporated by reference in Section 219.112 of this Part.

v) ASTM D 4457-85: Standard test method for determination of dichloromethane and 1,1,1, trichloroethane in paints and coatings by direct injection into a gas chromatograph. (The procedure delineated above can be used to develop protocols for any compounds specifically exempted from the definition of VOM.) This test method is incorporated by reference in Section 219.112 of this Part.

vi) ASTM D 2697-86: Standard test method for volume non-volatile matter in clear or pigmented coatings. This test method is incorporated by reference in Section 219.112 of this Part.

vii) ASTM D 3980-87: Standard practice for interlaboratory testing of paint and related materials. This practice is incorporated by reference in Section 219.112 of this Part.

viii) ASTM E 180-85: Standard practice for determining the precision of ASTM methods for analysis of and testing of industrial chemicals. This practice is incorporated by reference in Section 219.112 of this Part.

ix) ASTM D 2372-85: Standard method of separation of vehicle from solvent-reducible paints. This method is incorporated by reference in Section 219.112 of this Part.

D) Use of an adaptation to any of the analytical methods specified in subsections (a)(2)(A), (B), and (C) of this Section may not be used unless approved by the Agency and USEPA. An owner or operator must submit sufficient documentation for the Agency and USEPA to find that the analytical methods specified in subsections (a)(2)(A), (B), and (C) of this Section will yield inaccurate results and that the proposed adaptation is appropriate.

3) Calculations: Calculations for determining the VOM content, water content and the content of any compounds which are specifically exempted from the definition of VOM of coatings, inks and fountain solutions as applied shall follow the guidance provided in the following documents:

A) "A Guide for Surface Coating Calculation", EPA-340/1-86-016, incorporated by reference in Section 219.112 of this Part.

B) "Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink and Other Coatings" (revised June 1986), EPA-450/3-84-019, incorporated by reference in Section 219.112 of this Part.

C) "A Guide for Graphic Arts Calculations", August 1988, EPA-340/1-88-003, incorporated by reference in Section 219.112 of this Part.

b) Automobile or Light-Duty Truck Test Protocol

1) The protocol for testing, including determining the transfer efficiency of coating applicators, at primer surfacer operations and topcoat operations at an automobile or light-duty truck assembly source shall follow the procedures in the following:

A) Prior to May 1, 2012: "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations" ("topcoat protocol"), December 1988, EPA-450/3-88-018, incorporated by reference in Section 219.112 of this Part.

B) On and after May 1, 2012: "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat Operations" (topcoat protocol), September 2008, EPA-453/R-08-002, incorporated by reference in Section 219.112 of this Part.

2) Prior to testing pursuant to the applicable topcoat protocol, the owner or operator of a coating operation subject to the topcoat or primer surfacer limit in Section 219.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(E) shall submit a detailed testing proposal specifying the method by which testing will be conducted and how compliance will be demonstrated consistent with the applicable topcoat protocol. The proposal shall include, at a minimum, a comprehensive plan (including a rationale) for determining the transfer efficiency at each booth through the use of in-

plant or pilot testing, the selection of coatings to be tested (for the purpose of determining transfer efficiency) including the rationale for coating groupings, the method for determining the analytic VOM content of as applied coatings and the formulation solvent content of as applied coatings, and a description of the records of coating VOM content as applied and coating's usage that will be kept to demonstrate compliance. Upon approval of the proposal by the Agency and USEPA, the compliance demonstration for a coating line may proceed.

c) Capture System Efficiency Test Protocols

1) Applicability
The requirements of subsection (c)(2) of this Section shall apply to all VOM emitting process emission units employing capture equipment (e.g., hoods, ducts), except those cases noted in this subsection (c)(1).

A) If an emission unit is equipped with (or uses) a permanent total enclosure (PTE) that meets Agency and USEPA specifications, and which directs all VOM to a control device, then the emission unit is exempted from the requirements described in subsection (c)(2) of this Section. The Agency and USEPA specifications to determine whether a structure is considered a PTE are given in Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part. In this instance, the capture efficiency is assumed to be 100 percent and the emission unit is still required to measure control efficiency using appropriate test methods as specified in subsection (d) of this Section.

B) If an emission unit is equipped with (or uses) a control device designed to collect and recover VOM (e.g., carbon adsorber), an explicit measurement of capture efficiency is not necessary provided that the conditions given below are met. The overall control of the system can be determined by directly comparing the input liquid VOM to the recovered liquid VOM. The general procedure for use in this situation is given in 40 CFR 60.433, incorporated by reference in Section 219.112 of this Part, with the following additional restrictions:

i) The source owner or operator shall obtain data each operating day for the solvent usage and solvent recovery to permit the determination of the solvent recovery efficiency of the system each operating day using a 7-day rolling period. The recovery efficiency for each operating day is computed as the ratio of the total recovered solvent for that day and the most recent prior 6 operating days to the total solvent usage for the same 7-day period used for the

recovered solvent, rather than a 30-day weighted average as given in 40 CFR 60.433 incorporated by reference in Section 219.112 of this Part. This ratio shall be expressed as a percentage. The ratio shall be computed within 72 hours following each 7-day period. A source that believes that the 7-day rolling period is not appropriate may use an alternative multi-day rolling period not to exceed 30 days, with the approval of the Agency and USEPA. In addition, the criteria in subsection (c)(1)(B)(ii) or subsection (c)(1)(B)(iii) below must be met.

ii) The solvent recovery system (i.e., capture and control system) must be dedicated to a single coating line, printing line, or other discrete activity that by itself is subject to an applicable VOM emission standard, or

iii) If the solvent recovery system controls more than one coating line, printing line or other discrete activity that by itself is subject to an applicable VOM emission standard, the overall control (i.e., the total recovered VOM divided by the sum of liquid VOM input from all lines and other activities venting to the control system) must meet or exceed the most stringent standard applicable to any line or other discrete activity venting to the control system.

2) Capture Efficiency Protocols

The capture efficiency of an emission unit shall be measured using one of the protocols given below. Appropriate test methods to be utilized in each of the capture efficiency protocols are described in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part. Any error margin associated with a test method or protocol may not be incorporated into the results of a capture efficiency test. If these techniques are not suitable for a particular process, then an alternative capture efficiency protocol may be used, pursuant to the provisions of Section 219.108(b) of this Part.

A) Gas/gas method using temporary total enclosure (TTE). The Agency and USEPA specifications to determine whether a temporary enclosure is considered a TTE are given in Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part. The capture efficiency equation to be used for this protocol is:

$$CE = \frac{G_w}{G_w + F_w}$$

where:

CE = capture efficiency, decimal fraction;

G_w = mass of VOM captured and delivered to control device using a TTE;

F_w = mass of uncaptured VOM that escapes from a TTE.

Method 204B or 204C contained in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part is used to obtain G_w. Method 204D in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part is used to obtain F_w.

B) Liquid/gas method using TTE. The Agency and USEPA specifications to determine whether a temporary enclosure is considered a TTE are given in Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part. The capture efficiency equation to be used for this protocol is:

$$CE = \frac{L - F_w}{L}$$

where:

CE = capture efficiency, decimal fraction;

L = mass of liquid VOM input to process emission unit;

F_w = mass of uncaptured VOM that escapes from a TTE.

Method 204A or 204F contained in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part is used to obtain L. Method 204in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part is used to obtain F_w.

C) Gas/gas method using the building or room (building or room enclosure), in which the affected coating line, printing line or other emission unit is located, as the enclosure, as determined by Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part and in which "F_B" and "G" are measured while operating only the affected line or emission unit. All fans and blowers in the building or room must be operated as they would under normal production. The capture efficiency equation to be used for this protocol is:

$$CE = \frac{G}{G + F_B}$$

where:

CE = capture efficiency, decimal fraction;

G = mass of VOM captured and delivered to control device;

F_B = mass of uncaptured VOM that escapes from building enclosure.

Method 204B or 204C contained in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part is used to obtain G. Method 204E in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part is used to obtain F_B.

D) Liquid/gas method using the building or room (building or room enclosure), in which the affected coating line, printing line or other emission unit is located, as the enclosure as determined by Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part and in which "F_B" and "L" are measured while operating only the affected line emission unit. All fans and blowers in the building or room must be operated as they would under normal production. The capture efficiency equation to be used for this protocol is:

$$CE = \frac{L - F_B}{L}$$

where:

CE = capture efficiency, decimal fraction;

L = mass of liquid VOM input to process emission unit;

F_B = mass of uncaptured VOM that escapes from building enclosure.

Method 204A or 204F contained in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part is used to obtain L. Method 204E in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part is used to obtain F_B.

E) Mass balance using Data Quality Objective (DQO) or Lower Confidence Limit (LCL) protocol. For a liquid/gas input where an owner or operator is using the DQO/LCL protocol and not using an enclosure as described in Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part, the VOM content of the liquid input (L) must be determined using Method 204A or 204F in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part. The VOM content of the captured gas stream (G) to the control device must be determined using Method 204B or 204C in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part. The results of capture efficiency calculations (G/L) must satisfy the DQO or LCL statistical analysis methodology as described in Section 3 of USEPA's "Guidelines for Determining Capture Efficiency," incorporated by reference at Section 219.112 of this Part. Where capture efficiency testing is done to determine emission reductions for the purpose of establishing emission credits for offsets, shutdowns, and trading, the LCL protocol cannot be used for these applications. In enforcement cases, the LCL protocol cannot confirm non-compliance; capture efficiency must be determined using a protocol under subsection (c)(2)(A), (B), (C) or (D) of this Section, the DQO protocol of this subsection (c)(2)(E), or an alternative protocol pursuant to Section 219.108(b) of this Part.

BOARD NOTE: Where LCL was used in testing emission units that are the subject of later requests for establishing emission credits for offsets, shutdowns, and trading, prior LCL results may not be relied upon to determine the appropriate amount of credits. Instead, to establish the appropriate amount of credits, additional testing may be required that would satisfy the protocol of Section 219.105(c)(2)(A), (B), (C) or (D), the DQO protocol of Section 219.105(c)(2)(E), or an alternative protocol pursuant to Section 219.108(b) of this Part.

3) Simultaneous testing of multiple lines or emission units with a common control device. If an owner or operator has multiple lines sharing a common control device, the capture efficiency of the lines may be tested simultaneously, subject to the following provisions:

A) Multiple line testing must meet the criteria of Section 4 of USEPA's "Guidelines for Determining Capture Efficiency," incorporated by reference at Section 219.112 of this Part;

B) The most stringent capture efficiency required for any individual line or unit must be met by the aggregate of lines or units; and

C) Testing of all the lines of emission units must be performed with the same capture efficiency test protocol.

4) Recordkeeping and Reporting

A) All owners or operators affected by this subsection must maintain a copy of the capture efficiency protocol submitted to the Agency and the USEPA on file. All results of the appropriate test methods and capture efficiency protocols must be reported to the Agency within 60 days after the test date. A copy of the results must be kept on file with the source for a period of 3 years.

B) If any changes are made to capture or control equipment, then the source is required to notify the Agency and the USEPA of these changes and a new test may be required by the Agency or the USEPA.

C) The source must notify the Agency 30 days prior to performing any capture efficiency or control test. At that time, the source must notify the Agency which capture efficiency protocol and control device test methods will be used. Notification of the actual date and expected time of testing must be submitted a minimum of 5 working days prior to the actual date of the test. The Agency may at its discretion accept notification with shorter advance notice provided that such arrangements do not interfere with the Agency's ability to review the protocol and/or observe testing.

D) Sources utilizing a PTE must demonstrate that this enclosure meets the requirement given in Method 204 in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part, for a PTE during any testing of their control device.

E) Sources utilizing a TTE must demonstrate that their TTE meets the requirements given in Method 204 in appendix M or 40 CFR 51, incorporated by reference in Section 219.112 of this Part, for a TTE during any testing of their control device. The source must also provide documentation that the quality assurance criteria for a TTE have been achieved.

F) Any source utilizing the DQO or LCL protocol must submit the following information to the Agency with each test report:

i) A copy of all test methods, Quality Assurance/Quality Control procedures, and calibration procedures to be used

from those described in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part;

ii) A table with information on each sample taken, including the sample identification and the VOM content of the sample;

iii) The quantity of material used for each test run;

iv) The quantity of captured VOM for each test run;

v) The capture efficiency calculations and results for each test run;

vi) The DQO and/or LCL calculations and results; and

vii) The Quality Assurance/Quality Control results, including how often the instruments were calibrated, the calibration results, and the calibration gases used.

d) Control Device Efficiency Testing and Monitoring

1) The control device efficiency shall be determined by simultaneously measuring the inlet and outlet gas phase VOM concentrations and gas volumetric flow rates in accordance with the gas phase test methods specified in subsection (f) of this Section.

2) An owner or operator:

A) That uses an afterburner or carbon adsorber to comply with any Section of Part 219 shall use Agency and USEPA approved continuous monitoring equipment which is installed, calibrated, maintained, and operated according to vendor specifications at all times the control device is in use except as provided in subsection (d)(3) of this Section. The continuous monitoring equipment must monitor the following parameters:

i) For each afterburner which does not have a catalyst bed, the combustion chamber temperature of each afterburner.

ii) For each afterburner which has a catalyst bed, commonly known as a catalytic afterburner, the temperature rise across each catalytic afterburner bed or VOM concentration of exhaust.

iii) For each carbon adsorber, the VOM concentration of each

carbon adsorption bed exhaust or the exhaust of the bed next in sequence to be desorbed.

B) Must install, calibrate, operate and maintain, in accordance with manufacturer's specifications, a continuous recorder on the temperature monitoring device, such as a strip chart, recorder or computer, having an accuracy of ± 1 percent of the temperature measured, expressed in degrees Celsius or ± 0.5° C, whichever is greater.

C) Of an automobile or light-duty truck primer surfacer operation or topcoat operation subject to subsection (d)(2)(A), shall keep a separate record of the following data for the control devices, unless alternative provisions are set forth in a permit pursuant to Title V of the Clean Air Act:

i) For thermal afterburners for which combustion chamber temperature is monitored, all 3-hour periods of operation in which the average combustion temperature was more than 28° C (50° F) below the average combustion temperature measured during the most recent performance test that demonstrated that the operation was in compliance.

ii) For catalytic afterburners for which temperature rise is monitored, all 3-hour periods of operation in which the average gas temperature before the catalyst bed is more than 28° C (50° F) below the average gas temperature immediately before the catalyst bed measured during the most recent performance test that demonstrated that the operation was in compliance.

iii) For catalytic afterburners and carbon adsorbers for which VOM concentration is monitored, all 3-hour periods of operation during which the average VOM concentration or the reading of organics in the exhaust gases is more than 20 percent greater than the average exhaust gas concentration or reading measured by the organic monitoring device during the most recent determination of the recovery efficiency of a carbon adsorber or performance test for a catalytic afterburner, which determination or test that demonstrated that the operation was in compliance.

3) An owner or operator that uses a carbon adsorber to comply with Section 219.401 of this Part may operate the adsorber during periods of monitoring equipment malfunction, provided that:

A) The owner or operator notifies in writing the Agency and USEPA, within 10 days after the conclusion of any 72 hour period during which the adsorber is operated and the associated monitoring equipment is not operational, of such monitoring equipment failure and provides the duration of the malfunction, a description of the repairs made to the equipment, and the total to date of all hours in the calendar year during which the adsorber was operated and the associated monitoring equipment was not operational;

B) During such period of malfunction the adsorber is operated using timed sequences as the basis for periodic regeneration of the adsorber;

C) The period of such adsorber operation does not exceed 360 hours in any calendar year without the approval of the Agency and USEPA; and

D) The total of all hours in the calendar year during which the adsorber was operated and the associated monitoring equipment was not operational shall be reported, in writing, to the Agency and USEPA by January 31 of the following calendar year.

e) Overall Efficiency

1) The overall efficiency of the emission control system shall be determined as the product of the capture system efficiency and the control device efficiency or by the liquid/liquid test protocol as specified in 40 CFR 60.433, incorporated by reference in Section 219.112 of this Part, (and revised by subsection (c)(1)(B) of this Section) for each solvent recovery system. In those cases in which the overall efficiency is being determined for an entire line, the capture efficiency used to calculate the product of the capture and control efficiency is the total capture efficiency over the entire line.

2) For coating lines which are both chosen by the owner or operator to comply with Section 219.207(a), (d), (e), (f), (g), (l), or (m) of this Part by the alternative in Section 219.207(b)(2) of this Part and meet the criteria allowing them to comply with Section 219.207 instead of Section 219.204 of this Part, the overall efficiency of the capture system and control device, as determined by the test methods and procedures specified in subsections (c), (d) and (e)(1) of this Section, shall be no less than the equivalent overall efficiency which shall be calculated by the following equation:

$$E = \frac{VOM_a - VOM_l}{VOM_a} \times 100$$

where:

E = Equivalent overall efficiency of the capture system and control device as a percentage;

VOM_a = Actual VOM content of a coating, or the daily-weighted average VOM content of two or more coatings (if more than one coating is used), as applied to the subject coating line as determined by the applicable test methods and procedures specified in subsection (a)(4)(i) of this Part in units of kg VOM/1 (lb VOM/gal) of coating solids as applied;

VOM_1 = The VOM emission limit specified in Sections 219.204 or 219.205 of this Part in units of kg VOM/1 (lb VOM/gal) of coating solids as applied.

f) Volatile Organic Material Gas Phase Source Test Methods
The methods in 40 CFR 60, appendix A, incorporated by reference in Section 219.112 of this Part delineated below shall be used to determine control device efficiencies.

1) 40 CFR 60, appendix A, Method 18, 25 or 25A, incorporated by reference in Section 219.112 of this Part as appropriate to the conditions at the site, shall be used to determine VOM concentration. Method selection shall be based on consideration of the diversity of organic species present and their total concentration and on consideration of the potential presence of interfering gases. Except as indicated in subsections (f)(1)(A) and (B) below, the test shall consist of three separate runs, each lasting a minimum of 60 min, unless the Agency and the USEPA determine that process variables dictate shorter sampling times.

A) When the method is to be used to determine the efficiency of a carbon adsorption system with a common exhaust stack for all the individual adsorber vessels, the test shall consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all the individual adsorber vessels.

B) When the method is to be used to determine the efficiency of a carbon adsorption system with individual exhaust stacks for each adsorber vessel, each adsorber vessel shall be tested individually. The test for each adsorber vessel shall consist of three separate runs. Each run shall coincide with one or more complete adsorption cycles.

2) 40 CFR 60, appendix A, Method 1 or 1A, incorporated by reference in Section 219.112 of this Part, shall be used for sample and velocity traverses.

3) 40 CFR 60, appendix A, Method 2, 2A, 2C or 2D, incorporated by reference in Section 219.112 of this Part, shall be used for velocity and volumetric flow rates.

4) 40 CFR 60, appendix A, Method 3, incorporated by reference in Section 219.112 of this Part, shall be used for gas analysis.

5) 40 CFR 60, appendix A, Method 4, incorporated by reference in Section 219.112 of this Part, shall be used for stack gas moisture.

6) 40 CFR 60, appendix A, Methods 2, 2A, 2C, 2D, 3 and 4, incorporated by reference in Section 219.112 of this Part, shall be performed, as applicable, at least twice during each test run.

7) Use of an adaptation to any of the test methods specified in subsections (f)(1), (2), (3), (4), (5) and (6) of this Section may not be used unless approved by the Agency and the USEPA on a case by case basis. An owner or operator must submit sufficient documentation for the Agency and the USEPA to find that the test methods specified in subsections (f)(1), (2), (3), (4), (5) and (6) of this Section will yield inaccurate results and that the proposed adaptation is appropriate.

g) Leak Detection Methods for Volatile Organic Material
Owners or operators required by this Part to carry out a leak detection monitoring program shall comply with the following requirements:

1) Leak Detection Monitoring

A) Monitoring shall comply with 40 CFR 60, appendix A, Method 21, incorporated by reference in Section 219.112 of this Part.

B) The detection instrument shall meet the performance criteria of Method 21.

C) The instrument shall be calibrated before use on each day of its use by the methods specified in Method 21.

D) Calibration gases shall be:

i) Zero air (less than 10 ppm of hydrocarbon in air); and

ii) A mixture of methane or n-hexane and air at a concentration of approximately, but no less than, 10,000 ppm methane or n-hexane.

E) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21.

2) When equipment is tested for compliance with no detectable emissions as required, the test shall comply with the following requirements:

A) The requirements of subsections (g)(1)(A) through (g)(1)(E) of this Section shall apply.

B) The background level shall be determined as set forth in Method 21.

3) Leak detection tests shall be performed consistent with:

A) "APTI Course SI 417 controlling Volatile Organic Compound Emissions from Leaking Process Equipment", EPA-450/2-82-015, incorporated by reference in Section 219.112 of this Part.

B) "Portable Instrument User's Manual for Monitoring VOM Sources", EPA-340/1-86-015, incorporated by reference in Section 219.112 of this Part.

C) "Protocols for Generating Unit-Specific Emission Estimates for Equipment Leaks of VOM and VHAP", EPA-450/3-88-010, incorporated by reference in Section 219.112 of this Part.

D) "Petroleum Refinery Enforcement Manual", EPA-340/1-80-008, incorporated by reference in Section 219.112 of this Part.

h) Bulk Gasoline Delivery System Test Protocol

1) The method for determining the emissions of gasoline from a vapor recovery system are delineated in 40 CFR 60, Subpart XX, section 60.503, incorporated by reference in Section 219.112 of this Part.

2) Other tests shall be performed consistent with:

A) "Inspection Manual for Control of Volatile Organic Emissions from Gasoline Marketing Operations: Appendix D", EPA-340/1-80-012, incorporated by reference in Section 219.112 of this Part.

B) "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals: Appendix A", EPA-450/2-77-026, incorporated by reference in Section 219.112 of this Part.

i) Notwithstanding other requirements of this Part, upon request of the Agency where it is necessary to demonstrate compliance, an owner or operator of an emission unit which is subject to this Part shall, at his own expense, conduct tests in accordance with the applicable test methods and procedures specific in this Part. Nothing in this Section shall limit the authority of the USEPA pursuant to the Clean Air Act, as amended, to require testing.

j) Stage II Gasoline Vapor Recovery Test Methods
The methods for determining the acceptable performance of Stage II Gasoline Vapor Recovery System are delineated in "Technical Guidance-Stage II Vapor Recovery Systems for Control of Vehicle Refueling Emissions at Gasoline Dispensing Facilities," found at EPA 450/3-91-022b and incorporated by reference in Section 219.112 of this Part. Specifically, the test methods are as follows:

1) Dynamic Backpressure Test is a test procedure used to determine the pressure drop (flow resistance) through balance vapor collection and control systems (including nozzles, vapor hoses, swivels, dispenser piping and underground piping) at prescribed flow rates.

2) Pressure Decay/Leak Test is a test procedure used to quantify the vapor tightness of a vapor collection and control system installed at gasoline dispensing facilities.

3) Liquid Blockage Test is a test procedure used to detect low points in any vapor collection and control system where condensate may accumulate.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

SUBPART E: SOLVENT CLEANING

Section 219.187 Other Industrial Solvent Cleaning Operations

a) Applicability. On and after January 1, 2012:

1) Except as provided in subsection (a)(2) of this Section, the requirements of this Section shall apply to all cleaning operations that use organic materials at sources that emit a total of 226.8 kg per calendar month (500 lbs per calendar month) or more of VOM, in the absence of air pollution control equipment, from cleaning operations at the source other than cleaning operations identified in subsection (a)(2) of this Section. For purposes of this Section, "cleaning operation" means the process of

cleaning products, product components, tools, equipment, or general work areas during production, repair, maintenance or servicing, including but not limited to spray gun cleaning, spray booth cleaning, large and small manufactured components cleaning, parts cleaning, equipment cleaning, line cleaning, floor cleaning, and tank cleaning, at sources with emission units;

2) Notwithstanding subsection (a)(1) of this Section:

A) The following cleaning operations shall be exempt from the requirements of subsections (b), (c), (d), (e), (f), and (g) of this Section:

i) Cleaning operations subject to the limitations in Sections 219.182, 219.183, or 219.184;

ii) Janitorial cleaning;

iii) Stripping of cured coatings, inks, or adhesives;

iv) Cleaning operations in printing pre-press areas, including the cleaning of film processors, color scanners, plate processors, film cleaning, and plate cleaning;

B) Cleaning operations for emission units within the following ~~source~~ categories shall be exempt from the requirements of subsections (b), (c), (d), (e), (f), and (g) of this Section:

i) Flexible package printing;

ii) Lithographic printing;

iii) Letterpress printing;

iv) Flat wood paneling coating;

v) Large appliance coating;

vi) Metal furniture coating;

vii) Paper, film, and foil coating;

viii) Wood furniture coating;

ix) Plastic parts coating;

x) Miscellaneous metal parts coating;

xi) Fiberglass boat manufacturing;

xii) Miscellaneous industrial adhesives; and

xiii) Auto and light-duty truck assembly coating;

C) The following cleaning operations shall be exempt from the requirements of subsections (b), (c), (f), and (g) of this Section:

i) Cleaning of solar cells, laser hardware, scientific instruments, and high-precision optics;

ii) Cleaning conducted as part of performance laboratory tests on coatings, adhesives, or inks; research and development operations; or laboratory tests in quality assurance laboratories;

iii) Cleaning of paper-based gaskets and clutch assemblies where rubber is bonded to metal by means of an adhesive;

iv) Cleaning of cotton swabs to remove cottonseed oil before cleaning of high-precision optics;

v) Cleaning of medical device and pharmaceutical manufacturing operations if the facility uses no more than 5.7 liters (1.5 gallons) per day of solvents for such cleaning;

vi) Cleaning of adhesive application equipment used for thin metal laminating;

vii) Cleaning of electronic or electrical cables;

viii) Touch-up cleaning performed on printed circuit boards where surface mounted devices have already been attached;

ix) Cleaning of coating and adhesive application processes utilized to manufacture transdermal drug delivery products using no more than three gallons per day of ethyl acetate;

x) Cleaning of application equipment used to apply coatings on satellites and radiation effect coatings;

xi) Cleaning of application equipment used to apply solvent-borne fluoropolymer coatings;

xii) Cleaning of ultraviolet or electron beam adhesive application;

xiii) Cleaning of sterilization indicating ink application equipment if the facility uses no more than 5.7 liters (1.5 gallons) per day of solvents for such cleaning;

xiv) Cleaning of metering rollers, dampening rollers, and printing plates;

xv) Cleaning of numismatic dies; and

xvi) Cleaning operations associated with digital printing;~~.~~

xvii) Cleaning with aerosol products if the facility uses no more than 4.7 liters (1.25 gallons) per day of such products;

xviii) Cleaning of plastic-based or vinyl-based substrates for use in the screen printing process when using UV curable ink and coating systems;

xix) Cleaning conducted as part of performance tests on coatings, adhesives, or inks that are in research and development and that are not yet commercially used for the applications for which they are being tested. This exemption is limited to the use of up to a total of 90.9 liters (24 gallons) of cleaning solvent per calendar month and 416.3 liters (110 gallons) of cleaning solvent per calendar year for such cleaning.

b) Material and Control Requirements. No owner or operator of a source subject to this Section, other than manufacturers of coatings, inks, adhesives, or resins, shall perform any cleaning operation subject to this Section unless the owner or operator meets the requirements in subsection (b)(1), (b)(2), or (b)(3). No owner or operator of a source that manufactures coatings, inks, adhesives, or resins shall perform any cleaning operation subject to this Section unless the owner or operator meets the requirements in at least one of the following subsections: (b)(1), (b)(2), (b)(3), (b)(4), or (b)(5).

1) The VOM content of the as-used cleaning solutions does not exceed the following emissions limitations:

			kg/l	lb/gal
A)	Product cleaning during manufacturing process or surface preparation for coating, adhesive, or ink application:			
	i)	Electrical apparatus components and electronic components	0.10	0.83
	ii)	Medical device and pharmaceutical manufacturing	0.80	6.7
B)	Repair and maintenance cleaning:			
	i)	Electrical apparatus components and electronic	0.10	0.83
	ii)	Medical device and pharmaceutical manufacturing: tools, equipment, and machinery	0.80	6.7
	iii)	Medical device and pharmaceutical manufacturing: general work surfaces	0.60	5.0
C)	Cleaning of ink application equipment:			
	i)	Rotogravure printing that does not print flexible packaging	0.10	0.83
	ii)	Screen printing, including screen reclamation activities	0.50	4.2
	iii)	Ultraviolet ink and electron beam ink application equipment, except screen printing	0.65	5.4
	iv)	Flexographic printing that does not print flexible packaging	0.10	0.83
D)	Cleaning of equipment used in the manufacture of coatings, inks, adhesives, or resins		kg/l 0.20	lb/gal 1.67

		kg/l	lb/gal
E)	All other cleaning operations not subject to a specific limitation in subsections (b)(1)(A) through (b)(1)(D) of this Section	0.050	0.42

2) The VOM composite vapor pressure of each as-used cleaning solution used does not exceed 8.0 mmHg measured at 20°C (68°F);

3) An afterburner or carbon adsorber is installed and operated that reduces VOM emissions from the subject cleaning operation by at least 85 percent overall, or for sources that manufacture coatings, inks, adhesives, or resins, an afterburner or carbon adsorber is installed and operated that reduces VOM emissions from the subject cleaning operation by at least 80 percent overall and has a 90 percent efficiency. The owner or operator may use an emissions control system other than an afterburner or carbon adsorber if such device reduces VOM emissions from the subject cleaning operation in accordance with the applicable capture and control requirements above, the owner or operator submits a plan to the Agency detailing appropriate monitoring devices, test methods, recordkeeping requirements, and operating parameters for such control device, and such plan is approved by the Agency and USEPA within federally enforceable permit conditions;

4) For sources that manufacture coatings, inks, adhesives, or resins, the owner or operator complies with the following work practices:

   A) Equipment being cleaned is maintained leak-free;

   B) VOM-containing cleaning materials are drained from the cleaned equipment upon completion of cleaning;

   C) VOM-containing cleaning materials, including waste solvent, are not stored or disposed of in such a manner that will cause or allow evaporation into the atmosphere; and

   D) VOM-containing cleaning materials are stored in closed containers;

5) Sources that manufacture coatings, inks, adhesives, or resins may utilize solvents that do not comply with subsection (b)(1) or (b)(2) of this Section provided that all of the following requirements are met:

   A) No more than 228 l (60 gal) of fresh solvent is used per calendar month. Solvent that is reused or recycled, either onsite or offsite, for further use in equipment cleaning or in the manufacture of

coatings, inks, adhesives, or resins, shall not be included in this limit;

B) Solvents, including cleanup solvents, are collected and stored in closed containers; and

C) Records are maintained in accordance with subsection (e)(6).

c) The owner or operator of a subject source shall demonstrate compliance with this Section by using the applicable test methods and procedures specified in subsection (g) of this Section and by complying with the recordkeeping and reporting requirements specified in subsection (e) of this Section.

d) Operating Requirements. The owner or operator of a source subject to the requirements of this Section shall comply with the following for each subject cleaning operation. Such requirements are in addition to work practices set forth in subsections (b)(4) and (b)(5) of this Section, as applicable:

1) Cover open containers and properly cover and store applicators used to apply cleaning solvents;

2) Minimize air circulation around the cleaning operation;

3) Dispose of all used cleaning solutions, cleaning towels, and applicators used to apply cleaning solvents in closed containers;

4) Utilize equipment practices that minimize emissions;

5) When using cleaning solvent for wipe cleaning, sources that manufacture coatings, inks, adhesives, or resins shall:

A) Cover open containers used for the storage of spent or fresh organic compounds used for cleanup or coating, ink, adhesive, or resin removal; and

B) Cover open containers used for the storage or disposal of cloth or paper impregnated with organic compounds that are used for cleanup or coating, ink, adhesive, or resin removal.

e) Recordkeeping and Reporting Requirements

1) The owner or operator of a source exempt from the limitations of this Section because of the criteria in subsection (a)(1) of this Section shall comply with the following:

A) By January 1, 2012, or upon initial start-up of the source, whichever is later, submit a certification to the Agency that includes:

i) A declaration that the source is exempt from the requirements of this Section because of the criteria in subsection (a)(1);

ii) Calculations that demonstrate that combined emissions of VOM from cleaning operations at the source, other than cleaning operations identified in subsection (a)(2) of this Section, never equal or exceed 226.8 kg/month (500 lbs/month), in the absence of air pollution control equipment. An adjustment factor of 0.50 shall be used in calculating emissions from used shop towels if the VOM composite vapor pressure of each associated cleaning solution is demonstrated to be less than 10 mmHg at 20ºC (68ºF) and the shop towels are kept in closed containers. For cleaning solutions with VOM composite vapor pressure of equal to or greater than 10 mmHg measured at 20ºC (68ºF) and for shop towels that are not kept in closed containers, no emission adjustment factor shall be used;

B) On and after January 1, 2012, collect and record the following information each month for each cleaning operation, other than cleaning operations identified in subsection (a)(2) of this Section:

i) The name and identification of each VOM-containing cleaning solution as applied in each cleaning operation;

ii) The VOM content of each cleaning solution as applied in each cleaning operation;

iii) The weight of VOM per volume and the volume of each as-used cleaning solution; and

iv) The total monthly VOM emissions from cleaning operations at the source;

C) Notify the Agency of any record that shows that the combined emissions of VOM from cleaning operations at the source, other than cleaning operations identified in subsection (a)(2) of this Section, ever equal or exceed 226.8 kg/month (500 lbs/month), in the absence of air pollution control equipment, within 30 days after the event occurs.

2) All sources subject to the requirements of this Section shall:

A) By January 1, 2012 or upon initial start-up of the source, whichever is later, submit a certification to the Agency that includes:

i) A declaration that all subject cleaning operations are in compliance with the requirements of this Section;

ii) Identification of each subject cleaning operation and each VOM-containing cleaning solution used as of the date of certification in such operation;

iii) If complying with the emissions control system requirement, what type of emissions control system will be used;

iv) Initial documentation that each subject cleaning operation will comply with the applicable limitation, including copies of manufacturer's specifications, test results (if any), formulation data, and calculations;

v) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitations;

vi) A description of the practices and procedures that the source will follow to ensure compliance with the limitations in subsection (d), and, if applicable, subsection (b)(4); and

vii) A description of each cleaning operation exempt pursuant to subsection (a)(2), if any, and a listing of the emission units on which the exempt cleaning operation is performed;

B) At least 30 calendar days before changing the method of compliance between subsections (b)(1), (b)(2), (b)(4), or (b)(5) and subsection (b)(3) of this Section, notify the Agency in writing of such change. The notification shall include a demonstration of compliance with the newly applicable subsection;

3) All sources complying with this Section pursuant to the requirements of subsection (b)(1) of this Section shall collect and record the following information for each cleaning solution used:

A) For each cleaning solution that is prepared at the source with automatic equipment:

i) The name and identification of each cleaning solution;

ii) The VOM content of each cleaning solvent in the cleaning solution;

iii) Each change to the setting of the automatic equipment, with date, time, description of changes in the cleaning solution constituents (e.g., cleaning solvents), and a description of changes to the proportion of cleaning solvent and water (or other non-VOM);

iv) The proportion of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution;

v) The VOM content of the as-used cleaning solution, with supporting calculations; and

vi) A calibration log for the automatic equipment, detailing periodic checks;

B) For each batch of cleaning solution that is not prepared at the source with automatic equipment:

i) The name and identification of each cleaning solution;

ii) Date, time of preparation, and each subsequent modification of the batch;

iii) The VOM content of each cleaning solvent in the cleaning solution;

iv) The total amount of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution; and

v) The VOM content of the as-used cleaning solution, with supporting calculations. For cleaning solutions that are not prepared at the site but are used as purchased, the manufacturer's specifications for VOM content may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 219.105(a) of this Part;

4) All sources complying with this Section pursuant to the requirements of subsection (b)(2) of this Section shall collect and record the following information for each cleaning solution used:

A) The name and identification of each cleaning solution;

B) Date, time of preparation, and each subsequent modification of the batch;

C) The molecular weight, density, and VOM composite partial vapor pressure of each cleaning solvent, as determined in accordance with the applicable methods and procedures specified in Section 219.110 of this Part;

D) The total amount of each cleaning solvent used to prepare the as-used cleaning solution; and

E) The VOM composite partial vapor pressure of each as-used cleaning solution, as determined in accordance with the applicable methods and procedures specified in Section 219.110 of this Part;

5) All sources complying with this Section pursuant to the requirements of subsection (b)(3) of this Section shall comply with the following:

A) By January 1, 2012, or upon initial start-up of the source, whichever is later, and upon initial start-up of a new emissions control system, include in the certification required by subsection (e)(3) of this Section a declaration that the monitoring equipment required under subsection (f) of this Section has been properly installed and calibrated according to manufacturer's specifications;

B) If testing of an emissions control system is conducted pursuant to subsection (g) of this Section, the owner or operator shall, within 90 days after conducting such testing, submit a copy of all test results to the Agency and shall submit a certification to the Agency that includes the following:

i) A declaration that all tests and calculations necessary to demonstrate compliance with subsection (b)(3) of this Section have been properly performed;

ii) A statement whether the subject cleaning operation is or is not in compliance with subsection (b)(3) of this Section;

iii) The operating parameters of the emissions control system during testing, as monitored in accordance with subsection (f) of this Section;

C) Collect and record daily the following information for each cleaning operation subject to the requirements of subsection (b)(3) of this Section:

i) Emissions control system monitoring data in accordance with subsection (f) of this Section, as applicable;

ii) A log of operating time for the emissions control system, monitoring equipment, and associated cleaning equipment;

iii) A maintenance log for the emissions control system and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and duration of any outages;

D) Maintain records documenting the use of good operating practices consistent with the equipment manufacturer's specifications for the cleaning equipment being used and the emissions control system equipment. At a minimum, these records shall include:

i) Records for periodic inspection of the cleaning equipment and emissions control system equipment with date of inspection, individual performing the inspection, and nature of inspection;

ii) Records for repair of malfunctions and breakdowns with identification and description of incident, date identified, date repaired, nature of repair, and the amount of VOM released into the atmosphere as a result of the incident;

6) All sources complying with this Section pursuant to the requirements of subsection (b)(5) of this Section shall collect and record monthly the following information for each cleaning operation subject to the requirements of subsection (b)(5) of this Section:

A) The name, identification, and volume of each VOM-containing cleaning solution as applied in each cleaning operation;

B) The volume of each fresh cleaning solvent used for cleaning coating, ink, adhesive, or resin manufacturing equipment;

C) The volume of cleaning solvent recovered for either offsite or onsite reuse or recycling for further use in the cleaning of coating, ink, adhesive, or resin manufacturing equipment;

7) The owner or operator of a source with cleaning operations that fall under~~subject to~~ one or more of the exclusions set forth in subsection (a)(2)(C)(v), ~~or~~ (a)(2)(C)(xiii), or (a)(2)(C)(xvii), including sources exempt from the limitations of this Section because of the criteria in subsection (a)(1), shall:

A) By January 1, 2012, or upon initial start-up of the source, whichever is later, submit a certification to the Agency that includes a declaration that the source has cleaning operations that fall under~~subject to~~ one or more of the exclusions set forth in subsection (a)(2)(C)(v), ~~or~~ (a)(2)(C)(xiii), or (a)(2)(C)(xvii) and a statement identifying each such cleaning operation and the exclusion applicable to each cleaning operation;

B) Collect and record the name, identification, and volume of each cleaning solvent as applied each day in each cleaning operation that falls under~~subject to~~ one or more of the exclusions set forth in subsection (a)(2)(C)(v), ~~or~~ (a)(2)(C)(xiii) or (a)(2)(C)(xvii); and

C) Notify the Agency in writing if the amount of cleaning solvent used in the cleaning of medical device and pharmaceutical manufacturing operations or of sterilization indicating ink application equipment at the source ever exceeds 5.7 liters (1.5 gallons) per day, or if the amount of aerosol cleaning products used at the source ever exceeds 4.7 liters (1.25 gallons) per day, within 30 days after the exceedance occurs;

8) The owner or operator of a source with cleaning operations that fall under one or more of the exclusions set forth in Section 219.187(a)(2)(C)(xviii) or (a)(2)(C)(xix), including sources exempt from the limitations of this Section because of the criteria in Section 219.187(a)(1) of this Subpart, shall:

A) By January 1, 2012, or upon initial start-up of the source, whichever is later, submit a certification to the Agency that includes a declaration that the source has cleaning operations that fall under one or more of the exclusions set forth in Section 219.187(a)(2)(C)(xviii) or (a)(2)(C)(xix), and a statement identifying each such cleaning operation and the exclusion applicable to each cleaning operation;

B) Collect and record the name identification, volume, and VOM content of each cleaning solvent as applied each month in each cleaning operation that falls under one or more of the exclusions set forth in Section 219.187(a)(2)(C)(xviii) or (a)(2)(C)(xixi);

C) For cleaning operations that fall under the exclusion set forth in Section 219.187(a)(2)(C)(xviii), collect and record each month information demonstrating that the exempt cleaning solvent is being used exclusively for the cleaning of plastic-based or vinyl-based substrates for use in the screen printing process when using UV curable ink and coating systems; and

D) For cleaning operations that fall under the exclusion set forth in Section 219.187(a)(2)(C)(xix), collect and record each month information demonstrating that the exempt cleaning solvent is being used exclusively for production line performance testing of coatings that are in research and development and are not yet commercially used for the applications for which they are being tested;

8) All sources subject to the requirements of subsections (b) and (d) of this Section shall notify the Agency of any violation of subsection (b) or (d) by providing a description of the violation and copies of records documenting the violation to the Agency within 30 days following the occurrence of the violation;

9) All records required by this subsection (e) shall be retained by the source for at least three years and shall be made available to the Agency upon request.

f) Monitoring Requirements

1) If an afterburner or carbon adsorber is used to demonstrate compliance, the owner or operator of a source subject to subsection(b)(3) of this Section shall:

A) Install, calibrate, operate, and maintain temperature monitoring devices with an accuracy of $3^{o}C$ or $5^{o}F$ on the emissions control system in accordance with Section 219.105(d)(2) of this Part and in accordance with the manufacturer's specifications. Monitoring shall be performed at all times when the emissions control system is operating; and

B) Install, calibrate, operate and maintain, in accordance with manufacturer's specifications, a continuous recorder on the temperature monitoring devices, such as a strip chart, recorder or

computer, with at least the same accuracy as the temperature monitor;

2) If a carbon adsorber is used to demonstrate compliance, the owner or operator of a source subject to Section 219.187(b)(3) of this Subpart shall use Agency and USEPA approved continuous monitoring equipment which is installed, calibrated, maintained, and operated according to vendor specifications at all times the control device is in use. The continuous monitoring equipment shall monitor the VOM concentration of each carbon adsorption bed or the exhaust of the bed next in sequence to be desorbed;

3)~~2)~~ If an emissions control system other than an afterburner or carbon adsorber is used to demonstrate compliance, the owner or operator of a source subject to subsection (b)(3) of this Section shall install, maintain, calibrate, and operate such monitoring equipment as set forth in the owner's or operator's plan approved by the Agency and USEPA pursuant to subsection (b)(3).

g) Testing Requirements

1) Testing to demonstrate compliance with the requirements of this Section shall be conducted by the owner or operator within 90 days after a request by the Agency, or as otherwise specified in this Section. Such testing shall be conducted at the expense of the owner or operator and the owner or operator shall notify the Agency in writing 30 days in advance of conducting the testing to allow the Agency to be present during the testing;

2) Testing to demonstrate compliance with the VOM content limitations in subsection (b)(1) of this Section, and to determine the VOM content of cleaning solvents and cleaning solutions, shall be conducted as follows:

A) The applicable test methods and procedures specified in Section 219.105(a) of this Part shall be used; provided, however, Method 24, incorporated by reference in Section 219.112 of this Part, shall be used to demonstrate compliance; or

B) The manufacturer's specifications for VOM content for cleaning solvents may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 219.105(a) of this Part; provided, however, Method 24 shall be used to determine compliance. In the event of any inconsistency between a Method 24 test and the manufacturer's specifications, the Method 24 test shall govern;

3) Testing to determine the VOM composite partial vapor pressure of cleaning solvents, cleaning solvent concentrates, and as-used cleaning solutions shall be conducted in accordance with the applicable methods and procedures specified in Section 219.110 of this Part;

4) For afterburners and carbon adsorbers, the methods and procedures of Section 219.105(d) through (f) shall be used for testing to demonstrate compliance with the requirements of subsection (b)(3) of this Section, as follows:

A) To select the sampling sites, Method 1 or 1A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 219.112 of this Part;

B) To determine the volumetric flow rate of the exhaust stream, Method 2, 2A, 2C, or 2D, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 219.112 of this Part;

C) To determine the VOM concentration of the exhaust stream entering and exiting the emissions control system, Method 25 or 25A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 219.112 of this Part. For thermal and catalytic afterburners, Method 25 must be used except under the following circumstances, in which case Method 25A must be used:

i) The allowable outlet concentration of VOM from the emissions control system is less than 50 ppmv, as carbon;

ii) The VOM concentration at the inlet of the emissions control system and the required level of control result in exhaust concentrations of VOM of 50 ppmv, or less, as carbon; and

iii) Due to the high efficiency of the emissions control system, the anticipated VOM concentration at the emissions control system exhaust is 50 ppmv or less, as carbon, regardless of inlet concentration. If the source elects to use Method 25A under this option, the exhaust VOM concentration must be 50 ppmv or less, as carbon, and the required destruction efficiency must be met for the source to have demonstrated compliance. If the Method 25A test results show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, a retest is required. The retest shall be conducted using either Method 25 or Method 25A. If the retest is conducted

using Method 25A and the test results again show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, the source must retest using Method 25;

D) During testing, the cleaning equipment shall be operated at representative operating conditions and flow rates;

5) An owner or operator using an emissions control system other than an afterburner or carbon adsorber shall conduct testing to demonstrate compliance with the requirements of subsection (b)(3) of this Section as set forth in the owner's or operator's plan approved by the Agency and USEPA as federally enforceable permit conditions pursuant to subsection (b)(3).

(Source: Amended at 35 Ill. Reg. _____, effective _____)

SUBPART F: COATING OPERATIONS

Section 219.204 Emission Limitations

Except as provided in Sections 219.205, 219.207, 219.208, 219.212, 219.215 and 219.216 of this Subpart, no owner or operator of a coating line shall apply at any time any coating in which the VOM content exceeds the following emission limitations for the specified coating. Except as otherwise provided in subsections (a), (c), (g), (h), (j), (l), (n), (o), and (q) of this Section, compliance with the emission limitations marked with an asterisk in this Section is required on and after March 15, 1996, and compliance with emission limitations not marked with an asterisk is required until March 15, 1996. The following emission limitations are expressed in units of VOM per volume of coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied at each coating applicator, except where noted. Compounds which are specifically exempted from the definition of VOM should be treated as water for the purpose of calculating the "less water" part of the coating composition. Compliance with this Subpart must be demonstrated through the applicable coating analysis test methods and procedures specified in Section 219.105(a) of this Part and the recordkeeping and reporting requirements specified in Section 219.211(c) of this Subpart except where noted. (Note: The equation presented in Section 219.206 of this Part shall be used to calculate emission limitations for determining compliance by add-on controls, credits for transfer efficiency, emissions trades and cross-line averaging.) The emission limitations are as follows:

			kg/l	lb/gal
a)	Automobile or Light-Duty Truck Coating			
	1)	Prior to May 1, 2012:		
		A) Prime coat	0.14 0.14*	(1.2) (1.2)*
		B) Primer surface coat	1.81	(15.1)

1.81*	(15.1)*

BOARD NOTE: The primer surface coat limitation is in units of kg (lbs) of VOM per l (gal) of coating solids deposited. Compliance with the limitation shall be based on the daily-weighted average from an entire primer surface operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 219.105(b)(1)(A) and the recordkeeping and reporting requirements specified in Section 219.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 219.205 does not apply to the primer surface limitation.)

C) Topcoat	kg/l	lb/gal
	1.81	(15.1)
	1.81*	(15.1)*

BOARD NOTE: The topcoat limitation is in units of kg (lbs) of VOM per l (gal) of coating solids deposited. Compliance with the limitation shall be based on the daily-weighted average from an entire topcoat operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 219.105(b)(1)(A) of this Part and the recordkeeping and reporting requirements specified in Section 219.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 219.205 of this Part does not apply to the topcoat limitation.)

D) Final repair coat	kg/l	lb/gal
	0.58	(4.8)
	0.58*	(4.8)*

2) On and after May 1, 2012, subject automobile and light-duty truck coating lines shall comply with the following limitations. These limitations shall not apply to materials supplied in containers with a net volume of 0.47 liters (16 oz) or less, or a net weight of 0.45 kg (1 lb) or less:

A) Electrodeposition primer (EDP) operations. For purposes of this subsection (a)(2)(A), "electrodeposition" means a water-borne dip coating process in which opposite electrical charges are applied to the substrate and the coating. The coating is attracted to the substrate due to the electrochemical potential difference that is created.

kg VOM/l coating	lb VOM/gal coating solids

			solids applied	applied
	i)	When solids turnover ratio (R_T) is greater than or equal to 0.160	0.084	(0.7)
	ii)	When R_T is greater than or equal to 0.040 and less than 0.160	$0.084 \times 350^{0.160-R_T}$	$(0.084 \times 350^{0.160-R_T} \times 8.34)$

B) Primer surfacer operations

			kg VOM/l coating solids deposited	lb VOM/gal coating solids deposited
	i)	VOM content limitation	1.44	(12.0)

ii) Compliance with the limitation set forth in subsection (a)(2)(B)(i) shall be based on the daily-weighted average from an entire primer surfacer operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 219.105(b)(1)(B) and the recordkeeping and reporting requirements specified in Section 219.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 219.205 does not apply to the primer surfacer limitation.

C) Topcoat operations

			kg VOM/l coating solids deposited	lb VOM/gal coating solids deposited
	i)	VOM content limitation	1.44	(12.0)

ii) Compliance with the limitation set forth in subsection (a)(2)(C)(i) shall be based on the daily-weighted average from an entire topcoat operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 219.105(b)(1)(B) and the recordkeeping and reporting requirements specified in Section 219.211(f).

Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 219.205 does not apply to the topcoat limitation.

D) Combined primer surfacer and topcoat operations

		kg VOM/l coating solids deposited	lb VOM/gal coating solids deposited
i)	VOM content limitation	1.44	(12.0)

ii) Compliance with the limitation set forth in subsection (a)(2)(D)(i) shall be based on the daily-weighted average from the combined primer surfacer and topcoat operations. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 219.105(b)(1)(B) and the recordkeeping and reporting requirements specified in Section 219.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 219.205 does not apply to the combined primer surfacer and topcoat limitation.

E) Final repair coat operations

		kg/l coatings	lb/gal coatings
i)	VOM content limitation	0.58	(4.8)

ii) Compliance with the final repair operations limitation set forth in subsection (a)(2)(E)(i) shall be on an occurrence-weighted average basis, calculated in accordance with the equation below, in which clear coatings shall have a weighting factor of 2 and all other coatings shall have a weighting factor of 1. For purposes of this subsection (a)(2)(E)(ii), an "occurrence" is the application of the combination of coatings that constitute a final repair coat for a single automobile or light-duty truck. Section 219.205 does not apply to the final repair coat limitation.

$$VOM_{tot} = \frac{2VOM_{cc} + \sum_{i=1}^{n} VOM_i}{n+2}$$

where:

VOM_{tot} = Total VOM content of all coatings, as applied, on an occurrence weighted average basis, and used to determine compliance with this subsection (a)(2)(E).

i = Subscript denoting a specific coating applied.

n = Total number of coatings applied in the final repair operation, other than clear coatings.

VOM_{cc} = The VOM content, as applied, of the clear coat used in the final repair operation.

VOM_i = The VOM content of each coating used in the final repair operation, as applied, other than clear coatings.

F) Miscellaneous Materials. For reactive adhesives subject to this subsection (a)(2)(F), compliance shall be demonstrated in accordance with the methods and procedures set forth in appendix A to Subpart PPPP of 40 CFR 63, incorporated by reference in Section 219.112 of this Part.

		kg/l	lb/gal
i)	Glass bonding primer	0.90	(7.51)
ii)	Adhesive	0.25	(2.09)
iii)	Cavity wax	0.65	(5.42)
iv)	Trunk sealer	0.65	(5.42)
v)	Deadener	0.65	(5.42)
vi)	Gasket/gasket sealing material	0.20	(1.67)
vii)	Underbody coating	0.65	(5.42)
viii)	Trunk interior coating	0.65	(5.42)
ix)	Bedliner	0.20	(1.67)

x) Weatherstrip adhesive	0.75	(6.26)
xi) Lubricating wax/compound	0.70	(5.84)

b)	Can Coating		kg/l	lb/gal
	1)	Sheet basecoat and overvarnish		
		A) Sheet basecoat	0.34 0.26*	(2.8) (2.2)*
		B) Overvarnish	0.34 0.34	(2.8) (2.8)*
	2)	Exterior basecoat and overvarnish	0.34 0.25*	(2.8) (2.1)*
	3)	Interior body spray coat		
		A) Two piece	0.51 0.44*	(4.2) (3.7)*
		B) Three piece	0.51 0.51*	(4.2) (4.2)*
	4)	Exterior end coat	0.51 0.51*	(4.2) (4.2)*
	5)	Side seam spray coat	0.66 0.66*	(5.5) (5.5)*
	6)	End sealing compound coat	0.44 0.44*	(3.7) (3.7)*

c)	Paper Coating			
	1)	Prior to May 1, 2011:	kg/l 0.28	lb/gal (2.3)
	2)	On and after May 1, 2011:	kg VOM/kg (lb VOM/lb) solids applied	kg VOM/kg (lb VOM/lb) coatings applied
		A) Pressure sensitive tape and label surface coatings	0.20	(0.067)

B)	All other paper coatings	0.40	(0.08)

3) The paper coating limitation set forth in this subsection (c) shall not apply to any owner or operator of any paper coating line on which flexographic, rotogravure, lithographic, or letterpress printing is performed if the paper coating line complies with the applicable emissions limitations in Subpart H of this Part. In addition, screen printing on paper is not regulated as paper coating, but is regulated under Subpart TT of this Part. On and after May 1, 2011, the paper coating limitation shall also not apply to coating performed on or in-line with any digital printing press, or to size presses and on-machine coaters on papermaking machines applying sizing or water-based clays.

		kg/l	lb/gal
d)	Coil Coating	0.31	(2.6)
		0.20*	(1.7)*
e)	Fabric Coating	0.35	(2.9)
		0.28*	(2.3)*
f)	Vinyl Coating	0.45	(3.8)
		0.28*	(2.3)*

g) Metal Furniture Coating

1)	Prior to May 1, 2011:		kg/l	lb/gal
	A)	Air dried	0.34	(2.8)
	B)	Baked	0.28	(2.3)
2)	On and after May 1, 2011:		kg/l (lb/gal)	kg/l (lb/gal) solids applied
	A)	General, One Component	0.275 (2.3)	0.40 (3.3)
	B)	General, Multi-Component		
		i) Air dried	0.340 (2.8)	0.55 (4.5)
		ii) Baked	0.360 (3.0)	0.61 (5.1)
	C)	Extreme High Gloss		
		i) Air dried	0.340 (2.8)	0.55 (4.5)

ii) Baked	0.360 (3.0)	0.61 (5.1)
D) Extreme Performance		
i) Air dried	0.420 (3.5)	0.80 (6.7)
ii) Baked	0.360 (3.0)	0.61 (5.1)
E) Heat Resistant		
i) Air dried	0.420 (3.5)	0.80 (6.7)
ii) Baked	0.360 (3.0)	0.61 (5.1)
F) Metallic	0.420 (3.5)	0.80 (6.7)
G) Pretreatment Coatings	0.420 (3.5)	0.80 (6.7)
H) Solar Absorbent		
i) Air dried	0.420 (3.5)	0.80 (6.7)
ii) Baked	0.360 (3.0)	0.61 (5.1)

3) On and after May 1, 2011, the limitations set forth in this subsection (g) shall not apply to stencil coatings, safety-indicating coatings, solid-film lubricants, electric-insulating and thermal-conducting coatings, touch-up and repair coatings, or coating applications utilizing hand-held aerosol cans.

h) Large Appliance Coating

1) Prior to May 1, 2011:	kg/l	lb/gal
A) Air dried	0.34	(2.8)
B) Baked	0.28	(2.3)
2) On and after May 1, 2011:	kg/l (lb/gal)	kg/l (lb/gal) solids applied
A) General, One Component	0.275	0.40

		(2.3)	(3.3)
B)	General, Multi-Component		
	i) Air dried	0.340 (2.8)	0.55 (4.5)
	ii) Baked	0.275 (2.3)	0.40 (3.3)
C)	Extreme High Gloss		
	i) Air dried	0.340 (2.8)	0.55 (4.5)
	ii) Baked	0.360 (3.0)	0.61 (5.1)
D)	Extreme Performance		
	i) Air dried	0.420 (3.5)	0.80 (6.7)
	ii) Baked	0.360 (3.0)	0.61 (5.1)
E)	Heat Resistant		
	i) Air dried	0.420 (3.5)	0.80 (6.7)
	ii) Baked	0.360 (3.0)	0.61 (5.1)
F)	Metallic	0.420 (3.5)	0.80 (6.7)
G)	Pretreatment Coatings	0.420 (3.5)	0.80 (6.7)
H)	Solar Absorbent		
	i) Air dried	0.420 (3.5)	0.80 (6.7)
	ii) Baked	0.360	0.61

3) The limitations set forth in this subsection (h) shall not apply to the use of quick-drying lacquers for repair of scratches and nicks that occur during assembly, provided that the volume of coating does not exceed 0.95 1 (1

quart) in any one rolling eight-hour period. On and after May 1, 2011, these limitations shall also not apply to stencil coatings, safety-indicating coatings, solid-film lubricants, electric-insulating and thermal-conducting coatings, touch-up and repair coatings, or coating applications utilizing hand-held aerosol cans.

		kg/l	lb/gal
i)	Magnet Wire Coating	0.20	(1.7)
		0.20*	(1.7)*
j)	Prior to May 1, 2012: Miscellaneous Metal Parts and Products Coating		
	1) Clear coating	0.52	(4.3)
		0.52*	(4.3)*
	2) Extreme performance coating		
	A) Air dried	0.42	(3.5)
		0.42*	(3.5)*
	B) Baked	0.42	(3.5)
		0.40*	(3.3)*
	3) Steel pail and drum interior coating	0.52	(4.3)
		0.52*	(4.3)*
	4) All other coatings		
	A) Air dried	0.42	(3.5)
		0.40*	(3.3)*
	B) Baked	0.36	(3.0)
		0.34*	(2.8)*
	5) Metallic Coating		
	A) Air dried	0.42	(3.5)
		0.42*	(3.5)*
	B) Baked	0.36	(3.0)
		0.36	(3.0)*

6) For purposes of subsection (j)(5) of this Section, "metallic coating" means a coating which contains more than ¼ lb/gal of metal particles, as applied.

BOARD NOTE: On and after May 1, 2012, the limitations in Section 219.204(q) shall apply to this category of coating.

			kg/l	lb/gal
k)	Heavy Off-Highway Vehicle Products Coating			
	1)	Extreme performance prime coat	0.42 0.42*	(3.5) (3.5)*
	2)	Extreme performance topcoat (air dried)	0.42 0.42*	(3.5) (3.5)*
	3)	Final repair coat (air dried)	0.42 0.42*	(3.5) (3.5)*

4) All other coatings are subject to the emission limitations for miscellaneous metal parts and products coatings in subsection (j).

l) Wood Furniture Coating

			kg/l	lb/gal
1)	Limitations before March 15, 1998:			
	A)	Clear topcoat	0.67	(5.6)
	B)	Opaque stain	0.56	(4.7)
	C)	Pigmented coat	0.60	(5.0)
	D)	Repair coat	0.67	(5.6)
	E)	Sealer	0.67	(5.6)
	F)	Semi-transparent stain	0.79	(6.6)
	G)	Wash coat	0.73	(6.1)

BOARD NOTE: Prior to March 15, 1998, an owner or operator of a wood furniture coating operation subject to this Section shall apply all coatings, with the exception of no more than 37.8 l (10 gal) of coating per day used for touch-up and repair operations, using one or more of the following application systems: airless spray application system, air-assisted airless spray application system, electrostatic spray application system, electrostatic bell or disc spray application system, heated airless spray application system, roller coating, brush or wipe coating application system, dip coating application system or high volume low pressure (HVLP) application system.)

2) On and after March 15, 1998, wood furniture sealers and topcoats must comply with one of the limitations specified in subsections (l)(2)(A) through (E):

		kg VOM/kg solids	lb VOM/lb solids
A)	Topcoat	0.8	(0.8)
B)	Sealers and topcoats with the following limits:		
i)	Sealer other than acid-cured alkyd amino vinyl sealer	1.9	(1.9)
ii)	Topcoat other than acid-cured alkyd amino conversion varnish topcoat	1.8	(1.8)
iii)	Acid-cured alkyd amino vinyl sealer	2.3	(2.3)
iv)	Acid-cured alkyd amino conversion varnish topcoat	2.0	(2.0)

C) Meet the provisions of Section 219.215 of this Subpart for use of an averaging approach;

D) Achieve a reduction in emissions equivalent to the requirements of subsection (l)(2)(A) or (B) of this Section, as calculated using Section 219.216 of this Subpart; or

E) Use a combination of the methods specified in subsections (l)(2)(A) through (D) of this Section.

3) Other wood furniture coating limitations on and after March 15, 1998:

		kg/l	lb/gal
A)	Opaque stain	0.56	(4.7)
B)	Non-topcoat pigmented coat	0.60	(5.0)
C)	Repair coat	0.67	(5.6)
D)	Semi-transparent stain	0.79	(6.6)
E)	Wash coat	0.73	(6.1)

4) Other wood furniture coating requirements on and after March 15, 1998:

A) No source subject to the limitations of subsection (l)(2) or (3) of this Section and utilizing one or more wood furniture coating spray

booths shall use strippable spray booth coatings containing more than 0.8 kg VOM/kg solids (0.8 lb VOM/lb solids), as applied.

B) Any source subject to the limitations of subsection (l)(2) or (3) of this Section shall comply with the requirements of Section 219.217 of this Subpart.

C) Any source subject to the limitations of subsection (l)(2)(A) or (B) of this Section and utilizing one or more continuous coaters, shall for each continuous coater, use an initial coating which complies with the limitations of subsection (l)(2)(A) or (B) of this Section. The viscosity of the coating in each reservoir shall always be greater than or equal to the viscosity of the initial coating in the reservoir. The owner or operator shall:

i) Monitor the viscosity of the coating in the reservoir with a viscosity meter or by testing the viscosity of the initial coating and retesting the coating in the reservoir each time solvent is added;

ii) Collect and record the reservoir viscosity and the amount and weight of VOM per weight of solids of coating and solvent each time coating or solvent is added; and

iii) Maintain these records at the source for a period of three years.

m)	Prior to May 1, 2012: Plastic Parts Coating: Automotive/Transportation		kg/l	lb/gal
1)	Interiors			
A)	Baked			
i)		Color coat	0.49*	(4.1)*
ii)		Primer	0.46*	(3.8)*
B)	Air dried			
i)		Color coat	0.38*	(3.2)*
ii)		Primer	0.42*	(3.5)*
2)	Exteriors (flexible and non-flexible)			
A)	Baked			

		i)	Primer	0.60*	(5.0)*
		ii)	Primer non-flexible	0.54*	(4.5)*
		iii)	Clear coat	0.52*	(4.3)*
		iv)	Color coat	0.55*	(4.6)*
	B)	Air dried			
		i)	Primer	0.66*	(5.5)*
		ii)	Clear coat	0.54*	(4.5)*
		iii)	Color coat (red & black)	0.67*	(5.6)*
		iv)	Color coat (others)	0.61*	(5.1)*
3)	Specialty				
	A)		Vacuum metallizing basecoats, texture basecoats	0.66*	(5.5)*
	B)		Black coatings, reflective argent coatings, air bag cover coatings, and soft coatings	0.71*	(5.9)*
	C)		Gloss reducers, vacuum metallizing topcoats, and texture topcoats	0.77*	(6.4)*
	D)		Stencil coatings, adhesion primers, ink pad coatings, electrostatic prep coatings, and resist coatings	0.82*	(6.8)*
	E)		Head lamp lens coatings	0.89*	(7.4)*

BOARD NOTE: On and after May 1, 2012, the limitations in Section 219.204(q) shall apply to this category of coating.

n) Prior to May 1, 2012: Plastic Parts Coating: Business Machine	kg/l	lb/gal
1) Primer	0.14*	(1.2)*
2) Color coat (non-texture coat)	0.28*	(2.3)*
3) Color coat (texture coat)	0.28*	(2.3)*
4) Electromagnetic interference/radio frequency interference (EMI/RFI) shielding coatings	0.48*	(4.0)*

5) Specialty Coatings

A)	Soft coat	0.52*	(4.3)*
B)	Plating resist	0.71*	(5.9)*
C)	Plating sensitizer	0.85*	(7.1)*

BOARD NOTE: On and after May 1, 2012, the limitations in Section 219.204(q) shall apply to this category of coating.

o) Flat Wood Paneling Coatings. On and after August 1, 2010, flat wood paneling coatings shall comply with one of the following limitations:

1) 0.25 kg VOM/l of coatings (2.1 lb VOM/gal coatings); or

2) 0.35 kg VOM/l solids (2.9 lb VOM/gal solids).

BOARD NOTE: The Board has omitted subsection (p) and adopted a subsection (q) in order to preserve consistent labeling with similar requirements in 35 Ill. Adm. Code 218.

q) Miscellaneous Metal Parts and Products Coatings and Plastic Parts and Products Coatings On and After May 1, 2012. On and after May 1, 2012, the owner or operator of a miscellaneous metal or plastic parts coating line shall comply with the limitations in this subsection (q). The limitations in this subsection (q) shall not apply to aerosol coating products, powder coatings, or primer sealants and ejection cartridge sealants used in ammunition manufacturing. Primer sealants and ejection cartridge sealants shall instead be regulated under Subpart TT of this Part.

1) Metal Parts and Products. For purposes of this subsection (q)(1), "corrosion resistant basecoat" means a water-borne epoxy coating applied via an electrodeposition process to a metal surface prior to spray coating, for the purpose of enhancing corrosion resistance. The limitations in this subsection (q)(1) shall not apply to stencil coats, safety-indicating coatings, solid-film lubricants, electric-insulating and thermal-conducting coatings, magnetic data storage disk coatings, and plastic extruded onto metal parts to form a coating. The limitations in Section 219.219, however, shall apply to these coatings unless specifically excluded in Section 219.219.

		kg VOM/l coating solids applied	lb VOM/gal coating solids applied
A)	General one component coating		

	i) Air dried	0.34 (2.8)	0.54 (4.52)
	ii) Baked	0.28 (2.3)	0.40 (3.35)
B)	General multi-component coating		
	i) Air dried	0.34 (2.8)	0.54 (4.52)
	ii) Baked	0.28 (2.3)	0.40 (3.35)
C)	Camouflage coating	0.42 (3.5)	0.80 (6.67)
D)	Electric-insulating varnish	0.42 (3.5)	0.80 (6.67)
E)	Etching filler	0.42 (3.5)	0.80 (6.67)
F)	Extreme high-gloss coating		
	i) Air dried	0.42 (3.5)	0.80 (6.67)
	ii) Baked	0.36 (3.0)	0.61 (5.06)
G)	Extreme performance coating		
	i) Air dried	0.42 (3.5)	0.80 (6.67)
	ii) Baked	0.36 (3.0)	0.61 (5.06)
H)	Heat-resistant coating		
	i) Air dried	0.42 (3.5)	0.80 (6.67)
	ii) Baked	0.36	0.61

		(3.0)	(5.06)
I)	High performance architectural coating	0.42 (3.5)	0.80 (6.67)
J)	High temperature coating	0.42 (3.5)	0.80 (6.67)
K)	Metallic coating		
	i) Air dried	0.42 (3.5)	0.80 (6.67)
	ii) Baked	0.36 (3.0)	0.61 (5.06)
L)	Military specification coating		
	i) Air dried	0.34 (2.8)	0.54 (4.52)
	ii) Baked	0.28 (2.3)	0.40 (3.35)
M)	Mold-seal coating	0.42 (3.5)	0.80 (6.67)
N)	Pan backing coating	0.42 (3.5)	0.80 (6.67)
O)	Prefabricated architectural coating: multi-component		
	i) Air dried	0.42 (3.5)	0.80 (6.67)
	ii) Baked	0.28 (2.3)	0.40 (3.35)
P)	Prefabricated architectural coating: one-component		
	i) Air dried	0.42 (3.5)	0.80 (6.67)
	ii) Baked	0.28	0.40

		(2.3)	(3.35)
Q)	Pretreatment coating	0.42 (3.5)	0.80 (6.67)
R)	Repair coats and touch-up coatings		
	i) Air dried	0.42 (3.5)	
	ii) Baked	0.36 (3.01)	
S)	Silicone release coating	0.42 (3.5)	0.80 (6.67)
T)	Solar-absorbent coating		
	i) Air dried	0.42 (3.5)	0.80 (6.67)
	ii) Baked	0.36 (3.0)	0.61 (5.06)
U)	Vacuum-metalizing coating	0.42 (3.5)	0.80 (6.67)
V)	Drum coating, new, exterior	0.34 (2.8)	0.54 (4.52)
W)	Drum coating, new, interior	0.42 (3.5)	0.80 (6.67)
X)	Drum coating, reconditioned, exterior	0.42 (3.5)	0.80 (6.67)
Y)	Drum coating, reconditioned, interior	0.50 (4.2)	1.17 (9.78)

Z)	Ammunition sealants			
	i)	Air dried	0.42 (3.5)	0.80 (6.67)
	ii)	Baked	0.36 (3.0)	0.61 (5.06)
AA)	Electrical switchgear compartment coatings			
	i)	Air dried	0.42 (3.5)	0.80 (6.67)
	ii)	Baked	0.36 (3.0)	0.61 (5.06)
BB)	All other coatings			
	i)	Air dried	0.40 (3.3)	0.73 (5.98)
	ii)	Baked: primer/topcoat	0.34 (2.8)	0.54 (4.52)

2) Plastic Parts and Products: Miscellaneous. For purposes of this subsection (q)(2), miscellaneous plastic parts and products are plastic parts and products that are not subject to subsection (q)(3), (q)(4), (q)(5), or (q)(6) of this Section. The limitations in subsection (q)(2) shall not apply to touch-up and repair coatings; stencil coats applied on clear or transparent substrates; clear or translucent coatings; coatings applied at a paint manufacturing facility while conducting performance tests on the coatings; any individual coating category used in volumes less than 189.2 liters (50 gallons) in any one calendar year, if the total usage of all such coatings does not exceed 756.9 liters (200 gallons) per calendar year per source and substitute compliant coatings are not available; reflective coatings applied to highway cones; mask coatings that are less than 0.5 mm thick (dried) if the area coated is less than 25 square inches; electromagnetic

interference/radio frequency interference (EMI/RFI) shielding coatings; and heparin-benzalkonium chloride (HBAC)-containing coatings applied to medical devices if the total usage of all such coatings does not exceed 378.4 liters (100 gallons) per calendar year per source. The limitations in Section 219.219, however, shall apply to such coatings unless specifically excluded in Section 219.219.)

		kg/l (lb/gal) coatings	kg/l (lb/gal) solids
A)	General one component coating	0.28 (2.3)	0.40 (3.35)
B)	General multi-component	0.42 (3.5)	0.80 (6.67)
C)	Electric dissipating coatings and shock-free coatings	0.80 (6.7)	8.96 (74.7)
D)	Extreme performance (2-pack coatings)	0.42 (3.5)	0.80 (6.67)
E)	Metallic coating	0.42 (3.5)	0.80 (6.67)
F)	Military specification coating		
	i) 1-pack coatings	0.28 (2.3)	0.54 (4.52)
	ii) 2-pack coatings	0.42 (3.5)	0.80 (6.67)
G)	Mold-seal coating	0.76 (6.3)	5.24 (43.7)
H)	Multi-colored coating	0.68 (5.7)	3.04 (25.3)
I)	Optical coating	0.80 (6.7)	8.96 (74.7)
J)	Vacuum-metalizing coating	0.80 (6.7)	8.96 (74.7)

3) Plastic Parts and Products Automotive/Transportation

		kg/l (lb/gal) coatings	kg/l (lb/gal) solids
A)	High bake coatings − interior and exterior parts		
i)	Flexible primer	0.54 (4.5)	1.39 (11.58)
ii)	Non-flexible primer	0.42 (3.5)	0.80 (6.67)
iii)	Basecoats	0.52 (4.3)	1.24 (10.34)
iv)	Clear coat	0.48 (4.0)	1.05 (8.76)
v)	Non-basecoat/clear coat	0.52 (4.3)	1.24 (10.34)
B)	Low bake/air dried coatings − exterior parts		
i)	Primers	0.58 (4.8)	1.66 (13.80)
ii)	Basecoat	0.60 (5.0)	1.87 (15.59)
iii)	Clear coats	0.54 (4.5)	1.39 (11.58)
iv)	Non-basecoat/clear coat	0.60 (5.0)	1.87 (15.59)
C)	Low bake/air dried coatings − interior parts		
i)	Color coat	0.38 (3.2)	0.67 (5.66)

ii)	Primer	0.42 (3.5)	0.80 (6.67)
D)	Touchup and repair coatings	0.62 (5.2)	2.13 (17.72)
E)	Specialty		
i)	Vacuum metallizing basecoats~~, texture basecoats~~	0.66 (5.5)	2.62 (21.8)
ii)	Vacuum metallizing topcoats	0.77 (6.4)	6.06 (49.1)

F) Red, yellow, and black coatings: Subject coating lines shall comply with a limit determined by multiplying the appropriate limit in subsections (q)(3)(A) through (q)(3)(C) of this Section by 1.15.

4) Plastic Parts and Products: Business Machine. The limitations of this subsection (q)(4) shall not apply to vacuum metallizing coatings, gloss reducers, texture topcoats, adhesion primers, electrostatic preparation coatings, stencil coats, and resist coats other than plating resist coats. The limitations in Section 219.219, however, shall apply to such coatings unless specifically excluded in Section 219.219.

		kg/l (lb/gal) coatings	kg/l (lb/gal) solids
A)	Primers	0.35 (2.9)	0.57 (4.80)
B)	Topcoat	0.35 (2.9)	0.57 (4.80)
C)	Color coat (texture coat)	0.28 (2.3)	0.40 (4.80)
D)	Color coat (non-texture coat)	0.28	0.40

		(2.3)	(4.80)
E)	Texture coats other than color texture coats	0.35 (2.9)	0.57 (4.80)
F)	EMI/RFI shielding coatings	0.48 (4.0)	1.05 (8.76)
G)	Fog coat	0.26 (2.2)	0.38 (3.14)
H)	Touchup and repair	0.35 (2.9)	0.57 (4.80)

5) Pleasure Craft Surface Coatings

		kg/l (lb/gal) coatings	kg/l (lb/gal) solids
A)	Extreme high gloss coating − topcoat	0.60~~0.49~~ (5.0)~~(4.1)~~	1.88~~1.10~~ (15.6)~~(9.2)~~
B)	High gloss coating − topcoat	0.42 (3.5)	0.80 (6.7)
C)	Pretreatment wash primer	0.78 (6.5)	6.67 (55.6)
D)	Finish primer surfacer	~~0.42 (3.5)~~	~~0.80 (6.7)~~
	Prior to January 1, 2014:	0.60 (5.0)	1.88 (15.6)
	On and after January 1, 2014:	0.42 (3.5)	0.80 (6.7)

E)	High build primer/surfacer	0.34 (2.8)	0.55 (4.6)
F)	Aluminum substrate antifoulant coating	0.56 (4.7)	1.53 (12.8)
G)	Other substrate antifoulant coating	0.40~~0.33~~ (3.3)~~(2.8)~~	0.73~~0.53~~ (5.8)~~(4.4)~~
H)	Antifouling Sealer/Tie Coat	0.42 (3.5)	0.80 (6.7)
I~~H~~)	All other pleasure craft surface coatings for metal or plastic	0.42 (3.5)	0.80 (6.7)

6) Motor Vehicle Materials

		kg/l (lb/gal) coatings
A)	Cavity wax	0.65 (5.42)
B)	Sealer	0.65 (5.42)
C)	Deadener	0.65 (5.42)
D)	Gasket/gasket sealing material	0.20 (1.67)
E)	Underbody coating	0.65 (5.42)
F)	Trunk interior coating	0.65 (5.42)
G)	Bedliner	0.20 (1.67)
H)	Lubricating wax/compound	0.70 (5.84)

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 219.207 Alternative Emission Limitations

a) Any owner or operator of a coating line subject to Section 219.204 of this Subpart, except coating lines subject to Section 219.204(q)(6), may comply with this Section, rather than with Section 219.204 of this Subpart, if a capture system and control device are operated at all times the coating line is in operation and the owner or operator demonstrates compliance with subsection (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), or (m) of this Section (depending upon the source category) through the applicable coating analysis and capture system and control device efficiency test methods and procedures specified in Section 219.105 of this Part and the recordkeeping and reporting requirements specified in Section 219.211(e) of this Subpart; and the control device is equipped with the applicable monitoring equipment specified in Section 219.105(d) of this Part and the monitoring equipment is installed, calibrated, operated and maintained according to vendor specifications at all times the control device is in use. A capture system and control device, which does not demonstrate compliance with subsection (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), or (m) of this Section may be used as an alternative to compliance with Section 219.204 of this Subpart only if the alternative is approved by the Agency and approved by the USEPA as a SIP revision. ~~The owner or operator of a pleasure craft surface coating operation subject to Section 219.204(q)(5)(A) through (G) of this Subpart may also comply with subsection (n) of this Section, rather than with Section 219.204 of this Subpart.~~

b) Alternative Add-On Control Methodologies

1) The coating line is equipped with a capture system and control device that provides 81 percent reduction in the overall emissions of VOM from the coating line and the control device has a 90 percent efficiency; or

2) The system used to control VOM from the coating line is demonstrated to have an overall efficiency sufficient to limit VOM emissions to no more than what is allowed under Section 219.204 of this Subpart. Use of any control system other than an afterburner, carbon adsorption, condensation, or absorption scrubber system can be allowed only if approved by the Agency and approved by the USEPA as a SIP revision. The use of transfer efficiency credits can be allowed only if approved by the Agency and approved by the USEPA as a SIP revision. Baseline transfer efficiencies and transfer efficiency test methods must be approved by the Agency and the USEPA. Such overall efficiency is to be determined as follows:

A) Obtain the emission limitation from the appropriate subsection in Section 219.204 of this Subpart;

B) Unless complying with an emission limitation in Section 219.204 that is already expressed in terms of weight of VOM per volume of solids, calculate "S" according to the equation in Section 219.206

of this Subpart. For coating lines subject to an emission limitation in Section 219.204 that is already expressed in terms of weight of VOM per volume of solids, "S" is equal to such emission limitation;

C) Calculate the overall efficiency required according to Section 219.105(e) of this Part. For the purposes of calculating this value, according to the equation in Section 219.105(e)(2) of this Part, VOM_1 is equal to the value of "S" as determined in subsection (b)(2)(B) of this Section. If the coating line is subject to an emission limitation in Section 219.204 of this Subpart that is already expressed in terms of weight of VOM per volume of solids, VOM_1 is equal to that emission limitation.

c) No owner or operator of a coating line subject to only one of the emission limitations from among Section 219.204(a)(1)(A), (a)(1)(D), (a)(2)(A),(a)(2)(E), (a)(2)(F), (c)(1), (d), (e), (f), or (i) of this Subpart and equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met. No owner or operator of a coating line subject to Section 219.204(a)(1)(B) (a) (1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart and equipped with a capture system and control device shall operate the coating line unless the owner or operator demonstrates compliance with such limitation in accordance with the topcoat protocol referenced in Section 219.105(b)(1)(A) or (b)(1)(B), as applicable.

d) No owner or operator of a miscellaneous metal parts and products coating line that applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 219.204(j) of this Subpart (e.g., all coatings used on the line are subject to 0.42 kg/l (3.5 lbs/gal)), and that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

e) No owner or operator of a heavy off-highway vehicle products coating line that applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 219.204(k) of this Subpart (e.g., all coatings used on the line are subject to 0.42 kg/l (3.5 lbs/gal)), and that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

f) No owner or operator of a wood furniture coating line that applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 219.204(l) of this Subpart (e.g., all coatings used on the line are subject to 0.67 kg/l (5.6 lbs/gal)), and that is equipped with a capture system and control device shall operate the subject coating line unless the

requirements in subsection (b)(1) or (b)(2) of this Section are met. If compliance is achieved by meeting the requirements in subsection (b)(2) of this Section, then the provisions in the note to Section 219.204(l) of this Subpart must also be met.

g) No owner or operator of a can coating line equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (g)(1) or (g)(2) of this Section are met.

1) An alternative daily emission limitation for the can coating operation, i.e., for all of the can coating lines at the source, shall be determined according to Section 219.205(c)(2) of this Subpart. Actual daily emissions shall never exceed the alternative daily emission limitation and shall be calculated by use of the following equation:

$$E_d = \sum_{i=1}^{n} V_i C_i \left(1 - F_i\right)$$

where:

E_d = Actual VOM emissions for the day in units of kg/day (lbs/day);

i = Subscript denoting the specific coating applied;

n = Total number of surface coatings as applied in the can coating operation;

V_i = Volume of each coating as applied for the day in units of l/day (gal/day) of coating (minus water and any compounds that are specifically exempted from the definition of VOM);

C_i = The VOM content of each coating as applied in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds that are specifically exempted from the definition of VOM); and

F_i = Fraction, by weight, of VOM emissions from the surface coating, reduced or prevented from being emitted to the ambient air. This is the overall efficiency of the capture system and control device.

2) The coating line is equipped with a capture system and control device that provide 75 percent reduction in the overall emissions of VOM from the coating line and the control device has a 90 percent efficiency.

h) No owner or operator of a plastic parts coating line that applies one or more

coatings during the same day, all of which are subject to the same numerical emission limitation within Section 219.204(m) or (n) of this Subpart (e.g., all coatings used on the line are subject to 0.42 kg/l (3.5 lbs/gal)), and that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

i) Prior to May 1, 2011, no owner or operator of a metal furniture coating line that applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 219.204(g) of this Subpart (e.g., all coatings used on the line are subject to 0.34 kg/l (2.8 lbs/gal)), and that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

j) Prior to May 1, 2011, no owner or operator of a large appliance coating line that applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 219.204(h) of this Subpart (e.g., all coatings used on the line are subject to 0.34 kg/l (2.8 lbs/gal)), and that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.

k) On and after May 1, 2011, no owner or operator of a paper coating line, metal furniture coating line, or large appliance coating line that is equipped with a capture system and control device shall operate the subject coating line unless either:

1) The capture system and control device provide at least 90 percent reduction in the overall emissions of VOM from the coating line; or

2) The owner or operator complies with the applicable limitation set forth in Section 219.204 of this Subpart by utilizing a combination of low-VOM coatings and a capture system and control device.

l) No owner or operator of a flat wood paneling coating line that is equipped with a capture system and control device shall operate the subject coating line unless either:

1) The capture system and control device provide at least 90 percent reduction in the overall emissions of VOM from the coating line; or

2) The owner or operator of the flat wood paneling coating line complies with all requirements set forth in subsection (b)(2) of this Section.

m) On and after May 1, 2011, no owner or operator of a miscellaneous metal parts and products coating line, plastic parts and products coating line, or pleasure craft surface coating line that is equipped with a capture system and control device shall operate the subject coating line unless:

1) The capture system and control device provide at least 90 percent reduction in the overall emissions of VOM from the coating line; or

2) The owner or operator of the coating line complies with all requirements set forth in subsection (b)(2) of this Section.

~~n) Emissions Averaging Alternative for Pleasure Craft Surface Coating Operations. The owner or operator of a source with coating operations subject to the requirements of Section 219.204(q)(5)(A) through (G) may elect to include such operations in the emissions averaging alternative. Coating operations utilizing this alternative shall comply with a source-specific VOM emission limit on a 12-month rolling average basis, calculated at the end of each calendar month. Subject coating operations that do not utilize the emissions averaging alternative and coating operations subject to Section 219.204(q)(5)(H), shall comply with the requirements in Section 219.204(q)(5) or 219.205, or subsection (m) of this Section, as applicable, as well as with all other applicable requirements in this Subpart.~~

~~1) The total actual VOM emissions determined by Equation 2 shall be equal to or less than the total allowable VOM emissions determined by Equation 1. The owner or operator of a source subject to this subsection (n) shall use Equation 1 to determine the total allowable source-specific VOM mass emission limit for pleasure craft coatings included in this emissions average:~~

~~Equation 1:~~

$$VOM_{Allowable} = \sum_{i=A}^{G} LIM_i V_i$$

~~where:~~

~~$VOM_{Allowable}$ = Total allowable mass of VOM that can be emitted from the pleasure craft coating operations included in the average, expressed in kilograms per 12-month period.~~

~~LIM_i = The applicable VOM content limit for a specified pleasure craft coating category from Section 219.204(q)(5)(A) through (G), expressed in kilograms per liter.~~

~~V_i~~ = ~~Volume of specified pleasure craft coating category from Section 219.204(q)(5)(A) through (G) used in the past 12 months, excluding water and any compounds that are exempt, expressed in liters.~~

~~i~~ = ~~Subscript denoting a specific pleasure craft coating category from Section 219.204(q)(5)(A) through (G).~~

~~2) At the end of the first 12-month averaging period, and at the end of each subsequent month, the owner or operator of a source subject to this subsection (n) shall use Equation 2 to calculate the total actual VOM emissions from the pleasure craft coating operations included in the emissions average.~~

~~Equation 2:~~

$$VOM_{Actual} = \sum_{i=A}^{G} VOM_i V_i$$

~~where:~~

~~VOM_{Actual}~~ = ~~VOM emissions calculated using the VOM content for all coatings from Section 219.204(q)(5)(A) through (G) that are included in the average and the volume of those coatings used, expressed in kilograms.~~

~~VOM_i~~ = ~~Weighted average of actual VOM content for a specified pleasure craft coating category from Section 219.204(q)(5)(A) through (G), expressed in kilograms per liter.~~

~~V_i~~ = ~~Total volume of specified pleasure craft coating category from Section 219.204(q)(5)(A) through (G) used in the past 12 months, excluding water and any compounds that are exempt, expressed in liters.~~

~~i~~ = ~~Subscript denoting a specific pleasure craft coating category from Section 219.204(q)(5)(A) through (G).~~

~~3) For purposes of Equation 2, the owner or operator of a source subject to this subsection (n) shall use Equation 3 to calculate the weighted average~~

~~VOM content for each coating included in the emissions average for the previous 12 months.~~

~~Equation 3:~~

$$VOM_i = \frac{\sum_{j=1}^{n} VOM_j V_j}{\sum_{j=1}^{n} V_j}$$

~~where:~~

~~VOM_i~~ = ~~Weighted average of actual VOM content for a specified pleasure craft coating category from Section 219.204(q)(5)(A) through (G), expressed in kilograms per liter.~~

~~VOM_j~~ = ~~VOM content of each pleasure craft coating used over the previous 12 months within a specific pleasure craft coating category, i.~~

~~V_i~~ = ~~Volume of each pleasure craft coating used in the previous 12 months, excluding water and any compounds that are exempt, within a specific pleasure craft coating category, i.~~

~~i~~ = ~~Subscript denoting a specific pleasure craft coating category from Section 219.204(q)(5)(A) through (G).~~

~~j~~ = ~~Subscript denoting a specific pleasure craft coating within a specified coating category, i.~~

~~n~~ = ~~Number of coatings applied within a specific coating category, i.~~

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 219.211 Recordkeeping and Reporting

a) The VOM content of each coating and the efficiency of each capture system and control device shall be determined by the applicable test methods and procedures specified in Section 219.105 of this Part to establish the records required under this Section.

b) Any owner or operator of a coating line that is exempted from the limitations of Section 219.204 of this Subpart because of Section 219.208(a) or (b) of this Subpart shall comply with the following:

1) For sources exempt from Section 219.208(a) of this Subpart, by a date consistent with Section 219.106 of this Part, the owner or operator of a coating line or group of coating lines referenced in subsection (b) of this Section shall certify to the Agency that the coating line or group of coating lines is exempt under the provisions of Section 219.208(a) of this Subpart. Such certification shall include:

A) A declaration that the coating line is exempt from the limitations of Section 219.204 of this Subpart because of Section 219.208(a) of this Subpart; and

B) Calculations that demonstrate that the combined VOM emissions from the coating line and all other coating lines in the same category never exceed 6.8 kg (15 lbs) per day before the application of capture systems and control devices. The following equation shall be used to calculate total VOM emissions:

$$T_e = \sum_{j=1}^{m} \sum_{i=1}^{n} \left(A_i B_i \right)_j$$

where:

T_e = Total VOM emissions from coating lines each day before the application of capture systems and control devices in units of kg/day (lbs/day);

m = Number of coating lines at the source that otherwise would be subject to the same subsection of Section 219.104 of this Part (because they belong to the same category, e.g., can coating);

j = Subscript denoting an individual coating line;

n = Number of different coatings as applied each day on each coating line;

i = Subscript denoting an individual coating;

A_i = Weight of VOM per volume of each coating (minus water and any compounds that are specifically exempted from the definition of VOM) as applied each day on each coating line in units of kg VOM/l (lbs VOM/gal); and

B_i = Volume of each coating (minus water and any compounds that are specifically exempted from the definition of VOM) as applied each day on each coating line in units of l/day (gal/day). The instrument or method by which the owner or operator accurately measured or calculated the volume of each coating as applied on each coating line each day shall be described in the certification to the Agency.

2) For sources exempt under Section 219.208(b) of this Subpart, by March 15, 1998, or upon initial start-up, the owner or operator of a coating line or a group of coating lines referenced in subsection (b) of this Section shall certify to the Agency that the source is exempt under the provisions of Section 219.208(b) of this Subpart. Such certification shall include:

A) A declaration that the source is exempt from the limitations of Section 219.204(l) of this Subpart because of Section 219.208(b) of this Subpart; and

B) Calculations that demonstrate that the source meets the criteria of exemption because of Section 219.208(b) of this Subpart.

3) For sources exempt under Section 219.208(a) of this Subpart, on and after a date consistent with Section 219.106 of this Part, the owner or operator of a coating line or group of lines referenced in this subsection shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:

A) The name and identification number of each coating as applied on each coating line; and

B) The weight of VOM per volume and the volume of each coating (minus water and any compounds that are specifically exempted from the definition of VOM) as applied each day on each coating line.

4) For sources exempt under Section 219.208(b) of this Subpart, on and after March 15, 1998, the owner or operator of a coating line or group of coating lines referenced in this subsection (b) shall collect and record all of the following information for each coating line and maintain the information at the source for a period of three years:

A) The name and identification number of each coating as applied on each coating line; and

B) The weight of VOM per volume and the volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied on each coating line on a monthly basis.

5) On and after a date consistent with Section 219.106 of this Part, the owner or operator of a coating line or group of coating lines exempted from the limitations of Section 219.204 of this Subpart because of Section 219.208(a) of this Subpart shall notify the Agency of any record showing that total VOM emissions from the coating line or group of coating lines exceed 6.8 kg (15 lbs) in any day before the application of capture systems and control devices by sending a copy of such record to the Agency within 30 days after the exceedance occurs.

6) On and after March 15, 1998, any owner or operator of a source exempt from the limitations of Section 219.204(l) of this Subpart because of Section 219.208(b) of this Subpart shall notify the Agency if the source's VOM emissions exceed the limitations of Section 219.208(b) of this Subpart by sending a copy of calculations showing such an exceedance within 30 days after the change occurs.

c) Any owner or operator of a coating line subject to the limitations of Section 219.204 of this Subpart other than Section 219.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart and complying by means of Section 219.204 of this Subpart shall comply with the following:

1) By a date consistent with Section 219.106 of this Part, or upon initial start-up of a new coating line, or upon changing the method of compliance from an existing subject coating line from Section 219.205, Section 219.207, Section 219.215, or Section 219.216 of this Subpart to Section 219.204 of this Subpart; the owner or operator of a subject coating line shall certify to the Agency that the coating line will be in compliance with Section 219.204 of this Subpart on and after a date consistent with Section 219.106 of this Part, or on and after the initial start-up date. The certification shall include:

A) The name and identification number of each coating as applied on each coating line;

B) The weight of VOM per volume of each coating (minus water and any compounds that are specifically exempted from the definition of VOM) as applied each day on each coating line;

C) On and after March 15, 1998, for coating lines subject to the limitations of Section 219.204(l)(2)(A) or (B) of this Subpart, the

weight of VOM per weight of solids in each coating as applied each day on each coating line;

D) For coating lines subject to the limitations of Section 219.204(c)(2) of this Subpart, the weight of VOM per weight of solids (or the weight of VOM per weight of coatings, as applicable) in each coating as applied each day on each coating line;

E) For coating lines subject to the limitations of Section 219.204(g)(2) or (h)(2) of this Subpart, the application methods used to apply coatings on the subject coating line and the weight of VOM per volume of each coating (or the weight of VOM per volume of solids in each coating, as applicable) as applied each day on each coating line;

F) For coating lines subject to the limitations of Section 219.204(o) of this Subpart, the weight of VOM per volume of coatings or solids, as applicable, for each coating as applied each day on each coating line;

G) For coating lines subject to the limitations of Section 219.204(a)(2)(A) of this Subpart, the weight of VOM per volume of solids in each coating as applied each day on each coating line, and the solids turnover ratio of the EDP operation, with supporting calculations;

H) For coating lines subject to the limitations of Section 219.204(a)(2)(E), the weight of VOM per volume and volume of each coating used in the final repair coat operation, and the weight of VOM per volume of the final repair coat as applied, calculated on an occurrence weighted average basis;

I) For coating lines subject to the limitations of Section 219.204(q) of this Subpart, the weight of VOM per volume of each coating, or the weight of VOM per volume of solids in each coating, as applicable, as applied each day on each coating line.

2) On and after a date consistent with Section 219.106 of this Part, or on and after the initial start-up date, the owner or operator of a subject coating line shall collect and record all of the following information each day, unless otherwise specified, for each coating line and maintain the information at the source for a period of three years:

A) The name and identification number of each coating as applied on each coating line;

B) The weight of VOM per volume of each coating (minus water and any compounds that are specifically exempted from the definition of VOM) as applied each day on each coating line;

C) On and after March 15, 1998, for coating lines subject to the limitations of Section 219.204(l)(2)(A) or (B) of this Subpart, the weight of VOM per weight of solids in each coating as applied each day on each coating line and certified product data sheets for each coating;

D) On and after March 15, 1998, for wood furniture coating spray booths subject to the limitation of Section 219.204(l)(4)(A) of this Subpart, the weight of VOM per weight of solids in each strippable spray booth coating as applied each day on each spray booth and certified product data sheets for each coating;

E) For coating lines subject to the limitations of Section 219.204(c)(2) of this Subpart, the weight of VOM per weight of solids (or the weight of VOM per weight of coatings, as applicable) in each coating as applied each day on each coating line, and certified product data sheets for each coating;

F) For coating lines subject to the limitations of Section 219.204(g)(2) or 219.204(h)(2) of this Subpart, the weight of VOM per volume of each coating (or the weight of VOM per volume of solids in each coating, as applicable) as applied each day on each coating line, and certified product data sheets for each coating;

G) For coating lines subject to the limitations of Section 219.204(o) of this Subpart, the weight of VOM per volume of coatings or solids, as applicable, for each coating, as applied each day on each coating line;

H) For coating lines subject to the limitations of Section 219.204(a)(2)(A) of this Subpart, the weight of VOM per volume of solids in each coating as applied each day on each coating line, certified product data sheets for each coating, and the solid turnover ratio for the EDP operation, calculated on a calendar monthly basis, with supporting calculations;

I) For coating lines subject to the limitations of Section 219.204(a)(2)(E), the weight of VOM per volume and volume of each coating used in the final repair coat operation, the weight of VOM per volume of the final repair coat as applied, calculated on an occurrence weighted average basis, and certified product data sheets for each coating;

J) For coating lines subject to the limitations of Section 219.204(q) of this Subpart, the weight of VOM per volume of each coating, or the weight of VOM per volume of solids in each coating, as applicable, as applied each day on each coating line, and certified product data sheets for each coating.

3) On and after a date consistent with Section 219.106 of this Part, the owner or operator of a subject coating line shall notify the Agency in the following instances:

A) Any record showing violation of Section 219.204 of this Subpart shall be reported by sending a copy of such record to the Agency within 30 days following the occurrence of the violation.

B) At least 30 calendar days before changing the method of compliance from Section 219.204 to Section 219.205 or Section 219.207 of this Subpart, the owner or operator shall comply with all requirements of subsection (d)(1) or~~,~~ (e)(1), ~~or (i)(1),~~ as applicable. Upon changing the method of compliance from Section 219.204 to Section 219.205 or Section 219.207 of this Subpart, the owner or operator shall comply with all requirements of subsection (d) or~~,~~ (e)~~, or (i)~~ of this Section, as applicable.

d) Any owner or operator of a coating line subject to the limitations of Section 219.204 of this Subpart and complying by means of Section 219.205 of this Subpart shall comply with the following:

1) By a date consistent with Section 219.106 of this Part, or upon initial start-up of a new coating line, or upon changing the method of compliance for an existing subject coating line from Section 219.204 or Section 219.207 to Section 219.205 of this Subpart; the owner or operator of the subject coating line shall certify to the Agency that the coating line will be in compliance with Section 219.205 on and after a date consistent with Section 219.106 of this Part, or on and after the initial start-up date. The certification shall include:

A) The name and identification number of each coating line which will comply by means of Section 219.205 of this Subpart.

B) The name and identification number of each coating as applied on each coating line.

C) The weight of VOM per volume and the volume of each coating (minus water and any compounds which are specifically exempted

from the definition of VOM) as applied each day on each coating line.

D) On and after March 15, 1998, for coating lines subject to the limitations of Section 219.204(l)(2)(A) or (B) of this Subpart, the weight of VOM per weight of solids in each coating as applied each day on each coating line.

E) For coating lines subject to the limitations of Section 219.204(a)(2)(A) of this Subpart, the weight of VOM per volume of solids in each coating as applied each day on each coating line.

F) For coating lines subject to the limitations of Section 219.204(c)(2) of this Subpart, the weight of VOM per weight of solids (or the weight of VOM per weight of coatings, as applicable) in each coating as applied each day on each coating line.

G) For coating lines subject to the limitations of Section 219.204(g)(2) or (h)(2) of this Subpart, the weight of VOM per volume of each coating (or the weight of VOM per volume of solids in each coating, as applicable) as applied each day on each coating line.

H) For coating lines subject to the limitations of Section 219.204(o) of this Subpart, the weight of VOM per volume of coatings or solids, as applicable, for each coating, as applied each day on each coating line.

I) For coating lines subject to the limitations of Section 219.204(q) of this Subpart, the weight of VOM per volume of each coating, or the weight of VOM per volume of solids in each coating, as applicable, as applied each day on each coating line.

J) The instrument or method by which the owner or operator will accurately measure or calculate the volume of each coating as applied each day on each coating line.

K) The method by which the owner or operator will create and maintain records each day as required in subsection (d)(2) of this Section.

L) An example of the format in which the records required in subsection (d)(2) of this Section will be kept.

2) On and after a date consistent with Section 219.106 of this Part, or on and after the initial start-up date, the owner or operator of a subject coating line shall collect and record all of the following information each day for

each coating line and maintain the information at the source for a period of three years:

A) The name and identification number of each coating as applied on each coating line.

B) The weight of VOM per volume and the volume of each coating (minus water and any compounds that are specifically exempted from the definition of VOM) as applied each day on each coating line.

C) On and after March 15, 1998, for coating lines subject to the limitations of Section 219.204(l)(2)(A) or (B) of this Subpart, the weight of VOM per weight of solids in each coating as applied each day on each coating line.

D) For coating lines subject to the limitations of Section 219.204(a)(2)(A) of this Subpart, the weight of VOM per volume of solids in each coating as applied each day on each coating line.

E) For coating lines subject to the limitations of Section 219.204(c)(2) of this Subpart, the weight of VOM per weight of solids (or the weight of VOM per weight of coatings, as applicable) in each coating as applied each day on each coating line.

F) For coating lines subject to the limitations of Section 219.204(g)(2) or (h)(2) of this Subpart, the weight of VOM per volume of each coating (or the weight of VOM per volume of solids in each coating, as applicable) as applied each day on each coating line.

G) For coating lines subject to the limitations of Section 219.204(o) of this Subpart, the weight of VOM per volume of coatings or solids, as applicable, for each coating, as applied each day on each coating line.

H) For coating lines subject to the limitations of Section 219.204(q) of this Subpart, the weight of VOM per volume of each coating, or the weight of VOM per volume of solids in each coating, as applicable, as applied each day on each coating line.

I) The daily-weighted average VOM content of all coatings as applied on each coating line as defined in Section 219.104 of this Part.

3) On and after a date consistent with Section 219.106 of this Part, the owner or operator of a subject coating line shall notify the Agency in the following instances:

A) Any record showing violation of Section 219.205 of this Subpart shall be reported by sending a copy of such record to the Agency within 30 days following the occurrence of the violation.

B) At least 30 calendar days before changing the method of compliance with this Subpart from Section 219.205 to Section 219.204 or Section 219.207 of this Subpart, the owner or operator shall comply with all requirements of subsection (c)(1) or~~,~~ (e)(1)~~, or (i)(1)~~ of this Section, as applicable. Upon changing the method of compliance with this Subpart from Section 219.205 to Section 219.204 or Section 219.207 of this Subpart, the owner or operator shall comply with all requirements of subsection (c) or~~,~~ (e)~~, or (i)~~ of this Section, as applicable.

e) Any owner or operator of a coating line subject to the limitations of Section 219.207 and complying by means of Section 219.207(c), (d), (e), (f), (g), (h), or (k), (l), (m), or (n) of this Subpart shall comply with the following:

1) By a date consistent with Section 219.106 of this Part, or upon initial start-up of a new coating line, or upon changing the method of compliance for an existing coating line from Section 219.204 or Section 219.205 to Section 219.207 of this Subpart, the owner or operator of the subject coating line shall perform all tests and submit to the Agency the results of all tests and calculations necessary to demonstrate that the subject coating line will be in compliance with Section 219.207 of this Subpart on and after a date consistent with Section 219.106 of this Part, or on and after the initial start-up date.

2) On and after a date consistent with Section 219.106 of this Part, or on and after the initial start-up date, the owner or operator of a subject coating line shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:

A) The weight of VOM per volume of coating solids as applied each day on each coating line, if complying pursuant to Section 219.207(b)(2) of this Subpart.

B) Control device monitoring data.

C) A log of operating time for the capture system, control device, monitoring equipment and the associated coating line.

D) A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.

3) On and after a date consistent with Section 219.106 of this Part, the owner or operator of a subject coating line shall notify the Agency in the following instances:

A) Any record showing violation of Section 219.207 of this Subpart shall be reported by sending a copy of such record to the Agency within 30 days following the occurrence of the violation.

B) At least 30 calendar days before changing the method of compliance with this Subpart from Section 219.207 to Section 219.204 or Section 219.205 of this Subpart, the owner or operator shall comply with all requirements of subsection (c)(1) or (d)(1) of this Section, respectively. Upon changing the method of compliance with this Subpart from Section 219.207 to Section 219.204 or Section 219.205 of this Subpart, the owner or operator shall comply with all requirements of subsection (c) or (d) of this Section, respectively.

f) Any owner or operator of a primer surfacer operation or topcoat operation, or combined primer surfacer and topcoat operation, subject to the limitations of Section 219.204(a)(1)(B), (a)(1)(B), (a)(2)(C), or (a)(2)(D) of this Subpart shall comply with the following:

1) By a date consistent with Section 219.106 of this Part, or upon initial start-up of a new coating operation, the owner or operator of a subject coating operation shall certify to the Agency that the operation will be in compliance with Section 219.204 of this Subpart on and after a date consistent with Section 219.106 of this Part, or on and after the initial start-up date. The certification shall include:

A) The name and identification number of each coating operation that will comply by means of Section 219.204(a)(1)(B),(a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart and the name and identification number of each coating line in each coating operation.

B) The name and identification number of each coating as applied on each coating line in the coating operation.

C) The weight of VOM per volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating line.

D) The transfer efficiency and control efficiency measured for each coating line.

E) Test reports, including raw data and calculations documenting the testing performed to measure transfer efficiency and control efficiency.

F) The instrument or method by which the owner or operator will accurately measure or calculate the volume of each coating as applied each day on each coating line.

G) The method by which the owner or operator will create and maintain records each day as required in subsection (f)(2) of this Section.

H) An example format for presenting the records required in subsection (f)(2) of this Section.

2) On and after a date consistent with Section 219.106 of this Part, or on and after the initial start-up date, the owner or operator of a subject coating operation shall collect and record all of the following information each day for each topcoat or primer surfacer coating operation and maintain the information at the source for a period of three years:

A) All information necessary to demonstrate compliance with the topcoat protocol referenced in Section 219.105(b)(1)(B) and to calculate the daily-weighted average VOM emissions from the coating operations in kg/l (lbs/gal) of coating solids deposited in accordance with the proposal submitted, and approved pursuant to Section 219.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart including:

i) The name and identification number of each coating as applied on each coating operation.

ii) The weight of VOM per volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating operation.

B) If a control device or devices are used to control VOM emissions, control device monitoring data; a log of operating time for the

capture system, control device, monitoring equipment and the associated coating operation; and a maintenance log for the capture system, control device and monitoring equipment, detailing all routine and non-routine maintenance performed including dates and duration of any outages.

3) On and after a date consistent with Section 219.106 of this Part or on and after the initial start-up date, the owner or operator of a subject coating operation shall determine and record the daily VOM emissions in kg/l (lbs/gal) of coating solids deposited in accordance with the proposal submitted and approved pursuant to Section 219.204 (a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart within 10 days from the end of the month and maintain this information at the source for a period of three years.

4) On and after a date consistent with Section 219.106 of this Part, the owner or operator of a subject coating operation shall notify the Agency in the following instances:

A) Any record showing a violation of Section 219.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart shall be reported by sending a copy of such record to the Agency within 15 days from the end of the month in which the violation occurred.

B) The owner or operator shall notify the Agency of any change to the operation at least 30 days before the change is effected. The Agency shall determine whether or not compliance testing is required. If the Agency determines that compliance testing is required, then the owner or operator shall submit a testing proposal to the Agency within 30 days and test within 30 days after the approval of the proposal by the Agency and USEPA.

g) On and after a date consistent with Section 219.106(c) of this Part, or on and after the initial start-up date, whichever is later, the owner or operator of a coating line subject to the requirements of Section 219.218 of this Subpart shall comply with the following:

1) By May 1, 2011, or upon initial start-up, whichever is later, submit a certification to the Agency that includes a description of the practices and procedures that the source will follow to ensure compliance with the applicable requirements in Section 219.218 of this Subpart;

2) Notify the Agency of any violation of Section 219.218 of this Subpart by providing a description of the violation and copies of records documenting the violation to the Agency within 30 days following the occurrence of the violation; and

3) Maintain at the source all records required by this subsection (g) for a minimum of three years from the date the document was created and make those records available to the Agency upon request.

h) On and after a date consistent with Section 219.106 of this Part, or on and after the initial start-up date, whichever is later, the owner or operator of a coating line subject to the requirements of Section 219.219 of this Subpart shall comply with the following:

1) By May 1, 2012, or upon initial start-up, whichever is later, submit a certification to the Agency that includes:

A) A description of the practices and procedures that the source will follow to ensure compliance with the applicable requirements in Section 219.219 of this Subpart;

B) For sources subject to Section 219.219(a)(6), the work practices plan specified in that Section;

C) For sources subject to Section 219.219(b)(6), the application methods used to apply coatings on the subject coating line;

2) Notify the Agency of any violation of Section 219.219 of this Subpart by providing a description of the violation and copies of records documenting the violation to the Agency within 30 days following the occurrence of the violation; and

3) Maintain at the source all records required by this subsection (h) for a minimum of three years from the date the document was created and make those records available to the Agency upon request.

i) On and after a date consistent with Section 219.106(d) of this Part, or on and after the initial start-up date, whichever is later, the owner or operator of a flat wood paneling coating line subject to the requirements in Section 219.217 of this Subpart shall comply with the following:

1) By August 1, 2010, or upon initial start-up, whichever is later, submit a certification to the Agency that includes a description of the practices and procedures that the source will follow to ensure compliance with the applicable requirements in Section 219.217(c) and (d) of this Subpart; and

2) Notify the Agency of any violation of Section 219.217 of this Subpart by providing a description of the violation and copies of records documenting such violation to the Agency within 30 days following the occurrence of the violation.

j) Each owner or operator of a pleasure craft surface coating operation subject to the limitations in Section 219.204(q)(5)(A) through (G) of this Subpart and complying by means of Section 219.207(n) of this Subpart shall comply with the following:

1) By a date consistent with Section 219.106 of this Part, or upon initial start-up of a new pleasure craft surface coating operation, whichever is later, or upon changing the method of compliance for an existing subject coating operation from Section 219.204, 219.205, or 219.207(k) of this Subpart to Section 219.207(n) of this Subpart, the owner or operator of a subject coating operation shall perform all tests and calculations necessary to demonstrate that the subject coating line will be in compliance with Section 219.207(n) on and after a date consistent with Section 219.106 of this Part, or on and after the initial start-up date.

2) On and after a date consistent with Section 219.106 of this Part, or on and after the initial start-up date, whichever is later, the owner or operator of a subject pleasure craft coating operation shall:

A) Collect and record the following information each month:

i) The amount of each pleasure craft surface coating used in each subject coating operation;

ii) The VOM content and coating category of each pleasure craft surface coating used in each subject coating operation;

iii) Total monthly VOM emissions for all subject pleasure craft surface coating operations;

B) At the end of the first 12-month averaging period, and at the end of each subsequent month, collect and record the following information:

i) The VOM mass emission limit for all subject pleasure craft surface coating operations for the applicable 12-month averaging period, with supporting calculations;

ii) The total actual emissions of VOM from all subject pleasure craft surface coating operations for the applicable 12-month averaging period;

C) Notify the Agency in writing of any violation of the requirements of Section 219.207(n) within 30 days following the occurrence of

the violation and provide records documenting the violation upon request by the Agency;

D) Notify the Agency in writing at least 30 calendar days before changing the method of compliance with this Subpart from Section 219.207(n) to Section 219.204, 219.205, or 219.207(m). Upon changing the method of compliance, the owner or operator shall comply with all requirements set forth in subsection (c), (d), or (e) of this Section, as applicable.

E) Maintain at the source all records required by this subsection (j) for a minimum of three years from the date the document was created, and provide such records to the Agency upon request.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 219.217 Wood Furniture Coating and Flat Wood Paneling Coating Work Practice Standards

a) Spray booth cleaning. Each owner or operator of a source subject to the limitations of Section 219.204(l) of this Subpart shall not use compounds containing more than 8.0 percent, by weight, of VOM for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, and metal filters, unless the spray booth is being refurbished. If the spray booth is being refurbished, that is, the spray booth coating or other material used to cover the booth is being replaced, the affected source shall use no more than 1.0 gallon of organic solvent to prepare the booth prior to applying the booth coating.

b) Application equipment requirements. No owner or operator of a source subject to the limitations of Section 219.204(l) of this Subpart shall use conventional air spray guns to apply coating materials to wood furniture except under the circumstances specified in subsections (b)(1) through (4) of this Section:

1) To apply coating materials that have a VOM content no greater than 1.0 kg VOM/kg solids (1.0 lb VOM/lb solids), as applied;

2) For repair coating under the following circumstances:

A) The coating materials are applied after the completion of the coating operation; or

B) The coating materials are applied after the stain and before any other type of coating material is applied, and the coating materials are applied from a container that has a volume of no more than 2.0 gallons;

3) If the spray gun is aimed and triggered automatically, rather than manually; or

4) If emissions from the finishing application station are directed to a control device pursuant to Section 219.216 of this Subpart.

c) Cleaning and storage requirements. Each owner or operator of a source subject to the limitations of Section 219.204(l) or (o) of this Subpart shall:

1) Keep, store, and dispose of all coating, cleaning, and washoff materials in closed containers;

2) Pump or drain all organic solvent used for line cleaning into closed containers;

3) Collect all organic solvent used to clean spray guns in closed containers; and

4) Control emissions from washoff operations by using closed tanks.

d) Additional cleaning and storage requirements for flat wood paneling coating lines. Every owner or operator of a source subject to the limitations of Section 219.204(o) of this Subpart shall:

1) Minimize spills of VOM-containing coatings, thinners, and cleaning materials and clean up spills immediately;

2) Minimize emissions of VOM during the cleaning of storage, mixing, and conveying equipment;

3) Keep mixing vessels that contain VOM-containing coatings and other VOM-containing materials closed except when specifically in use;

4) On and after January 1, 2012, convey VOM-containing coatings, thinners, and cleaning materials in closed containers or pipes.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

SUBPART H: PRINTING AND PUBLISHING

Section 219.401 Flexographic and Rotogravure Printing

a) No owner or operator of a subject flexographic or rotogravure printing line shall apply at any time any coating or ink unless the VOM content does not exceed the limitation specified in either subsection (a)(1) or (a)(2), as applicable. Compliance with this Section must be demonstrated through the applicable

coating or ink analysis test methods and procedures specified in Section 219.105(a) and the recordkeeping and reporting requirements specified in Section 219.404(c) of this Part. As an alternative to compliance with this subsection, a subject printing line may meet the requirements of subsection (b) or (c).

1) Prior to August 1, 2010, either:

A) Forty percent VOM by volume of the coating and ink (minus water and any compounds which are specifically exempted from the definition of VOM); or

B) Twenty-five percent VOM by volume of the volatile content in the coating and ink; and

2) On and after August 1, 2010:

A) For owners or operators of flexographic or rotogravure printing lines that do not print flexible packaging, either:

i) Forty percent VOM by volume of the coating and ink (minus water and any compounds that are specifically exempted from the definition of VOM); or

ii) Twenty-five percent VOM by volume of the volatile content in the coating and ink;

B) For owners or operators of flexographic or rotogravure printing lines that print flexible packaging, or that print flexible packaging and non-flexible packaging on the same line, either:

i) 0.8 kg VOM/kg (0.8 lbs VOM/lb) solids applied; or

ii) 0.16 kg VOM/kg (0.16 lbs VOM/lb) inks and coatings applied.

b) Weighted Averaging Alternative

1) Prior to August 1, 2010, no owner or operator of a subject flexographic or rotogravure printing line shall apply coatings or inks on the subject printing line unless the weighted average, by volume. VOM content of all coatings and inks as applied each day on the subject printing line does not exceed the limitation specified in either subsection (a)(1)(A) (as determined by subsection (b)(1)(A)) or subsection (a)(1)(B) (as determined by subsection (b)(1)(B) of this Section). Compliance with this subsection must be demonstrated through the applicable coating or ink analysis test methods and procedures specified in Section 219.105(a) of

this Part and the recordkeeping and reporting requirements specified in Section 219.404(d) of this Part.

A) The following equation shall be used to determine if the weighted average VOM content of all coatings and inks as applied each day on the subject printing line exceeds the limitation specified in subsection (a)(1)(A) of this Section.

$$VOM_{(i)(A)} = \frac{\sum_{i=1}^{n} C_i L_i (V_{si} + V_{VOMi})}{\sum_{i=1}^{n} L_i (V_{si} + V_{VOMi})}$$

where:

$VOM_{(i)(A)}$ = The weighted average VOM content in units of percent VOM by volume of all coatings and inks (minus water and any compounds that are specifically exempted from the definition of VOM) used each day;

i = Subscript denoting a specific coating or ink as applied;

n = The number of different coatings and/or inks as applied each day on a printing line;

C_i = The VOM content in units of percent VOM by volume of each coating or ink as applied (minus water and any compounds that are specifically exempted from the definition of VOM);

L_i = The liquid volume of each coating or ink as applied in units of l (gal);

V_{si} = The volume fraction of solids in each coating or ink as applied;

V_{VOMi} = The volume fraction of VOM in each coating or ink as applied.

B) The following equation shall be used to determine if the weighted average VOM content of all coatings and inks as applied each day on the subject printing line exceeds the limitation specified in subsection (a)(1)(B) of this Section.

$$VOM_{(i)(B)} = \frac{\sum_{i=1}^{n} C_i L_i V_{VMi}}{\sum_{i=1}^{n} L_i V_{VMi}}$$

where:

$VOM_{(i)(B)}$ = The weighted average VOM content in units of percent VOM by volume of the volatile content of all coatings and inks used each day;

i = Subscript denoting a specific coating or ink as applied;

n = The number of different coatings and/or inks as applied each day on a printing line;

C_i = The VOM content in units of percent VOM by volume of the volatile matter in each coating or ink as applied;

L_i = The liquid volume of each coating or ink as applied in units of l (gal);

V_{VMi} = The volume fraction of volatile matter in each coating or ink as applied.

2) On and after August 1, 2010, no owner or operator of a subject flexographic or rotogravure printing line that does not print flexible packaging shall apply coatings or inks on the subject printing line unless the weighted average, by weight, VOM content of all coatings and inks as applied each day on the subject printing line does not exceed the limitation specified in either subsection (a)(2)(A)(i) (calculated in accordance with the equation in subsection (b)(1)(A)) or (a)(2)(A)(ii) (calculated in accordance with the equation in subsection (b)(1)(B)) of this Section. Compliance with this subsection (b)(2) shall be demonstrated through the applicable coating or ink analysis test methods and procedures specified in Section 219.105(a) of this Part and the recordkeeping and reporting requirements specified in Section 219.404(d) of this Subpart.

3) On and after August 1, 2010, no owner or operator of a subject flexographic or rotogravure printing line that prints flexible packaging, or that prints flexible packaging and non-flexible packaging on the same line, shall apply coatings or inks on the subject printing line unless the weighted average, by weight, VOM content of all coatings and inks as applied each day on the subject printing line does not exceed the limitation

specified in either subsection (a)(2)(B)(i) (calculated in accordance with the equation in subsection (b)(3)(A)) or subsection (a)(2)(B)(ii) (calculated in accordance with the equation in subsection (b)(3)(B)) of this Section. Compliance with this subsection (b)(3) shall be demonstrated through the applicable coating or ink analysis test methods and procedures specified in Section 219.105(a) of this Part and the recordkeeping and reporting requirements specified in Section 219.404(d) of this Subpart.

A) The following equation shall be used to determine if the weighted average VOM content of all coatings and inks as applied each day on the subject printing line exceeds the limitation specified in subsection (a)(2)(B)(i) of this Section.

$$VOM_{(A)} = \frac{\sum_{i=1}^{n} C_i W_i}{\sum_{i=1}^{n} W_i}$$

where:

$VOM_{(A)}$ = The weighted average VOM content in units of kg VOM per kg (lbs VOM per lb) solids of all coatings and inks used each day;

i = Subscript denoting a specific coating or ink as applied;

n = The number of different coatings and/or inks as applied each day on a printing line;

C_i = The VOM content in units of kg VOM per kg (lbs VOM per lb) solids of each coating or ink as applied;

W_i = Weight of solids in each coating or ink, as applied, in units of kg (lb).

B) The following equation shall be used to determine if the weighted average VOM content of all coatings and inks as applied each day on the subject printing line exceeds the limitation specified in subsection (a)(2)(B)(ii) of this Section.

$$VOM_{(B)} = \frac{\sum_{i=1}^{n} C_i L_i}{\sum_{i=1}^{n} L_i}$$

where:

$VOM_{(B)}$ = The weighted average VOM content in units of kg (lbs) VOM per weight in kg (lbs) of all coatings or inks as applied each day;

i = Subscript denoting a specific coating or ink as applied;

n = The number of different coatings and/or inks as applied each day on each printing line;

C_i = The VOM content in units of kg (lbs) VOM per weight in kg (lbs) of each coating or ink as applied;

L_i = The weight of each coating or ink, as applied, in units of kg (lb).

c) Capture System and Control Device Requirements

1) Prior to August 1, 2010, no owner or operator of a subject flexographic or rotogravure printing line equipped with a capture system and control device shall operate the subject printing line unless the owner or operator meets the requirements in subsection (c)(1)(A)(i), (c)(1)(A)(ii), or (c)(1)(A)(iii), as well as subsections (c)(1)(B), (c)(5), and (c)(6).

A) One of:

i) A carbon adsorption system is used that reduces the captured VOM emissions by at least 90 percent by weight; or

ii) An incineration system is used that reduces the captured VOM emissions by at least 90 percent by weight; or

iii) An alternative VOM emission reduction system is used that is demonstrated to have at least a 90 percent control device efficiency, approved by the Agency and approved by USEPA as a SIP revision; and

B) The printing line is equipped with a capture system and control device that provides an overall reduction in VOM emissions of at least:

i) 75 percent where a publication rotogravure printing line is employed; or

ii) 65 percent where a packaging rotogravure printing line is employed; or

iii) 60 percent where a flexographic printing line is employed;

2) On and after August 1, 2010, no owner or operator of a flexographic or rotogravure printing line that does not print flexible packaging and that is equipped with a capture system and control device shall operate the subject printing line unless the owner or operator meets the requirements in subsection (c)(1)(A)(i), (c)(1)(A)(ii), or (c)(1)(A)(iii), as well as subsections (c)(1)(B), (c)(5), and (c)(6) of this Section;

3) On and after August 1, 2010, no owner or operator of a flexographic or rotogravure printing line that prints flexible packaging and that is equipped with a capture system and control device shall operate the subject printing line unless the owner or operator meets the requirements in subsections (c)(5) and (c)(6) of this Section and the capture system and control device provides an overall reduction in VOM emissions of at least:

A) 65 percent in cases in which a subject printing line was first constructed at the subject source prior to March 14, 1995 and utilizes a control device that was first constructed at the subject source prior to January 1, 2010; or

B) 70 percent when a subject printing line was first constructed at the subject source prior to March 14, 1995 and utilizes a control device that was first constructed at the subject source on or after January 1, 2010; or

C) 75 percent when a subject printing line was first constructed at the subject source on or after March 14, 1995 and utilizes a control device that was first constructed at the subject source prior to January 1, 2010; or

D) 80 percent when a subject printing line was first constructed at the subject source on or after March 14, 1995 and utilizes a control device that was first constructed at the subject source on or after January 1, 2010;

4) On and after August 1, 2010, the owner or operator of a flexographic or rotogravure printing line that prints flexible packaging and non-flexible packaging on the same line and that is equipped with a control device shall be subject to the requirements of either subsection (c)(1)(B) or (c)(3) of this Section, whichever is more stringent, as well as subsections (c)(5) and (c)(6) of this Section;

5) The control device is equipped with the applicable monitoring equipment specified in Section 219.105(d)(2) of this Part and, except as provided in Section 219.105(d)(3) of this Part, the monitoring equipment is installed, calibrated, operated and maintained according to vendor specifications at all times the control device is in use; and

6) The capture system and control device are operated at all times when the subject printing line is in operation. The owner or operator shall demonstrate compliance with this subsection by using the applicable capture system and control device test methods and procedures specified in Section 219.105(c) of this Part through Section 219.105(f) of this Part and by complying with the recordkeeping and reporting requirements specified in Section 219.404(e) of this Part. The owner or operator of a printing line subject to the requirements in subsection (c)(1)(B) or (c)(2) of this Section that performed all testing necessary to demonstrate compliance with subsection (c)(1)(B) prior to August 1, 2010, is not required to retest pursuant to this subsection (c)(6). The owner or operator of a printing line subject to the requirements in subsection (c)(3) shall perform testing in compliance with this subsection (c)(6), even if the owner or operator already performed such testing prior to August 1, 2010, unless the following conditions are met. Nothing in this subsection (c)(6), however, shall limit the Agency's ability to require that the owner or operator perform testing pursuant to 35 Ill. Adm. Code 201.282:

   A) On or after May 1, 2000, the owner or operator of the subject printing line performed all testing necessary to demonstrate compliance with subsection (c)(1)(B);

   B) Such testing also demonstrated an overall control efficiency equal to or greater than the applicable control efficiency requirements in subsection (c)(3);

   C) The owner or operator submitted the results of such tests to the Agency, and the tests were not rejected by the Agency;

   D) The same capture system and control device subject to the tests referenced in subsection (c)(6)(A) of this Section is still being used by the subject printing line; and

E) The owner or operator complies with all recordkeeping and reporting requirements in Section 219.404(e)(1)(B).

d) No owner or operator of subject flexographic or rotogravure printing lines that print flexible packaging or print flexible packaging and non-flexible packaging on the same line shall cause or allow VOM containing cleaning materials, including used cleaning towels, associated with the subject flexographic or rotogravure printing lines to be kept, stored, or disposed of in any manner other than in closed containers, or conveyed from one location to another in any manner other than in closed containers or pipes, except when specifically in use.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 219.404 Recordkeeping and Reporting

a) The VOM content of each coating and ink and the efficiency of each capture system and control device shall be determined by the applicable test methods and procedures specified in Section 219.105 of this Part to establish the records required under this Section.

b) Any owner or operator of a printing line which is exempted from any of the limitations of Section 219.401 of this Part because of the criteria in Section 219.402(a) of this Part shall comply with the following:

1) By a date consistent with Section 219.106 of this Part, or, for flexographic or rotogravure printing lines that print flexible packaging or that print flexible packaging and non-flexible packaging on the same line, by January 1, 2012, the owner or operator of a flexographic and rotogravure printing line to which this subsection (b) is applicable shall certify to the Agency that the flexographic and rotogravure printing line is exempt under the provisions of Section 219.402(a) of this Part. Such certification shall include:

A) A declaration that the flexographic and rotogravure printing line is exempt from the limitations of the criteria in Section 219.401 because of Section 219.402(a) of this Part; and

B) Calculations that demonstrate that total maximum theoretical emissions of VOM from all flexographic and rotogravure printing lines at the source never exceed 90.7 Mg (100 tons) per calendar year before the application of capture systems and control devices. Total maximum theoretical emissions of VOM for a flexographic or rotogravure printing source is the sum of maximum theoretical emissions of VOM from each flexographic and rotogravure printing line at the source. The following equation shall be used to calculate total maximum theoretical emissions of VOM per

calendar year before the application of capture systems and control devices for each flexographic and rotogravure printing line at the source:

$$E_p = A \times B + 1095 \left(C \times D \times F \right)$$

where:

E_p = Total maximum theoretical emissions of VOM from one flexographic or rotogravure printing line in units of kg/year (lbs/year);

A = Weight of VOM per volume of solids of the coating or ink with the highest VOM content as applied each year on the printing line in units of kg VOM/l (lbs VOM/gal) of coating or ink solids;

B = Total volume of solids for all coatings and inks that can potentially be applied each year on the printing line in units of 1/year (gal/year). The method by which the owner or operator accurately calculated the volume of each coating and ink as applied and the amount that can potentially be applied each year on the printing line shall be described in the certification to the Agency;

C = Weight of VOM per volume of material for the cleanup material or solvent with the highest VOM content as used each year on the printing line in units of kg/l (lbs VOM/gal) of such material;

D = The greatest volume of cleanup material or solvent used in any 8-hour period;

F = The highest fraction of cleanup material or solvent which is not recycled or recovered for offsite disposal during any 8-hour period.

2) On and after a date consistent with Section 219.106 of this Part, or, for flexographic or rotogravure printing lines that print flexible packaging or that print flexible packaging and non-flexible packaging on the same line, on and after January 1, 2012, the owner or operator of a facility referenced in this subsection shall collect and record all of the following information each year for each printing line and maintain the information at the source for a period of three years:

A) The name and identification number of each coating and ink as

applied on each printing line.

B) The VOM content and the volume of each coating and ink as applied each year on each printing line.

3) On and after a date consistent with Section 219.106 of this Part, or, for flexographic or rotogravure printing lines that print flexible packaging or that print flexible packaging and non-flexible packaging on the same line, on and after January 1, 2012, the owner or operator of a facility exempted from the limitations of Section 219.401 of this Part because of the criteria in Section 219.402(a) of this Part shall notify the Agency of any record showing that total maximum theoretical emissions of VOM from all printing lines exceed 90.7 Mg (100 tons) in any calendar year before the application of capture systems and control devices by sending a copy of such record to the Agency within 30 days after the exceedance occurs.

c) Any owner or operator of a printing line subject to the limitations of Section 219.401 of this Part and complying by means of Section 219.401(a) of this Part shall comply with the following:

1) By a date consistent with Section 219.106 of this Part, or Section 219.403(e), as applicable, or upon initial start-up of a new printing line, or upon changing the method of compliance from an existing subject printing line from Section 219.401(b) or Section 219.401(c) to Section 219.401(a) of this Part, the owner or operator of a subject printing line shall certify to the Agency that the printing line will be in compliance with Section 219.401(a) of this Part on and after a date consistent with Section 219.106 of this Part, or Section 219.403(e), as applicable, or on and after the initial start-up date. The owner or operator of a printing line subject to the requirements in Section 219.401(a)(2)(B) shall certify in accordance with this subsection (c)(1) even if the owner or operator of such line submitted a certification prior to January 1, 2010. Such certification shall include:

A) The name and identification number of each coating and ink as applied on each printing line.

B) The VOM content of each coating and ink as applied each day on each printing line.

2) On and after a date consistent with Section 219.106 of this Part, or Section 219.403(e), as applicable, or on and after the initial start-up date, the owner or operator of a printing line subject to the limitations of Section 219.401 of this Part and complying by means of Section 219.401(a) of this Part shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:

A) The name and identification number of each coating and ink as applied on each printing line.

B) The VOM content of each coating and ink as applied each day on each printing line.

3) On and after a date consistent with Section 219.106 of this Part, or Section 219.403(e), as applicable, the owner or operator of a subject printing line shall notify the Agency in the following instances:

A) Any record showing violation of Section 219.401(a) of this Part shall be reported by sending a copy of such record to the Agency within 30 days following the occurrence of the violation.

B) At least 30 calendar days before changing the method of compliance with Section 219.401 of this Part from Section 219.401(a) to Section 219.401(b) or (c) of this Part, the owner or operator shall comply with all requirements of subsection (d)(1) or (e)(1) of this Section, respectively. Upon changing the method of compliance with Section 219.401 of this Part from Section 219.401(a) to Section 219.401(b) or (c) of this Part, the owner or operator shall comply with all requirements of subsection (d) or (e) of this Section, respectively.

d) Any owner or operator of a printing line subject to the limitations of Section 219.401 of this Part and complying by means of Section 219.401(b) of this Part shall comply with the following:

1) By a date consistent with Section 219.106 of this Part, or Section 219.403(e), as applicable, or upon initial start-up of a new printing line, or upon changing the method of compliance for an existing subject printing line from Section 219.401(a) or (c) to Section 219.401(b) of this Part, the owner or operator of the subject printing line shall certify to the Agency that the printing line will be in compliance with Section 219.401(b) of this Part on and after a date consistent with Section 219.106 of this Part, or Section 219.403(e), as applicable, on and after the initial start-up date. The owner or operator of a printing line subject to the requirements in Section 219.401(b)(3) shall certify in accordance with this subsection (d)(1) even if the owner or operator of such line submitted a certification prior to January 1, 2010. Such certification shall include:

A) The name and identification number of each printing line which will comply by means of Section 219.401(b) of this Part.

B) The name and identification number of each coating and ink

available for use on each printing line.

C) The VOM content of each coating and ink as applied each day on each printing line.

D) The method by which the owner or operator will accurately calculate the volume, or weight of solids, as applicable, of each coating and ink as applied each day on each printing line, and on and after January 1, 2012, the weight of each coating or ink.

E) The method by which the owner or operator will create and maintain records each day as required in subsection (d)(2) of this Section.

F) An example of the format in which the records required in subsection (d)(2) of this Section will be kept.

2) On and after a date consistent with Section 219.106 of this Part, or Section 219.403(e), as applicable, or on and after the initial start-up date, the owner or operator of a printing line subject to the limitations of Section 219.401 and complying by means of Section 219.401(b) of this Part shall collect and record all of the following information each day for each printing line and maintain the information at the source for a period of three years:

A) The name and identification number of each coating and ink as applied on each printing line.

B) The VOM content and the volume, or weight of solids, as applicable, of each coating and ink as applied each day on each printing line, and on and after January 1, 2012, the weight of each coating or ink.

C) The daily-weighted average VOM content of all coatings and inks as applied on each printing line.

3) On and after a date consistent with Section 219.106 of this Part, or Section 219.403(e), as applicable, the owner or operator of a subject printing line shall notify the Agency in the following instances:

A) Any record showing violation of Section 219.401(b) of this Part shall be reported by sending a copy of such record to the Agency within 30 days following the occurrence of the violation.

B) At least 30 calendar days before changing the method of compliance with Section 219.401 of this Part from Section

219.401(b) to Section 219.401(a) or (c) of this Part, the owner or operator shall comply with all requirements of subsection (c)(1) or (e)(1) of this Section, respectively. Upon changing the method of compliance with Section 219.401 of this Part from Section 219.401(b) to Section 219.401(a) or (c) of this Part, the owner or operator shall comply with all requirements of subsection (c) or (e) of this Section, respectively.

e) Any owner or operator of a printing line subject to the limitations of Section 219.401 of this Part and complying by means of Section 219.401(c) of this Part shall comply with the following:

1) By a date consistent with Section 219.106 of this Part, or Section 219.403(e), as applicable, or upon initial start-up of a new printing line, or upon changing the method of compliance for an existing printing line from Section 219.401(a) or (b) to Section 219.401(c) of this Part, the owner or operator of the subject printing line shall either:

A) Perform all tests and submit to the Agency the results of all tests and calculations necessary to demonstrate that the subject printing line will be in compliance with Section 219.401(c) of this Part on and after a date consistent with Section 219.106 of this Part, or Section 219.403(e), as applicable, or on and after the initial start-up date; or

B) If not required to perform such testing pursuant to Section 219.401(c)(6), submit a certification to the Agency that includes:

i) A declaration that the owner or operator is not required to perform testing pursuant to Section 219.401(c)(6);

ii) The dates that testing demonstrating compliance with Section 219.401(c)(3) was performed; and

iii) The dates that the results of such testing were submitted to the Agency.

2) On and after a date consistent with Section 219.106 of this Part, or Section 219.403(e), as applicable, or on and after the initial start-up date, the owner or operator of a printing line subject to the limitations of Section 219.401 of this Part and complying by means of Section 219.401(c) of this Part shall collect and record all of the following information each day for each printing line and maintain the information at the facility for a period of three years:

A) Control device monitoring data.

B) A log of operating time for the capture system, control device, monitoring equipment and the associated printing line.

C) A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.

3) On and after a date consistent with Section 219.106 of this Part, or Section 219.403(e), as applicable, the owner or operator of a subject printing line shall notify the Agency in the following instances:

A) Any record showing violation of Section 219.401(c) of this Part shall be reported by sending a copy of such record to the Agency within 30 days following the occurrence of the violation.

B) At least 30 calendar days before changing the method of compliance with Section 219.401 of this Part from Section 219.401(c) to Section 219.401(a) or (b) of this Part, the owner or operator shall comply with all requirements of subsection (c)(1) or (d)(1) of this Section, respectively. Upon changing the method of compliance with Section 219.401 of this Part from Section 219.401(c) to Section 219.401(a) or (b) of this Part, the owner or operator shall comply with all requirements of subsection (c) or (d) of this Section, respectively.

4) By August 1, 2010, or upon initial start-up of a new printing line, whichever is later, the owner or operator of a printing line subject to the requirements in Section 219.401(c)(3) or (c)(4) shall submit to the Agency records documenting the date the printing line was constructed at the subject source and the date the control device for such printing line was constructed at the subject source.

f) Any owner or operator of a flexographic or rotogravure printing line that prints flexible packaging, or that prints flexible packaging and non-flexible packaging on the same line, and that is exempt from the limitations of Section 219.401(d) because of the criteria in Section 219.402(b) shall:

1) By August 1, 2010, or upon initial start-up of a new printing line, whichever is later, and upon modification of a printing line, submit a certification to the Agency that includes:

A) A declaration that the source is exempt from the requirements in Section 219.401(d) because of the criteria in Section 219.402(b);

B) Calculations that demonstrate that combined emissions of VOM from all flexographic and rotogravure printing lines (including inks and solvents used for cleanup operations associated with such printing lines) at the source never equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment;

2) On and after January 1, 2012, collect and record the following information each day for each subject printing line:

A) The name and identification number of each coating, ink, and cleaning solvent as applied each day on each printing line;

B) The VOM content of each coating and ink (measured in weight of VOM per volume of coating or ink, or in weight of VOM per weight of coating or ink) as applied each day on each printing line, and the volume or weight of each coating or ink, as applicable;

C) The weight of VOM per volume of each cleaning solvent and the volume of each cleaning solvent used each day on each printing line;

D) The total daily emissions of VOM from each printing line (including solvents used for cleanup operations associated with the printing line) and the sum of daily emissions from all subject printing lines at the source; and

3) Notify the Agency in writing if the combined emissions of VOM from all flexographic and rotogravure printing lines (including inks and solvents used for cleanup operations associated with the flexographic and rotogravure lines) at the source ever equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment, within 30 days after the event occurs.

g) Any owner or operator of a printing line subject to the limitations of Section 219.401(d) shall:

1) By August 1, 2010, or upon initial start-up of a new printing line, whichever is later, submit a certification to the Agency describing the practices and procedures that the owner or operator will follow to ensure compliance with the limitations of Section 219.401(d); and

2) Notify the Agency of any violation of Section 219.401(d) by sending a description of the violation and copies of records documenting such violations to the Agency within 30 days following the occurrence of the violation.

h) All records required by subsections (f) and (g) of this Section shall be retained for at least three years and shall be made available to the Agency upon request.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 219.409 Testing for Lithographic Printing

a) Testing to demonstrate compliance with the requirements of Section 219.407 of this Subpart shall be conducted by January 1, 2012, unless such testing was conducted on or after May 9, 1995, the test was conducted pursuant to a test method approved by USEPA, the current operating conditions and operating capacity of the press are consistent with the operation of the press during such testing, and the test results were submitted to the Agency ~~has been conducted within the two years immediately preceding January 1, 2012~~. If an owner or operator of a printing line performed such testing prior to May 9, 1995, the owner or operator of a printing line performed such testing prior to May 9, 1995, the owner or operator shall either retest pursuant to this Section, or submit to the Illinois EPA all information necessary to demonstrate that the prior testing was conducted pursuant to a test method approved by the USEPA, and that the current operating conditions and operating cpactity of the press are consistent with the operation of the press during prior testing. Thereafter, testing shall be conducted by the owner or operator within 90 days after a request by the Agency, or as otherwise specified in this Subpart. Such testing shall be conducted at the expense of the owner or operator and the owner or operator shall notify the Agency in writing 30 days in advance of conducting such testing to allow the Agency to be present during such testing.

b) The methods and procedures of Section 219.105(d) and (f) shall be used for testing to demonstrate compliance with the requirements of Section 219.407(a)(1)(C) or (b)(1) of this Subpart, as follows:

1) To select the sampling sites, Method 1 or 1A, as appropriate, 40 CFR 60, appendix A, incorporated by reference at Section 219.112 of this Part. The sampling sites for determining efficiency in reducing VOM from the dryer exhaust shall be located between the dryer exhaust and the control device inlet, and between the outlet of the control device and the exhaust to the atmosphere;

2) To determine the volumetric flow rate of the exhaust stream, Method 2, 2A, 2C, or 2D, as appropriate, 40 CFR 60, appendix A, incorporated by reference at Section 219.112 of this Part;

3) To determine the VOM concentration of the exhaust stream entering and exiting the control device, Method 25 or 25A, as appropriate, 40 CFR 60, appendix A, incorporated by reference at Section 219.112 of this Part. For thermal and catalytic afterburners, Method 25 must be used except under

the following circumstances, in which case Method 25A must be used:

A) The allowable outlet concentration of VOM from the control device is less than 50 ppmv, as carbon;

B) The VOM concentration at the inlet of the control device and the required level of control result in exhaust concentrations of VOM of 50 ppmv, or less, as carbon; and

C) Due to the high efficiency of the control device, the anticipated VOM concentration at the control device exhaust is 50 ppmv or less, as carbon, regardless of inlet concentration. If the source elects to use Method 25A under this option, the exhaust VOM concentration must be 50 ppmv or less, as carbon, and the required destruction efficiency must be met for the source to have demonstrated compliance. If the Method 25A test results show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, a retest is required. The retest shall be conducted using either Method 25 or Method 25A. If the retest is conducted using Method 25A and the test results again show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, the source must retest using Method 25;

4) Notwithstanding the criteria or requirements in Method 25 that specifies a minimum probe temperature of 129ºC (265ºF), the probe must be heated to at least the gas stream temperature of the dryer exhaust, typically close to 176.7ºC (350ºF);

5) During testing, the printing lines shall be operated at representative operating conditions and flow rates; and

6) During testing, an air flow direction indicating device, such as a smoke stick, shall be used to demonstrate 100 percent emissions capture efficiency for the dryer in accordance with Section 219.407(a)(1)(B) of this Subpart.

c) Testing to demonstrate compliance with the VOM content limitations in Section 219.407(a)(1)(A), (a)(2), (a)(3) and (a)(4)(A) of this Subpart, and to determine the VOM content of fountain solutions, fountain solution additives, cleaning solvents, cleaning solutions, and inks (pursuant to the requirements of Section 219.411(a)(1)(B), (b)(1)(B), or (b)(2)(B) of this Subpart, as applicable), shall be conducted upon request of the Agency or as otherwise specified in this Subpart, as follows:

1) The applicable test methods and procedures specified in Section

219.105(a) of this Part shall be used; provided, however, Method 24, incorporated by reference at Section 219.112 of this Part, shall be used to demonstrate compliance; or

2) The manufacturer's specifications for VOM content for fountain solution additives, cleaning solvents, and inks may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 219.105(a) of this Part; provided, however, Method 24 shall be used to determine compliance.

d) Testing to demonstrate compliance with the requirements of Section 219.407(b) of this Subpart shall be conducted as set forth in the owner or operator's plan approved by the Agency and USEPA as federally enforceable permit conditions pursuant to Section 219.407(b) of this Subpart.

e) Testing to determine the VOM composite partial vapor pressure of cleaning solvents, cleaning solvent concentrates, and as-used cleaning solutions shall be conducted in accordance with the applicable methods and procedures specified in Section 219.110 of this Part.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 219.411 Recordkeeping and Reporting for Lithographic Printing

a) Exempt Units prior to August 1, 2010. An owner or operator of lithographic printing lines exempt from the limitations of Section 219.407 of this Subpart prior to August 1, 2010, because of the criteria in Section 219.405(b) of this Subpart, shall comply with the following:

1) Upon initial start-up of a new lithographic printing line, and upon modification of a lithographic printing line, submit a certification to the Agency that includes:

A) A declaration that the source is exempt from the control requirements in Section 219.407 of this Part because of the criteria in Section 219.405(b) of this Subpart;

B) Calculations that demonstrate that combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source never exceed 45.5 kg/day (100 lbs/day) before the use of capture systems and control devices, as follows:

i) To calculate daily emissions of VOM, the owner or operator shall determine the monthly emissions of VOM

from all lithographic printing lines at the source (including solvents used for cleanup operations associated with the lithographic printing lines) and divide this amount by the number of days during that calendar month that lithographic printing lines at the source were in operation;

ii) To determine the VOM content of the inks, fountain solution additives and cleaning solvents, the tests methods and procedures set forth in Section 219.409(c) of this Subpart shall be used;

iii) To determine VOM emissions from inks used on lithographic printing lines at the source, an ink emission adjustment factor of 0.05 shall be used in calculating emissions from all non-heatset inks except when using an impervious substrate, and a factor of 0.80 shall be used in calculating emissions from all heatset inks to account for VOM retention in the substrate except when using an impervious substrate. For impervious substrates such as metal or plastic, no emission adjustment factor is used. The VOM content of the ink, as used, shall be multiplied by this factor to determine the amount of VOM emissions from the use of ink on the printing lines; and

iv) To determine VOM emissions from fountain solutions and cleaning solvents used on lithographic printing lines at the source, no retention factor is used;

C) Either a declaration that the source, through federally enforceable permit conditions, has limited its maximum theoretical emissions of VOM from all heatset web offset lithographic printing lines (including solvents used for cleanup operations associated with heatset web offset printing lines) at the source to no more than 90.7 Mg (100 tons) per calendar year before the application of capture systems and control devices or calculations which demonstrate that the source's total maximum theoretical emissions of VOM do not exceed 90.7 Mg/yr (100 tons/yr). Total maximum theoretical emissions of VOM for a heatset web offset lithographic printing source is the sum of maximum theoretical emissions of VOM from each heatset web offset lithographic printing line at the source. The following equation shall be used to calculate total maximum theoretical emissions of VOM per calendar year in the absence of air pollution control equipment for each heatset web offset lithographic printing line at the source:

$$E_p = (R \times A \times B) + (C \times D) + 1095\,(F \times G \times H)$$

where:

E_d = Total maximum theoretical emissions of VOM from one heatset web offset printing line in units of kg/yr (lb/yr);

A = Weight of VOM per volume of solids of ink with the highest VOM content as applied each year on the printing line in units of kg/l (lb/gal) of solids;

B = Total volume of solids for all inks that can potentially be applied each year on the printing line in units of 1/yr (gal/yr). The method by which the owner or operator accurately calculated the volume of each ink as applied and the amount that can potentially be applied each year on the printing line shall be described in the certification to the Agency;

C = Weight of VOM per volume of fountain solution with the highest VOM content as applied each year on the printing line in units of kg/l (lb/gal);

D = The total volume of fountain solution that can potentially be used each year on the printing line in units of 1/yr (gal/yr). The method by which the owner or operator accurately calculated the volume of each fountain solution used and the amount that can potentially be used each year on the printing line shall be described in the certification to the Agency;

F = Weight of VOM per volume of material for the cleanup material or solvent with the highest VOM content as used each year on the printing line in units of kg/l (lb/gal) of such material;

G = The greatest volume of cleanup material or solvent used in any 8-hour period;

H = The highest fraction of cleanup material or solvent that is not recycled or recovered for offsite disposal during any 8-hour period;

R = The multiplier representing the amount of VOM not retained in the substrate being used. For paper, R = 0.8. For metal, plastic, or other impervious substrates,

R = 1.0;

D) A description and the results of all tests used to determine the VOM content of inks, fountain solution additives, and cleaning solvents, and a declaration that all such tests have been properly conducted in accordance with Section 219.409(c)(1) of this Subpart;

2) Notify the Agency in writing if the combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source ever exceed 45.5 kg/day (100 lbs/day), before the use of capture systems and control devices, within 30 days after the event occurs. Such notification shall include a copy of all records of such event.

b) Exempt Units on and after August 1, 2010

1) Lithographic Printing Lines Exempt pursuant to Section 219.405(c)(2). By August 1, 2010, or upon initial start-up of a new lithographic printing line, whichever is later, and upon modification of a lithographic printing line, an owner or operator of lithographic printing lines exempt from the limitations in Section 219.407 of this Subpart because of the criteria in Section 219.405(c)(2) of this Subpart shall submit a certification to the Agency that includes the information specified in either subsections (b)(1)(A), (b)(1)(B), and (b)(1)(D) of this Section, or subsections (b)(1)(A) and (b)(1)(C) of this Section, as applicable. An owner or operator complying with subsection (b)(1)(B) shall also comply with the requirements in subsection (b)(1)(E) of this Section. An owner or operator complying with subsection (b)(1)(C) shall also comply with the requirements in subsection (b)(1)(F) of this Section:

A) A declaration that the source is exempt from the requirements in Section 219.407 of this Subpart because of the criteria in Section 219.405(c)(2) of this Subpart;

B) Calculations that demonstrate that combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source do not equal or exceed 6.8 kg/day (15 lbs/day), before the use of capture systems and control devices, as follows:

i) To calculate daily emissions of VOM, the owner or operator shall determine the monthly emissions of VOM from all lithographic printing lines at the source (including solvents used for cleanup operations associated with the

lithographic printing lines) and divide this amount by the number of days during that calendar month that lithographic printing lines at the source were in operation;

ii) To determine the VOM content of the inks, fountain solution additives and cleaning solvents, the test methods and procedures set forth in Section 219.409(c) of this Subpart shall be used;

iii) To determine VOM emissions from inks used on lithographic printing lines at the source, an ink emission adjustment factor of 0.05 shall be used in calculating emissions from all non-heatset inks except when using an impervious substrate, and a factor of 0.80 shall be used in calculating emissions from all heatset inks to account for VOM retention in the substrate except when using an impervious substrate. For impervious substrates such as metal or plastic, no emission adjustment factor is used. The VOM content of the ink, as used, shall be multiplied by this factor to determine the amount of VOM emissions from the use of ink on the printing lines; and

iv) To determine VOM emissions from cleaning solutions used on lithographic printing lines at the source, an emission adjustment factor of 0.50 shall be used in calculating emissions from used shop towels if the VOM composite vapor pressure of each associated cleaning solution is demonstrated to be less than 10 mmHg measured at 20°C (68°F) and the shop towels are kept in closed containers. For cleaning solutions with VOM composite vapor pressures of equal to or greater than 10 mmHg measured at 20°C (68°F) and for shop towels that are not kept in closed containers, no emission adjustment factor is used;

C) As an alternative to the calculations in subsection (b)(1)(B), a statement that the source uses less than the amount of material specified in subsection (b)(1)(C)(i) or (ii), as applicable, during each calendar month. A source may determine that it emits below 6.8 kg/day (15 lbs/day) of VOM based upon compliance with such material use limitations. If the source exceeds this amount of material use in a given calendar month, the owner or operator must, within 15 days after the end of that month, complete the emissions calculations of subsection (b)(1)(B) to determine daily emissions for applicability purposes. If the source ever exceeds this amount of material use for six consecutive calendar months, it is no longer eligible to use this subsection (b)(1)(C) as an alternative

to the calculations in subsection (b)(1)(B). If a source has both heatset web offset and either nonheatset web offset or sheetfed lithographic printing operations, or has all three types of printing operations, the owner or operator may not make use of this alternative and must use the calculations in subsection (b)(1)(B).

i) The sum of all sheetfed and nonheatset web offset lithographic printing operations at the source: 242.3liters (64 gallons) of cleaning solvent and fountain solution additives, combined; or

ii) The sum of all heatset web offset lithographic printing operations at the source: 204.1 kg (450 lbs) of ink, cleaning solvent, and fountain solution additives, combined;

D) A description and the results of all tests used to determine the VOM content of inks, fountain solution additives, and cleaning solvents, and a declaration that all such tests have been properly conducted in accordance with Section 219.409(c)(1) of this Subpart;

E) For sources complying with subsection (b)(1)(B) of this Section, notify the Agency in writing if the combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source ever equal or exceed 6.8 kg/day (15 lbs/day), before the use of capture systems and control devices, within 30 days after the event occurs. If such emissions of VOM at the source equal or exceed 6.8 kg/day (15 lbs/day) but do not exceed 45.5 kg/day (100 lbs/day), the source shall comply with the requirements in subsection (b)(2) of this Section;

F) For sources complying with subsection (b)(1)(C) of this Section, comply with the following:

i) Maintain material use records showing that the source uses less than the amount of material specified in subsections (b)(1)(C)(i) and (b)(1)(C)(ii) during each calendar month, or, if the source exceeds the material use limitations, records showing that the source exceeded the limitations but did not emit 6.8 kg/day (15 lbs/day) or more of VOM, and provide such records to the Agency upon request. On and after January 1, 2012, such records shall include the name, identification number, and VOM content of each cleaning solvent and fountain solution additive used per

calendar month, the volume of each cleaning solvent and fountain solution additive used per calendar month for each sheetfed and nonheatset web offset lithographic printing operation, and the weight of each cleaning solvent, ink, and fountain solution additive used per calendar month for each heatset web offset lithographic printing operation;

ii) Notify the Agency in writing if the source exceeds the material use limitations for six consecutive calendar months, or if the source changes its method of compliance from subsection (b)(1)(C) to subsection (b)(1)(B) of this Section, within 30 days after the event occurs;

2) Heatset web offset lithographic printing lines exempt pursuant to Section 219.405(c)(1) but not exempt pursuant to Section 219.405(c)(2). By August 1, 2010, or upon initial start-up of a new heatset web offset lithographic printing line, whichever is later, and upon modification of a heatset web offset lithographic printing line, an owner or operator of heatset web offset lithographic printing lines that are exempt from the limitations in Section 219.407 of this Subpart pursuant to the criteria in Section 219.405(c)(1) of this Subpart, but that are not exempt pursuant to the criteria in Section 219.405(c)(2) of this Subpart, shall submit a certification to the Agency that includes the information specified in subsections (b)(2)(A) through (b)(2)(C) of this Section. Such owner or operator shall also comply with the requirements in subsection (b)(2)(D) of this Section:

A) A declaration that the source is exempt from the control requirements in Section 219.407 of this Subpart because of the criteria in Section 219.405(c)(1) of this Subpart, but is not exempt pursuant to the criteria in Section 219.405(c)(2) of this Subpart;

B) Calculations that demonstrate that combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source never exceed 45.5 kg/day (100 lbs/day) before the use of capture systems and control devices, as follows (the following methodology shall also be used to calculate whether a source exceeds 45.5 kg/day (100 lbs/day) for purposes of determining eligibility for the exclusions set forth in Section 219.405(c)(3), in accordance with Section 219.411(g)(2)(A)(i)):

i) To calculate daily emissions of VOM, the owner or operator shall determine the monthly emissions of VOM from all lithographic printing lines at the source (including

solvents used for cleanup operations associated with the lithographic printing lines) and divide this amount by the number of days during that calendar month that lithographic printing lines at the source were in operation;

ii) To determine the VOM content of the inks, fountain solution additives and cleaning solvents, the test methods and procedures set forth in Section 219.409(c) of this Subpart shall be used;

iii) To determine VOM emissions from inks used on lithographic printing lines at the source, an ink emission adjustment factor of 0.05 shall be used in calculating emissions from all non-heatset inks except when using an impervious substrate, and a factor of 0.80 shall be used in calculating emissions from all heatset inks to account for VOM retention in the substrate except when using an impervious substrate. For impervious substrates such as metal or plastic, no emission adjustment factor is used. The VOM content of the ink, as used, shall be multiplied by this factor to determine the amount of VOM emissions from the use of ink on the printing lines;

iv) To determine VOM emissions from cleaning solvents used on lithographic printing lines at the source, an emission adjustment factor of 0.50 shall be used in calculating emissions from cleaning solution in shop towels if the VOM composite vapor pressure of such cleaning solution is demonstrated to be less than 10 mmHg measured at 20^{o}C (68^{o}F) and the shop towels are kept in closed containers. For cleaning solutions with VOM composite vapor pressures of equal to or greater than 10 mmHg measured at 20^{o}C (68^{o}F) and for shop towels that are not kept in closed containers, no emission adjustment factor is used;

C) A description and the results of all tests used to determine the VOM content of inks, fountain solution additives, and cleaning solvents, and a declaration that all such tests have been properly conducted in accordance with Section 219.409(c)(1) of this Subpart;

D) Notify the Agency in writing if the combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source ever exceed 45.5

kg/day (100 lbs/day), before the use of capture systems and control devices, within 30 days after the event occurs.

c) Unless complying with subsections (b)(1)(C) and (b)(1)(F) of this Section, an owner or operator of lithographic printing lines subject to the requirements of subsection (a) or (b) of this Section shall collect and record either the information specified in subsection (c)(1) or (c)(2) of this Section for all lithographic printing lines at the source:

1) Standard recordkeeping, including the following:

A) The name and identification of each fountain solution additive, lithographic ink, and cleaning solvent used on any lithographic printing line, recorded each month;

B) A daily record which shows whether a lithographic printing line at the source was in operation on that day;

C) The VOM content and the volume of each fountain solution additive, lithographic ink, and cleaning solvent used on any lithographic printing line, recorded each month;

D) The total VOM emissions at the source each month, determined as the sum of the product of usage and VOM content for each fountain solution additive, cleaning solvent, and lithographic ink (with the applicable ink VOM emission adjustment) used at the source, calculated each month; and

E) The VOM emissions in lbs/day for the month, calculated in accordance with subsection (a)(1)(B), (b)(1)(B), or (b)(2)(B) of this Section, as applicable;

2) Purchase and inventory recordkeeping, including the following:

A) The name, identification, and VOM content of each fountain solution additive, lithographic ink, and cleaning solvent used on any lithographic printing line, recorded each month;

B) Inventory records from the beginning and end of each month indicating the total volume of each fountain solution additive, lithographic ink, and cleaning solvent to be used on any lithographic printing line at the source;

C) Monthly purchase records for each fountain solution additive, lithographic ink, and cleaning solvent used on any lithographic printing line at the source;

D) A daily record which shows whether a lithographic printing line at the source was in operation on that day;

E) The total VOM emissions at the source each month, determined as the sum of the product of usage and VOM content for each fountain solution additive, cleaning solvent, and lithographic ink (with the applicable ink VOM emission adjustment) used at the source, calculated each month based on the monthly inventory and purchase records required to be maintained pursuant to subsections (c)(2)(A), (c)(2)(B), and (c)(2)(C) of this Section;

F) The VOM emissions in lbs/day for the month, calculated in accordance with subsection (a)(1)(B), (b)(1)(B), or (b)(2)(B) of this Section, as applicable.

d) An owner or operator of a heatset web offset lithographic printing line subject to the control requirements of Section 219.407(a)(1)(C) or (b)(1) of this Subpart shall comply with the following:

1) By August 1, 2010, upon initial start-up of a new printing line, and upon initial start-up of a new control device for a heatset web offset printing line, submit a certification to the Agency that includes the following:

A) An identification of each heatset web offset lithographic printing line at the source;

B) A declaration that each heatset web offset lithographic printing line is in compliance with the requirements of Section 219.407 (a)(1)(B), (a)(1)(C), (a)(1)(D) and (a)(1)(E) or (b) of this Subpart, as appropriate;

C) The type of afterburner or other approved control device used to comply with the requirements of Section 219.407(a)(1)(C) or (b)(1) of this Subpart and the date that such device was first constructed at the source;

D) The control requirements in Section 219.407(a)(1)(C) or (b)(1) of this Subpart with which the lithographic printing line is complying;

E) The results of all tests and calculations necessary to demonstrate compliance with the control requirements of Section 219.407(a)(1)(C) or (b)(1) of this Subpart, as applicable; and

F) A declaration that the monitoring equipment required under Section 219.407(a)(1)(D) or (b) of this Subpart, as applicable, has

been properly installed and calibrated according to manufacturer's specifications;

2) If testing of the afterburner or other approved control device is conducted pursuant to Section 219.409(b) of this Subpart, the owner or operator shall, within 90 days after conducting such testing, submit a copy of all test results to the Agency and shall submit a certification to the Agency that includes the following:

A) A declaration that all tests and calculations necessary to demonstrate whether the lithographic printing lines are in compliance with Section 219.407(a)(1)(C) or (b)(1) of this Subpart, as applicable, have been properly performed;

B) A statement whether the lithographic printing lines are or are not in compliance with Section 219.407(a)(1)(C) or (b)(1) of this Subpart, as applicable; and

C) The operating parameters of the afterburner or other approved control device during testing, as monitored in accordance with Section 219.410(c) or (d) of this Subpart, as applicable;

3) Except as provided in subsection (d)(3)(D)(ii) of this Section, collect and record daily the following information for each heatset web offset lithographic printing line subject to the requirements of Section 219.407(a)(1)(C) or (b)(1) of this Subpart:

A) Afterburner or other approved control device monitoring data in accordance with Section 219.410(c) or (d) of this Subpart, as applicable;

B) A log of operating time for the afterburner or other approved control device, monitoring equipment, and the associated printing line;

C) A maintenance log for the afterburner or other approved control device and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and duration of any outages; and

D) A log detailing checks on the air flow direction or air pressure of the dryer and press room to ensure compliance with the requirements of Section 219.407(a)(1)(B) of this Subpart as follows:

i) Prior to August 1, 2010, at least once per 24-hour period

while the line is operating; and

ii) On and after August 1, 2010, at least once per calendar month while the line is operating;

4) Notify the Agency in writing of any violation of Section 219.407(a)(1)(C) or (b)(1) of this Subpart within 30 days after the occurrence of such violation. Such notification shall include a copy of all records of such violation;

5) If changing its method of compliance between subsections (a)(1)(C) and (b) of Section 219.407 of this Subpart, certify compliance for the new method of compliance in accordance with subsection (d)(1) of this Section at least 30 days before making such change, and perform all tests and calculations necessary to demonstrate that such printing lines will be in compliance with the requirements of Section 219.407(a)(1)(B), (a)(1)(C), (a)(1)(D) and (a)(1)(E) of this Subpart, or Section 219.407(b) of this Subpart, as applicable.

e) An owner or operator of a lithographic printing line subject to Section 219.407(a)(1)(A), (a)(2), or (a)(3) of this Subpart shall:

1) By August 1, 2010, and upon initial start-up of a new lithographic printing line, certify to the Agency that fountain solutions used on each lithographic printing line will be in compliance with the applicable VOM content limitation. Such certification shall include:

A) Identification of each lithographic printing line at the source, by type, e.g., heatset web offset, non-heatset web offset, or sheet-fed offset;

B) Identification of each centralized fountain solution reservoir and each lithographic printing line that it serves;

C) A statement that the fountain solution will comply with the VOM content limitations in Section 219.407(a)(1)(A), (a)(2), or (a)(3), as applicable;

D) Initial documentation that each type of fountain solution will comply with the applicable VOM content limitations, including copies of manufacturer's specifications, test results, if any, formulation data and calculations;

E) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitation, e.g., a refractometer, hydrometer, conductivity meter, or recordkeeping

procedures with detailed description of the compliance methodology; and

F) A sample of the records that will be kept pursuant to subsection (e)(2) of this Section.

2) Collect and record the following information for each fountain solution:

A) The name and identification of each batch of fountain solution prepared for use on one or more lithographic printing lines, the lithographic printing lines or centralized reservoir using such batch of fountain solution, and the applicable VOM content limitation for the batch;

B) If an owner or operator uses a hydrometer, refractometer, or conductivity meter, pursuant to Section 219.410(b)(1)(B), to demonstrate compliance with the applicable VOM content limit in Section 219.407(a)(1)(A), (a)(2), or (a)(3) of this Subpart:

i) The date and time of preparation, and each subsequent modification, of the batch;

ii) The results of each measurement taken in accordance with Section 219.410(b) of this Subpart;

iii) Documentation of the periodic calibration of the meter in accordance with the manufacturer's specifications, including date and time of calibration, personnel conducting, identity of standard solution, and resultant reading; and

iv) Documentation of the periodic temperature adjustment of the meter, including date and time of adjustment, personnel conducting and results;

C) If the VOM content of the fountain solution is determined pursuant to Section 219.410(b)(1)(A) of this Subpart, for each batch of as-applied fountain solution:

i) Date and time of preparation and each subsequent modification of the batch;

ii) Volume or weight, as applicable, and VOM content of each component used in, or subsequently added to, the fountain solution batch;

iii) Calculated VOM content of the as-applied fountain solution; and

iv) Any other information necessary to demonstrate compliance with the applicable VOM content limits in Section 219.407(a)(1)(A), (a)(2) and (a)(3) of this Subpart, as specified in the source's operating permit;

D) If the VOM content of the fountain solution is determined pursuant to Section 219.410(b)(2) of this Subpart, for each setting:

i) VOM content limit corresponding to each setting;

ii) Date and time of initial setting and each subsequent setting;

iii) Documentation of the periodic calibration of the automatic feed equipment in accordance with the manufacturer's specifications; and

iv) Any other information necessary to demonstrate compliance with the applicable VOM content limits in Section 219.407(a)(1)(A), (a)(2) and (a)(3) of this Subpart, as specified in the source's operating permit.

E) If the owner or operator relies on the temperature of the fountain solution to comply with the requirements in Section 219.407(a)(1)(A)(ii) or (a)(3)(B) of this Subpart:

i) The temperature of the fountain solution at each printing line, as monitored in accordance with Section 219.410(a); and

ii) A maintenance log for the temperature monitoring devices and automatic, continuous temperature recorders detailing all routine and non-routine maintenance performed, including dates and duration of any outages.

3) Notify the Agency in writing of any violation of Section 219.407 of this Subpart within 30 days after the occurrence of such violation. Such notification shall include a copy of all records of such violation.

f) For lithographic printing line cleaning operations, an owner or operator of a lithographic printing line subject to the requirements of Section 219.407 of this Subpart shall:

1) By August 1, 2010, and upon initial start-up of a new lithographic printing

line, certify to the Agency that all cleaning solutions, other than those excluded pursuant to Section 219.405(c)(3)(C), and the handling of all cleaning materials, will be in compliance with the requirements of Section 219.407(a)(4)(A) or (a)(4)(B) and (a)(5) of this Subpart, and such certification shall also include:

A) A statement that the cleaning solution will comply with the limitations in Section 219.407(a)(4);

B) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitations;

C) A sample of the records that will be kept pursuant to subsection (f)(2) of this Section; and

D) A description of the practices that ensure that VOM-containing cleaning materials are kept in closed containers;

2) Collect and record the following information for each cleaning solution used on each lithographic printing line:

A) For each cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 219.407(a)(4)(A) of this Subpart and that is prepared at the source with automatic equipment:

i) The name and identification of each cleaning solution;

ii) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 219.409(c) of this Subpart;

iii) Each change to the setting of the automatic equipment, with date, time, description of changes in the cleaning solution constituents (e.g., cleaning solvents), and a description of changes to the proportion of cleaning solvent and water (or other non-VOM);

iv) The proportion of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution;

v) The VOM content of the as-used cleaning solution, with supporting calculations; and

vi) A calibration log for the automatic equipment, detailing periodic checks;

B) For each batch of cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 219.407(a)(4)(A) of this Subpart, and that is not prepared at the source with automatic equipment:

i) The name and identification of each cleaning solution;

ii) Date and time of preparation, and each subsequent modification, of the batch;

iii) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 219.409(c) of this Subpart;

iv) The total amount of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution; and

v) The VOM content of the as-used cleaning solution, with supporting calculations. For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM content may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 219.105(a) of this Part;

C) For each batch of cleaning solution for which the owner or operator relies on the vapor pressure of the cleaning solution to demonstrate compliance with Section 219.407(a)(4)(B) of this Subpart:

i) The name and identification of each cleaning solution;

ii) Date and time of preparation, and each subsequent modification, of the batch;

iii) The molecular weight, density, and VOM composite partial vapor pressure of each cleaning solvent, as determined in accordance with Section 219.409(e) of this Subpart. For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM composite partial vapor pressure may be used if such manufacturer's specifications are based on results of tests conducted in accordance with methods specified in Sections 219.105(a) and 219.110 of this Part;

iv) The total amount of each cleaning solvent used to prepare the as-used cleaning solution; and

v) The VOM composite partial vapor pressure of each as-used cleaning solution, as determined in accordance with Section 219.409(e) of this Subpart. For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM composite partial vapor pressure may be used if such manufacturer's specifications are based on results of tests conducted in accordance with methods specified in Sections 219.105(a) and 219.110 of this Part;

D) The date, time and duration of scheduled inspections performed to confirm the proper use of closed containers to control VOM emissions, and any instances of improper use of closed containers, with descriptions of actual practice and corrective action taken, if any;

3) Notify the Agency in writing of any violation of Section 219.407 of this Subpart within 30 days after the occurrence of such violation. Such notification shall include a copy of all records of such violation.

g) The owner or operator of lithographic printing lines subject to one or more of the exclusions set forth in Section 219.405(c)(3) shall:

1) By August 1, 2010, or upon initial start-up of a new lithographic printing line that is subject to one or more of the exclusions set forth in Section 219.405(c)(3), whichever is later, submit a certification to the Agency that includes either:

A) A declaration that the source is subject to one or more of the exclusions set forth in Section 219.405(c)(3) and a statement indicating which such exclusions apply to the source; or

B) A declaration that the source will not make use of any of the exclusions set forth in Section 219.405(c)(3);

2) Unless the source has certified in accordance with subsection (g)(1)(B) of this Section that it will not make use of any of the exclusions set forth in Section 219.405(c)(3):

A) Collect and record the following information for all lithographic printing lines at the source:

i) Calculations that demonstrate that combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source never exceed 45.5 kg/day (100 lbs/day) before the use of capture systems and control devices, determined in accordance with the calculations in subsection (b)(2)(B) of this Section;

ii) The name, identification, and volume of all cleaning materials used per calendar month on lithographic printing lines at the source that do not comply with the cleaning material limitations in Section 219.407(a)(4) of this Subpart;

B) Notify the Agency in writing if the combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source ever exceed 45.5 kg/day (100 lbs/day), before the use of capture systems and control devices, within 30 days after the event occurs;

3) If changing from utilization of the exclusions set forth in Section 219.405(c)(3) to opting out of such exclusions pursuant to subsection (g)(1)(B) of this Section, or if there is a change at the source such that the exclusions no longer apply, certify compliance in accordance with subsection (g)(1)(B) of this Section within 30 days after making such change, and perform all tests and calculations necessary to demonstrate that such printing lines will be in compliance with the applicable requirements of Section 219.407 of this Subpart;

4) If changing from opting out of the exclusions set forth in Section 219.405(c)(3) pursuant to subsection (g)(1)(B) of this Section to utilization of such exclusions, certify compliance in accordance with subsection (g)(1)(A) of this Section within 30 days after making such change.

h) The owner or operator shall maintain all records required by this Section at the source for a minimum period of three years and shall make all records available to the Agency upon request.

i) Provisions for Calculation of Emissions from Heatset Web Offset Lithographic Printing Operations. To calculate VOM emissions from heatset web offset lithographic printing operations for purposes other than the applicability thresholds specified in Section 219.405 of this Subpart, sources may use the following emission adjustment factors (for Annual Emissions Reports or permit limits, for example):

1) A factor of 0.80 may be used in calculating emissions from all heatset inks to account for VOM retention in the substrate except when using an impervious substrate. For impervious substrates such as metal or plastic, no emission adjustment factor is used. The VOM content of the ink, as used, shall be multiplied by this factor to determine the amount of VOM emissions from the use of ink on the printing lines;

2) To determine VOM emissions from fountain solutions that contain no alcohol, an emission adjustment factor may be used to account for carryover into the dryer, except when using an impervious substrate.

   A) The VOM emitted from the fountain solution shall be calculated using the following equation:

$$VOM_{fs} = 0.30 \times VOM_{tot} + \left(0.70 \times VOM_{tot}\right) \times \left(1 - DE\right)$$

   where:

   VOM_{tot} = Total VOM in the fountain solution;

   VOM_{fs} = VOM emitted from the fountain solution;

   DE = Destruction efficiency of the control device on the associated dryer, in decimal form (i.e., 95% control is represented as 0.95). If no control device is present, DE = 0;

   B) For fountain solutions that contain alcohol, impervious substrates such as metal or plastic, or non-heatset lithographic presses, no emission adjustment factor is used;

3) To determine VOM emissions from cleaning solutions used on heatset web offset lithographic printing lines at the source, an emission adjustment factor of 0.50 may be used in calculating emissions from used shop towels if the VOM composite vapor pressure of each associated cleaning solution is less than 10 mmHg measured at 20°C (68°F) and the shop towels are kept in closed containers. To determine VOM emissions from automatic blanket wash solution with a VOM composite vapor pressure of less than 10 mmHg measured at 20°C (68°F), an emission adjustment factor may be used to account for carryover into the dryer, except when using an impervious substrate.

   A) The VOM emitted from the automatic blanket wash solution shall be calculated using the following equation:

$$VOM_{bw} = 0.60 \times VOM_{tot} + \left(0.40 \times VOM_{tot}\right) \times \left(1 - DE\right)$$

where:

VOM_{tot} = Total VOM in the blanket wash;

VOM_{bw} = VOM emitted from the blanket wash;

DE = Destruction efficiency of the control device on the associated dryer, in decimal form (i.e., 95% control is represented as 0.95). If no control device is present, DE = 0;

B) For cleaning solutions with VOM composite vapor pressures of equal to or greater than 10 mmHg measured at 20°C (68°F), for shop towels that are not kept in closed containers, and for impervious substrates such as metal or plastic, no emission adjustment factor is used.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 219.415 Testing for Letterpress Printing Lines

a) Testing to demonstrate compliance with the requirements of Section 219.413 of this Subpart shall be conducted by the owner or operator by January 1, 2012, unless such testing has been conducted within the two years immediately preceding January 1, 2012. Thereafter, testing shall be conducted by the owner or operator within 90 days after a request by the Agency, or as otherwise specified in this Subpart. Such testing shall be conducted at the expense of the owner or operator, and the owner or operator shall notify the Agency in writing 30 days in advance of conducting such testing to allow the Agency to be present during such testing.

b) The methods and procedures of Section 219.105(d) and (f) shall be used for testing to demonstrate compliance with the requirements of Section 219.413(a)(1)(B) or (b)(1) of this Subpart, as follows:

1) To select the sampling sites, Method 1 or 1A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 219.112 of this Part. The sampling sites for determining efficiency in reducing VOM from the dryer exhaust shall be located between the dryer exhaust and the control device inlet, and between the outlet of the control device and the exhaust to the atmosphere;

2) To determine the volumetric flow rate of the exhaust stream, Method 2, 2A, 2C, or 2D, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 219.112 of this Part;

3) To determine the VOM concentration of the exhaust stream entering and exiting the control device, Method 25 or 25A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 219.112 of this Part. For thermal and catalytic afterburners, Method 25 must be used except under the following circumstances, in which case Method 25A must be used:

   A) The allowable outlet concentration of VOM from the control device is less than 50 ppmv, as carbon;

   B) The VOM concentration at the inlet of the control device and the required level of control result in exhaust concentrations of VOM of 50 ppmv, or less, as carbon; and

   C) Due to the high efficiency of the control device, the anticipated VOM concentration at the control device exhaust is 50 ppmv or less, as carbon, regardless of inlet concentration. If the source elects to use Method 25A under this option, the exhaust VOM concentration must be 50 ppmv or less, as carbon, and the required destruction efficiency must be met for the source to have demonstrated compliance. If the Method 25A test results show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, a retest is required. The retest shall be conducted using either Method 25 or Method 25A. If the retest is conducted using Method 25A and the test results again show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, the source must retest using Method 25;

4) Notwithstanding the criteria or requirements in Method 25 which specifies a minimum probe temperature of 129°C (265^{o}F), the probe must be heated to at least the gas stream temperature of the dryer exhaust, typically close to 176.7^{o}C (350^{o}F);

5) During testing, the printing lines shall be operated at representative operating conditions and flow rates; and

6) During testing, an air flow direction indicating device, such as a smoke stick, shall be used to demonstrate 100 percent emissions capture efficiency for the dryer in accordance with Section 219.413(a)(1)(A) of this Subpart.

c) Testing to demonstrate compliance with the VOM content limitations in Section 219.413(a)(2)(A) of this Subpart, and to determine the VOM content of cleaning solvents, cleaning solutions, and inks (pursuant to the requirements of Section 219.417(b)(1)(B) of this Subpart), shall be conducted upon request of the Agency, or as otherwise specified in this Subpart, as follows:

1) The applicable test methods and procedures specified in Section 219.105(a) of this Part shall be used; provided, however, Method 24, incorporated by reference in Section 219.112 of this Part, shall be used to demonstrate compliance; or

2) The manufacturer's specifications for VOM content for cleaning solvents and inks may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 219.105(a) of this Part; provided, however, Method 24 shall be used to determine compliance.

d) Testing to demonstrate compliance with the requirements of Section 219.413(b) of this Subpart shall be conducted as set forth in the owner or operator's plan approved by the Agency and USEPA as federally enforceable permit conditions pursuant to Section 219.413(b) of this Subpart.

e) Testing to determine the VOM composite partial vapor pressure of cleaning solvents, cleaning solvent concentrates, and as-used cleaning solutions shall be conducted in accordance with the applicable methods and procedures specified in Section 219.110 of this Part.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 219.417 Recordkeeping and Reporting for Letterpress Printing Lines

a) By August 1, 2010, or upon initial start-up of a new heatset web letterpress printing line, whichever is later, and upon modification of a heatset web letterpress printing line, an owner or operator of a heatset web letterpress printing line exempt from any of the limitations of Section 219.413 of this Subpart because of the criteria in Section 219.412(a)(1) shall submit a certification to the Agency that includes:

1) A declaration that the source is exempt from the requirements in Section 219.413 of this Subpart because of the criteria in Section 219.412(a)(1) of this Subpart;

2) Calculations which demonstrate that the source's total potential to emit VOM does not equal or exceed 22.7 Mg (25 tons) per year.

b) An owner or operator of a letterpress printing line exempt from any of the limitations of Section 219.413 of this Subpart because of the criteria in Section 219.412(a)(2) shall:

1) By August 1, 2010, or upon initial start-up of a new letterpress printing line, whichever is later, and upon modification of a letterpress printing line, submit a certification to the Agency that includes the information specified in either subsections (b)(1)(A) through (b)(1)(C) of this Section, or subsections (b)(1)(A) and (b)(1)(D) of this Section, as applicable:

A) A declaration that the source is exempt from the control requirements in Section 219.413 of this Part because of the criteria in Section 219.412(a)(2) of this Subpart;

B) Calculations that demonstrate that combined emissions of VOM from all letterpress printing lines (including inks and solvents used for cleanup operations associated with the letterpress printing lines) at the source never equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment, as follows:

i) To calculate daily emissions of VOM, the owner or operator shall determine the monthly emissions of VOM from all letterpress printing lines at the source (including solvents used for cleanup operations associated with the letterpress printing lines) and divide this amount by the number of days during that calendar month that letterpress printing lines at the source were in operation;

ii) To determine the VOM content of the inks and cleaning solvents, the tests methods and procedures set forth in Section 219.415(c) of this Subpart shall be used;

iii) To determine VOM emissions from inks used on letterpress printing lines at the source, an ink emission adjustment factor of 0.05 shall be used in calculating emissions from all non-heatset inks except when using an impervious substrate, and a factor of 0.80 shall be used in calculating emissions from all heatset inks to account for VOM retention in the substrate except when using an impervious substrate. For impervious substrates such as metal or plastic, no emission adjustment factor is used. The VOM content of the ink, as used, shall be multiplied by this factor to determine the amount of VOM emissions from the use of ink on the printing lines; and

iv) To determine VOM emissions from cleaning solutions used on letterpress printing lines at the source, an emission adjustment factor of 0.50 shall be used in calculating emissions from used shop towels if the VOM composite vapor pressure of each associated cleaning solution is less than 10 mmHg measured at 20°C (68°F) and the shop towels are kept in closed containers. Otherwise, no retention factor is used;

C) A description and the results of all tests used to determine the VOM content of inks and cleaning solvents, and a declaration that all such tests have been properly conducted in accordance with Section 219.415(c)(1) of this Subpart;

D) As an alternative to the calculations in subsection (b)(1)(B), a statement that the source uses less than the amount of material specified in subsection (b)(1)(D)(i) or (b)(1)(D)(ii), as applicable, during each calendar month. A source may determine that it emits below 6.8 kg/day (15 lbs/day) of VOM based upon compliance with such material use limitations. If the source exceeds this amount of material use in a given calendar month, the owner or operator must, within 15 days of the end of that month, complete the emissions calculations of subsection (b)(1)(B) to determine daily emissions for applicability purposes. If the source ever exceeds this amount of material use for six consecutive calendar months, it is no longer eligible to use this subsection as an alternative to the calculations in subsection (b)(1)(B). If a source has both heatset web and either nonheatset web or sheetfed letterpress printing operations, or has all three types of printing operations, the owner or operator may not make use of this alternative and must use the calculations in subsection (b)(1)(B).

i) The sum of all sheetfed and nonheatset web letterpress printing operations at the source: 242.3 liters (64 gallons) of cleaning solvent; or

ii) The sum of all heatset web letterpress printing operations at the source: 204.1 kg (450 lbs) of ink and cleaning solvent;

2) For sources complying with subsection (b)(1)(B) of this Section, notify the Agency in writing if the combined emissions of VOM from all letterpress printing lines (including inks and solvents used for cleanup operations associated with the letterpress printing lines) at the source ever equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment, within 30 days after the event occurs;

3) For sources complying with subsection (b)(1)(D) of this Section, comply with the following:

A) Maintain material use records showing that the source uses less than the amount of material specified in subsections (b)(1)(D)(i) and (b)(1)(D)(ii) during each calendar month, or, if the source exceeds the material use limitations, records showing that the source exceeded the limitations but did not emit 6.8 kg/day (15 lbs/day) or more of VOM. On and after January 1, 2012, such records shall include the name, identification number, and VOM content of each cleaning solvent and ink used per calendar month, the volume of each cleaning solvent used per calendar month for each sheetfed and nonheatset web letterpress printing operation, and the weight of each cleaning solvent and ink used per calendar month for each heatset web letterpress printing operation;

B) Notify the Agency in writing if the source exceeds the material use limitations for six consecutive calendar months, or if the source changes its method of compliance from subsection (b)(1)(D) to subsection (b)(1)(B) of this Section, within 30 days after the event occurs.

c) Unless complying with subsections (b)(1)(D) and (b)(3) of this Section, on and after August 1, 2010, an owner or operator of a letterpress printing line exempt from any of the limitations in Section 219.413 of this Subpart because of the criteria in Section 219.412(a)(1) or (a)(2) shall collect and record either the information specified in subsection (c)(1) or (c)(2) of this Section for all letterpress printing lines at the source:

1) Standard recordkeeping, including the following:

A) The name and identification of each letterpress ink and cleaning solvent used on any letterpress printing line, recorded each month;

B) A daily record that shows whether a letterpress printing line at the source was in operation on that day;

C) The VOM content and the volume of each letterpress ink and cleaning solvent used on any letterpress printing line, recorded each month;

D) The total VOM emissions at the source each month, determined as the sum of the product of usage and VOM content for each cleaning solvent and letterpress ink (with the applicable ink VOM emission adjustment) used at the source, calculated each month; and

E) The VOM emissions in lbs/day for the month, calculated in accordance with subsection (b)(1)(B) of this Section;

2) Purchase and inventory recordkeeping, including the following:

A) The name, identification, and VOM content of each letterpress ink and cleaning solvent used on any letterpress printing line, recorded each month;

B) Inventory records from the beginning and end of each month indicating the total volume of each letterpress ink, and cleaning solvent to be used on any letterpress printing line at the source;

C) Monthly purchase records for each letterpress ink and cleaning solvent used on any letterpress printing line at the source;

D) A daily record that shows whether a letterpress printing line at the source was in operation on that day;

E) The total VOM emissions at the source each month, determined as the sum of the product of usage and VOM content for each cleaning solvent and letterpress ink (with the applicable ink VOM emission adjustment factor) used at the source, calculated each month based on the monthly inventory and purchase records required to be maintained pursuant to subsections (c)(2)(A), (c)(2)(B), and (c)(2)(C) of this Section; and

F) The VOM emissions in lbs/day for the month, calculated in accordance with subsection (b)(1)(B) of this Section.

d) An owner or operator of a heatset web letterpress printing lines subject to the control requirements of Section 219.413(a)(1)(B) or (b)(1) of this Subpart shall comply with the following:

1) By August 1, 2010, or upon initial start-up of a new printing line, whichever is later, and upon initial start-up of a new control device for a heatset web printing line, submit a certification to the Agency that includes the following:

A) An identification of each heatset web letterpress printing line at the source;

B) A declaration that each heatset web letterpress printing line is in compliance with the requirements of Section 219.413(a)(1) or (b) of this Subpart, as appropriate;

C) The type of afterburner or other approved control device used to comply with the requirements of Section 219.413(a)(1)(B) or (b)(1) of this Subpart, and the date that such device was first constructed at the subject source;

D) The control requirements in Section 219.413(a)(1)(B) or (b)(1) of this Subpart with which the letterpress printing line is complying;

E) The results of all tests and calculations necessary to demonstrate compliance with the control requirements of Section 219.413(a)(1)(B) or (b)(1) of this Subpart, as applicable; and

F) A declaration that the monitoring equipment required under Section 219.413(a)(1)(C) or (b) of this Subpart, as applicable, has been properly installed and calibrated according to manufacturer's specifications;

2) If testing of the afterburner or other approved control device is conducted pursuant to Section 219.415(b) of this Subpart, the owner or operator shall, within 90 days after conducting such testing, submit a copy of all test results to the Agency and shall submit a certification to the Agency that includes the following:

A) A declaration that all tests and calculations necessary to demonstrate whether the letterpress printing lines is in compliance with Section 219.413(a)(1)(B) or (b)(1) of this Subpart, as applicable, have been properly performed;

B) A statement whether the heatset web letterpress printing lines are or are not in compliance with Section 219.413(a)(1)(B) or (b)(1) of this Subpart, as applicable; and

C) The operating parameters of the afterburner or other approved control device during testing, as monitored in accordance with Section 219.416(a) or (b) of this Subpart, as applicable;

3) Except as provided in subsection (d)(3)(D) of this Section, collect and record daily the following information for each heatset web letterpress printing line subject to the requirements of Section 219.413(a)(1)(B) or (b)(1) of this Subpart:

A) Afterburner or other approved control device monitoring data in accordance with Section 219.416(a) or (b) of this Subpart, as applicable;

B) A log of operating time for the afterburner or other approved control device, monitoring equipment, and the associated printing line;

C) A maintenance log for the afterburner or other approved control device and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and duration of any outages; and

D) A log detailing checks on the air flow direction or air pressure of the dryer and press room to ensure compliance with the requirements of Section 219.413(a)(1)(A) of this Subpart at least once per calendar month while the line is operating;

4) Notify the Agency in writing of any violation of Section 219.413(a)(1)(B) or (b)(1) of this Subpart within 30 days after the occurrence of such violation. Such notification shall include a copy of all records of such violation;

5) If changing the method of compliance between Sections 219.413(a)(1)(B) and 219.413(b) of this Subpart, certify compliance for the new method of compliance in accordance with Section 219.413(b) at least 30 days before making such change, and perform all tests and calculations necessary to demonstrate that such printing lines will be in compliance with the requirements of Section 219.413(a)(1) of this Subpart, or Section 219.413(b) of this Subpart, as applicable.

e) For letterpress printing line cleaning operations, an owner or operator of a letterpress printing line subject to the requirements of Section 219.413 of this Subpart shall:

1) By August 1, 2010, or upon initial start-up of a new letterpress printing line, whichever is later, certify to the Agency that all cleaning solutions, other than those excluded pursuant to Section 219.412(b), and the handling of all cleaning materials will be in compliance with the requirements of Section 219.413(a)(2)(A) or (a)(2)(B) and (a)(3) of this Subpart. Such certification shall include:

A) A statement that the cleaning solution will comply with the limitations in Section 219.413(a)(2);

B) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitations;

C) A sample of the records that will be kept pursuant to subsection (e)(2) of this Section; and

D) A description of the practices that ensure that VOM-containing cleaning materials are kept in closed containers;

2) Collect and record the following information for each cleaning solution used on each letterpress printing line:

A) For each cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 219.413(a)(2)(A) of this Subpart and that is prepared at the source with automatic equipment:

i) The name and identification of each cleaning solution;

ii) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 219.415(c) of this Subpart;

iii) Each change to the setting of the automatic equipment, with date, time, description of changes in the cleaning solution constituents (e.g., cleaning solvents), and a description of changes to the proportion of cleaning solvent and water (or other non-VOM);

iv) The proportion of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution;

v) The VOM content of the as-used cleaning solution, with supporting calculations; and

vi) A calibration log for the automatic equipment, detailing periodic checks;

B) For each batch of cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 219.413(a)(2)(A) of this Subpart, and that is not prepared at the source with automatic equipment:

i) The name and identification of each cleaning solution;

ii) Date and time of preparation, and each subsequent modification, of the batch;

iii) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 219.415(c) of this Subpart;

iv) The total amount of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution; and

v) The VOM content of the as-used cleaning solution, with supporting calculations. For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM content may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 219.105(a) of this Part;

C) For each batch of cleaning solution for which the owner or operator relies on the vapor pressure of the cleaning solution to demonstrate compliance with Section 219.413(a)(2)(B) of this Subpart:

i) The name and identification of each cleaning solution;

ii) Date and time of preparation, and each subsequent modification, of the batch;

iii) The molecular weight, density, and VOM composite partial vapor pressure of each cleaning solvent, as determined in accordance with Section 219.415(e) of this Subpart. For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM composite partial vapor pressure may be used if such manufacturer's specifications are based on results of tests conducted in accordance with methods specified in Sections 219.105(a) and 219.110 of this Part;

iv) The total amount of each cleaning solvent used to prepare the as-used cleaning solution; and

v) The VOM composite partial vapor pressure of each as-used cleaning solution, as determined in accordance with Section 219.415(e) of this Subpart. For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM composite partial vapor pressure may be used if such manufacturer's specifications are based on results of tests conducted in accordance with methods specified in Sections 219.105(a) and 219.110 of this Part;

D) The date, time, and duration of scheduled inspections performed to confirm the proper use of closed containers to control VOM emissions, and any instances of improper use of closed containers, with descriptions of actual practice and corrective action taken, if any;

E) The amount of cleaning materials used on letterpress printing lines at the source that do not comply with the cleaning material limitations set forth in Section 219.413(a)(2) of this Subpart;

3) Notify the Agency in writing of any violation of Section 219.413 of this Subpart within 30 days after the occurrence of such violation. Such notification shall include a copy of all records of such violation.

f) The owner or operator shall maintain all records required by this Section at the source for a minimum period of three years and shall make all records available to the Agency upon request.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

SUBPART II: FIBERGLASS BOAT MANUFACTURING MATERIALS

Section 219.891 Emission Limitations and Control Requirements

a) Except as provided in subsection (f) of this Section, no owner or operator of a source subject to the requirements of this Subpart shall use a subject resin or gel coat at the source unless the resin and gel coat comply with subsection (b)(1) or (b)(2), (c), or (d) of this Section, as well as with subsections (e), (g), and (h) of this Section. For sources complying pursuant to subsection (b) or (c) of this Section, if the non-monomer VOM content of a resin or gel coat exceeds 5 percent, by weight, the excess non-monomer VOM shall be added to the monomer VOM content of the resin or gel coat. The excess non-monomer VOM shall be calculated in accordance with the following equation:

$$\text{Excess Non-Monomer VOM} = \text{Non-monomer VOM Content} - 5 \text{ percent, by weight}$$

b) VOM Content Limitations

1) Except as provided in subsection (e) of this Section, the monomer VOM content of a subject resin or gel coat shall not exceed the following limitations:

		Weighted average monomer VOM content (weight percent)
A)	Production resin	
i)	Atomized spray	28
ii)	Non-atomized	35
B)	Pigmented gel coat	33
C)	Clear gel coat	48
D)	Tooling resin	
i)	Atomized	30
ii)	Non-atomized	39
E)	Tooling gel coat	40

2) Except as provided in subsection (e) of this Section, the weighted average monomer VOM content of a subject resin or gel coat shall not exceed the applicable limitation set forth in subsection (b)(1) of this Section on a 12-month rolling average basis. Equation 1 shall be used to determine the weighted average monomer VOM content for resin and gel coat materials.

Equation 1:

$$\text{Weighted Average Monomer VOM Content} = \frac{\sum_{i=1}^{n} M_i VOM_i}{\sum_{i=1}^{n} M_i}$$

where:

M_i = Mass of open molding resin or gel coat (i) used in the past 12 months in an operation, in megagrams;

VOM_i = Monomer VOM content, by weight percent, of open molding resin or gel coat (i) used in the past 12 months in an operation;

n = Number of different open molding resins or gel coats used in the past 12 months in an operation.

c) Emissions Averaging Alternative. The owner or operator of a source subject to the requirements of this Subpart may elect to include some or all of the subject resin and gel coat operations at the source in the emissions averaging alternative. Resin and gel coat operations utilizing the emissions averaging alternative shall comply with a source-specific monomer VOM mass emission limit on a 12-month rolling average basis, calculated at the end of each calendar month. All subject resin and gel coat operations that do not utilize the emissions averaging alternative shall comply with the requirements in subsection (b) or (d) of this Section, as well as with all other applicable requirements in this Section.

1) The owner or operator of a source subject to this subsection (c) shall use Equation 2 to determine the source-specific monomer VOM mass emission limit for resin and gel coats included in the emissions average:

Equation 2:

$$\text{Monomer VOM Limit} = 46(M_R) + 159(M_{PG}) + 291(M_{CG}) + 54(M_{TR}) + 214(M_{TG})$$

where:

Monomer VOM Limit = Total allowable monomer VOM that can be emitted from the open molding operations included in the average, expressed in kilograms per 12-month period;

M_R = Mass of production resin used in the past 12 months, excluding any materials that are exempt, expressed in megagrams (Mg);

M_{PG} = Mass of pigmented gel coat used in the past 12 months, excluding any materials that are exempt, expressed in Mg;

M_{CG} = Mass of clear gel coat used in the past 12 months,

excluding any materials that are exempt, expressed in Mg;

M_{TR} = Mass of tooling resin used in the past 12 months, excluding any materials that are exempt, expressed in Mg;

M_{TG} = Mass of tooling gel coat used in the past 12 months, excluding any materials that are exempt, expressed in Mg.

The numerical coefficients associated with each term on the right hand side of Equation 2 are the allowable monomer VOM emission rates for that particular material in units of kg VOM/Mg of material used.

2) At the end of the first 12-month averaging period, and at the end of each subsequent month, the owner or operator of a source subject to this subsection (c) shall use Equation 3 to calculate the monomer VOM emissions from the resin and gel coat operations included in the emissions average. The monomer VOM emissions calculated using Equation 3 shall not exceed the monomer VOM limit calculated using Equation 2.

Equation 3:

$$\text{Monomer VOM Emissions} = (PV_R)(M_R) + (PV_{PG})(M_{PG}) + (PV_{CG})(M_{CG}) + (PV_{TR})(M_{TR}) + (PV_{TG})(M_{TG})$$

where:

Monomer VOM Emissions = Monomer VOM emissions calculated using the monomer VOM emission equations for each operation included in the average, expressed in kg;

PV_R = Weighted-average monomer VOM emission rate for production resin used in the past 12 months, expressed in kg/Mg, calculated in accordance with Equation 4 in subsection (c)(3);

M_R = Mass of production resin used in the past 12 months, expressed in Mg;

PV_{PG} = Weighted-average monomer VOM emission rate for pigmented gel coat used in the past 12 months, expressed in kg/Mg, calculated pursuant to Equation 4;

M_{PG} = Mass of pigmented gel coat used in the past 12 months, expressed in Mg;

PV_{CG} = Weighted-average monomer VOM emission rate for clear gel coat used in the past 12 months, expressed in kg/Mg, calculated pursuant to Equation 4;

M_{CG} = Mass of clear gel coat used in the past 12 months, expressed in Mg;

PV_{TR} = Weighted-average monomer VOM emission rate for tooling resin used in the past 12 months, expressed in kg/Mg, calculated pursuant to Equation 4;

M_{TR} = Mass of tooling resin used in the past 12 months, expressed in Mg;

PV_{TG} = Weighted-average monomer VOM emission rate for tooling gel coat used in the past 12 months, expressed in kg/Mg, calculated pursuant to Equation 4;

M_{TG} = Mass of tooling gel coat used in the past 12 months, expressed in Mg.

3) For purposes of Equation 3, the owner or operator of a source subject to this subsection (c) shall use Equation 4 below to calculate the weighted-average monomer VOM emission rate for the previous 12 months for each resin and gel coat operation included in the emissions average, except as provided in subsection (e) of this Section.

Equation 4:

$$PV_{OP} = \frac{\sum_{i=1}^{n} M_i PV_i}{\sum_{i=1}^{n} M_i}$$

where:

PV_{OP} = Weighted-average monomer VOM emission rate for each open molding operation (PV_R, PV_{PG}, PV_{CG}, PV_{TR}, and PV_{TG}) included in the average, expressed in kg of monomer VOM per Mg of material applied;

M_i = Mass of resin or gel coat (i) used within an operation in the past 12 months, expressed in Mg;

n = Number of different open molding resins and gel coats used within an operation in the past 12 months;

PV_i = The monomer VOM emission rate for resin or gel coat (i) used within an operation in the past 12 months, expressed in kg of monomer VOM per Mg of material applied. The monomer VOM emission rate formulas in subsection (c)(4) of this Section shall be used to compute PV_i. If a source includes filled resins in the emissions average, the source shall use the value of PV_F, calculated using Equation 5 in subsection (e)(3) of this Section, as the value of PV_i for those resins;

i = Subscript denoting a specific open molding resin or gel coat applied.

4) For purposes of Equation 4 and subsection (e)(3) of this Section, the following monomer VOM emission rate formulas shall apply. Such formulas calculate monomer VOM emission rates in terms of kg of monomer VOM per Mg of resin or gel coat applied. "VOM%" means the monomer VOM content as supplied, expressed as a weight percent value between 0 and 100 percent:

A) Production resin, tooling resin:

i) Atomized: $0.014 \times (\text{Resin VOM\%})^{2.425}$

ii) Atomized, plus vacuum bagging with roll-out: $0.01185 \times (\text{Resin VOM\%})^{2.425}$

iii) Atomized, plus vacuum bagging without roll-out: $0.00945 \times (\text{Resin VOM\%})^{2.425}$

iv) Nonatomized: $0.014 \times (\text{Resin VOM\%})^{2.275}$

v) Nonatomized, plus vacuum bagging with roll-out: $0.0110 \times (\text{Resin VOM\%})^{2.275}$

vi) Nonatomized, plus vacuum bagging without roll-out: $0.0076 \times (\text{Resin VOM\%})^{2.275}$

B) Pigmented gel coat, clear gel coat, tooling gel coat: $0.445 \times (\text{Gel Coat VOM\%})^{1.675}$

d) Capture System and Control Device Requirements. No owner or operator of a source subject to the requirements of this Subpart that is utilizing a capture system and control device for a subject resin or gel coat operation shall conduct that operation unless the following requirements are satisfied:

1) An afterburner or carbon adsorber is installed and operated that meets the limitations set forth in this subsection (d). The owner or operator may use an emissions control system other than an afterburner or carbon adsorber if that device complies with all limitations in this subsection (d), the owner or operator submits a plan to the Agency detailing appropriate monitoring devices, test methods, recordkeeping requirements, and operating parameters for the control device, and the plan is approved by the Agency and approved by USEPA as a SIP revision;

2) The VOM emissions at the outlet of the control device meet an emissions limitation determined using Equation 2 in subsection (c)(1) of this Section. In Equation 2, however, instead of using the mass of each material used over the past 12 months to determine the emission limitation, the owner or operator shall use the mass of each material used during the applicable control device performance test;

3) The owner or operator complies with all testing and monitoring requirements set forth in Section 219.892 of this Subpart.

e) Filled Resins. For all filled production and tooling resins, the owner or operator of a source subject to this Subpart shall adjust the monomer VOM emission rates determined pursuant to subsections (b) and (c) of this Section using Equation 5 in subsection (e)(3). If complying pursuant to subsection (b), the emission rate determined using Equation 5 shall not exceed the limitations set forth in subsections (e)(1) and (e)(2) of this Section. If complying pursuant to subsection (c), the value of PV_F, calculated using Equation 5, shall be used as the value of PV_i in Equation 4, as set forth in subsection (c)(3) of this Section. If the non-monomer VOM content of a filled resin exceeds 5 percent, by weight, based on the unfilled resin, the excess non-monomer VOM shall be added to the monomer VOM content in accordance with the equation set forth in subsection (a).

1) Tooling Resin: 54 kg (119.1 lbs) monomer VOM/Mg filled resin applied;

2) Production Resin: 46 kg (101.4 lbs) monomer VOM/Mg filled resin applied;

3) Equation 5:

$$PV_F = PV_U \times \frac{(100 - \%Filler)}{100}$$

where:

PV_F = The as-applied monomer VOM emission rate for the filled production resin or tooling resin, expressed in kg monomer VOM per Mg of filled material;

PV_U = The monomer VOM emission rate for the unfilled resin, before filler is added, expressed in kg monomer VOM per Mg, as calculated using the formulas in Section 219.891(c)(4) of this Subpart;

% Filler = The weight-percent of filler in the as-applied filled resin system.

f) The limitations in subsections (a) through (e) of this Section shall not apply to the following materials. These materials shall instead comply with the applicable requirements set forth in subsections (f)(1) through (f)(3).

1) Production resins, including skin coat resins, that must meet specifications for use in military vessels or must be approved by the United States Coast Guard for use in the construction of lifeboats, rescue boats, and other life-saving appliances approved under 46 CFR Subchapter Q, incorporated by reference in Section 219.112 of this Part, or for use in the construction of small passenger vessels regulated by 40 CFR Subchapter T, incorporated by reference in Section 219.112 of this Part. The owner or operator of a source subject to this Subpart shall apply all such resins with nonatomizing resin application equipment;

2) Production and tooling resins, and pigmented, clear, and tooling gel coats used for part or mold repair and touch ups. These materials shall not exceed 1 percent, by weight, of all resins and gel coats used at a subject source on a 12-month rolling average basis;

3) Pure, 100 percent vinylester resins used for skin coats. The owner or operator of a source subject to this Subpart shall apply these resins with non-atomizing resin application equipment, and the total amount of the resins shall not exceed 5 percent, by weight, of all resins used at the subject source on a 12-month rolling-average basis.

g) No owner or operator of a source subject to this Subpart shall use VOM-containing cleaning solutions to remove cured resins and gel coats from fiberglass boat manufacturing application equipment. Additionally, no owner or operator shall use VOM-containing cleaning solutions for routine cleaning of application equipment unless:

1) The VOM content of the cleaning solution is less than or equal to 5 percent, by weight; or

2) The composite vapor pressure of the cleaning solution is less than or equal to 0.50 mmHg at 68°F.

h) No owner or operator of a source subject to this Subpart shall use resin or gel coat mixing containers with a capacity equal to or greater than 208 liters (55 gallons), including those used for on-site mixing of putties and polyputties, unless such containers have covers with no visible gaps in place at all times, except when material is being manually added to or removed from a container or when mixing or pumping equipment is being placed in or removed from a container.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 219.892 Testing and Monitoring Requirements

a) Testing to demonstrate compliance with the requirements of Section 219.891 of this Subpart shall be conducted by the owner or operator by May 1, 2012. Thereafter, testing shall be conducted within 90 days after a request by the Agency, or as otherwise specified in this Subpart. The testing shall be conducted at the expense of the owner or operator and the owner or operator shall notify the Agency in writing 30 days in advance of conducting the testing to allow the Agency to be present during testing.

b) Testing to demonstrate compliance with the monomer VOM content limitations for resin and gel coat materials in Section 219.891(b) of this Subpart shall be conducted upon request of the Agency, or as otherwise specified in this Subpart, in accordance with SCAQMD 312-91, incorporated by reference in Section 219.112 of this Part.

c) The owner or operator of a source complying with this Subpart pursuant to Section 219.891(d) shall comply with the following:

1) By May 1, 2012, or upon initial start-up, whichever is later, and upon start-up of a new control device, conduct an initial performance test of the control device in accordance with this subsection (c) that demonstrates compliance with the emission limitation determined pursuant to Section 219.891(d).

2) Subsequent to the initial performance test described in subsection (c)(1) of this Section, conduct at least one performance test per calendar year. Performance tests used to demonstrate compliance with Section 219.891(d) shall be conducted at least six months apart, unless the performance test is being conducted following an exceedance of operating

parameters as described in subsection (c)(3) of this Section, or per a request by the Agency.

3) Monitor and record relevant operating parameters, including the control efficiency of the control device and the amount of materials used in the fiberglass boat manufacturing process, during each control device performance test used to demonstrate compliance with Section 219.891(d). The owner or operator shall continue to operate the fiberglass boat manufacturing process within the parameters until another performance test is conducted that demonstrates compliance with Section 219.891(d). The owner or operator shall monitor the parameters at all times when the control device is in operation. If the fiberglass boat manufacturing process exceeds any operating parameter by more than 10 percent, the owner or operator shall conduct additional performance testing in accordance with this Section within 10 operating days after the exceedance;

4) The methods and procedures of Section 219.105(d) and (f) shall be used for testing to demonstrate compliance with the requirements of Section 219.891(d) of this Subpart, as follows:

A) To select the sampling sites, Method 1 or 1A, as appropriate, 40 CFR 60, appendix A, incorporated by reference at Section 219.112 of this Part. The sampling sites for determining efficiency in reducing VOM from the dryer exhaust shall be located between the dryer exhaust and the control device inlet, and between the outlet of the control device and the exhaust to the atmosphere;

B) To determine the volumetric flow rate of the exhaust stream, Method 2, 2A, 2C, or 2D, as appropriate, 40 CFR 60, appendix A, incorporated by reference at Section 219.112 of this Part;

C) To determine the VOM concentration of the exhaust stream entering and exiting the control device, Method 25 or 25A, as appropriate, 40 CFR 60, appendix A, incorporated by reference at Section 219.112 of this Part. For thermal and catalytic afterburners, Method 25 must be used except under the following circumstances, in which case Method 25A must be used:

i) The allowable outlet concentration of VOM from the control device is less than 50 ppmv, as carbon;

ii) The VOM concentration at the inlet of the control device and the required level of control result in exhaust concentrations of VOM of 50 ppmv, or less, as carbon; and

iii) Due to the high efficiency of the control device, the anticipated VOM concentration at the control device exhaust is 50 ppmv or less, as carbon, regardless of inlet concentration. If the source elects to use Method 25A under this option, the exhaust VOM concentration must be 50 ppmv or less, as carbon, and the required destruction efficiency must be met for the source to have demonstrated compliance. If the Method 25A test results show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, a retest is required. The retest shall be conducted using either Method 25 or 25A. If the retest is conducted using Method 25A and the test results again show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, the source must retest again using Method 25.

D) Notwithstanding the criteria or requirements in Method 25, which specifies a minimum probe temperature of 129°C (265°F), the probe must be heated to at least the gas stream temperature of the dryer exhaust, typically close to 176.7°C (350°F); and

E) During testing, the fiberglass boat manufacturing operation shall be operated at representative operating conditions and flow rates.

5) If an afterburner is used to demonstrate compliance, the owner or operator shall:

A) Install, calibrate, operate, and maintain temperature monitoring devices with an accuracy of 3°C or 5°F on the emissions control system in accordance with Section 219.105(d)(2) of this Part and in accordance with the manufacturer's specifications. Monitoring shall be performed at all times when the emissions control system is operating; and

B) Install, calibrate, operate and maintain, in accordance with manufacturer's specifications, a continuous recorder on the temperature monitoring devices, such as a strip chart, recorder or computer, with at least the same accuracy as the temperature monitor.

6) If a carbon adsorber is used to demonstrate compliance, the owner or operator shall use Agency and USEPA approved continuous monitoring equipment that is installed, calibrated, maintained, and operated according to vendor specifications at all times the control device is in use. The continuous monitoring equipment shall monitor the VOM concentration of

each carbon adsorption bed exhaust or the exhaust of the bed next in sequence to be desorbed.

7) If an emissions control system other than an afterburner or carbon adsorber is used to demonstrate compliance, the owner or operator shall install, maintain, calibrate, and operate the monitoring equipment as set forth in the owner's or operator's plan approved by the Agency and USEPA pursuant to Section 219.891(d).

d) Testing to demonstrate compliance with the VOM content limitations for cleaning solutions in Section 219.891(g) of this Subpart, and with the non-monomer VOM content limitations for resin and gel coat materials in Section 219.891(a) of this Subpart, shall be conducted upon request of the Agency, or as otherwise specified in this Subpart, as follows:

1) The applicable test methods and procedures specified in Section 219.105(a) of this Part shall be used; provided, however, Method 24, incorporated by reference at Section 219.112 of this Part, shall be used to demonstrate compliance; or

2) For cleaning solvents, the manufacturer's specifications for VOM content may be used if the manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 219.105(a) of this Part; provided, however, Method 24 shall be used to determine compliance. In the event of any inconsistency between a Method 24 test and the manufacturer's specifications, the Method 24 test shall govern.

e) The owner or operator of a source subject to this Subpart and relying on the VOM content of the cleaning solution to comply with Section 219.891(g)(1) of this Subpart shall:

1) For cleaning solutions that are prepared at the source with equipment that automatically mixes cleaning solvent and water (or other non-VOM):

A) Install, operate, maintain, and calibrate the automatic feed equipment in accordance with manufacturer's specifications to regulate the volume of each of the cleaning solvent and water (or other non-VOM), as mixed; and

B) Pre-set the automatic feed equipment so that the consumption rates of the cleaning solvent and water (or other non-VOM), as applied, comply with Section 219.891(g)(1);

2) For cleaning solutions that are not prepared at the source with automatic feed equipment, keep records of the usage of cleaning solvent and water (or other non-VOM) as set forth in Section 219.894(g) of this Subpart.

f) Testing to demonstrate compliance with the VOM composite partial vapor pressure limitation for cleaning solvents set forth in Section 219.891(g) of this Subpart shall be conducted in accordance with the applicable methods and procedures set forth in Section 219.110 of this Part.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 219.894 Recordkeeping and Reporting Requirements

a) The owner or operator of a source exempt from the limitations of this Subpart because of the criteria in Section 219.890(a) of this Subpart shall:

1) By May 1, 2012, or upon initial start-up, whichever is later, submit a certification to the Agency that includes the following:

A) A declaration that the source is exempt from the requirements in this Subpart because of the criteria in Section 219.890(a);

B) Calculations that demonstrate that combined emissions of VOM from all subject fiberglass boat manufacturing operations (including solvents used for cleanup operations associated with the fiberglass boat manufacturing operation) at the source never equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment. To calculate daily emissions of VOM, the owner or operator shall determine the monthly emissions of VOM from fiberglass boat manufacturing operations at the source (including solvents used for cleanup operations associated with the fiberglass boat manufacturing operations) and divide the amount by the number of days during that calendar month that the fiberglass boat manufacturing operations were in operation;

2) Collect and record the following information and provide copies of the records to the Agency upon request:

A) The total pounds of all resins and gel coats used per calendar month;

B) The total gallons of all cleanup materials used per calendar month;

C) The VOM content of each resin, gel coat, and cleanup material used per calendar month;

D) The total VOM emissions, in pounds, for all resins, gel coats, and cleanup materials employed per calendar month, before the application of control systems and devices.

3) Notify the Agency of any record that shows that the combined emissions of VOM from subject fiberglass boat manufacturing operations at the source, including related cleaning activities, ever equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment, within 30 days after the event occurs, and provide copies of the record upon request by the Agency.

b) All sources subject to the requirements of this Subpart shall:

1) By May 1, 2012, or upon initial start-up of the source, whichever is later, and upon start-up of a new fiberglass boat manufacturing operation at the source, submit a certification to the Agency that includes:

A) Identification of each subject fiberglass boat manufacturing operation as of the date of certification;

B) A declaration that all subject fiberglass boat manufacturing operations, including related cleaning operations, are in compliance with the requirements of this Subpart;

C) The limitation with which each subject fiberglass boat manufacturing operation will comply (i.e., the VOM content limitation, the emissions averaging alternative, or the emissions control system alternative);

D) Initial documentation that each subject fiberglass boat manufacturing operation will comply with the applicable limitation, including copies of manufacturer's specifications, test results (if any), formulation data, and calculations;

E) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitations;

F) A description of the practices and procedures that the source will follow to ensure compliance with the limitations in Section 219.891(h) of this Subpart;

G) A description of each fiberglass boat manufacturing operation exempt pursuant to Section 219.890(b) of this Subpart, if any;

H) A description of materials subject to Section 219.891(f) of this Subpart, if any, used in each fiberglass boat manufacturing operation;

2) At least 30 calendar days before changing the method of compliance in accordance with Section 219.891(b), (c), and (d), notify the Agency in writing of the change. The notification shall include a demonstration of compliance with the newly applicable subsection;

3) Notify the Agency in writing of any violation of the requirements of this Subpart within 30 days following the occurrence of the violation and provide records documenting the violation upon request by the Agency;

4) Retain all records required by this Section for at least three years and make those records available to the Agency upon request.

c) The owner or operator of a fiberglass boat manufacturing operation subject to the limitations of Section 219.891 of this Subpart and complying by means of Section 219.891(b) shall comply with the following.

1) By May 1, 2012, or upon initial start-up, whichever is later, submit a certification to the Agency that includes the name, identification number, and VOM content of each subject resin and gel coat as applied each day by each subject fiberglass boat manufacturing operation;

2) Collect and record the following information each day for each fiberglass boat manufacturing operation complying with Section 219.891(b):

A) The name, identification number, and VOM content of each subject resin and gel coat as applied each day by each fiberglass boat manufacturing operation; and

B) If complying with Section 219.891(b)(2), the mass of each open molding resin or gel coat as applied each month by each subject fiberglass boat manufacturing operation and the weighted average VOM content of all subject resins and gel coats as applied by each subject fiberglass boat manufacturing operation.

d) The owner or operator of a fiberglass boat manufacturing operation subject to the requirements of Section 219.891 of this Subpart and complying by means of Section 219.891(c) shall:

1) On and after May 1, 2012, collect and record the following information each month:

A) The amount of production resin, pigmented gel coat, clear gel coat, tooling resin, and tooling gel coat used in each subject fiberglass boat manufacturing operation;

B) The VOM content of each production resin, pigmented gel coat, clear gel coat, tooling resin, and tooling gel coat used in each subject fiberglass boat manufacturing operation;

C) Total monthly VOM emissions for all subject fiberglass boat manufacturing operations;

2) At the end of the first 12-month averaging period, and at the end of each subsequent month, collect and record the following information:

A) The monomer VOM mass emission limit for all subject fiberglass boat manufacturing operations for the applicable 12-month averaging period, with supporting calculations;

B) The total actual emissions of VOM from all subject fiberglass boat manufacturing operations for the applicable 12-month averaging period.

e) The owner or operator of a fiberglass boat manufacturing operation subject to the requirements of Section 219.891 of this Subpart and complying by means of Section 219.891(d) shall:

1) By May 1, 2012, or upon initial start-up, whichever is later, and upon start-up of a new control device, submit a certification to the Agency that includes the following:

A) The type of control device used to comply with the requirements of Section 219.891(d);

B) The results of all tests and calculations necessary to demonstrate compliance with the requirements of Section 219.891(d); and

C) A declaration that the monitoring equipment required under Section 219.892 of this Subpart has been properly installed and calibrated according to manufacturer's specifications;

2) Within 90 days after conducting testing pursuant to Section 219.892, submit to the Agency a copy of all test results, as well as a certification that includes the following:

A) A declaration that all tests and calculations necessary to demonstrate whether the fiberglass boat manufacturing operation is

in compliance with Section 219.891(d) have been properly performed;

B) A statement whether the fiberglass boat manufacturing operations are or are not in compliance with Section 219.891(d);

C) The emissions limitation applicable during the control device performance test, with supporting calculations;

D) The operating parameters of the fiberglass boat manufacturing process during testing, as monitored in accordance with Section 219.892;

3) Collect and record daily the following information for each fiberglass boat manufacturing operation subject to the requirements of Section 219.891(d), and submit that information to the Agency upon request:

A) Afterburner or other approved control device monitoring data in accordance with Section 219.892 of this Subpart;

B) A log of operating time for the control device and monitoring equipment;

C) A maintenance log for the control device and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and duration of any outages;

D) Information to substantiate that the fiberglass boat manufacturing operation is operating in compliance with the parameters determined pursuant to Section 219.892.

f) The owner or operator of a source subject to the requirements in Section 219.891(f) of this Subpart shall collect and record the following information for each fiberglass boat manufacturing operation:

1) The name and identification number of each material subject to Section 219.891(f) as applied each day by each subject fiberglass boat manufacturing operation;

2) If subject to Section 219.891(f)(2), the amount of production and tooling resins, and pigmented, clear, and tooling gel coats used for part or mold repair and touch-ups, used each month at the subject source, and the total amount of all resins and gel coats used each month at the subject source;

3) If subject to Section 219.891(f)(3), the amount of pure, 100 percent vinylester resins used for skin coats each month at the subject source, and the total amount of all resins used each month at the subject source.

g) The owner or operator of a source subject to the requirements of Section 219.891 of this Subpart shall collect and record the following information for each cleaning solution used in each fiberglass boat manufacturing operation:

1) For each cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 219.891(g) of this Subpart and that is prepared at the source with automatic equipment:

A) The name and identification of each cleaning solution;

B) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 219.892(d) of this Subpart;

C) Each change to the setting of the automatic equipment, with date, time, description of changes in the cleaning solution constituents (e.g., cleaning solvents), and a description of changes to the proportion of cleaning solvent and water (or other non-VOM);

D) The proportion of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution;

E) The VOM content of the as-used cleaning solution, with supporting calculations; and

F) A calibration log for the automatic equipment, detailing periodic checks;

2) For each batch of cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 219.891(g), and that is not prepared at the source with automatic equipment:

A) The name and identification of each cleaning solution;

B) Date and time of preparation, and each subsequent modification, of the batch;

C) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 219.892(d);

D) The total amount of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution; and

E) The VOM content of the as-used cleaning solution, with supporting calculations;

3) For each batch of cleaning solution for which the owner or operator relies on the vapor pressure of the cleaning solution to demonstrate compliance with Section 219.891(g):

A) The name and identification of each cleaning solution;

B) Date and time of preparation, and each subsequent modification, of the batch;

C) The molecular weight, density, and VOM composite partial vapor pressure of each cleaning solvent, as determined in accordance with Section 219.892(f) of this Subpart;

D) The total amount of each cleaning solvent, including water, used to prepare the as-used cleaning solution; and

E) The VOM composite partial vapor pressure of each as-used cleaning solution, as determined in accordance with Section 219.110 of this Part.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

SUBPART JJ: MISCELLANEOUS INDUSTRIAL ADHESIVES

Section 219.901 Emission Limitations and Control Requirements

a) The owner or operator of a source subject to the requirements of this Subpart shall comply with the limitations in subsection (b), (c), or (d) of this Section, as well as with the limitations in subsections (e) and (f) of this Section. Notwithstanding this requirement, sources subject to Section 219.900(b)(2) shall comply with the limitations in subsection (f) of this Section only.

b) The owner or operator of adhesive application operations listed in this subsection (b) shall comply with the following VOM emission limitations, minus water and any compounds that are specifically exempted from the definition of VOM, as applied. If an adhesive is used to bond dissimilar substrates together, the substrate category with the highest VOM emission limitation shall apply:

	kg VOM/l adhesive or adhesive primer	lb VOM/gal adhesive or adhesive primer

			applied	applied
1)	General adhesive application operations			
	A)	Reinforced plastic composite	0.200	(1.7)
	B)	Flexible vinyl	0.250	(2.1)
	C)	Metal	0.030	(0.3)
	D)	Porous material (except wood)	0.120	(1.0)
	E)	Rubber	0.250	(2.1)
	F)	Wood	0.030	(0.3)
	G)	Other substrates	0.250	(2.1)
2)	Specialty adhesive application operations			
	A)	Ceramic tile installation	0.130	(1.1)
	B)	Contact adhesive	0.250	(2.1)
	C)	Cove base installation	0.150	(1.3)
	D)	Indoor floor covering installation	0.150	(1.3)
	E)	Outdoor floor covering installation	0.250	(2.1)
	F)	Installation of perimeter bonded sheet flooring	0.660	(5.5)
	G)	Metal to urethane/rubber molding or casting	0.850	(7.1)
	H)	Motor vehicle adhesive	0.250	(2.1)
	I)	Motor vehicle weatherstrip adhesive	0.750	(6.3)
	J)	Multipurpose construction	0.200	(1.7)
	K)	Plastic solvent welding (acrylonitrile butadiene styrene (ABS) welding)	0.400	(3.3)
	L)	Plastic solvent welding (except ABS welding)	0.500	(4.2)

M)	Sheet rubber lining installation	0.850	(7.1)
N)	Single-ply roof membrane installation/repair (except ethylene propylenediene monomer (EPDM) roof membrane)	0.250	(2.1)
O)	Structural glazing	0.100	(0.8)
P)	Thin metal laminate	0.780	(6.5)
Q)	Tire repair	0.100	(0.8)
R)	Waterproof resorcinol glue	0.170	(1.4)

3) Adhesive primer application operations

A)	Motor vehicle glass bonding primer	0.900	(7.5)
B)	Plastic solvent welding adhesive primer	0.650	(5.4)
C)	Single-ply roof membrane adhesive primer	0.250	(2.1)
D)	Other adhesive primer	0.250	(2.1)

c) No owner or operator of a source subject to this Subpart shall operate a miscellaneous industrial adhesive application operation unless the daily-weighted average VOM content of subject adhesives as applied each day by the operation, calculated in accordance with subsection (c)(1) of this Section, is less than or equal to the emissions limitation calculated in accordance with subsection (c)(2) of this Section.

1) Weighted Average of VOM Content of Adhesives Applied Each Day

$$VOM_{WA} = \frac{\sum_{i=1}^{n} V_i VOM_i}{\sum_{i=1}^{n} V_i}$$

where:

VOM_{WA} = The weighted average VOM content in units of kg (lbs)

VOM per volume in l (gal) of all subject adhesives as applied each day;

i = Subscript denoting a specific adhesive as applied;

n = The number of different adhesives as applied each day by each miscellaneous industrial adhesive application operation;

V_i = The volume of each adhesive, as applied, in units of l (gal);

VOM_i = The VOM content in units of kg (lbs) VOM per volume in l (gal) of each adhesive as applied;

2) Allowable Weighted Average VOM Limit for an Averaging Operation

$$Limit_{WA} = \frac{\sum_{i=1}^{n} V_i Limit_i}{\sum_{i=1}^{n} V_i}$$

where:

$Limit_{WA}$ = The allowable weighted average VOM limit in units of kg (lbs) VOM per volume in l (gal) of all subject adhesives as applied each day in a single operation;

i = Subscript denoting a specific adhesive as applied;

n = The number of different adhesives as applied each day by each miscellaneous industrial adhesive application operation;

V_i = The volume of each adhesive, as applied, in units of l (gal);

$Limit_i$ = The VOM limit, taken from subsection (b) of this Section, in units of kg (lbs) VOM per volume in l (gal) of each adhesive as applied.

d) No owner or operator of a source subject to this Subpart shall operate a miscellaneous industrial adhesive application operation employing a capture system and control device unless either:

1) An afterburner or carbon adsorption system is used that provides at least 85 percent reduction in the overall emissions of VOM from the application operation;

2) An alternative capture and control system is used that provides at least 85 percent reduction in the overall emissions of VOM from the application operation and is approved by the Agency and approved by USEPA as a SIP revision. The owner or operator shall submit a plan to the Agency detailing appropriate monitoring devices, test methods, recordkeeping requirements, and operating parameters for the control device; or

3) The owner or operator complies with the applicable limitation set forth in subsection (b) of this Section by utilizing a combination of low-VOM adhesives and an afterburner or carbon adsorption system. The owner or operator may use an alternative capture and control system if the owner or operator submits a plan to the Agency detailing appropriate monitoring devices, test methods, recordkeeping requirements, and operating parameters for the capture and control system and the system is approved by the Agency and approved by USEPA as a SIP revision.

e) The owner or operator of a source subject to this Subpart shall apply all miscellaneous industrial adhesives using one or more of the following methods:

1) Electrostatic spray;

2) High volume low pressure (HVLP) spray;

3) Flow coating. For the purposes of this Subpart, flow coating means a non-atomized technique of applying coating to a substrate with a fluid nozzle with no air supplied to the nozzle;

4) Roll coating or hand application, including non-spray application methods similar to hand or mechanically powered caulking gun, brush, or direct hand application;

5) Dip coating, including electrodeposition. For purposes of this Subpart, "electrodeposition" means a water-borne dip coating process in which opposite electrical charges are applied to the substrate and the coating. The coating is attracted to the substrate due to the electrochemical potential difference that is created;

6) Airless spray;

7) Air-assisted airless spray; or

8) Another adhesive application method capable of achieving a transfer efficiency equal to or better than that achieved by HVLP spraying, if the method is approved in writing by the Agency.

f) The owner or operator of a source subject to this Subpart shall comply with the following work practices for each subject miscellaneous adhesive application operation at the source:

1) Store all VOM-containing adhesives, adhesive primers, process-related waste materials, cleaning materials, and used shop towels in closed containers;

2) Ensure that mixing and storage containers used for VOM-containing adhesives, adhesive primers, process-related waste materials, and cleaning materials are kept closed at all times except when depositing or removing those materials;

3) Minimize spills of VOM-containing adhesives, adhesive primers, process-related waste materials, and cleaning materials;

4) Convey VOM-containing adhesives, adhesive primers, process-related waste materials, and cleaning materials from one location to another in closed containers or pipes; and

5) Minimize VOM emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 219.902 Testing Requirements

a) Testing to demonstrate compliance with the requirements of this Subpart shall be conducted by the owner or operator by May 1, 2012. Thereafter, testing shall be conducted within 90 days after a request by the Agency, or as otherwise provided in this Subpart. The testing shall be conducted at the expense of the owner or operator and the owner or operator shall notify the Agency in writing 30 days in advance of conducting the testing to allow the Agency to be present during testing.

b) Testing to demonstrate compliance with the VOM content limitations in Section 219.901(b) of this Subpart shall be conducted as follows:

1) Method 24, incorporated by reference in Section 219.112 of this Part, shall be used for non-reactive adhesives. If it is demonstrated to the satisfaction

of the Agency and the USEPA that plant adhesive formulation data are equivalent to Method 24 results, formulation data may be used. In the event of any inconsistency between a Method 24 test and a facility's formulation data, the Method 24 test will govern;

2) Appendix A of 40 CFR 63, Subpart PPPP, incorporated by reference in Section 219.112 of this Part, shall be used for reactive adhesives;

3) The manufacturer's specifications for VOM content for adhesives may be used if the specifications are based on results of tests of the VOM content conducted in accordance with methods specified in subsections (b)(1) and (b)(2) of this Section, as applicable.

c) For afterburners and carbon adsorbers, the methods and procedures of Section 219.105(d) through (f) of this Part shall be used for testing to demonstrate compliance with the requirements of Section 219.901(d) of this Subpart, as follows:

1) To select the sampling sites, Method 1 or 1A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 219.112 of this Part;

2) To determine the volumetric flow rate of the exhaust stream, Method 2, 2A, 2C, or 2D, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 219.112 of this Part;

3) To determine the VOM concentration of the exhaust stream entering and exiting the emissions control system, Method 25 or 25A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 219.112 of this Part. For thermal and catalytic afterburners, Method 25 must be used, except under the following circumstances, in which case Method 25A must be used:

A) The allowable outlet concentration of VOM from the emissions control system is less than 50 ppmv, as carbon;

B) The VOM concentration at the inlet of the emissions control system and the required level of control result in exhaust concentrations of VOM of 50 ppmv, or less, as carbon;

C) Due to the high efficiency of the emissions control system, the anticipated VOM concentration at the emissions control system exhaust is 50 ppmv or less, as carbon, regardless of inlet concentration. If the source elects to use Method 25A under this option, the exhaust VOM concentration must be 50 ppmv or less, as carbon, and the required destruction efficiency must be met for the source to have demonstrated compliance. If the Method 25A

test results show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, a retest is required. The retest shall be conducted using either Method 25 or Method 25A. If the retest is conducted using Method 25A and the test results again show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, the source must retest using Method 25;

D) During testing, the cleaning equipment shall be operated at representative operating conditions and flow rates.

d) An owner or operator using an emissions control system other than an afterburner or carbon adsorber shall conduct testing to demonstrate compliance with the requirements of Section 219.901(d) as set forth in the owner's or operator's plan approved by the Agency and USEPA pursuant to Section 219.901(d)(3).

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 219.903 Monitoring Requirements

a) If an afterburner is used to demonstrate compliance, the owner or operator of a source subject to Section 219.901(d) of this Subpart shall:

1) Install, calibrate, operate, and maintain temperature monitoring devices with an accuracy of 3°C or 5°F on the emissions control system in accordance with Section 219.105(d)(2) of this Part and in accordance with the manufacturer's specifications. Monitoring shall be performed at all times when the emissions control system is operating; and

2) Install, calibrate, operate and maintain, in accordance with manufacturer's specifications, a continuous recorder on the temperature monitoring devices, such as a strip chart, recorder or computer, with at least the same accuracy as the temperature monitor.

b) If a carbon adsorber is used to demonstrate compliance, the owner or operator of a source subject to Section 219.901(d) of this Subpart shall use Agency and USEPA approved continuous monitoring equipment that is installed, calibrated, maintained, and operated according to vendor specifications at all times the control device is in use. The continuous monitoring equipment shall monitor the VOM concentration of each carbon adsorption bed exhaust or the exhaust of the bed next in sequence to be desorbed.

c) If an emissions control system other than an afterburner or carbon adsorber is used to demonstrate compliance, the owner or operator of a source subject to Section 219.901(d) of this Subpart shall install, maintain, calibrate, and operate

the monitoring equipment as set forth in the owner's or operator's plan approved by the Agency and USEPA pursuant to Section 219.901(d)(3).

(Source: Amended at 35 Ill. Reg. _____, effective _____)

Section 219.904 Recordkeeping and Reporting Requirements

a) The owner or operator of a source exempt from the limitations of this Subpart because of the criteria in Section 219.900(a) of this Subpart shall comply with the following:

1) By May 1, 2012, or upon initial start-up of the source, whichever is later, submit a certification to the Agency that includes:

A) A declaration that the source is exempt from the requirements of this Section because of the criteria in Section 219.900(a);

B) Calculations that demonstrate that combined emissions of VOM from miscellaneous industrial adhesive application operations at the source, including related cleaning activities, never equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment. To calculate daily emissions of VOM, the owner or operator shall determine the monthly emissions of VOM from miscellaneous industrial adhesive application operations at the source (including related cleaning activities) and divide this amount by the number of days during that calendar month that miscellaneous industrial adhesive application operations at the source were in operation;

2) Collect and record the following information each month for each miscellaneous industrial adhesive application operation, maintain the information at the source for a period of three years, and provide the information to the Agency upon request:

A) The name and identification number of each adhesive as applied by each miscellaneous industrial adhesive application operation; and

B) The weight of VOM per volume and the volume of each adhesive (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each month by each miscellaneous industrial adhesive application operation;

3) Notify the Agency of any record that shows that the combined emissions of VOM from miscellaneous industrial adhesive application operations at the source, including related cleaning activities, ever equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment,

within 30 days after the event occurs, and provide copies of those records upon request by the Agency.

b) All sources subject to the requirements of this Subpart shall:

1) By May 1, 2012, or upon initial start-up of the source, whichever is later, submit a certification to the Agency that includes:

A) Identification of each subject adhesive application operation as of the date of certification;

B) A declaration that all subject adhesive application operations are in compliance with the requirements of this Subpart;

C) The limitation with which each subject adhesive application operation will comply (i.e., the VOM content limitation, the daily weighted averaging alternative, or the emissions control system alternative);

D) Initial documentation that each subject adhesive application operation will comply with the applicable limitation, including copies of manufacturer's specifications, test results (if any), formulation data, and calculations;

E) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitations;

F) A description of the practices and procedures that the source will follow to ensure compliance with the limitations in Section 219.901(f) of this Subpart;

G) A description of each adhesive application operation exempt pursuant to Section 219.900(b)(2) of this Subpart, if any; and

H) The application methods used by each subject adhesive application operation;

2) At least 30 calendar days before changing the method of compliance in accordance with Section 219.901(b), (c), and (d), notify the Agency in writing of the change. The notification shall include a demonstration of compliance with the newly applicable subsection;

3) Notify the Agency in writing of any violation of the requirements of this Subpart within 30 days following the occurrence of the violation and provide records documenting the violation upon request by the Agency;

4) Retain all records required by this Section for at least three years and make those records available to the Agency upon request.

c) The owner or operator of an adhesive application operation subject to the limitations of Section 219.901 of this Subpart and complying by means of Section 219.901(b) shall comply with the following:

1) By May 1, 2012, or upon the initial start-up date, whichever is later, submit a certification to the Agency that includes the name, identification number, and VOM content of each adhesive as applied by each subject adhesive application operation;

2) Collect and record the name, identification number, and VOM content of each adhesive as applied each day by each adhesive application operation complying with Section 219.901(b).

d) The owner or operator of an adhesive application operation subject to the limitations of Section 219.901 of this Subpart and complying by means of Section 219.901(c) shall comply with the following:

1) By May 1, 2012, or upon initial start-up, whichever is later, submit a certification to the Agency that includes the name, identification number, and VOM content of each adhesive as applied by each subject adhesive application operation;

2) Collect and record the following information each day for each adhesive application operation complying by means of Section 219.901(c):

A) The name, identification number, VOM content, and volume of each adhesive as applied each day by each subject adhesive application operation;

B) The daily weighted average VOM content of all adhesives as applied by each subject adhesive application operation.

e) The owner or operator of an adhesive application operation subject to the requirements of Section 219.901 of this Subpart and complying by means of Section 219.901(d) shall:

1) By May 1, 2012, or upon the initial start-up date, whichever is later, and upon initial start-up of a new control device, submit a certification to the Agency that includes the following:

A) The type of afterburner or other approved control device used to comply with the requirements of Section 219.901(d);

B) The results of all tests and calculations necessary to demonstrate compliance with the control requirements of Section 219.901(d); and

C) A declaration that the monitoring equipment required under Section 219.903 of this Subpart has been properly installed and calibrated according to manufacturer's specifications;

2) Within 90 days after conducting testing pursuant to Section 219.902 of this Subpart, submit to the Agency a copy of all test results, as well as a certification that includes the following:

A) A declaration that all tests and calculations necessary to demonstrate whether the adhesive application operations are in compliance with Section 219.901(d) have been properly performed;

B) A statement whether the adhesive application operations are or are not in compliance with Section 219.901(d); and

C) The operating parameters of the afterburner or other approved control device during testing, as monitored in accordance with Section 219.903 of this Subpart;

3) Collect and record daily the following information for each adhesive application operation subject to the requirements of Section 219.901(d):

A) Afterburner or other approved control device monitoring data in accordance with Section 219.903 of this Subpart;

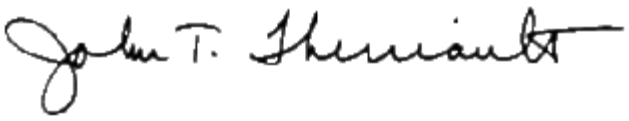
B) A log of operating time for the afterburner or other approved control device, monitoring equipment, and the associated application unit; and

C) A maintenance log for the afterburner or other approved control device and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and duration of any outages.

(Source: Amended at 35 Ill. Reg. _____, effective _____)

IT IS SO ORDERED.

I, John T. Therriault, Assistant Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above order on June 16, 2011, by a vote of 5-0.



John T. Therriault, Assistant Clerk
Illinois Pollution Control Board