

ILLINOIS POLLUTION CONTROL BOARD  
August 19, 2010

IN THE MATTER OF: )  
)  
REASONABLY AVAILABLE CONTROL ) R10-08(A)  
TECHNOLOGY (RACT) FOR VOLATILE ) (Rulemaking - Air)  
ORGANIC MATERIAL EMISSIONS FROM )  
GROUP II CONSUMER & COMMERCIAL )  
PRODUCTS: PROPOSED AMENDMENTS )  
TO 35 ILL. ADM. CODE 211, 218, and 219 )

Proposed Rule. First Notice.

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

On July 29, 2010, the Illinois Environmental Protection Agency (Agency or Illinois EPA) filed a “Motion for Leave to File in Subdocket A, or Alternatively, Motion to Open Subdocket B” (Mot.). The Agency indicates that recently adopted rules contain a technical error and seeks an avenue to correct it.

On June 17, 2010, the Board in rulemaking docket R10-8 issued its final opinion and order adopting proposed rules. *See* 34 Ill. Reg. 9069 (July 9, 2010). In its opinion adopting the rules, the Board noted that it had received correspondence on June 7, 2010, from the Flexible Packaging Association (FPA). Language proposed by FPA had not been included in the Board’s first-notice opinion and order, and JCAR did not suggest it to the Board as a second-notice change. However, having reviewed the correspondence it had received, the Board recognized that FPA and its members might either offer a rulemaking proposal or seek relief from the adopted regulations. The Board opened this subdocket in which it might consider issues raised by FPA while proceeding to final adoption. In its June 17, 2010 order, the Board provided that, if it did not receive a rulemaking proposal in the subdocket within 45 days, the Board on its own motion would close this subdocket.

Within that 45-day period, the Board did not receive a rulemaking proposal in this subdocket from FPA either or any request from FPA for relief from the adopted regulations.

**AGENCY MOTION**

On July 29, 2010, the Illinois Environmental Protection Agency (Agency or Illinois EPA) filed a “Motion for Leave to File in Subdocket A, or Alternatively, Motion to Open Subdocket B” (Mot.). The motion notes that, on July 9, 2009, the Agency filed a rulemaking proposal and that “Section 218/219.187 of the Agency’s proposal established control measures for industrial cleaning solvents.” *Id.* The motion states that the Agency responded to a request by industry for clarification by filing a second motion to amend, which proposed the following changes to Section 218/219.187(b)(1):

- b) Material and Control Requirements. No owner or operator of a source subject to this Section 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):
- 1) The VOM content of the as-used cleaning solutions (minus water and any compounds which are specifically exempted from the definition of VOM) does not exceed the following emissions limitations: *Id.* at 1-2.

On January 7, 2010, the Board granted the Agency's unopposed motion to amend the proposal in this manner. *See id.* at 2. The regulations proposed in docket R10-8, including the amended Section 218/219.187(b)(1), became effective on June 25, 2010. *See* 34 Ill. Reg. 9069 (July 9, 2010); Mot. at 2.

The motion indicates that the Agency "recently discovered that the language added to Section 218/219.187(b)(1) in response to the Illinois EPA's Second Motion to Amend is technically incorrect." Mot. at 2. The Agency argues that "excluding water and other non-VOM compounds from a substance when determining its compliance with VOM content limitations is appropriate for many materials, such as coatings. . . ." *Id.* The Agency elaborates that "the exclusion is appropriate for coatings because coatings consist of three compounds -- VOM, solids, and water/exempt compounds. When determining compliance with VOM limits, water and exempt compounds must be removed from the calculation in order to determine the amount of VOM in the coating versus the amount of solids." Mot. at 2 n.2. The Agency argues that, because cleaning solutions consist only of VOM and water/exempt compounds, the exclusion is not appropriate for them. Mot. at 2. The Agency claims that, "[i]f water/exempt compounds are removed from the calculation, all that would remain in the calculation is VOM, making it impossible for sources subject to the rule to comply with the applicable VOM content limitations." *Id.* n.2.

The Agency notes that the Board's June 17, 2010 order opened this subdocket in response to changes proposed by the FPA. Mot. at 2. The Agency states that it "and the FPA subsequently reached an agreement regarding the FPA's issues with the rule, and the FPA agreed not to seek an additional rulemaking under subdocket A." Mot. at 2 n.1. The Agency reports that it wishes to propose that the Board remove the exclusionary language described in the preceding paragraph from Section 218/219.187(b)(1). Mot. at 2. The Agency claims that it "has discussed this issue with the United States Environmental Protection Agency, the industry representative whose request for clarification prompted the addition of the exclusionary language, and other consultants. All agree that an amendment is necessary." *Id.* at 3. The Agency argues that the Board has already held two hearing in the underlying docket R10-8 and that "the proposed revision will merely correct an undisputable technical error." *Id.* Although the Board originally opened this subdocket in order to address issues raised by the FPA, the Agency concludes that "filing the rulemaking in a subdocket is the most efficient method of achieving the necessary amendment." *Id.*

## CONCLUSION

In adopting regulations in docket R10-8, the Board held open for 45 days this subdocket. While correspondence from the FPA originally caused the Board to open that subdocket, the Board has not received a rulemaking proposal or other filing from the FPA, and the Agency reports that it “and the FPA subsequently reached an agreement regarding the FPA’s issues with the rule, and the FPA agreed not to seek an additional rulemaking under subdocket A.” Mot. at 2 n.1.

Since the Board opened that subdocket, the Agency has sought to correct a technical error in the recently adopted rules. The Agency argues that that the error makes compliance with those rules “impossible” and that there is no disagreement that an amendment is necessary. *See* Mot. at 2-3. The Board notes the unusual circumstances and proceedings of this subdocket and the absence of any response to the Agency’s motion. *See* 35 Ill. Adm. Code 101.500(d). The Board concurs with the Agency that this subdocket is the most efficient course through which to consider amending Section 218/219.187(b)(1) and grants to the motion for leave to proceed in this subdocket (A).

Although the Agency has not filed a separate rulemaking proposal, it has specifically described the amendment it seeks. The sixth section of the Agency’s motion states that “[t]he Illinois EPA would like to file a rulemaking proposal with the Board to remove the exclusionary language referenced above.” Mot. at 2 (¶6). In addition, the Agency has argued that the change is necessary in order to make compliance with the recently-adopted regulations possible. As the Agency has described the change it would propose in a separate filing in this subdocket, the Board in the interests of expeditious consideration proceeds to first notice publication without commenting on the substantive merits.

First-notice publication of these proposed rules in the *Illinois Register* will start a period of at least 45 days during which any person may file a public comment with the Board, regardless of whether the person has already filed a public comment in this proceeding. *See* 5 ILCS 100/5-40(b) (2008) (Illinois Administrative Procedure Act).

Public comments must be filed with the Clerk of the Board at the following address:

Pollution Control Board  
John T. Therriault, Assistant Clerk  
James R. Thompson Center  
100 W. Randolph Street, Suite 11-500  
Chicago, IL 60601.

The docket number for this rulemaking, R10-8(A), should be indicated on any public comment in this proceeding.

Please note that all filings with the Clerk of the Board must be served on the hearing officer and on those persons on the Service List for this rulemaking. Before filing any document

with the Clerk, please check with the Clerk's Office to verify the current version of the Service List.

### ORDER

Without commenting on the substantive merits, the Board directs the Clerk to cause first-notice publication of the following proposed amendments to Parts 218 and 219 of the Board's air pollution regulations in the *Illinois Register*. Proposed additions to Parts 218 and 219 are underlined, and proposed deletions appear stricken.

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 E: SOLVENT CLEANING

Section	
218.181	Solvent Cleaning Degreasing Operations
218.182	Cold Cleaning
218.183	Open Top Vapor Degreasing
218.184	Conveyorized Degreasing
218.185	Compliance Schedule (Repealed)
218.186	Test Methods
218.187	Other Industrial Solvent Cleaning Operations

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

**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. at 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 R10-08 at 34 Ill. Reg. 9096, effective June 25, 2010; amended in R10-08(A) at 34 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

## **SUBPART E: SOLVENT CLEANING**

### **Section 218.187 Other Industrial Solvent Cleaning Operations**

- a) Applicability. On and after April 1, 2011:
  - 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 6.8 kg/day (15 lbs/day) or more of VOM from cleaning operations at the source, in the absence of air pollution control equipment. 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), (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, including screen reclamation activities;
      - 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), (f), and (g) of this Section:

- i) Aerospace coating;
  - ii) Flexible package printing;
  - iii) Lithographic printing;
  - iv) Letterpress printing;
  - v) Flat wood paneling coating;
  - vi) Large appliance coating;
  - vii) Metal furniture coating;
  - viii) Paper, film, and foil coating;
  - ix) Wood furniture coating;
  - x) Shipbuilding and repair coating;
  - xi) Plastic parts coating;
  - xii) Miscellaneous metal parts coating;
  - xiii) Fiberglass boat manufacturing;
  - xiv) Miscellaneous industrial adhesives; and
  - xv) 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 facilities using no more than 1.5 gallons per day of solvents;
  - 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 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.
- b) Material and Control Requirements. No owner or operator of a source subject to this Section 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):
- 1) The VOM content of the as-used cleaning solutions (~~minus water and any compounds that are specifically exempted from the definitions of VOM~~) 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	.83
ii)	Screen printing	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)	All other cleaning operations not subject to a specific limitation in subsections (b)(1)(A) through	kg/l	lb/gal

(b)(1)(C) of this Section

0.050 0.42

- 2) The composite vapor pressure of each as-used cleaning solution used does not exceed 8.0 mmHg measured at 20° C (68° F); or
  - 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. 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 by at least 85 percent overall, 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.
- 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:
- 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.
- 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 Section 218.187(a)(1) of this Subpart shall comply with the following:
    - A) By April 1, 2011, 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 Section 218.187(a)(1);
    - ii) Calculations that demonstrate that combined emissions of VOM from cleaning operations at the source never equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment;
  - B) Notify the Agency of any record that shows that the combined emissions of VOM from cleaning operations 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
- 2) All sources subject to the requirements of this Section shall:
- A) By April 1, 2011, 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 Section 218.187(d); and
    - vii) A description of each cleaning operation exempt pursuant to Section 218.187(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) or (b)(2), 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 which 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 April 1, 2011, 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 Section 218.187(f) of this Subpart has been properly installed and calibrated according to manufacturer's specifications;

- B) If testing of an emissions control system is conducted pursuant to Section 218.187(g) 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:
- i) A declaration that all tests and calculations necessary to demonstrate compliance with Section 218.187(b)(3) of this Subpart have been properly performed;
  - ii) A statement whether the subject cleaning operation is or is not in compliance with Section 218.187(b)(3) of this Subpart; and
  - iii) The operating parameters of the emissions control system during testing, as monitored in accordance with Section 218.187(f) of this Subpart;
- C) Collect and record daily the following information for each cleaning operation subject to the requirements of Section 218.187(b)(3) of this Subpart:
- i) Emissions control system monitoring data in accordance with Section 218.187(f) of this Subpart, 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 subject to the requirements of subsections (b) and (d) of this Section shall notify the Agency of any violation of subsections (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;
  - 7) 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 Section 218.187(b)(3) of this Subpart 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;
  - 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 Section 218.187(b)(3) of this Subpart 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 Section 218.187(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 Section 218.187(b)(1) of this Subpart, 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;
- 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 Section 218.187(b)(3) 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 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 Section 218.187(b)(3) of this Subpart as set forth in the owner's or operator's plan approved by the Agency and USEPA as federally enforceable permit conditions pursuant to Section 218.187(b)(3) of this Subpart.

(Source: Amended at 34 Ill. Reg. \_\_\_\_, effective\_\_\_\_)

TITLE 35: ENVIRONMENTAL PROTECTION  
 SUBTITLE B: AIR POLLUTION  
 CHAPTER I: POLLUTION CONTROL BOARD  
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 LIMITATIONS FOR STATIONARY SOURCES

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 ORGANIC MATERIAL EMISSION STANDARDS AND LIMITATIONS FOR  
 THE METRO EAST AREA

## SUBPART E: SOLVENT CLEANING

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219.187	Other Industrial Solvent Cleaning Operations

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

**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 R10-08 at 34 Ill. Reg. 9253, effective June 25, 2010; amended in R10-08(A) at 34 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

## SUBPART E: SOLVENT CLEANING

### **Section 219.187 Other Industrial Solvent Cleaning Operations**

- a) Applicability. On and after April 1, 2011:
  - 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 6.8 kg/day (15 lbs/day) or more of VOM from cleaning operations at the source, in the absence of air pollution control equipment. 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), (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, including screen reclamation activities;
    - 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), (f), and (g) of this Section:
    - i) Aerospace coating;
    - ii) Flexible package printing;
    - iii) Lithographic printing;
    - iv) Letterpress printing;
    - v) Flat wood paneling coating;
    - vi) Large appliance coating;
    - vii) Metal furniture coating;
    - viii) Paper, film, and foil coating;
    - ix) Wood furniture coating;

- x) Shipbuilding and repair coating;
  - xi) Plastic parts coating;
  - xii) Miscellaneous metal parts coating;
  - xiii) Fiberglass boat manufacturing;
  - xiv) Miscellaneous industrial adhesives; and
  - xv) 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 facilities using no more than 1.5 gallons per day of solvents;
  - 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 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.
- b) Material and Control Requirements. No owner or operator of a source subject to this Section 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):
- 1) The VOM content of the as-used cleaning solutions (~~minus water and any compounds that are specifically exempted from the definition of VOM~~) 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   | 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)   | All other cleaning operations not subject to a specific limitation in subsections (b)(1)(A) through (b)(1)(C) of this Section | kg/l  | lb/gal |
|      |   | 0.050 | 0.42   |
- 2) The composite vapor pressure of each as-used cleaning solution used does not exceed 8.0 mmHg measured at 20° C (68° F); or
- 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. 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 by at least 85 percent overall, 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.
- 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:

- 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.

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 Section 219.187(a)(1) of this Subpart shall comply with the following:
  - A) By April 1, 2011, 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 Section 219.187(a)(1);
    - ii) Calculations that demonstrate that combined emissions of VOM from cleaning operations at the source never equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment;
  - B) Notify the Agency of any record that shows that the combined emissions of VOM from cleaning operations 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.
- 2) All sources subject to the requirements of this Section shall:
  - A) By April 1, 2011, 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 Section 219.187(d); and
  - vii) A description of each cleaning operation exempt pursuant to Section 219.187(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) or (b)(2), 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 which 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 April 1, 2011, 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 Section 219.187(f) of this Subpart has been properly installed and calibrated according to manufacturer's specifications;
  - B) If testing of an emissions control system is conducted pursuant to Section 219.187(g) 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:
    - i) A declaration that all tests and calculations necessary to demonstrate compliance with Section 219.187(b)(3) of this Subpart have been properly performed;
    - ii) A statement whether the subject cleaning operation is or is not in compliance with Section 219.187(b)(3) of this Subpart; and
    - iii) The operating parameters of the emissions control system during testing, as monitored in accordance with Section 219.187(f) of this Subpart;
  - C) Collect and record daily the following information for each cleaning operation subject to the requirements of Section 219.187(b)(3) of this Subpart:
    - i) Emissions control system monitoring data in accordance with Section 219.187(f) of this Subpart, 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 subject to the requirements of subsections (b) and (d) of this Section shall notify the Agency of any violation of subsections (b) or (d) 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;
- 7) 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 Section 219.187(b)(3) of this Subpart 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;

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 Section 219.187(b)(3) of this Subpart shall install, maintain, calibrate, and operate such monitoring equipment as set forth in the owner or operator's plan approved by the Agency and USEPA pursuant to Section 219.187(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 Section 219.187(b)(1) of this Subpart, 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;

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 Section 219.187(b)(3) 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 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 Section 219.187(b)(3) of this Subpart as set forth in the owner or operator's plan approved by the Agency and USEPA as federally enforceable permit conditions pursuant to Section 219.187(b)(3) of this Subpart.

(Source: Amended at 34 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 opinion and order on August 19, 2010, by a vote of 5-0.



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John T. Therriault, Assistant Clerk  
Illinois Pollution Control Board