

ILLINOIS POLLUTION CONTROL BOARD  
December 19, 2013

IN THE MATTER OF: )  
)  
VAPOR RECOVERY RULES: ) R13-18  
AMENDMENTS TO 35 ILL. ADM. CODE ) (Rulemaking - Air)  
PARTS 201, 218, and 219 )

Adopted Rule. Final Order.

OPINION AND ORDER OF THE BOARD (by J.D. O’Leary):

Today the Board adopts final amendments to its air pollution rules at 35 Ill. Adm. Code 201, 218, and 219. With this final adoption, the Board makes only several minor changes to the rule amendments proposed at second notice. The Board now files the adopted amendments with the Secretary of State, ensuring that they will have a calendar year 2013 effective date. *See* 5 ILCS 100/5-40(d) (2012).

The amendments include the phase-out of Stage II vapor recovery systems at the pump nozzles of gasoline dispensing facilities (GDFs) in the Chicago ozone nonattainment area (NAA). The phase-out is based upon the determination of the United States Environmental Protection Agency (USEPA), pursuant to the federal Clean Air Act (CAA) Amendments of 1990 (42 U.S.C. § 7511a(b)(3)), that there is widespread use of on-board refueling vapor recovery (ORVR) throughout the national motor vehicle fleet. The phase-out is further based upon decreased emission reductions resulting from simultaneously using ORVR and incompatible Stage II systems.

This rulemaking was initiated on March 18, 2013, when the Illinois Environmental Protection Agency (IEPA) filed a rulemaking proposal under Sections 10, 27, and 28 of the Environmental Protection Act (Act) (415 ILCS 5/10, 27, 28 (2012)). The Board issued an order on April 4, 2013, accepting IEPA’s proposal for hearing and granting IEPA’s motion for expedited review, which accompanied the proposal. To allow the State of Illinois to begin realizing additional emission reduction benefits, IEPA asked the Board to adopt final amendments by the end of the 2013 calendar year. Along with further reducing emissions, the amendments will (1) allow existing GDFs to begin decommissioning Stage II systems and (2) eliminate the requirement for new GDFs to install and operate Stage II systems.

In granting IEPA’s motion for expedited review, the Board stated that it would, subject to available resources, “endeavor to adopt final rules by the end of this calendar year.” Vapor Recovery Rules: Amendments to 35 Ill. Adm. Code Parts 201, 218, and 219, R13-18, slip op. at 3 (Apr. 4, 2013) (First Notice). The Board’s April 4, 2013 order accordingly adopted the proposed amendments for first notice without commenting on their merits.

First-notice publication of the amendments appeared in the *Illinois Register* on May 10, 2013 (37 Ill. Reg. 6028 (Part 201); 37 Ill. Reg. 6054 (Part 218); 37 Ill. Reg. 6083 (Part 219)).

Section 5-40(b) of the Illinois Administrative Procedure Act (IAPA) (5 ILCS 100/5-40(b) (2012)) requires the Board to receive any public comments for at least 45 days from the date of first-notice publication. The Board received public comments from IEPA; the Illinois Petroleum Marketers Association and the Illinois Association of Convenience Stores (collectively, IPMA); and ARID Technologies, Inc. (ARID). The Board also conducted two public hearings during this rulemaking.

On November 7, 2013, the Board adopted second-notice amendments for review by the Joint Committee on Administrative Rules (JCAR). The Board at second notice made only minor changes to the first-notice rule language. At its December 17, 2013 meeting, JCAR issued a certification of no objection concerning the amendments. As noted, the final rules reflect only minor revisions to the second-notice rule language.

In this opinion, the Board first provides the procedural history of the rulemaking. This is followed by a table of acronyms used in this opinion. The Board then discusses the adopted amendments and its findings. The final rule language is set forth in the order following this opinion.

## **PROCEDURAL HISTORY**

### **IEPA Proposal and Motions; First Notice**

On March 18, 2013, IEPA filed its rulemaking proposal, which included a Statement of Reasons (SR) and a Technical Support Document (TSD). IEPA's proposal was accompanied by a motion for expedited review and a motion for waiver of copy requirements. On April 4, 2013, the Board accepted the Agency's proposal for hearing and granted IEPA's motion for expedited review. The Board found that "the emission reduction benefits for the State and economic savings for affected [GDFs], as described by IEPA, justify establishing a January 1, 2014 starting date to phase-out the Chicago NAA Stage II program." First Notice at 3. In accord with expedited review, the Board adopted the proposed amendments for first notice without commenting on their merits.

In its April 4, 2013 order, the Board reserved ruling upon IEPA's motion for waiver of copy requirements and directed IEPA to provide, by May 6, 2013, further information in support of that motion. On May 2, IEPA filed its response to the Board's order. The Board granted IEPA's waiver motion on November 7, 2013.

The first-notice amendments were published in the *Illinois Register* on May 10, 2013. See 37 Ill. Reg. 6028, 6054, 6083 (May 10, 2013).

### **Public Hearings**

The Board held two public hearings in this rulemaking. The first hearing took place in Springfield on May 8, 2013, and the second hearing took place in Chicago on June 5, 2013. The transcripts of the Springfield hearing (Tr.1) and the Chicago hearing (Tr.2) were received by the

Board on May 13 and June 12, 2013, respectively, and promptly placed in the Clerk's Office On-Line (COOL) on the Board's Web site at [www.ipcb.state.il.us](http://www.ipcb.state.il.us).

On April 24, 2013, IEPA timely filed its pre-filed testimony for the first hearing. To expedite the hearing process, four pages of Board staff questions for IEPA's witnesses were attached to a hearing officer order of May 6, 2013. Two persons testified on behalf of IEPA at the first hearing: Darwin Burkhart, Manager of the Clean Air Programs of the Division of Mobile Source Programs within IEPA's Bureau of Air; and Ross Cooper, Permit Engineer in the Permit Section of the Division of Air Pollution Control within IEPA's Bureau of Air. Also appearing on behalf of IEPA were the following: Chuck Gebhardt, Manager of the Technical Services Section of IEPA's Division of Mobile Source Programs; and Michael Rogers of IEPA's Technical Services Section.

One person testified on behalf of the Office of the State Fire Marshal (OSFM) at the first hearing: Fred Schneller, Division Manager for OSFM's Petroleum Chemical Safety Division. Also appearing on behalf of OSFM was Scott Johnson. One person testified on behalf of the Illinois Department of Agriculture (IDOA) at the first hearing: Doug Rathbun, Bureau Chief for IDOA's Weights and Measures Bureau.

The hearing officer entered three exhibits into the record at the first hearing:

- Pre-filed Testimony of IEPA's Darwin Burkhart for First Hearing (Exh.1 or Burkhart PFT1);
- Pre-filed Testimony of IEPA's Ross Cooper for First Hearing (Exh. 2 or Cooper PFT1); and
- "Motor Vehicle Emission Simulator (MOVES)," User Guide for MOVES2010b, USEPA, Assessment and Standards Division, Office of Transportation and Air Quality, EPA-420-B-12-001b (June 2012) (Exh. 3 or MOVES User Guide).

IEPA timely filed its pre-filed testimony for the second hearing on May 28, 2013. To expedite the hearing process, two pages of Board staff questions for IEPA's witnesses were attached to a hearing officer order of May 31, 2013. Two persons testified on behalf of IEPA at the second hearing: Mr. Burkhart and Mr. Gebhardt. Also appearing on behalf of IEPA were the following: Mr. Cooper, Mr. Rogers, and Jerry Clark, Clean Air Programs of IEPA's Division of Mobile Source Programs. Also testifying at the second hearing was Jeff Dzierzanowski with Source North America Corporation.

The hearing officer entered three exhibits into the record at the second hearing:

- Pre-filed Testimony of IEPA's Darwin Burkhart for Second Hearing (Exh. 4 or Burkhart PFT2)
- Pre-filed Testimony of IEPA's Chuck Gebhardt for Second Hearing (Exh. 5 or Gebhardt PFT2); and
- Links to Two Websites for "Selected Gasoline Dispenser Training and Certification Courses" (Exh. 6).

By order of June 13, 2013, the hearing officer entered two additional exhibits into the record:

- Screen Shots for the Two Websites Identified in Exhibit 6 (Exh. 7); and
- Run Specifications, Cook County, Years 2007, 2014, and 2020, Motor Vehicle Emission Simulator (MOVES2O lob), Printed through MOVES2OI Ob from Attachment B (Compact Disc) to IEPA's Technical Support Document filed on March 18, 2013 (Exh. 8).

### **Public Comments**

#### **IEPA (PC1) and IPMA (PC2)**

At the end of the second hearing, the hearing officer established a deadline of July 8, 2013, for filing public comments. The deadline was reiterated in the hearing officer's order of June 13, 2013. That order also posed questions for IEPA to address in public comment. IEPA filed a public comment on June 27, 2013 (PC1).

On the final day for public comments, July 8, 2013, IPMA filed a comment (PC2) through its Executive Vice President, William J. Fleischli. IPMA had not previously participated actively in the rulemaking. In its public comment, IPMA proposed that the requirement for new gasoline stations in the Chicago NAA to install Stage II vapor recovery equipment be eliminated *immediately* upon the effective date of the rule amendments, rather than eliminating the requirement only for new stations that commence operating on or after January 1, 2014, as proposed at first notice. PC2 at 1. IPMA likewise proposed that existing gasoline stations in the Chicago NAA be allowed to decommission Stage II vapor recovery equipment *immediately* upon the effective date of the rules, instead of having to wait until January 1, 2014, as proposed at first notice. PC2 at 1-2. IPMA primarily asserted that an earlier effective date to eliminate Stage II requirements would have a positive economic effect for Illinois. According to IPMA, during the last five months of calendar year 2013, petroleum marketers faced with maintaining existing or installing new Stage II equipment in Illinois would either not invest in Illinois stations or simply invest elsewhere. *Id.*

#### **IEPA (PC3) in Response to IPMA (PC2)**

By order of July 16, 2013, the hearing officer directed IEPA file a public comment by July 31, 2013, in response to IPMA's public comment. IEPA did so on July 31, 2013 (PC3). IEPA explains that it spoke with IPMA about the latter's comment and

understands that IPMA's concerns have been addressed. [IEPA] has committed to IPMA that it will continue working with IPMA should any compliance issues arise in a way that will be understanding of this situation and will seek to expeditiously and amicably resolve any such issues. As a result, [IEPA] understands that an immediate effective date is no longer a request of or desired by IPMA and that IPMA is in agreement with this statement. PC3 at 1.

Attached to IEPA's PC3 is a July 31, 2013 letter from IPMA in which IPMA's Executive Vice President, Mr. Fleischli, confirms these representations of IEPA. PC3, Exh. 1 at 1.

### **ARID (PC4, PC5) and Responsive Comments of IPMA (PC6) and IEPA (PC7)**

On September 9, 2013, ARID Technologies, Inc. (ARID), a Wheaton, Illinois designer and manufacturer of vapor processors, sent an email message with attachments to the Board's Clerk (PC4), accompanied by ARID's request to accept the late submission. On September 10, 2013, ARID sent another email message with an attachment to the Board's Clerk as an addendum to PC4. ARID had not previously participated in this rulemaking. On September 16, 2013, IEPA filed a motion to strike ARID's PC4, including the addendum. On September 18, 2013, IPMA filed a response opposing ARID's request that PC4 be accepted into the record. ARID submitted an email message to the Clerk on September 20, 2013, opposing IEPA's motion to strike. On September 23, 2013, ARID sent an email message with attachments to the Clerk (PC5).

In an order of September 30, 2013, the hearing officer first construed both ARID's motion to add and IEPA's motion to strike as encompassing not only PC4, but also PC5, to promote administrative efficiency and avoid undue delay. The hearing officer then denied IEPA's motion to strike and granted ARID's motion to allow ARID's PC 4 and PC5 into the record for the Board's consideration. On his own motion, however, the hearing officer struck a video file attachment that ARID submitted (as part of PC4 on September 9, 2013) because the video was not readily viewable. PC4 is 87 pages long and PC5 is 26 pages long.

In addition, the hearing officer's order directed IEPA to file a public comment in response to ARID's PC 4 and PC5 by October 11, 2013. The order also allowed any other participant to file a public comment responsive to PC4 and PC5 by the same deadline. The order added: "In so ruling, the hearing officer does not contemplate granting any further extensions of the public comment period." Hearing Officer Order, R13-18 at 1 (Sept. 30, 2013).

On October 11, 2013, pursuant to the hearing officer's order, IPMA filed a public comment (PC6) and IEPA filed a public comment (PC7).

### **Other Late Submissions from ARID**

On September 30, 2013, ARID submitted an email twice to the Board's Clerk, each with different attachments. On October 1, 2013, ARID submitted another email to the Clerk, referencing the hearing officer's September 30, 2013 order and purporting to provide a link for the video file stricken by the hearing officer. On October 16, 2013, ARID submitted an additional email to the Clerk with attachments, purportedly responding to either or both IPMA's PC6 and IEPA's PC7. Finally, on November 6, 2013, ARID submitted three more emails to the Clerk, including another attachment and purported link for a video (. For the reasons detailed in the Board's second-notice opinion of November 7, 2013, the Board declined to consider these additional late submissions from ARID and, on its own motion, struck them.

### **Second Notice and Additional Late Submissions**

On November 7, 2013, the Board issued a second-notice opinion and order, proposing amendments for JCAR's review. By letters of November 8, 2013, one for each of Parts 201, 218, and 219, JCAR informed the Board of the following: (1) JCAR accepted the Board's second notice submittal; (2) the second-notice period began on November 7, 2013, and would end no later than December 21, 2013; and (3) the rulemaking would be considered at JCAR's December 17, 2013 meeting.

On November 14, 15, and 20, 2013, the Board received a total of 28 letters from Metea Valley High School students. Each letter opposes the decommissioning of Stage II vapor recovery systems. The Board appreciates the students' participation but cannot consider the letters at this late stage of the rulemaking. The IAPA provides that once the second-notice period has begun, "no substantive change may be made to a proposed rulemaking unless it is made in response to an objection or suggestion of [JCAR]." 5 ILCS 100/5-40(c) (2012). As noted, the second-notice period for this rulemaking began on November 7, 2013. Further, during the second-notice period, the Board can accept comments "only from JCAR." 35 Ill. Adm. Code 102.606(a).

The only changes suggested by JCAR to the second-notice rule language have been non-substantive in nature. Those several revisions appear in the final rules. On December 17, 2013, JCAR issued a certification of no objection concerning the amendments.

### **Economic Impact Study**

As required by Section 27(b) of the Act (415 ILCS 5/27(b) (2012)), the Board requested that the Department of Commerce and Economic Opportunity (DCEO) conduct an economic impact study (EcIS) on the proposed rules. The Board's EcIS request was hand-delivered to DCEO on April 8, 2013. On April 10, 2013, the Board received DCEO's response. DCEO states that based upon its review of the Board's request and in light of continuing fiscal constraints, DCEO would not conduct an EcIS. At the first hearing, the hearing officer noted the Board's EcIS request and DCEO's response, affording anyone the opportunity to testify. No one testified about DCEO's response. Tr.1 at 71-72.

### **ACRONYMS USED IN THIS OPINION**

Acronyms used by the Board in this opinion include the following:

CAA = Clean Air Act
CAAPP = Clean Air Act Permit Program
CARB = California Air Resources Board
GDFs = gasoline dispensing facilities
MOVES = MOtor Vehicle Emission Simulator
NAA = nonattainment area
NAAQS = National Ambient Air Quality Standards

NESHAP = National Emission Standards for Hazardous Air Pollutants
ORVR = on-board refueling vapor recovery
RFP = Reasonable Further Progress
ROP = Rate of Progress
SIP = State Implementation Plan
STBL = storage tank breathing losses
UST = underground storage tank
VRS = vapor recovery systems

## **DISCUSSION**

The Board’s second-notice findings remain unchanged and are adopted at final notice. In this section of the opinion, the Board discusses the adopted amendments, the evidence and comments in the record, and the Board’s findings. The Board’s discussion proceeds as follows:

- Overview of adopted amendments (pp. 7-8)
- Applicable air quality standards (pp. 8-9)
- Stage II SIP revision (p. 9)
- ORVR (pp. 9-10)
- Vapor recovery systems (pp. 10-11)
- Incompatibility of Stage II vacuum assist and ORVR (pp. 11-12)
- Stage II waiver and widespread use of ORVR (p. 12)
- MOVES modeling (p. 13)
- Timing of implementation—“Phase-Out” of Stage II (p. 14)
- CAA “anti-backsliding” provision (p. 15)
- Contested issues—retaining Stage II and/or requiring UST vapor processors (pp. 15-26)
- State and CAAPP permitting exemptions for GDFs (pp. 26-28)
- Part-by-Part analysis (pp. 28-34)
- Technical feasibility and economic reasonableness (pp. 34-38).

### **Overview of Adopted Amendments**

The Board adopts final amendments to 35 Ill. Adm. Code Part 201 (applicable State-wide), Part 218 (applicable to the Chicago NAA), and Part 219 (applicable to the Metro-East NAA).

Most significantly, the amendments phase out the Board’s requirements (35 Ill. Adm. Code 218.586) for installing and maintaining vapor recovery equipment at GDFs (*i.e.*, Stage II requirements) in the Chicago ozone NAA. SR at 1, 3. Stage I refers to “the entire gasoline distribution system that includes all facilities from and including the refinery to the end user, except for vehicle refueling (so-called Stage II).” 73 Fed. Reg. 35940 (June 25, 2008).

The phase-out of Stage II vapor recovery systems (VRS) is based upon USEPA’s determination that ORVR is widely used across the country and USEPA’s resulting waiver of the Stage II requirement of Section 182(b)(3) of the CAA (42 U.S.C. § 7511a(b)(3)). SR at 1. Phasing out the Stage II requirement affects those GDFs in the Chicago ozone NAA that are

subject to Section 218.586 (35 Ill. Adm. Code 218.586), including retail gas stations, and private and commercial fuel facilities. PFT1 Burkhardt at 1. Section 218.586 applies to any GDF that “dispenses an average monthly volume of more than 10,000 gallons of motor vehicle fuel per month.” 35 Ill. Adm. Code 218.586(b). The adopted rules phase out existing Stage II systems in the Chicago ozone NAA over a three-year period, requiring that decommissioning be complete by December 31, 2016. SR at 7, 15.

Phasing out Stage II requirements in the Chicago ozone NAA (1) allows the State of Illinois to realize additional emission reduction benefits, (2) allows existing GDFs in the Chicago ozone NAA to decommission Stage II systems starting on January 1, 2014, and (3) allows new GDFs locating in the Chicago ozone NAA on or after January 1, 2014, to avoid having to install and operate Stage II systems. SR at 1-2.

This final order also amends State and federal Title V permitting regulations relating to fuel dispensing, including the repeal of the Stage I registration requirements. Finally, the amendments include clarifications to Parts 201, 218, and 219. *Id.*

The Board’s Stage I regulations apply in the Chicago NAA (35 Ill. Adm. Code 218.583) and the Metro-East NAA (35 Ill. Adm. Code 219.583). The Board’s Stage II regulations apply in the Chicago NAA (35 Ill. Adm. Code 218.586). SR at 26.

IEPA’s TSD includes three lists of sources potentially affected by the adopted amendments. TSD, Atts. A, F, G. Attachment A to the TSD is a list of the thousands of GDFs in the Chicago NAA, including those subject to the Stage I registration requirement or the Stage II maintenance requirement. SR at 26; TSD at 5, 17, Att. A. Attachment F is a list of over 600 sources State-wide subject to Part 201 that may be eligible for the expanded exemption/insignificant activity provisions. SR at 26; TSD at 29, Att. F. Attachment G to the TSD lists the retail GDFs in the Metro-East NAA subject to the Stage I requirements that would be affected by the repeal of the registration requirement. SR at 26; TSD Att. G.

### **Applicable Air Quality Standards**

Under the 1990 one-hour National Ambient Air Quality Standards (NAAQS) for ozone, the Chicago NAA (Cook, DuPage, Kane, Lake, McHenry, and Will Counties, as well as Aux Sable and Goose Island Townships in Grundy County and Oswego Township in Kendall County) was classified as “severe” non-attainment and Metro-East (Madison, Monroe, and St. Clair Counties) was classified as “moderate” non-attainment. SR 12. The Metro-East NAA was later designated to attainment of the 1990 1-hour ozone standard, and this ozone standard was revoked June 15, 2005. *See* 40 C.F.R. § 81.314.

Under the 1997 eight-hour ozone standard, which took effect on June 15, 2004, the Chicago NAA and Metro-East NAA (including Jersey County) were originally classified as moderate non-attainment. SR at 12. Both the Chicago and Metro-East NAAs were thereafter reclassified to attainment of the 1997 eight-hour ozone standard. *Id.* Under the 2008 eight-hour ozone standard, effective July 20, 2012, both NAAs have been classified as “marginal” non-attainment. SR at 12.

### **Stage II SIP Revision**

Section 182(b)(3) of the CAA (42 U.S.C. § 7511a(b)(3)) required that each state submit a revision to its state implementation plan (SIP) for ozone. The SIP revision had to require that owners and operators of certain types of GDFs install and operate Stage II equipment designed to capture emissions from refueling motor vehicles. Specifically, this requirement applied in moderate, severe, serious, and extreme ozone NAAs to GDFs that dispense more than 10,000 gallons of gasoline per month. *See* 42 U.S.C. § 7511a(b)(3), (c), (d), (e). For Illinois, the Chicago ozone NAA and the Metro-East ozone NAA were implicated because they were classified, respectively, as severe and moderate non-attainment for the one-hour ozone NAAQS. *See* 40 C.F.R. § 81.314; SR at 3.

To enable the State of Illinois to comply with the CAA Section 182(b)(3) Stage II requirement, the General Assembly amended the Act, mandating that the Board adopt Stage II regulations. *See* 415 ILCS 5/10(D) (2012). In turn, the Board adopted the Stage II gasoline vapor recovery rules in 1992. *See* Stage II Gasoline Vapor Recovery Rules: Amendments to 35 Ill. Adm. Code Parts 215, 218, and 219, R91-30 (Aug. 13, 1992) (final order). The rules are set forth in Parts 218 and 219 of Title 35 of the Illinois Administrative Code (35 Ill. Adm. Code 218, 219). The Board's Stage II rules were approved by USEPA as an ozone SIP revision in 1993. *See* 58 Fed. Reg. 3841 (Jan. 12, 1993); SR at 4.

The Chicago ozone NAA Stage II rule (35 Ill. Adm. Code 218.586) has required “gasoline dispensing operations that dispense an average monthly volume of more than 10,000 gallons of motor vehicle fuel per month to install, operate, and maintain Stage II systems that are certified by the California Air Resources Board (‘CARB’) as having a vapor recovery and removal efficiency of at least 95 percent by weight.” SR at 4-5, citing 35 Ill. Adm. Code 218.586(b), (c); PFT1 Burkhardt at 3. As discussed below, the Metro-East NAA was only required to maintain a Stage II program until USEPA promulgated standards for ORVR, which occurred in 1994.

### **ORVR**

The CAA required USEPA to promulgate standards for vehicle-based (“onboard”) systems to control refueling emissions, which became known as “onboard refueling vapor recovery” or “ORVR” systems. *See* 42 U.S.C. § 7521(a)(6). CAA Section 202(a)(6) required auto manufactures to phase in ORVR systems on new vehicles based upon a percentage of each manufacturer’s fleet of vehicles, beginning with the fourth model year after the model year in which the standards were promulgated. *See* 42 U.S.C. § 7521(a)(6).

USEPA promulgated ORVR standards on April 6, 1994.<sup>1</sup> SR at 3. Auto manufacturers were required to install ORVR systems, progressing from model year 1998 with light-duty cars

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<sup>1</sup> USEPA promulgated ORVR standards for light-duty vehicles and trucks on April 6, 1994 (59 Fed. Reg. 16262 (Apr. 6, 1994)), codified at 40 C.F.R. Parts 86 (including § 86.098-8), 88, and 600.

through model year 2006 for heavier light-duty gasoline trucks. Since model year 2000, all new passenger cars have been equipped with ORVR systems, and starting with model year 2006, all new vehicles less than a 14,000 pounds Gross Vehicle Weight Rating (GVWR) sold in the U.S. are required to have ORVR systems. *See* 77 Fed. Reg. at 28774; TSD at 4; PFT1 Burkhart at 4.

Although Section 202(a)(6) of the CAA (42 U.S.C. § 7521(a)(6)) requires ORVR systems to provide a minimum evaporative emission capture efficiency of 95%, USEPA has found, based upon recent research, that the average in-use efficiency of ORVR is actually 98%. TSD at 4; PFT1 Burkhart at 4; Tr.1 at 15-16; 42 U.S.C. § 7521(a)(6); 77 Fed. Reg. 28775 (May 16, 2012). Section 202(a)(6) provided that once USEPA promulgated standards for ORVR: (1) the Stage II requirement would no longer apply in moderate NAA; and (2) the USEPA Administrator could “revise or waive the Stage II requirement for serious, severe, or extreme ozone NAAs after a determination is made by the Administrator that ORVR is in widespread use through the motor vehicle fleet.” SR at 4.

The Metro-East ozone NAA Stage II rule contained the same Stage II requirements as the Chicago ozone NAA rule, but the former was repealed in 1994 after USEPA signed the ORVR final rule.<sup>2</sup> *See* Stage II Vapor in the Metro-East Area: Repeal of 35 Ill. Adm. Code 219.586, R93-28; 59 Fed. Reg. 16262 (Apr. 6, 1994). Section 202(a)(6) of the CAA provided that Stage II would no longer apply in moderate NAAs once USEPA promulgated ORVR standards. SR at 4-5.

### **Vapor Recovery Systems**

#### **Vapors**

During the dispensing of gasoline to fill a tank, the gasoline volatilizes in the tank and the vapors are displaced by the incoming liquid fuel. TSD at 2-3; PFT1 Burkhart at 3. As a result, the vapors are forced out of the tank. If the vapors are not captured, they are released into the atmosphere. Once in the atmosphere, gasoline vapors, which contain volatile organic compounds (VOCs), can react with other pollutants and sunlight to contribute to the formation of ground-level ozone pollution. TSD at 2-3.

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<sup>2</sup> At the time, ORVR systems were referred to as “on-board vapor recovery” or “OBVR” systems. *See* Stage II Vapor in the Metro-East Area: Repeal of 35 Ill. Adm. Code 219.586, R93-28; 59 Fed. Reg. 16262 (Apr. 6, 1994).

## **Stage II Systems**

The purpose of the Stage II program has been to capture gasoline vapors displaced during vehicle refueling. The Stage II rules have required GDFs to install equipment certified by CARB to capture, with at least 95% efficiency, gasoline vapors displaced during vehicle refueling. TSD at 2-3. Using Stage II equipment has been “credited with capturing harmful, ozone precursor emissions that would otherwise be released during vehicle refueling, thereby improving air quality and human health in the Chicago NAA.” *Id.*

Stage II systems come in two basic types: vacuum-assist and balance. TSD at 3; PFT1 Burkhart at 3-4. With a vacuum-assist system, during refueling, a vacuum pump on the vapor return line of the gasoline dispensing nozzle draws vapors from the vehicle fill pipe through the nozzle back into the GDF’s storage tank. *Id.* With the balance system, during refueling, a rubber boot on the nozzle provides a seal around the vehicle’s fill pipe, allowing a natural positive pressure differential to build between the vehicle’s fuel tank and the GDF’s storage tank. *Id.* This pressure differential draws gasoline vapors from the vehicle’s tank through the rubber boot into the GDF’s storage tank. *Id.* Unlike the vacuum-assist system, the balance system does not use a mechanical pump, but the balance systems are not popular with retail GDFs because customers dislike the bulky rubber boots. *Id.*

## **ORVR Systems**

Unlike Stage II systems, which function through the gasoline dispensing nozzle, ORVR systems are integrated into the vehicle’s fueling system. TSD at 4; PFT1 Burkhart at 4. With ORVR, vapors in the vehicle’s fuel tank that are displaced during refueling are routed into a canister of activated carbon located onboard the vehicle. When the engine is started, these vapors are purged from the canister into the engine where they are burned as fuel. *Id.*

### **Incompatibility of Stage II Vacuum-Assist and ORVR**

Both vacuum-assist Stage II and ORVR systems are effective in capturing gasoline vapors and reducing VOC emissions. The two systems are generally incompatible, however, when operated simultaneously on the same vehicle. 77 Fed. Reg. at 28775; SR at 6; TSD at 4-5; PFT1 Burkhart at 4-5. When an ORVR-equipped vehicle is refueled using an ORVR-incompatible vacuum-assist Stage II system, the ORVR captures the gasoline vapors first before they reach the Stage II system. Instead of capturing displaced vapors, the Stage II vacuum draws in fresh air and routes it into the GDF’s storage tank. *Id.* The fresh air causes the gasoline in the GDF’s storage tank to evaporate and increases the pressure within the storage tank. As a result, the gasoline vapors are pushed out of the storage tank through the vent pipe and released into the ambient air. *Id.* USEPA stated that this incompatibility can result in a 1% to 10% efficiency decrease in controlling vehicle fuel tank emissions, as compared to either the Stage II system or ORVR system operating alone. *Id.*

Some Stage II vacuum-assist systems are compatible with ORVR systems. Such Stage II vacuum-assist systems shut off the pump when they detect the presence of an ORVR-equipped vehicle. In this way, less fresh air is drawn into the GDFs storage tank. SR at 6-7; TSD at 5;

TSD Att. A; PFT1 Burkhart at 5. Stage II balance systems are also compatible with ORVR systems. *Id.* Compatible Stage II systems could be used to comply with 35 Ill. Adm. Code 218.586, but the vast majority of Stage II systems already in the Chicago NAA are incompatible with ORVR systems. *Id.* In the Chicago NAA, 2,420 GDFs have Stage II equipment. Of these, 2,320 have the consumer-friendly vacuum-assist Stage II systems, 2,005 of which are incompatible with ORVR systems. The other 100 facilities use the balance type Stage II systems and are all for private fleets. *Id.*

### **Stage II Waiver and Widespread Use of ORVR**

CAA Section 202(a)(6) provides that USEPA may waive the Stage II requirement for serious, severe, or extreme ozone NAAs once USEPA determines that ORVR is in widespread use. SR at 2-3. USEPA defined “widespread use” as when at least 75% of gasoline is dispensed into ORVR-equipped vehicles. *See* 77 Fed. Reg. 28776 (May 16, 2012); Tr.1 at 15. Effective May 16, 2012, USEPA determined the following:

[ORVR] technology is in widespread use throughout the motor vehicle fleet for purposes of controlling motor vehicle refueling emissions, and, therefore, . . . the [US]EPA is waiving the [CAA Section 182(b)(3)] requirement for states to implement Stage II gasoline vapor recovery systems at gasoline dispensing facilities in nonattainment areas classified as Serious and above for the ozone national ambient air quality standards (NAAQS). 77 Fed. Reg. at 28772.

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States now have the option of removing Stage II programs from their Ozone SIPs, by submitting a SIP revision requesting the USEPA to approve the removal. *Id.* at 28779. The state must also provide, as appropriate, a demonstration that such revision is consistent with CAA section 110(1) (42 U.S.C. § 7410(1)) and that it would not result in an emissions increase or that the increase is offset by other changes in the SIP. *Id.*

USEPA used the “MOTOR Vehicle Emission Simulator” (MOVES) modeling program in determining the national widespread use date and expects states to include the MOVES model in their CAA Section 110(1) SIP demonstrations. *See* 77 Fed. Reg. at 28777; SR at 7. IEPA’s use of MOVES modeling, which includes state-specific program inputs, was able to identify area-wide emissions impacts associated with maintaining and removing a Stage II program. SR at 7.

In August 2012, USEPA issued a guidance document entitled “Guidance on Removing Stage II Gasoline Vapor Control Programs from State Implementation Plans and Assessing Comparable Measures.” SR at 8. The Board is phasing out the Chicago ozone NAA’s Stage II program and requiring the decommissioning of existing Stage II equipment due to the following: (1) USEPA’s determination of the widespread use of ORVR; (2) the CAA Section 182(b)(3) (42 U.S.C. § 7511a(b)(3)) Stage II waiver; and (3) IEPA’s assessment of the air quality impacts associated with retaining and removing the Stage II program. *Id.*

### **MOVES Modeling**

Following USEPA's directive, IEPA used the MOVES model to evaluate refueling emissions and determine when the Stage II requirement should be repealed in the Chicago ozone NAA. TSD at 6-7; PFT1 Burkhart at 5. IEPA used the modeling to minimize the loss of effectiveness anticipated when ORVR and incompatible Stage II systems operate simultaneously. *Id.* IEPA's modeling considered when requirements to install Stage II equipment should be discontinued and when existing Stage II equipment should be decommissioned. *Id.*

Specifically, IEPA used MOVES Version 2010b to estimate refueling emissions in the Chicago ozone NAA for the scenarios of "ORVR Only" and "ORVR + Stage II." TSD at 7-8. IEPA ran the MOVES model for the entire Chicago ozone NAA. Resp. to June 17, 2013 Hearing Officer Order at 2. IEPA described key input data for the modeling. TSD at 7. Parameters included data on annual vehicle miles traveled by type of vehicle (from the Illinois Department of Transportation), average meteorological data (from the National Weather Service at O'Hare International Airport), MOVES default data on fuel supply and fuel formation, and on-board diagnostics for idle and gas cap tests. TSD at 7; Tr.1 at 67-68.

IEPA submitted a compact disc that includes the input and output files used with the MOVES model in the format required for SIP revisions. PFT2 Gebhardt at 3. IEPA indicated that providing a written summary of the compact disc's voluminous data would be infeasible. PFT2 Gebhardt at 3; Tr.2 at 21-22. The MOVES2010b run specifications from the compact disc for the years 2007, 2014, and 2020 were entered into the record as Exhibit 8. Hearing Officer Order, R13-18, Att. C (June 17, 2013).

IEPA ran the MOVES model for calendar years 2007 through 2020 as ORVR-equipped vehicles represent an increasing portion of the vehicle fleet. TSD at 7. For each year, IEPA modeled weekday emissions in the month of July to reflect the worst-case scenario for refueling emissions. More vehicle miles are traveled during the week than on weekends and USEPA considers July to be the peak of the ozone season. PC1 at 3. IEPA presented the modeling results for the entire Chicago ozone NAA in Figure 1 of the TSD and a table. Figure 1 graphically displays a trend in total refueling emissions from GDFs in tons per day (tpd) by calendar year based upon an "ORVR Only" scenario superimposed onto a trend based upon "ORVR + Stage II." TSD at 7-8; PFT1 Burkhart at 6; PFT2 Gebhardt at 4; Tr.1 at 62-63; PC1 at 2.

The "ORVR + Stage II" trend represents the projections under the Stage II program and reflects the incompatibility issue. From 2007 through 2020, Figure 1 depicts a trend of decreasing refueling emissions under the "ORVR Only" scenario, from more than 14 tpd in 2007 to less than 2 tpd in 2020. Under the "ORVR + Stage II" scenario, Figure 1 depicts a trend of more gradually decreasing refueling emissions, from slightly more than 4 tpd to slightly less than 4 tpd over the same time period. The "ORVR + Stage II" scenario still reflects an emissions decrease because, over time, older vehicles are being replaced by newer vehicles. Newer vehicles have better gas mileage and therefore spend less time at the pump. TSD at 8-10; PFT1 Burkhart at 6; PFT2 Gebhardt at 5; Tr.1 at 16-17; Tr.2 at 20-21.

### **Timing of Implementation—“Phase-Out” of Stage II**

There is a “cross-over point” between July 2013 and July 2014 where the “ORVR-only” line in Figure 1 of the TSD crosses over the “ORVR + Stage II” line. TSD at 10. After the cross-over point, the simultaneous use of ORVR and incompatible Stage II systems would begin to result in an “emissions disbenefit,” *i.e.*, smaller emission reductions through “ORVR + Stage II” than with “ORVR-only.” SR at 14; TSD at 8.

The Board finds the MOVES modeling has demonstrated that beginning in 2014, ORVR alone would start providing greater reductions in refueling emissions than the simultaneous use of ORVR and Stage II in the Chicago ozone NAA. The disparity between the emission reductions by leaving the Stage II program in place versus removing it and relying solely upon ORVR will increase over time. TSD at 6-8, 10; PFT1 Burkhart at 6. Based upon this analysis, the Board adopts January 1, 2014, as the date to allow existing GDFs to begin decommissioning their Stage II equipment and to no longer require new GDFs to install Stage II equipment. PFT1 Burkhart at 6; Tr.1 at 17, 20. The Stage II program will not cease operating on January 1, 2014. GDFs must continue to operate their Stage II equipment until the date they arrange to have the system decommissioned. Tr.2 at 20.

Based upon this record, the Board finds that 0.07 fewer tpd would be emitted in 2014 with ORVR-only versus Stage II + ORVR. In 2020, the difference becomes 2.54 fewer tpd, when 98% of the vehicle fleet is estimated to be ORVR-equipped. SR at 14; TSD at 8; PFT2 Gebhardt at 5. The Board further finds that beginning in 2014, Stage II would no longer be necessary and, worse, its continued use would result in the release of *more* refueling vapors than with ORVR alone (due to the incompatibility of the two systems and the widespread use of ORVR). TSD at 6-7. IEPA’s MOVES analysis shows that Stage II + ORVR is currently providing emission reductions beyond what ORVR alone would achieve, but only until 2014. Tr.1 at 18.

Figure 1 of the TSD also depicts the expected trend in refueling emissions over the three-year decommissioning period. The refueling emissions trend starts at the cross-over point in January 2014 and decreases at a rate representing the shift in Stage II and ORVR use, meeting back up with the “ORVR-only” trend in 2017. TSD at 8, 10. The trend assumes decommissioning will proceed uniformly over the three-year period, though it cannot be specifically predicted when GDFs will decommission their Stage II systems. TSD at 8.

The Board finds that these amendments should become effective by the end of this calendar year for three reasons: (1) to begin realizing additional emission reduction benefits as of January 1, 2014; (2) to allow existing GDFs to begin decommissioning Stage II equipment as of January 1, 2014, and (3) to ensure that new GDFs on and after January 1, 2014, are not required to install and operate Stage II systems. TSD at 34.

### **CAA “Anti-Backsliding” Provision**

The Board finds that choosing January 2014 to begin decommissioning Stage II systems enables the State to comply with the CAA Section 110(1) “anti-backsliding” provision (42 U.S.C. § 7410(1)). A SIP revision must comply with CAA Section 110(1) to prevent the loss of emission reductions from removing an existing clean air program. Although Illinois could have phased out the Stage II program before January 2014, the CAA anti-backsliding provision would require substitute measures to compensate for the resulting loss of emission reductions. By keeping the Stage II program in place until the January 2014 cross-over point, there will be no loss in emission reductions. The Board finds that the adopted rule will therefore not interfere with attainment of the applicable NAAQS, Reasonable Further Progress (RFP), Rate of Progress (ROP), or any other applicable CAA requirement. TSD at 8-9; PFT1 Burkhardt at 2, 6; Tr.1 at 16-18.

### **Contested Issues—Retaining Stage II and/or Requiring UST Vapor Processors**

#### **ARID**

ARID urges the Board to reconsider requiring the decommissioning of Stage II vapor recovery systems. PC4 at 2. ARID contends that removing Stage II equipment and relying solely on ORVR technology “will increase refueling emissions.” *Id.* ARID argues that ORVR and the MOVES model do not address emissions from the GDF’s storage tanks. Some of the increased emissions, ARID adds, will result from refueling gas cans, motorcycles, and non-road vehicles, such as boats and snowmobiles, because none of these have ORVR technology. *Id.*

ARID refers to efforts in other states (Pennsylvania, Maryland, Rhode Island, Texas, Connecticut, and Massachusetts) to evaluate controls for storage tank emissions and enhancing or eliminating Stage II. PC4 at 1. ARID represents that Pennsylvania is considering field testing of storage tanks emissions under various scenarios with and without Stage II and storage tank vapor processors. *Id.* For Maryland, ARID includes an analysis of potential impacts associated with eliminating Stage II, considering emissions from gasoline vapor displacement and spillage associated with on-road and non-road equipment and vehicles. *Id.* For Rhode Island, ARID highlights a shared savings program using ARID’s vapor processor that generated money for the GDF owner/operator with no outlay costs for the vapor processor. *Id.* For Texas, ARID summarizes information on a GDF that voluntarily installed Stage II with the ARID vapor processor to maximize fuel savings and reduce emissions. *Id.*

ARID submitted the calculations it prepared for the States of Massachusetts and Connecticut. PC4 at 2. According to ARID, emissions from ORVR vehicles and non-ORVR vehicles refueling at non-Stage II GDFs over a period of 2013-2022 exceed emissions from ORVR vehicles and non-ORVR vehicles refueling at Stage II GDFs. *Id.* ARID asserts that when GDF storage tank emissions are added, the emissions from the non-Stage II scenario are even greater. The calculations demonstrate, ARID continues, that the decision to decommission Stage II would result in a large net increase in emissions, which can negatively impact human health and the environment. *Id.* ARID asserts that such a decision would also impact areas in

which environmental justice is of concern, particularly where a disproportionate share of older vehicles are still in use. *Id.*

ARID provided its December 18, 2012 “White Paper” entitled “Stage II & ORVR and Associated Emissions of Gasoline Vapor, State of Connecticut Gasoline Dispensing Facilities.” PC4, White Paper. The White Paper’s Chart 3 on refueling emissions with “incompatibility excess emissions” depicts Connecticut data. PC4, White Paper at 7. Chart 3 shows a point where the “ORVR Only” line crosses the “Stage II plus ORVR (No Processor)” line. *Id.* According to ARID, the relative slopes of the lines in Chart 3 closely approximate the depiction of Chicago NAA data resulting from IEPA’s use of the MOVES model. PC4, White Paper at 7; PC5 at 1, 25, 26; *see also* TSD, Fig. 1.

ARID asserts that the “key point” is made by the White Paper’s Chart 4, which, unlike Chart 3, accounts for storage tank breathing losses (STBL) in the emissions inventory and has “no crossover,” *i.e.*, “the lines do not intersect.” PC5 at 1; PC4, White Paper at 7-8. According to ARID, if STBL are considered, the “ORVR + Stage II (with [incompatibility excess emissions]) emissions are less than the ORVR Only emissions throughout the entire time frame – up to and including 2022.” PC5 at 1. ARID notes that in Chart 3, STBL for the “ORVR Only” line are “strangely” set to zero. PC5 at 1; PC4, White Paper at 7-8. ARID maintains that “[t]he assumption of zero STBL is totally unrealistic and not supportable by actual measured data.” PC4, White Paper at 7. “It’s clear that the MOVES model,” continues ARID, “does not incorporate the impact of [STBL]; and this oversight is a very significant error.” PC5 at 1.

To show the impact of non-road, non-ORVR vehicles, ARID also provides an analysis of Maryland’s Stage II requirements using USEPA’s NONROAD2008a model. PC4, Att. Entitled “Stage II Emission Reduction Benefits,” Meszler Engineering Services (Aug. 22, 2012).

Instead of decommissioning Stage II vapor recovery systems, ARID recommends that “enhancing” Stage II systems “for minimizing emissions while at the same time yielding a favorable economic payback for the GDF owner.” PC4 at 2. ARID explains that enhanced Stage II uses “vapor processors with continuous pressure monitoring and remote data acquisition” for “managing storage tank pressure and significantly reducing incompatibility excess emissions and [STBL].” PC4, White Paper at 16. Among the benefits of enhanced Stage II, ARID lists:

- Control of VOC’s and HAP’s
  - Reduction of Toxic Exposure Risk to motorists, GDF employees and members of Community
  - Energy Recovery from saved gasoline
  - Automatic monitoring and inspection through data logging and remote data acquisition system
  - Continuous monitoring to reduce leaks in UST and Stage II piping system
  - Leverage valuable existing hardware already installed at GDF
  - Improve operating efficiency and associated profitability for GDF
  - Allow both large capacity and small capacity GDF to earn benefits
- PC4, White Paper at 17.

ARID asserts that a vapor processor can be “[c]ost neutral (or cash flow positive) to GDF using shared savings program.” PC4, Howard/Tiberi PowerPoint at 17. In an evaluation for Connecticut, ARID provided a range of cost effectiveness figures for the combination of Stage II + ORVR + ARID’s vapor processor. For GDFs with a throughput of 700,001 to more than 3,900,001 gallons per year, and STBL of 1.0 lbs/1,000 gallons of fuel, ARID calculated a *cost* per ton of emissions reduced of \$9,336 (for lower throughput) but a *revenue* per ton of emissions reduced of \$145 (for higher throughput). When higher STBL of 2.5 lbs/1,000 gal are considered, the range is from a cost \$6,910 per ton to a revenue of \$852 per ton. PC4, White Paper at 13-15.

Lastly, if the Board proceeds to require the decommissioning of Stage II vapor recovery systems, ARID alternatively recommends that the Board consider requiring the control of emissions from GDF storage tanks with a “vapor processor.” PC4 at 2. ARID also urges IEPA “to either make direct measurements of storage tank emissions or seek to participate with measurement efforts underway in the state of PA” to obtain field data upon which to make an objective decision based upon science. *Id.*

### **IPMA Response to ARID**

IPMA notes that ARID is one of several manufacturers that have emission control systems to make an existing Stage II equipment compatible with ORVR. PC6 at 1. IPMA contends that such Stage II “upgrading” had already been considered when IEPA drafted the revised SIP. *Id.* Further, IPMA states that upgrading existing Stage II systems would entail additional capital and maintenance costs. *Id.* IPMA also asserts that because Stage II systems are “only certified and compatible for up to E10 fuel,” continuing to use Stage II would limit Illinois marketers from offering biofuel options higher than E10 fuel. *Id.*

Finally, according to IPMA, “Illinois marketers are delaying investment in building new sites or upgrading existing ones until the new rules are in place.” PC6 at 1. IPMA maintains that delaying the rulemaking beyond the planned implementation date of January 1, 2014, “to review ARID’s product” would be “unproductive and a disservice to the citizens of Illinois.” *Id.*

### **IEPA Response to ARID**

According to IEPA, ARID’s position that removing the Stage II program will increase emissions is “misplaced” and based upon “false assumptions.” PC7 at 3. IEPA maintains that while the regulation is intended to address the “emissions disbenefit” from incompatibility between Stage II vacuum-assist pumps and ORVR-equipped vehicles, ARID’s technology addresses Stage I storage tank vent emissions. *Id.* IEPA notes that storage tank emissions in the Chicago NAA are addressed through the Stage I program (35 Ill. Adm. Code 218.583) and the requirement to install pressure/vacuum (p/v) relief valves (35 Ill. Adm. Code 218.583(a)(3)).<sup>3</sup> *Id.*

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<sup>3</sup> USEPA describes a p/v relief valve or “pressure vacuum vent valve” as “[a] device, usually referred to as a “P/V vent valve,” installed at the discharge end of a vent pipe connected to a gasoline storage tank, to regulate the pressure at which vapor is allowed to escape from the tank,

IEPA characterizes ARID's "primary argument" as being that "removal of Stage II vapor recovery systems with sole reliance on ORVR will increase refueling emissions." PC7 at 4. IEPA states that in the ORVR widespread rulemaking, USEPA studied whether removing Stage II would increase UST breathing/emptying loss emissions as compared to continuing Stage II with ORVR:

According to USEPA, for non-Stage II gasoline dispensing operations, ORVR does not increase breathing losses relative to vehicles without ORVR. [*Id.*, citing and attaching USEPA Office of Transportation and Air Quality Memorandum, "Onboard Refueling Vapor Recovery Widespread Use Assessment" at 10, docket EPA-HQ-OAR-2010-1076 (June 9, 2011) (OTAQ 2011 Memo).] For balance type Stage II systems, USEPA indicates that if the p/v relief valve is retained, these emissions will be similar for refueling of ORVR and non-ORVR vehicles after the balance system is removed. *Id.* For vacuum-assist Stage II systems, USEPA indicates breathing/emptying loss emissions will likely decrease with removal of these systems. *Id.* Further, USEPA indicates that retaining Stage II provides no additional breathing loss emission reductions and the incompatibility excess emissions factor arguably reduces overall efficiency. *Id.* at 10-11.

IEPA notes that during the ORVR widespread rulemaking, USEPA responded to ARID's primary argument. PC7 at 4. USEPA found that ARID was not targeting refueling emissions but rather Stage I storage tank emissions, which were beyond the scope of that rulemaking. *Id.*, citing USEPA "Determination of Widespread Use of Onboard Refueling Vapor Recovery (ORVR) and Waiver of Stage II Vapor Recovery Requirements," Summary of Public Comments and Responses at 27-28, OAR-2010-1076 (May 8, 2012) (USEPA PC Responses). Further, IEPA states that ARID's calculations rely upon emissions data from other states and assumptions not applicable in Illinois. PC7 at 4-5. IEPA also asserts that ARID's methodology for calculating emissions impacts is unexplained and appears to give no credit for (1) emissions reductions from Stage I and p/v relief valve requirements or (2) correcting the incompatibility issue through Stage II decommissioning. PC7 at 5. IEPA reiterates its position that removing the Stage II program addresses the incompatibility issue and results in additional emission reduction benefits beginning in January 2014. *Id.*

Next, according to IEPA, despite ARID's claim that the MOVES model is inappropriate for evaluating refueling emissions, MOVES is USEPA's official model for estimating emissions from all on-road mobile sources, including refueling emissions. PC7 at 5, citing 75 Fed. Reg. 9411, 9412 (Mar. 2, 2010). USEPA used MOVES in the ORVR widespread use rulemaking and expected states to use the model in SIP revision demonstrations for removing Stage II. PC7 at 5-

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and the vacuum at which outside air is allowed to enter the tank. The inflow/outflow of air through the vent pipe is controlled at specified pressures. These vent valves generally inhibit vapor release and are used to ensure the proper operation of Stage II balance systems. These P/V vent valves are now widely required as a result of EPA's GDF 'Stage I' NESHAP regulation (40 CFR 63 CCCCCC)." TSD, Att. C at 9.

6. Further, IEPA contends that using MOVES is appropriate because it allows for the use of state-specific data, including vehicle miles traveled, fuel Reid vapor pressure, meteorological data, and vehicle population. *Id.* On the other hand, continues IEPA, “ARID’s methodology is not approved by USEPA for SIP demonstration purposes.” PC7 at 6.

Regarding ARID’s complaint that non-road refueling emissions are not considered in IEPA’s modeling, IEPA notes that Stage II was required by the CAA to recover motor vehicle refueling emissions (42 U.S.C. § 182(b)(3)). PC7 at 6. Moreover, “non-road equipment is not typically refueled at gasoline dispensing operations covered by Stage II requirements.” *Id.* Also, IEPA maintains that emission losses from refueling non-road equipment are very small because the percentage of gasoline used for such refueling is insignificant at GDFs. *Id.*

Noting ARID’s argument that removing Stage II will increase in emissions due to non-ORVR vehicles refueling at non-Stage II facilities, IEPA responds as follows:

As USEPA has stated, “[t]his is not to suggest that there would not be additional reductions available from non-ORVR vehicles at Stage II GDFs [] after the crossover date if Stage II was retained or that there would not be uncontrolled emissions (non-ORVR vehicles at non-Stage II GDFs), but these would be relatively small and decreasing each year” as the percentage of ORVR-equipped vehicles grows. PC7 at 6, citing USEPA PC Responses at 28.

IEPA adds that Stage II was required by Section 182(b)(3) of the CAA to reduce ozone precursor emissions, and this record shows that phasing out Stage II will reduce ozone-forming emissions by eliminating incompatibility emissions. PC7 at 6.

IEPA emphasizes that states with Stage II programs can determine whether it would benefit ozone air quality to maintain, modify, or remove Stage II. PC7 at 7.<sup>4</sup> IEPA evaluated various options, held stakeholder outreach meetings, and determined that “due to the demonstrated emissions ‘disbenefit’ that would ensue from maintaining our Stage II program in its current form after Illinois’ widespread use crossover date of January 2014, modifications to, or elimination of, the program would need to take place.” *Id.* IEPA determined that phasing out Stage II would be “environmentally beneficial, technically feasible, and economically reasonable.” *Id.* IEPA maintains that it is unknown, and irrelevant to this rulemaking, whether “ARID, or anyone else, may have a system that is capable of achieving greater emissions reductions” at GDFs, “whether or not they are equipped with Stage I, p/v relief valves, Stage II, or something else.” PC7 at 7-8. IEPA observes that from time to time, it is “offered advice from vendors, legislators, advocacy groups, and the general public as to specific requirements or measures that should be taken,” but IEPA ultimately, within legal requirements, must “choose the best course of action available,” which IEPA believes it has done here. PC7 at 8.

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<sup>4</sup> USEPA explained that the ORVR widespread use determination “does not compel any state to take action to remove Stage II or prevent a state from enhancing its GDF emission control requirements.” USEPA PC Responses at 27.

Lastly, IEPA addresses a question posed by the September 30, 2013 hearing officer order concerning the repeal of the registration requirements (35 Ill. Adm. Code 218.583(e), 219.583(e)) as redundant. PC7 at 8. Those requirements call for information regarding, among other things, p/v relief valves for tank vent pipes. *Id.* IEPA states that repealing the registration requirements is based in part upon overlapping notification requirements under the National Emission Standards for Hazardous Air Pollutants (NESHAP) for gasoline dispensing (40 C.F.R. § 63.11124), which IEPA administers. *Id.* Additionally, IEPA notes that OSFM receives GDF information under the Gasoline Storage Act (430 ILCS 15/2-4 (2012)) and implementing regulations (41 Ill. Adm. Code 175.200, 175.300, 176.400), as does IDOA under the Motor Fuel and Petroleum Standards Act (815 ILCS 370 (2012)) and the Weights and Measures Act (225 ILCS 470 (2012)). PC7 at 8-9.

IEPA concedes that the NESHAP notifications do not require information on p/v relief valves. PC7 at 8-9. IEPA argues, however, that information on p/v relief valves was required in the registration when the requirement for p/v relief valves was new in 1995. PC7 at 9-10. Upon re-evaluation after the passage of some nearly 20 years, IEPA maintains that the only information necessary to administer and enforce the Stage I program is the name and address of the GDF owner/operator. *Id.* IEPA states that it already has access to the necessary information through the NESHAP notifications and OSFM and IDOA tracking systems. PC7 at 10.

### **Board Analysis of Issues Raised by ARID**

USEPA describes “storage tank breathing loss” or STBL as being “attributable to gasoline evaporation into fresh air which enters the UST due to diurnal changes in barometric pressure and air temperature.” OTAQ 2011 Memo at 5. “[E]mptying losses,” on the other hand, are “caused by the evaporation of gasoline into fresh air drawn into the UST to replace gasoline volume dispensed to the vehicles.” *Id.* Distinguishing between STBL and emptying losses is difficult, continues USEPA, but the evaporation of gasoline due to either can lead to UST emissions being vented to the atmosphere. *Id.* at 6.<sup>5</sup>

USEPA states that “incompatibility excess emissions”:

can occur when ORVR-equipped vehicles are refueled with vacuum assist type Stage II VRS nozzles. By definition, these emissions are incremental to the breathing/emptying loss emissions from [USTs] which normally occur at [GDFs].  
 \*\*\* Incompatibility emissions are in excess of those normally expected from breathing/emptying losses. USEPA Office of Transportation and Air Quality Memorandum, “Calculating Vacuum-Assist Stage II VRS and ORVR Excess

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<sup>5</sup> In the OTAQ 2011 Memo, USEPA notes that breathing and emptying losses “are often measured and considered together as one source of emissions and addressed in that manner from a technology perspective.” OTAQ 2011 Memo at 6. For convenience, the OTAQ Memo ultimately refers to the two types of UST emissions simply as “breathing losses.” *Id.*

Emissions” at 1, 3, docket EPA-HQ-OAR-2010-1076 (May 7, 2012) (OTAQ 2012 Memo).<sup>6</sup>

To reiterate the mechanics of incompatibility excess emissions for this discussion, the Board quotes USEPA:

When an ORVR vehicle is fueled at a service station equipped with a vacuum assist Stage II vapor recovery system, a lack of compatibility between the two controls may actually cause the emission reduction of the two systems together to be less than the emission reduction achieved by either system alone. The problem arises when the ORVR canister captures the gasoline emissions from the motor vehicle fuel tank. Instead of drawing vapor-laden air from the vehicle fuel tank into the underground storage tank, the vacuum pump of the Stage II system draws fresh air into the underground storage tank. The fresh air causes gasoline in the underground tank to evaporate inside the underground tank and thus creates an increase in pressure in the underground storage tank. As a result, gasoline vapors may be forced out of the underground storage tank vent pipe into the ambient air. This incompatibility can result in a 1 to 10 percent decrease in control efficiency over what would be achieved by either Stage II or ORVR alone. 76 Fed. Reg. 41731 (July 15, 2011).

ARID supports continuing to use Stage II systems but with vapor processors on GDF gasoline USTs to control breathing/emptying losses and incompatibility excess emissions or, if Stage II is phased out, using the UST vapor processors to control breathing/emptying losses. ARID stresses that breathing/emptying losses must be taken into account in calculating refueling emissions. According to ARID, the “crossover” point at which Stage II + ORVR will reduce emissions less than ORVR alone would likely not occur if UST breathing/emptying losses are considered in the calculations. ARID adds that even with more ORVR-equipped vehicles, there will continue to be the filling of non-ORVR fuel tanks, such as gas cans, motor cycles, and non-road equipment (*e.g.*, boats, snowmobiles), and such filling would benefit from retaining Stage II. PC4 at 1.

During the federal “Stage II waiver” or “ORVR widespread use” rulemaking, USEPA addressed comments concerning several technologies, including vapor processors that may be used to “extend the utility of Stage II to further minimize the overall control of gasoline vapor emissions at GDF.” 77 Fed. Reg. at 28775 (May 16, 2012). Among these comments, ARID expressed concern about breathing/emptying losses and incompatibility excess emissions, and encouraged retaining Stage II systems and adding UST vapor processors. USEPA PC Responses at 25-27.<sup>7</sup>

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<sup>6</sup> <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2010-1076-0082>

<sup>7</sup> Comment dated September 13, 2011, filed in USEPA rulemaking docket EPA-HQ-OAR-2010-1076. USEPA PC Responses at 25-26, referring to Commenter EPA-HQ-OAR-2010-1076-0059, Ted Tiberi, President and founder, ARID, “the manufacturer of a vapor processor which enhances the reduction of overall gasoline vapor emissions at the GDF.”

USEPA noted that ARID is “a manufacturer of a vapor processor which enhances the reduction of overall gasoline vapor emissions at the GDF.” PC7, USEPA PC Responses at 25. USEPA has also described ARID’s vapor processor as an add-on air pollution control device (APCD) for UST vents:

[ARID’s] APCD is a membrane technology (called PERMEATOR) that prevents UST venting of gasoline vapors. ARID claims the technology can be used with balance Stage II VRS and vacuum assist VRS. ARID believes the technology allows for improved UST vapor recovery efficiency during UST breathing and emptying; the technology has the potential to recover gasoline product that would otherwise be emitted to the atmosphere as vapor. USEPA Office of Air Quality Planning and Standards, Emissions Monitoring and Analysis Division, Emissions Factors and Policy Applications Group (C339-02), “Stage II Vapor Recovery Systems – Options Paper, Draft” at 22, docket EPA-HQ-OAR-2010-1076-0013 (Feb. 7, 2006).<sup>8</sup>

Responding to ARID’s comments, USEPA noted that GDF emissions are generally comprised of emissions from refueling and from storage tanks, as well as from spillage during refueling. In its assessment for the final widespread use rule, USEPA included emission rates from these three sources, comparing “ORVR only” with “Stage II only.” USEPA PC Responses at 27. USEPA determined that “the only significant difference was in the emissions which occur from the vehicle fuel tank during the refueling event and the incompatibility emissions when ORVR vehicles are refueled by a vacuum assist type Stage II system.” *Id.* Accordingly, USEPA found that UST breathing/emptying loss emissions would be “about the same with ORVR alone or with Stage II alone.” USEPA PC Responses at 27.

USEPA observed there are technologies that:

address these UST vent-stack emissions and can extend the utility of Stage II to further minimize the overall control of gasoline vapor emissions at the GDF . . . [such as] the addition of processors on the UST vent pipe that capture or destroy the gasoline vapor emissions from the vent pipe. A number of these systems were presented in comments on the proposed rule. While they may have merit, installing these technologies adds to the expense of the control systems. 77 Fed. Reg. at 28775 (May 16, 2012).

USEPA’s final rule neither required retention of Stage II nor required add-on controls for UST vent pipes.

ARID asserts that adding vapor processor controls to USTs could provide a favorable “economic payback” for the GDF owner and gasoline fuel savings. PC4 at 2, White Paper at 17. However, ARID provided the Board with no cost information comparable to USEPA’s financial

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<sup>8</sup> <http://federal.eregulations.us/rulemaking/document/EPA-HQ-OAR-2010-1076-0013>

analysis for the average GDF. USEPA found that the average GDF would save \$1,230 per year in vapor recovery (*i.e.*, fuel) savings if Stage II were kept in place, but the GDF (1) would need to pay \$1,844 annually to operate and maintain the Stage II equipment and (2) would not realize the recurring cost savings of switching to conventional, non-Stage II equipment of \$2,977 total per year. TSD, Att. H at 7-9. The Board finds that the technological add-on favored by ARID could place an unspecified cost burden on the regulated community.

For non-Stage II GDFs, USEPA found that ORVR does not increase UST breathing/emptying loss emissions relative to non-ORVR vehicles. OTAQ 2011 Memo at 10. For GDFs with balance-type Stage II, USEPA found that if the p/v relief valve is retained after the balance system is removed, UST breathing/emptying loss emissions will be similar for refueling ORVR and non-ORVR vehicles. *Id.* USEPA found that removing vacuum-assist Stage II systems will likely decrease UST breathing/emptying loss emissions in most states. *Id.* Further, USEPA found that “retaining Stage II provides no additional [UST breathing/emptying] loss emission reductions and the incompatibility factor arguably reduces overall efficiency.” *Id.* at 10-11.

When USEPA approved Illinois’ October 25, 1994 SIP revision, USEPA found that Illinois’ rule (35 Ill. Adm. Code Part 218, Subpart Y) addresses storage tank emissions. *See* 60 Fed. Reg. at 5318-5320 (Jan. 27, 1995). Sections 218.583(a)(3) and (a)(4) (35 Ill. Adm. Code 218.583(a)(3), (a)(4)) require GDFs located in the Chicago NAA with a storage tank capacity of at least 575 gallons to install and maintain a p/v relief valve.<sup>9</sup> These requirements are not being repealed or phased out by this rulemaking. Only the registration requirements (35 Ill. Adm. Code 218.583(e)) for p/v relief valves are being repealed.

When the p/v relief valve regulations were adopted, IEPA stated that the average cost to install a p/v relief valve was between \$67 and \$82, with no routine maintenance, and a life expectancy of 10-15 years. IEPA estimated the cost effectiveness of the p/v relief valve as a control measure to be \$139 per ton of VOC emissions reduced. *See* 15% ROP Plan Control Measures for VOM Emissions – Part I: Pressure/Vacuum Relief Valves and 7.2 RVP (Amendments to 35 Ill. Adm. Code 201,211,218, and 219), R94-12, slip op. at 2-4 (Sept. 15, 1994).

USEPA also explained that its analysis did account for non-ORVR vehicles at non-Stage II GDFs, as well as non-ORVR vehicles at Stage II GDFs, ORVR vehicles at non-Stage II GDFs, and ORVR vehicles at Stage II GDFs. USEPA acknowledged that retaining Stage II might provide additional emission reductions from non-ORVR vehicles refueling at a Stage II GDF after the crossover date, and that there could be “uncontrolled emissions (non-ORVR vehicles at non-Stage II GDFs), but these would be relatively small and decreasing each year.” USEPA PC Responses at 28. In its widespread-use determination, USEPA stated:

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<sup>9</sup> Tanks installed before January 1, 1979, are exempt from the rule if they have a capacity of less than 2,000 gallons, as are tanks equipped with floating roofs or equivalent control devices approved by IEPA and USEPA. *See* 35 Ill. Adm. Code 218.583(a)(3), (b).

ORVR does not apply to all vehicles, but those not covered by the ORVR requirement comprise a small percentage of gasoline-powered highway vehicle fleet (approximately 1.5 percent of gasoline consumption) . . . . [M]otorcycles and heavy-duty gasoline vehicles not manufactured as a complete chassis are not required to install ORVR, so it is likely that there will be some very small percentage of gasoline refueling emissions not captured by ORVR controls. 77 Fed. Reg. at 28774 (May 16, 2012); *see also* Exh. 3 at 29, 66, 79 (MOVES model includes motorcycles in the types of sources analyzed).

Acknowledging that Stage II would not be “redundant” for “[a] small fraction of the on-road vehicle fleet” not covered by ORVR, USEPA cautioned:

Even though Stage II controls are capable of achieving some small level of area-wide benefit for non-ORVR refueling events, they may become a less cost-effective method than other alternatives for addressing area-wide VOC emissions and . . . may ultimately result in a disbenefit to air quality in the areas. Stage II Removal Guidance at 2.

There may come a point where retaining Stage II controls is otherwise unattractive for cost and cost-effectiveness reasons and . . . the foregone emission reductions are small enough that the loss of control would not affect compliance with the NAAQS. *Id.* at 22.

IEPA adds that in Illinois, non-road equipment is not typically refueled at GDFs with Stage II, and even for those that are, the emission losses are very small because the amount of gasoline used to refuel such equipment is considered insignificant. PC7 at 6.

In its widespread use determination, USEPA discussed the “compatibility factor” for vacuum assist Stage II systems:

The magnitude of the compatibility factor for any given area varies depending on ORVR penetration, fraction of vacuum assist nozzles relative to balance nozzles, and excess A/L for vacuum assist nozzles.<sup>10</sup> Two states have adopted measures to reduce this effect through the use of ORVR-compatible nozzles and one state prohibits vacuum assist nozzles completely. Due to these significant variables, the EPA is electing not to include the compatibility factor in the widespread use date determination analysis, but will provide the guidance requested by the commenters for use in making future SIP revisions. To the extent that compatibility emissions across all existing Stage II programs as a whole are significant, the EPA’s final analysis overestimates the length of time required for emissions reductions from ORVR alone to eclipse the reductions that can be achieved by Stage II alone. 77 Fed. Reg. at 28777 (May 16, 2012).

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<sup>10</sup> “A/L” refers to “the ratio of volume of air drawn into the UST compared to the volume of gasoline dispensed.” 77 Fed. Reg. at 28775 (May 16, 2012).

In turn, USEPA provided guidance to the states on how the compatibility factor should be incorporated into SIP revisions for Stage II programs. Specifically, USEPA issued both the OTAQ 2012 Memo and a document entitled “Guidance on Removing Stage II Gasoline Vapor Control Programs from State Implementation Plans and Assessing Comparable Measures,” EPA-457/B-12-001 (Aug. 7, 2012) (Stage II Removal Guidance), which is Attachment C to the TSD.

The User Guide for MOVES2010b states that “MOVES does not account for any effects on the emissions from refueling station gasoline storage tanks when Stage II is used in combination with vehicles equipped with ORVR systems.” Exh. 3 at F-1. Accordingly, the MOVES model itself does not account for incompatibility excess emissions. However, while USEPA’s Stage II Removal Guidance uses the same core elements of the MOVES model, it also includes equations for the compatibility factor not included in MOVES. Stage II Removal Guidance at 11-12 (compatibility factor is “an increase in UST vent pipe emissions over the normal breathing/emptying loss emissions”). USEPA explains:

The compatibility factor is an especially important consideration in calculating the emissions impacts of Stage II controls. Even if a state/local area wishes to keep Stage II controls to address non-ORVR equipped vehicles being refueled at Stage II GDFs, for non-ORVR compatible Stage II vacuum assist systems there will come a point where the emissions impact of the compatibility factor surpasses any gain from controlling non-ORVR vehicles. After that point, Stage II would lead to a net area-wide loss in emissions control. The point in time when this occurs depends on the nature of the Stage II program and the rate of ORVR penetration into the fleet. *Id.* at 10.

EPA’s calculations took the compatibility factor into account. The values used to graph Figure 1 include the incompatibility excess emissions. TSD at 7-10. This rulemaking requires the decommissioning of Stage II, including vacuum-assist systems, which will necessarily eliminate incompatibility excess emissions.

After considering ARID’s concerns, the Board finds that this rulemaking record supports phasing out Stage II vapor recovery systems. Further, the second-notice amendments comply with the CAA Section 110(1) “anti-backsliding” provision (42 U.S.C. § 7410(1)) and accordingly do not interfere with attaining the applicable NAAQS, RFP, ROP, or any other applicable CAA requirement. The record does not demonstrate, however, that retaining Stage II would meet these requirements or that augmenting current Board regulations on UST breathing/emptying loss emissions is warranted.

Based upon this record, the Board finds that emissions from non-ORVR sources are relatively small and that without Stage II, whether a vehicle is ORVR or non-ORVR has no bearing on UST breathing/emptying loss emissions. The Board further finds that after removal of Stage II, GDFs compliant with p/v relief valve requirements will on the whole likely decrease UST breathing/emptying loss emissions.

This record shows that the second-notice amendments will take full advantage of the emission reductions derived from the widespread use of ORVR. Synchronizing the January

2014 crossover point with the commencement of the Stage II phase-out, and requiring Stage II decommissioning within three years, minimizes the excess emissions from ORVR/Stage II incompatibility while eliminating long-term Stage II cost burdens on GDFs.

The Board recognizes that nothing in USEPA’s widespread use determination “prevent[s] a state from enhancing its GDF emission control requirements.” USEPA PC Responses at 27. The Board appreciates ARID’s contributions to this record on the potential for add-on technology to better control UST breathing/emptying losses. If, after the removal of Stage II, USEPA or IEPA were to identify the need for additional emission reductions to attain and maintain the ozone NAAQS, then vapor processor technology would be one of the methods the Board could consider. Any such consideration would need to take place in a rulemaking addressing Stage I. Finally, today’s decision does not preclude GDFs from considering additional UST vent pipe controls for breathing/emptying losses.

### **State and CAAPP Permitting Exemptions for GDFs**

#### **State Permitting Exemptions for GDFs**

Under the Act and Board regulations, State construction and operating permits are required for emission sources and air pollution control equipment, unless otherwise exempt from permitting. *See* 415 ILCS 5/9 (2012); 35 Ill. Adm. Code 201.142, 201.143, 201.144. A permitting exemption applies to GDFs that register with IEPA in accordance with 35 Ill. Adm. Code 218.586(h). *See* 35 Ill. Adm. Code Section 201.146(kk). A corollary permitting exemption based upon registering with IEPA applies to storage tanks with a volume of more than 10,000 gallons for gasoline dispensing. *See* 35 Ill. Adm. Code 218.586(h).

Another permitting exemption applies to the storage tanks for retail dispensing other than those subject to the Stage I control requirements of 35 Ill. Adm. Code. 215.583(a)(2), 218.583(a)(2), and 219.583(a)(2). *See* 35 Ill. Adm. Code 201.146(c). Stage I control requirements “seek to control vapors displaced from storage tanks during the filling of such tanks by product delivery vessels.” SR at 9. The Stage I regulations for the Chicago and Metro-East NAAs also contain a permitting exemption for storage tank filling operations that register with IEPA. *See* 35 Ill. Adm. Code 218.583(e), 219.583(e).

The Board revises and clarifies these State permitting provisions. SR at 9. Specifically, the Board repeals the registration requirement for GDFs subject to Stage I under Section 218.583(e) for the Chicago NAA or Section 219.583(e) for the Metro-East NAA. For GDFs in the Chicago NAA subject to Stage II under Section 218.586(h), the registration requirement would cease when the decommissioning process begins. The Board finds that OSFM and IDOA already have programs that track GDFs subject to Stages I and II. There are also overlapping federal notification requirements at 40 C.F.R. 63, subpart CCCCCC, which the IEPA administers and enforces. The federal notification requirements under the NESHAP rules apply to GDFs that dispense 10,000 gallons of gasoline or more per month—IEPA already has information on GDFs from this requirement. Ending the registration requirement will streamline the rules. SR at 25; TSD at 17-18; PFT1 Burkhardt at 11-13; Tr. 1 at 21-22.

The Board finds, however, that simply ending the registration requirement would have the unintended consequence of requiring GDFs to obtain State construction or operating air permits under Section 201.142, 201.143, or 201.144. GDFs eligible to register with IEPA have been provided with exemptions from State air permitting under Sections 201.146(l), 201.146(kk), 218.583(e), 218.586(h), and 219.583(e). TSD at 18-19; PFT1 Burkhart at 12. The Board sees no reason to now begin requiring State air permitting of these insignificant sources, and believes that doing so would merely add to the administrative burden and cost associated with permitting.

For the above reasons, the Board finds that registration should no longer be required to obtain an exemption from permitting. The Board adopts a single permit exemption not tied to registration. The new exemption from permitting would apply to storage tanks and fuel-dispensing equipment used for dispensing fuel to mobile sources for use in those sources, and would cover all fuels used in mobile sources, such as ethanol blends. The new exemption would not apply to the filling or dispensing of distribution vessels, such as tanker trucks, rail tanks, and barge sources. PFT Cooper at 2.

The Board therefore repeals the permit exemption tied to registration (Sections 201.146(kk), 218.583(e), and 219.583(e)) as no longer necessary. Larger sources, such as bulk gasoline plants and bulk gasoline terminals, would still require a permit. TSD at 17-21; PFT Cooper at 3; Tr.1 at 26. IEPA provided a 69-page list of GDFs in the Chicago NAA that would be affected by ending the registration program. TSD Att. A.

### **CAAAP Permitting Exemptions for GDFs**

Section 39.5 of the Act (415 ILCS 5/39.5 (2012)) establishes the Clean Air Act Permit Program (CAAPP), also known as the Title V operating permit program, which requires permits for major stationary sources of air pollution. SR at 9. Section 39.5 provides an exemption from CAAPP permitting by allowing for the designation of insignificant activities or emission levels that are proposed by IEPA and adopted by the Board. *See* 415 ILCS 5/39.5(5)(w) (2012); SR at 9-10.

When a CAAPP permit application is submitted to IEPA, insignificant activities or emission levels must be individually listed or denoted as present in the CAAPP application. *See* 415 ILCS 5/39.5(5)(w) (2012); 35 Ill. Adm. Code 201.210, 201.211; SR at 10. After permit issuance, the CAAPP source owner or operator may, without a permit modification, make changes to its operations that are not addressed or prohibited by its CAAPP permit and that are deemed by regulation as insignificant activities or emission levels. *See* 415 ILCS 5/39.5(12) (2012); SR at 10.

Without these categorical exemptions, a source would, under Section 201.211, have to seek an IEPA “insignificant activity” determination through an application to modify the CAAPP permit, a laborious and time-consuming process for both the source and IEPA. TSD at 23-24. IEPA admits that such requests for insignificant status are often not approved in a timely manner because other CAAPP renewals take priority. TSD at 25. Categorical exemptions allow the

CAAPP source to add the insignificant activities or emission levels to its operations without the delay that would occur if the source was required to modify its CAAPP permit. SR at 10.

Presently, Section 201.210 does not list fuel dispensing or small gasoline storage tanks as insignificant activities, even though these activities “will eventually be found to be insignificant” through the permitting process, according to IEPA. SR at 10. This lack of regulatory listing significantly delays a source’s ability to engage in these activities. SR at 10. The Board revises Section 201.210(a)(10) to include storage tanks of gasoline, including gasoline/ethanol blend fuels, with less than 2,000 gallons of capacity. The 2,000 gallon cutoff is consistent with USEPA’s NESHAP for gasoline dispensing (40 C.F.R Part 63, Subpart CCCCCC) and existing Board rules (Sections 218.583(b)(2) and 219.583(b)(2)) and provides a reasonably usable amount for the source. TSD at 25-26; PFT Cooper at 3; Tr.1 at 27.

The Board also adds Section 201.210(a)(19), addressing fuel dispensing operations and equipment for mobile sources for use in those sources, such as fleet vehicles, bulldozers, and landfill compactors, but not distribution vessels, such as tanker trucks. SR at 10; TSD at 23 25-26; Tr. 1 at 27. This insignificant activity applies to gasoline, including gasoline/ethanol blend fuels, if the annual average throughput of such fuel dispensed is less than 120,000 gallons on a rolling 12 month total basis. The threshold is consistent with the NESHAP (40 C.F.R. Part 63, Subpart CCCCCC), which applies control requirements once a subject source meets or exceeds the 10,000 gallon/month threshold (rolling 12 month total). 40 C.F.R. § 63.11117; SR at 21; TSD at 26-27; PFT Cooper at 3-4; Tr.1 at 25-28.

The Board agrees with IEPA’s assessment that expanding the list of insignificant activities would not result in an adverse environmental impact because such sources are small and would still be bound by any applicable rules regardless of whether they have a permit. PFT Cooper at 6; Tr.1 at 30.

### **Part-By-Part Analysis**

#### **Amendments to Part 218, Subpart Y—Chicago NAA Stage II Vapor Recovery Rule**

The majority of the amendments are in Part 218, Subpart Y, the gasoline distribution regulations for the Chicago NAA, particularly Section 218.586 on motor vehicle fueling operations. Revisions to Section 218.586 allow owners/operators of “existing” GDFs (*i.e.*, operating at any time prior to January 1, 2014) to begin decommissioning Stage II systems on January 1, 2014, but require compliance with Stage II requirements until decommissioning is commenced. The amendments also remove the requirement for Stage II systems at “new” GDFs (*i.e.*, commence operating for the first time on or after January 1, 2014). SR at 13-14; TSD at 12.

The timeframes to install Stage II systems under Section 218.586(d)(1)-(5) are being deleted. The new Stage II decommissioning timeframes and procedures are set forth in Section 218.586(i). In considering the decommissioning timeframes, IEPA held outreach meetings with members of the petroleum marketing industry and contractors likely to be involved in decommissioning work. Contractors stated that the average amount of time to decommission a Stage II system would be one day or less. Industry representatives believed that a three-year

timeframe to decommission all Stage II systems seemed reasonable. IEPA also contacted several other states and found timeframes for decommissioning Stage II systems ranged from two to four years. Of the states surveyed, IEPA learned that Texas has a Stage II program similar in size to the Illinois program, with 2,800 affected GDFs, and is contemplating a three-year decommissioning process. TSD at 12-13; Tr. 1 at 18-19.

The Board adopts a three-year timeframe for phasing out the Stage II program under Section 218.586(i)(1)(B) based upon “the number of gasoline dispensing operations subject to the Chicago NAA Stage II rule, the time involved in decommissioning Stage II equipment, the number of contractors available to perform decommissioning work, and [IEPA’s] analysis of the decommissioning period of other similarly situated states.” SR at 15; TSD at 13. The Board therefore requires that decommissioning of all Stage II equipment be completed no later than December 31, 2016. PFT1 Burkhart at 8.

The new decommissioning procedures and standards are contained in Section 218.586(i)(2). USEPA recommended that “currently available industry association codes and standards be followed (where applicable) to ensure that Stage II systems are properly . . . dismantled or decommissioned.” TSD at 13-14, Att. C, quoting Stage II Removal Guidance. The Board requires that the decommissioning be performed in accordance with the Petroleum Equipment Institute’s (PEI’s) “Recommended Practices for Installation and Testing of Vapor-Recovery Systems at Vehicle-Fueling Sites,” PEI/RP300-09 (2009). The PEI document contains the steps involved in dismantling Stage II hardware for both balance and vacuum-assist type systems. TSD, Att. D; Tr.1 at 19.

IEPA is unaware of any other industry codes or standards for Stage II decommissioning. TSD at 14; Tr.1 at 19. USEPA does not require the use of any particular industry codes or standards but has indicated that the PEI document is particularly instructive because it was developed by industry experts concentrating on regulatory compliance and safety. SR at 14; TSD, Att. H at 4. During the outreach meetings, IEPA found support for using the PEI requirements from members of the petroleum marketing and petroleum equipment industries, as well as officials from OSFM and other states with Stage II programs. TSD at 14-15.

The Board finds that appropriate decommissioning procedures are necessary (1) to ensure that potential liquid and vapor leak issues associated with decommissioning are consistently addressed and (2) to realize additional emission reductions achievable through the use of only ORVR systems. SR at 27-28. Under Section 218.112, the Board incorporates by reference the PEI document and requires the decommissioning steps listed in Section 14.6 of the PEI document, except Section 14.6.14, which is a decommissioning checklist. IEPA will develop its own checklist, which will be posted on IEPA’s website and call for contractor registration or license information under OSFM and IDOA programs. SR at 15; TSD at 14; PFT1 Burkhart at 8-9; Tr.1 at 45-47.

To ensure the PEI decommissioning procedures are properly implemented, the Board requires that contractors be registered or licensed by the State. Although the PEI document indicates that contractors should have equipment manufacturer and state certifications, IEPA is not aware of any Illinois-specific Stage II decommissioning codes or standards, other than

independently enforceable local and industry-specific standards and codes that may relate indirectly to Stage II equipment decommissioning, such as safety and electrical codes. SR at 16; Tr.1 at 19-20.

OSFM and IDOA have contractor licensing and registration requirements to perform work on gasoline station dispensers, UST piping, and tank testing. IEPA, OSFM, and IDOA all agree that contractors doing Stage II decommissioning work should be licensed by both IDOA and OSFM, as well as carry certification from the specific dispensing equipment manufacturer to work on the equipment. TSD at 15; PFT1 Burkhart at 9-10; Tr.1 at 20-21. The Board therefore requires under Section 218.586(i)(2)(B)(i) that decommissioning procedures be performed by a contractor that meets the following:

- Registered with IDOA, Bureau of Weights and Measures, in the 3-A Gasoline Pump Meters Code pursuant to Section 8.1 of the Weights and Measures Act (225 ILCS 470/8.1 (2012));
- Licensed by OSFM in the storage tank installation/retrofit module pursuant to the Petroleum Equipment Contractors Licensing Act (225 ILCS 729 (2012)) and implementing regulations at 41 Ill. Adm. Code 172; and
- Has the appropriate dispenser-manufacturer certification and training, if any. SR at 16; TSD at 15-16.

Depending upon the extent of decommissioning or other issues revealed during the decommissioning process, other State laws or regulations may become applicable, such as OSFM UST regulations, but any such requirements are independently enforceable. SR at 16. For example, Section 218.586(i)(2)(B)(i) requires that if product piping is disconnected during decommissioning and an OSFM permit is required for any part of the work, the contractor must ensure that the OSFM-permitted work is performed by the appropriate licensed contractor and personnel. PFT1 Burkhart at 10.

Mr. Schellner of OSFM explained that one OSFM licensure module is the installed retrofit license, which covers anything related to repairing or installing components of a system. The other module is the tank tightness testing license, which is used at the end of the decommissioning effort to ensure that piping is tight and pipes are manifolded pursuant to the PEI standard. Tr.1 at 48-49. Mr. Rathbun of IDOA explained that the 3-A designation referenced in Section 218.586(i)(2)(B)(i) for the 3-A Gasoline Pump Meters Code is a designation IDOA uses to indicate persons and companies qualified to work on motor fuel dispensers. Mr. Rathbun stated that IDOA maintains a list of repair persons certified and registered to work on motor fuel dispensers. Mr. Rathbun explained that IDOA's Bureau of Weights and Measures registers any individual who sells or works on anything used for commercial purposes, such as a motor fuel dispenser. Tr.1 at 50.

For decommissioning procedures related solely to testing, the Board requires under Section 218.586(i)(2)(B)(ii) that contractors performing the tests be licensed by OSFM in the tank tightness module (225 ILCS 729 (2012); 41 Ill. Adm. Code 172). SR at 16; TSD at 15-16.

The pressure decay test required by Section 14.6 of the PEI must be passed in accordance with Appendix A of the PEI document and the tie-tank test must be conducted and passed in accordance with CARB TP 201.3C to ensure all tanks are properly vented under Section 218.586(i)(2)(B)(iii). The results of the tests must be reported to IEPA. SR at 15-16; TSD at 16; Tr.1 at 50-54, 57

Mr. Schneller explained that the pressure decay test is done on an annual basis at Stage II facilities by contractors licensed through OSFM:

[The pressure decay test] is done to verify that all fittings are tight and they seal off sections of the pipe, apply meter gauges, and in certain amount of time based on certain formulas that are built into the testing equipment, they are able to determine whether the tank and the piping is tight to accepted standards or not based on how the pressure drops. So it's called static test because the pressure is applied and then let sit and see what happens. Tr.1 at 54-55.

Once decommissioning is complete and the piping is recombined, the tie-tank test is done to ensure that the piping/system vents properly. The tie-tank test would also be performed by contractors licensed through OSFM. Tr.1 at 55.

As to the availability of contractors to meet the above licensing, registration, and certification requirements, IEPA, OSFM, and IDOA all believe that there is a sufficient number to enable all GDFs in the Chicago NAA to complete the decommissioning work within the three-year timeframe. IEPA provided a list of contractors meeting the above requirements in its proposal, showing 41 contractors for Stage II decommissioning work and 23 contractors for tank testing. TSD Att. E. Based upon information from OSFM and IDOA, IEPA also provided website links to two of the primary dispenser manufacturers that provide training and certification for technicians working on their dispensers: Gilbarco; and Wayne. Tr.2 at 24-25; Exh. 6, 7.<sup>11</sup> For interested contractors that do not already have the above licensing, registration, and certification requirements, both OSFM and IDOA believe that the contractors could obtain them within a reasonable amount of time. PFT1 Burkhart at 10-11.

The Board also requires owners/operators of GDFs to submit a 10-day notice of the intent to decommission under Section 218.586(i)(2)(A). The notice of intent would need to be on a form to be provided by IEPA. The notice must be submitted to IEPA at least 10 days prior to commencing decommissioning. This notice would give IEPA the ability to schedule an inspector to be present for the decommissioning. TSD at 16-17; PFT1 Burkhart at 11; Tr.1 at 21-22. The Board agrees with IEPA's view that the owner or operator could comply with the 10-day requirement by having the notice, for example, postmarked, sent by Fed Ex, emailed, hand-delivered, faxed, or submitted through other conventional electronic means to IEPA on or before the 10th day before the date on which decommissioning commences. The 10-day notice does not

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<sup>11</sup> IEPA's Exh. 6 provides the following website links:

<http://www.gilbarco.com/us/content/north-american-technical-training>

<http://www.wayne.com/index.cfm/go/product-detail/product/Technical-Training/>

have to be in IEPA's possession 10 days beforehand to comply. Tr.2 at 14-15, 18. IEPA provided a draft form of the 10-day "Notice of Intent to Decommission Stage II Vapor Recovery Equipment" and stated that the final form would be available on the IEPA's website. PFT2 Burkhart Exhibit 1; Tr.2 at 44-45.

Under Section 218.586(i)(2)(C), within 30 days of completing the decommissioning, the owner or operator of the GDF must submit to IEPA a completed checklist and certification, developed and provided by IEPA, and test results, documenting the decommissioning procedures performed. SR at 17; TSD at 17. These documents will enable IEPA to effectively track and monitor decommissioning activities. *Id.* Consistent with the timing discussion above, the Board agrees with IEPA's view that an owner or operator could comply with the 30-day requirement by having the checklist, for example, postmarked, sent by Fed Ex, emailed, hand delivered, faxed, or submitted through other conventional electronic means to IEPA on the 30th day after the date on which decommissioning was completed. Tr.2 at 18. IEPA provided a draft form of the "Stage II Decommissioning Checklist." PFT2 Burkhart, Att. 2.

The Board also requires under Section 218.586(g)(4) that owners/operators maintain records relating to decommissioning for a period of five years, and provide any decommissioning records to IEPA within 30 minutes of IEPA's request. This will enable IEPA to inspect and review the documents for compliance with the rule. TSD at 16-17; PFT Burkhart at 11. The 30-minute timeframe was requested by IPMA for consistency with OSFM requirements. Tr.1 at 42-44.

### **Clarifying Amendments to Part 201—Statewide**

The Board clarifies Section 201.146(n), which provides, among other things, an exemption from State construction and operating permit requirements for storage tanks of organic liquid with a capacity of less than 10,000 gallons, provided the storage tank is not used to store material listed as a hazardous air pollutant (HAP) pursuant to Section 112(b) of the CAA and is not subject to Stage I requirements. IEPA believes "the qualifications relating to Stage I requirements [were] intended to address the fact that gasoline itself is not listed as a HAP, although it is made up of a mixture of HAPs." TSD at 21; PFT Cooper at 2; Tr.1 at 25-26. IEPA proposed to "remove the reference to Stage I rules and address this prohibition against exempting gasoline storage tanks through clarifying that the subject storage tanks may not be used to store any amount of material or mixture of any material listed as a HAP." SR at 22-23; TSD at 21. The Board agrees and adopts the clarifying amendments, with no change to the meaning or scope of this exemption, *i.e.*, Stage I (gasoline) storage tanks are not exempt. SR at 22; TSD at 21-22; PFT Cooper at 2-3.

The Board clarifies Section 201.146(nn), which provides a State permitting exemption for general vehicle maintenance and servicing activities conducted at a source, motor vehicle repair shop, or motor vehicle body shop, but does not include motor vehicle refinishing or gasoline fuel handling. SR at 23; TSD at 22. Because Section 201.146(l) exempts storage tanks and dispensing equipment used to dispense fuel to mobile sources for use in such mobile sources, the Board repeals the gasoline fuel handling language in Section 201.146(nn). SR at 23; TSD at 22; PFT Cooper at 3; Tr.1 at 26.

At Section 201.210(a)(10), the Board includes storage tanks of gasoline (including gasoline/ethanol blend fuels) with a capacity of less than 2,000 gallons as insignificant activities to be listed in a CAAPP application. At Section 201.210(a)(19), the Board adds, as insignificant activities to be listed in a CAAPP application, operations and equipment used to dispense the following fuels to mobile sources for use in such mobile sources: gasoline, if the annual throughput of the fuel dispensed is less than 120,000 gallons (rolling 12 month total); and distillate oil (including kerosene and diesel fuel), biodiesel, and biodiesel/distillate oil blends.

The Board also clarifies Section 201.210(b)(4), which provides that general vehicle maintenance and services activities at a source, other than “gasoline fuel handling,” are insignificant activities not required to be individually listed in a CAAPP application but rather merely denoted as present. Fuel handling and dispensing of gasoline, distillate oil, biodiesel, and biodiesel/distillate oil blends falls within the exception to Section 201.210(b)(4)’s insignificant activities.

The Board adopts two clarifications with respect to Section 201.302. That provision was intended to require the submission of annual emissions reports (AERs) to IEPA when the owner/operator of an emission source or air pollution control equipment is required to obtain a permit. SR at 23-24; PFT Cooper at 5; Tr.1 at 29. Section 201.302(a) has required all sources to submit an AER unless specifically exempt in that section. SR at 24. Since Section 201.302 was adopted, the number of exemptions has increased and different types of sources have been added to the permitting process, such as Registration of Smaller Sources (ROSS). The Board’s intent behind Section 201.302 of requiring AERs only from permitted sources is reflected in the applicability criteria of IEPA’s rule 35 Ill. Adm. Code 254.102. The Board amends Section 201.302(a) to tie the requirement for AER submittal to the applicability criteria in Section 254.102. TSD at 28-29; PFT Cooper at 6.

Additionally, Section 201.302(d) specifies that retail gasoline dispensing operations are exempt from the AER requirements unless the source has failed to obtain a permit, if applicable, or comply with the registration provision contained in the Stage II rule. Because Section 254.102 refers to sources required to have permits and the Stage II program is being phased out, the Board repeals Section 201.302(d) as unnecessary. SR at 24; PFT Cooper at 6; Tr.1 at 29.

IEPA provides a list of over 600 sources potentially affected by amendments to Part 201 that would be eligible to use the expanded exemption/insignificant activity provisions. SR at 26; TSD at 29, Att. F.

### **Clarifying Amendments to Part 218—Chicago NAA**

For Section 218.586, the Board removes the definition of “constructed” as the term will no longer be used, updating ASTM D 323 to its current version (*i.e.*, ASTM D 323-08), and removing 40 C.F.R. Part 80, Appendix E as it no longer exists. SR at 25, 32-33. The Board also repeals the Stage I registration provision (35 Ill. Adm. Code 218.583(e)) due to overlapping federal notification requirements and State tracking systems for GDFs. Those exemptions from

permitting that have been conditioned upon Stage I registration or Stage II registration (35 Ill. Adm. Code 218.586(h)) are relocated to Part 201 and do not require registration.

### **Clarifying Amendments to Part 219—Metro-East NAA**

Because the Stage II program was repealed in the Metro-East NAA, the Board removes the Stage II testing methods at 35 Ill. Adm. Code 219.105(j) and a Stage II incorporation by reference at 35 Ill. Adm. Code Section 219.112(v). TSD at 29; PFT1 Burkhart at 12-13. In addition, the Board repeals the Stage I registration provision (35 Ill. Adm. Code 219.583(e)) due to overlapping federal notification requirements and other State tracking systems for GDFs. The exemption from permitting that has been conditioned upon Stage I registration is relocated to Part 201 and does not require registration.

### **Technical Feasibility and Economic Reasonableness**

Section 27(a) of the Act directs the Board to take into account the “technical feasibility and economic reasonableness of measuring or reducing the particular type of pollution” when conducting a substantive rulemaking. 415 ILCS 5/27(a) (2012). Section 27(b) of the Act requires the Board to determine whether a proposed substantive regulation “has any adverse economic impact on the people of the State of Illinois.” 415 ILCS 5/27(b) (2012). For the reasons below, the Board finds that the amendments adopted today as final rules are technically feasible and economically reasonable and will not have an adverse economic impact on the People of Illinois. *See* 415 ILCS 5/27(a), (b) (2012).

Initially, the Board notes that IEPA engaged in outreach regarding the proposal by contacting and meeting with numerous interested stakeholders from industry, government, and advocacy groups. Participants included representatives of individual petroleum refining and marketing companies, petroleum service companies, contractors likely to be involved in Stage II decommissioning work, the Illinois Petroleum Council, the Illinois Petroleum Marketers Associations, Illinois Corn Growers Association, the American Lung Association, the Respiratory Health Association of Metropolitan Chicago, the Illinois Corn Growers Association, the Illinois Environmental Regulatory Group, DCEO, OSFM, IDOA, and USEPA. SR at 29; TSD at 13, 32-33. In general, the outreach group supported the proposed modifications. TSD at 33.

IEPA sought input on the PEI decommissioning procedures, the availability of contractors trained in the PEI procedures, and the timeframe for decommissioning. Based upon these meetings, IEPA revised its initial decommissioning timeframe to three years. After learning about IDOA and OSFM certification/registration requirements for contractors involved in work on gasoline dispensers, piping, and UST testing, IEPA decided to propose that decommissioning work must be performed by OSFM- and IDOA-registered contractors. TSD at 33.

At hearing, Jeff Dzierzanowski with Source North America Corporation also testified, providing positive feedback on the outreach process for this rule proposal. Mr. Dzierzanowski explained that Source North America Corporation is the largest petroleum equipment distributor

in the country and works with contractors and marketers doing Stage II decommissioning. He stated that he is involved in legislative matters along with compatibility issues and equipment specialties, and has been involved in the Stage II decommissioning process in other states. Mr. Dzierzanowski thanked IEPA, OSFM, and IDOA for allowing him to be part of the outreach before the proposal was filed: “I deal with a lot of states that deal with the federal government. It is a great thing and it was reassuring and refreshing to be able to sit down with [IEPA, OSFM, and IDOA] and you respected our opinion and thought process on doing this whole thing and it greatly impacts our control community.” Tr.2 at 26-29.

### **Technical Feasibility**

Nothing in this rulemaking record indicates that the amendments are technically infeasible. The amendments do not involve any new technology and generally impose no new requirements other than decommissioning Stage II equipment.

The requirement to operate Stage II equipment at GDFs in the Chicago ozone NAA will be phased out over a three-year period. SR at 27. Three years is chosen due to the number of GDFs subject to the Chicago NAA Stage II rule, the time involved in decommissioning Stage II equipment, the number of contractors available to perform decommissioning work, and IEPA’s analysis of the decommissioning phase-out period of other similarly situated states. *Id.* Feedback received by IEPA from Stage II contractors and members of industry indicate that this time period is reasonable. *Id.* For interested contractors lacking the necessary licensing, registration, and certifications, both OSFM and IDOA indicated that contractors could obtain these within a reasonable amount of time. PFT1 Burkhart at 10-11.

The rule requires decommissioning of existing Stage II equipment by following the decommissioning procedures established by PEI, the only industry-service publication. PEI decommissioning procedures were established by industry experts and are considered by USEPA as instructive. IEPA is aware of no other industry standards for Stage II equipment decommissioning. SR at 27. IEPA, OSFM, and IDOA learned from members of industry and Stage II contractors in Illinois that the PEI decommissioning procedures are feasible and appropriate. SR 27; TSD at 17; PFT1 Burkhart at 11.

Repealing the Stage I registration program at Sections 218.583(e) and 219.583(e) is technically feasible due to the ability of IEPA to monitor GDFs through administering and enforcing 40 C.F.R. Part 63, Subpart CCCCCC, and through the tracking systems of OSFM and IDOA. SR at 28.

The permitting amendments add and clarify permit exemptions and insignificant activities, which will reduce the burden associated with permitting and may result in reduced costs to affected sources. SR at 28-29; TSD at 27-28; Tr.1 at 30.

Based upon this record, the Board finds that the amendments adopted in the order below are technically feasible.

### Economic Reasonableness

With the final adoption of the amendments, existing GDFs in the Chicago ozone NAA will be required to incur costs to decommission existing Stage II equipment, but will realize recurring annual cost savings. SR 28. GDFs that operate for the first time on or after January 1, 2014, will not be required to install Stage II equipment, which will result in significant capital investment savings as well as recurring annual cost savings. *Id.*

In support of the final rule waiving the CAA Section 182(b)(3) Stage II requirement, USEPA issued a document entitled “Decommissioning Stage II Vapor Recovery Financial Benefits and Costs,” dated May 8, 2012, which examined the short- and long-term costs and financial benefits of decommissioning. TSD at 30; TSD Att. H; PFT1 Burkhardt at 13-14; Tr.1 at 22.

USEPA expects that after states remove the Stage II requirement, each GDF owner will decide the best time to begin the decommissioning process within the regulatory timeframes. The owner will likely select a date that will minimize total costs and business disruption, typically when standard maintenance is scheduled for GDF pump hanging hardware. TSD Att. H at 3-4. USEPA expects that not all GDFs will begin decommissioning at the same time. For the purposes of the cost analysis, USEPA stated that an average GDF with Stage II would pump about 1.2 million gallons per year, or about 100,000 gallons of fuel per month. *Id.* The average GDF has 5 dispenser cabinets with 10 fueling nozzles connected to four USTs. *Id.* USEPA estimated that on a national basis, about 70% of Stage II systems are vacuum-assist types and 30% are balance types, although this would vary from state to state. *Id.*

USEPA estimated decommissioning at the average GDF would take about 10 hours. Looking at the costs for labor associated with the decommissioning process, USEPA considered the direct labor costs for modifying the hardware and electronics to disable or remove the Stage II system and administrative labor costs related to reporting and updating labels or registrations. TSD Att. H at 6-7. USEPA also considered lost revenue associated with the decommissioning process that would put at least part of the GDF out of service for at least part of the day. USEPA estimated total labor and lost revenue costs would total about \$1,980. *Id.*

As to the hardware components of a Stage II system, such as the nozzles, hoses, swivels, and check valves, USEPA estimated that the switch from Stage II to conventional dispensing hardware would be about \$3,580 less than the cost of replacing the Stage II hardware during regular maintenance. TSD Att. H at 5-6.

For the financial benefit of decommissioning, USEPA considered cost savings that would result from reduced operating and maintenance costs for dispensers along with the elimination of annual costs related to Stage II system testing, inspections, fees, training, and recordkeeping. USEPA also factored in lost revenue associated with the loss of vapor recovery savings that was provided by the Stage II systems of \$1,230. TSD Att. H at 7-8. The savings in annual operating and maintenance costs of \$1,844 together with the lost savings in vapor recovery of \$1,230 resulted in a net savings of \$614. *Id.*

After the decommissioning process and going forward on an annual basis, USEPA estimated that the average GDF will see a \$997 savings in the initial year and \$2,977 to as much as \$6,000 in following years. TSD Att. H at 9; Tr.1 at 23, 57-61. Extrapolating these savings, USEPA estimated the nationwide savings for the first 12-month period would be \$10,200,000 in 2013 and \$91,100,000 by the end of 2016, not counting California. TSD Att. H at 10.

Further, USEPA estimated the costs savings of not installing Stage II systems at the average newly-established GDFs on or after January 1, 2014, to be in the range of \$20,000 to \$60,000, with a recurring annual savings from avoided operating costs of about \$3,000. TSD at 32; TSD Att. C; TSD Att. H at 12; PFT1 Burkhardt at 15, Tr. 1 at 23.

IEPA requested cost estimates from a few major licensed contractors that perform gasoline dispenser and fuel infrastructure work in the Chicago area. Looking at a range of GDFs with 2 to 6 nozzles and various dispenser manufactures, cost estimates ranged from \$2,000 to \$7,000 per GDF to decommission. The least expensive of these would be the balance-type systems at \$2000, of which there are an estimated 100 in the Chicago NAA. For the vacuum-assist Stage II systems with 2 nozzles, IEPA found estimates around \$4,400. For all 2,420 GDFs in the Chicago NAA to decommission their Stage II equipment, IEPA estimated a total cost of about \$10.6 million. TSD at 31-32; PFT1 Burkhardt at 14, Tr. 1 at 22-23.

IPMA, which consists of “300 members who own or supply 3500 gasoline stations and convenience stores in Illinois,” made economic arguments for the timely adoption of the amendments. PC2 at 1; *see also* PC6 at 1. IPMA emphasized that “Illinois marketers are delaying investment in building new sites or upgrading existing ones until the new rules are in place.” PC6 at 1. IPMA argued that delaying final adoption of the amendments would have an economic ripple effect:

There are several marketers with stations in Illinois that market in multiple states. Many of them are electing to invest money in developing new stations in other states. By doing this they can enjoy a savings of about 50k per site. This is the typical average cost when stage II vapor recovery systems do not need to be installed. Each station built outside of Illinois is a loss of about 2.5 to 3 million dollars spent in Illinois. That is the average cost of construction per site in the impacted counties. This is a loss of jobs and revenue to the state and its citizens. PC2 at 1.

ARID suggests that adding vapor processor controls to USTs would provide a favorable payback to the GDF owner and fuel savings. PC4 at 2; White Paper at 17. IPMA opposes these add-on controls, arguing that “it would be an expensive investment for the site to make this change” and after installation, would impose additional maintenance costs both for the ARID system and the retained Stage II “ORVR compatible” system. PC6 at 1. The Board reiterates that ARID provided no cost information comparable to USEPA’s analysis for the average GDF for the Board to draw comparisons. USEPA’s financial analysis found the average GDF would save \$1,230 per year in vapor recovery (*i.e.*, fuel) savings if Stage II were kept in place, but would still need to pay \$1,844 in annual Stage II operating and maintenance costs and not realize

the cost savings of switching to conventional, non-Stage II equipment of \$2,977 total per year. TSD Att. H at 7-8.

The permit exemptions and insignificant activity amendments do not place additional financial obligations on affected sources, but rather should reduce the burden associated with permitting and may result in reduced costs to sources. SR at 28-29; TSD at 27-28; Tr.1 at 30.

Based upon the record, the Board finds that these amendments are economically reasonable and will not have an adverse economic impact on the People of Illinois.

### **CONCLUSION**

The Board adopts final amendments to Parts 201, 218, and 219. No substantive changes, and only minor revisions, are made to the second-notice rule language. The Board now files the final rules with the Secretary of State to provide an effective date for these amendments during this calendar year. A 2013 calendar-year effective date will allow the State of Illinois to timely realize additional emission reduction benefits achievable by using only ORVR systems.

This proceeding's most substantial rule change is the phasing out of the Stage II requirements for GDFs in the Chicago ozone NAA. The proposed removal of Stage II vapor recovery systems is possible due to USEPA's waiver of the Stage II requirement, which is based upon USEPA's determination that there is widespread use of ORVR nationwide. In turn, IEPA has demonstrated that beginning in January 2014, ORVR operating simultaneously with incompatible Stage II systems will not achieve as many emission reductions as could be achieved through the use of ORVR alone.

Owners and operators of existing GDFs (*i.e.*, operating at any time before January 1, 2014) in the Chicago ozone NAA may begin decommissioning Stage II systems on January 1, 2014, but must comply with Stage II requirements until decommissioning begins. Decommissioning must be completed by December 31, 2016. Additionally, the amendments remove the requirement for installing Stage II systems at new GDFs in the Chicago ozone NAA (*i.e.*, operating for the first time on or after January 1, 2014).

As proposed at first and second notice, the final amendments also reflect the repeal of overlapping Stage I registration requirements in the Chicago and Metro-East ozone NAAs. Finally, applicable throughout the State are clarifications to State air permitting exemptions and amendments for Title V or CAAPP "insignificant activities."

### **ORDER**

The Board adopts the following amendments to 35 Ill. Adm. Code 201, 218, and 219 and directs the Clerk to submit the amendments to the Secretary of State for publication in the *Illinois Register* as final rules. Adopted additions to the rules are underlined; adopted deletions to the rules appear stricken.

TITLE 35: ENVIRONMENTAL PROTECTION  
SUBTITLE B: AIR POLLUTION  
CHAPTER I: POLLUTION CONTROL BOARD  
SUBCHAPTER a: PERMITS AND GENERAL PROVISIONS

PART 201  
PERMITS AND GENERAL PROVISIONS

SUBPART A: DEFINITIONS

Section	
201.101	Other Definitions
201.102	Definitions
201.103	Abbreviations and Units
201.104	Incorporations by Reference

SUBPART B: GENERAL PROVISIONS

Section	
201.121	Existence of Permit No Defense
201.122	Proof of Emissions
201.123	Burden of Persuasion Regarding Exceptions
201.124	Annual Report
201.125	Severability
201.126	Repealer

SUBPART C: PROHIBITIONS

Section	
201.141	Prohibition of Air Pollution
201.142	Construction Permit Required
201.143	Operating Permits for New Sources
201.144	Operating Permits for Existing Sources
201.146	Exemptions from State Permit Requirements
201.147	Former Permits
201.148	Operation Without Compliance Program and Project Completion Schedule
201.149	Operation During Malfunction, Breakdown or Startups
201.150	Circumvention
201.151	Design of Effluent Exhaust Systems

SUBPART D: PERMIT APPLICATIONS AND REVIEW PROCESS

Section	
201.152	Contents of Application for Construction Permit
201.153	Incomplete Applications (Repealed)
201.154	Signatures (Repealed)

201.155	Standards for Issuance (Repealed)
201.156	Conditions
201.157	Contents of Application for Operating Permit
201.158	Incomplete Applications
201.159	Signatures
201.160	Standards for Issuance
201.161	Conditions
201.162	Duration
201.163	Joint Construction and Operating Permits
201.164	Design Criteria
201.165	Hearings
201.166	Revocation
201.167	Revisions to Permits
201.168	Appeals from Conditions
201.169	Special Provisions for Certain Operating Permits
201.170	Portable Emission Units
201.175	Registration of Smaller Sources (ROSS)

#### SUBPART E: SPECIAL PROVISIONS FOR OPERATING PERMITS FOR CERTAIN SMALLER SOURCES

Section	
201.180	Applicability (Repealed)
201.181	Expiration and Renewal (Repealed)
201.187	Requirement for a Revised Permit (Repealed)

#### SUBPART F: CAAPP PERMITS

Section	
201.207	Applicability
201.208	Supplemental Information
201.209	Emissions of Hazardous Air Pollutants
201.210	Categories of Insignificant Activities or Emission Levels
201.211	Application for Classification as an Insignificant Activity
201.212	Revisions to Lists of Insignificant Activities or Emission Levels

#### SUBPART G: EXPERIMENTAL PERMITS (Reserved)

#### SUBPART H: COMPLIANCE PROGRAMS AND PROJECT COMPLETION SCHEDULES

Section	
201.241	Contents of Compliance Program
201.242	Contents of Project Completion Schedule
201.243	Standards for Approval
201.244	Revisions

201.245	Effects of Approval
201.246	Records and Reports
201.247	Submission and Approval Dates

#### SUBPART I: MALFUNCTIONS, BREAKDOWNS OR STARTUPS

Section	
201.261	Contents of Request for Permission to Operate During a Malfunction, Breakdown or Startup
201.262	Standards for Granting Permission to Operate During a Malfunction, Breakdown or Startup
201.263	Records and Reports
201.264	Continued Operation or Startup Prior to Granting of Operating Permit
201.265	Effect of Granting of Permission to Operate During a Malfunction, Breakdown or Startup

#### SUBPART J: MONITORING AND TESTING

Section	
201.281	Permit Monitoring Equipment Requirements
201.282	Testing
201.283	Records and Reports

#### SUBPART K: RECORDS AND REPORTS

Section	
201.301	Records
201.302	Reports

#### SUBPART L: CONTINUOUS MONITORING

Section	
201.401	Continuous Monitoring Requirements
201.402	Alternative Monitoring
201.403	Exempt Sources
201.404	Monitoring System Malfunction
201.405	Excess Emission Reporting
201.406	Data Reduction
201.407	Retention of Information
201.408	Compliance Schedules

201.APPENDIX A	Rule into Section Table
201.APPENDIX B	Section into Rule Table
201.APPENDIX C	Past Compliance Dates

AUTHORITY: Implementing Sections 10, 39 and 39.5 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/10, 27, 39 and 39.5].

SOURCE: Adopted as Chapter 2: Air Pollution, Part I: General Provisions, in R71-23, 4 PCB 191, filed and effective April 14, 1972; 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. 13579; amended in R82-1 (Docket A) at 10 Ill. Reg. 12628, effective July 7, 1986; amended in R87-38 at 13 Ill. Reg. 2066, effective February 3, 1989; amended in R89-7(A) at 13 Ill. Reg. 19444, effective December 5, 1989; amended in R89-7(B) at 15 Ill. Reg. 17710, effective November 26, 1991; amended in R93-11 at 17 Ill. Reg. 21483, effective December 7, 1993; amended in R94-12 at 18 Ill. Reg. 15002, effective September 21, 1994; amended in R94-14 at 18 Ill. Reg. 15760, effective October 17, 1994; amended in R96-17 at 21 Ill. Reg. 7878, effective June 17, 1997; amended in R98-13 at 22 Ill. Reg. 11451, effective June 23, 1998; amended in R98-28 at 22 Ill. Reg. 11823, effective July 31, 1998; amended in R02-10 at 27 Ill. Reg. 5820, effective March 21, 2003; amended in R05-19 and R05-20 at 30 Ill. Reg. 4901, effective March 3, 2006; amended in R07-19 at 33 Ill. Reg. 11965, effective August 6, 2009; amended in R10-21 at 34 Ill. Reg.19575, effective December 1, 2010; amended in R12-10 at 35 Ill. Reg. 19790, effective December 5, 2011; amended in R13-18 at 38 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

### SUBPART C: PROHIBITIONS

#### Section 201.146 Exemptions from State Permit Requirements

Construction or operating permits, pursuant to Sections 201.142, 201.143 and 201.144 of this Part, are not required for the classes of equipment and activities listed below in this Section. The permitting exemptions in this Section do not relieve the owner or operator of any source from any obligation to comply with any other applicable requirements, including the obligation to obtain a permit pursuant to Sections 9.1(d) and 39.5 of the Act, sections 165, 173 and 502 of the Clean Air Act or any other applicable permit or registration requirements.

- a) Air contaminant detectors or recorders, combustion controllers or combustion shutoffs;
- b) Air conditioning or ventilating equipment not designed to remove air contaminants generated by or released from associated equipment;
- c) Each fuel burning emission unit for indirect systems and for heating and reheating furnace systems used exclusively for residential, or commercial establishments using gas and/or fuel oil exclusively with a design heat input capacity of less than 14.6 MW (50 mmbtu/hr), except that a permit shall be required for any such emission unit with a design heat input capacity of at least 10 mmbtu/hr that was constructed, reconstructed or modified after June 9, 1989 and that is subject to 40 CFR 60, subpart D;

- d) Each fuel burning emission unit other than those listed in subsection (c) of this Section for direct systems used for comfort heating purposes and indirect heating systems with a design heat input capacity of less than 2930 kW (10 mmbtu/hr);
- e) Internal combustion engines or boilers (including the fuel system) of motor vehicles, locomotives, air craft, watercraft, lifttrucks and other vehicles powered by nonroad engines;
- f) Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including associated laboratory fume hoods, vacuum producing devices and control devices installed primarily to address potential accidental releases;
- g) Coating operations located at a source using not in excess of 18,925 l (5,000 gal) of coating (including thinner) per year;
- h) Any emission unit acquired exclusively for domestic use, except that a permit shall be required for any incinerator and for any fuel combustion emission unit using solid fuel with a design heat input capacity of 14.6 MW (50 mmbtu/hr) or more;
- i) Any stationary internal combustion engine with a rated power output of less than 1118 kW (1500 bhp) or stationary turbine, except that a permit shall be required for the following:
  - 1) Any internal combustion engine with a rating at equal to or greater than 500 bhp output that is subject to the control requirements of 35 Ill. Adm. Code 217.388(a) or (b); or
  - 2) Any stationary gas turbine engine with a rated heat input at peak load of 10.7 gigajoules/hr (10 mmbtu/hr) or more that is constructed, reconstructed or modified after October 3, 1977 and that is subject to requirements of 40 CFR 60, subpart GG;
- j) Rest room facilities and associated cleanup operations, and stacks or vents used to prevent the escape of sewer gases through plumbing traps;
- k) Safety devices designed to protect life and limb, provided that a permit is not otherwise required for the emission unit with which the safety device is associated;
- l) Storage tanks and fuel dispensing equipment that are both used for the dispensing of fuel to mobile sources, including on-road and off-road vehicles, for use in such mobile sources~~Storage tanks for liquids for retail dispensing except for storage tanks that are subject to the requirements of 35 Ill. Adm. Code 215.583(a)(2), 218.583(a)(2) or 219.583(a)(2);~~

- m) Printing operations with aggregate organic solvent usage that never exceeds 2,839 l (750 gal) per year from all printing lines at the source, including organic solvent from inks, dilutents, fountain solutions and cleaning materials;
- n) Storage tanks of:
  - 1) Organic liquids with a capacity of less than 37,850 l (10,000 gal), provided the storage tank is not used to store any amount of material or mixture of any material listed as a hazardous air pollutant pursuant to section 112(b) of the Clean Air Act, ~~and provided the storage tank is not subject to the requirements of 35 Ill. Adm. Code 215.583(a)(2), 218.583(a)(2) or 219.583(a)(2);~~
  - 2) Any size containing exclusively soaps, detergents, surfactants, waxes, glycerin, vegetable oils, greases, animal fats, sweetener, corn syrup, aqueous salt solutions or aqueous caustic solutions, provided an organic solvent has not been mixed with such materials; or
  - 3) Any size containing virgin or re-refined distillate oil (including kerosene and diesel fuel), hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil or residual fuel oils;
- o) Threaded pipe connections, vessel manways, flanges, valves, pump seals, pressure relief valves, pressure relief devices and pumps;
- p) Sampling connections used exclusively to withdraw materials for testing and analyses;
- q) All storage tanks of Illinois crude oil with capacity of less than 151,400 l (40,000 gal) located on oil field sites;
- r) All organic material-water single or multiple compartment effluent water separator facilities for Illinois crude oil of vapor pressure of less than 34.5 kPa absolute (5 psia);
- s) Grain-handling operations, exclusive of grain-drying operations, with an annual grain through-put not exceeding 300,000 bushels;
- t) Grain-drying operations with a total grain-drying capacity not exceeding 750 bushels per hour for 5% moisture extraction at manufacturer's rated capacity, using the American Society of Agricultural Engineers Standard 248.2, Section 9, Basis for Stating Drying Capacity of Batch and Continuous-Flow Grain Dryers;
- u) Portable grain-handling equipment and one-turn storage space;

- v) Cold cleaning degreasers that are not in-line cleaning machines, where the vapor pressure of the solvents used never exceeds 2 kPa (15 mmHg or 0.3 psi) measured at 38°C (100°F) or 0.7 kPa (5 mmHg or 0.1 psi) at 20°C (68°F);
- w) Coin-operated dry cleaning operations;
- x) Dry cleaning operations at a source that consume less than 30 gallons per month of perchloroethylene;
- y) Brazing, soldering, wave soldering or welding equipment, including associated ventilation hoods;
- z) Cafeterias, kitchens, and other similar facilities, including smokehouses, used for preparing food or beverages, but not including facilities used in the manufacturing and wholesale distribution of food, beverages, food or beverage products, or food or beverage components;
- aa) Equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sand blast cleaning, shot blasting, shot peening, or polishing ceramic artwork, leather, metals (other than beryllium), plastics, concrete, rubber, paper stock, wood or wood products, where such equipment is either:
  - 1) Used for maintenance activity;
  - 2) Manually operated;
  - 3) Exhausted inside a building; or
  - 4) Vented externally with emissions controlled by an appropriately operated cyclonic inertial separator (cyclone), filter, electro-static precipitator or a scrubber;
- bb) Feed mills that produce no more than 10,000 tons of feed per calendar year, provided that a permit is not otherwise required for the source pursuant to Section 201.142, 201.143 or 201.144;
- cc) Extruders used for the extrusion of metals, minerals, plastics, rubber or wood, excluding:
  - 1) Extruders used in the manufacture of polymers;
  - 2) Extruders using foaming agents or release agents that contain volatile organic materials or Class I or II substances subject to the requirements of Title VI of the Clean Air Act; and

- 3) Extruders processing scrap material that was produced using foaming agents containing volatile organic materials or Class I or II substances subject to the requirements of Title VI of the Clean Air Act;
- dd) Furnaces used for melting metals, other than beryllium, with a brim full capacity of less than 450 cubic inches by volume;
- ee) Equipment used for the melting or application of less than 22,767 kg/yr (50,000 lbs/yr) of wax to which no organic solvent has been added;
- ff) Equipment used for filling drums, pails or other packaging containers, excluding aerosol cans, with soaps, detergents, surfactants, lubricating oils, waxes, vegetable oils, greases, animal fats, glycerin, sweeteners, corn syrup, aqueous salt solutions or aqueous caustic solutions, provided an organic solvent has not been mixed with such materials;
- gg) Loading and unloading systems for railcars, tank trucks, or watercraft that handle only the following liquid materials: soaps, detergents, surfactants, lubricating oils, waxes, glycerin, vegetable oils, greases, animal fats, sweetener, corn syrup, aqueous salt solutions or aqueous caustic solutions, provided an organic solvent has not been mixed with such materials;
- hh) Equipment used for the mixing and blending of materials at ambient temperatures to make water based adhesives, provided each material mixed or blended contains less than 5% organic solvent by weight;
- ii) Die casting machines where a metal or plastic is formed under pressure in a die located at a source with a through-put of less than 2,000,000 lbs of metal or plastic per year, in the aggregate, from all die casting machines;
- jj) Air pollution control devices used exclusively with other equipment that is exempt from permitting, as provided in this Section;
- kk) ~~(Reserved)An emission unit for which a registration system designed to identify sources and emission units subject to emission control requirements is in place, such as the registration system found at 35 Ill. Adm. Code 218.586 (Gasoline Dispensing Operations—Motor Vehicle Fueling Operations) and 35 Ill. Adm. Code 218, Subpart HH (Motor Vehicle Refinishing);~~
- ll) Photographic process equipment by which an image is reproduced upon material sensitized to radiant energy;
- mm) Equipment used for hydraulic or hydrostatic testing;

- nn) General vehicle maintenance and servicing activities conducted at a source, motor vehicle repair shops, and motor vehicle body shops, but not including motor vehicle refinishing;:
  - 1) ~~Gasoline fuel handling; and~~
  - 2) ~~Motor vehicle refinishing;~~
- oo) Equipment using water, water and soap or detergent, or a suspension of abrasives in water for purposes of cleaning or finishing, provided no organic solvent has been added to the water;
- pp) Administrative activities including, but not limited to, paper shredding, copying, photographic activities and blueprinting machines. This does not include incinerators;
- qq) Laundry dryers, extractors, and tumblers processing that have been cleaned with water solutions of bleach or detergents that are:
  - 1) Located at a source and process clothing, bedding and other fabric items used at the source, provided that any organic solvent present in such items before processing that is retained from cleanup operations shall be addressed as part of the VOM emissions from use of cleaning materials;
  - 2) Located at a commercial laundry; or
  - 3) Coin operated;
- rr) Housekeeping activities for cleaning purposes, including collecting spilled and accumulated materials, including operation of fixed vacuum cleaning systems specifically for such purposes, but not including use of cleaning materials that contain organic solvent;
- ss) Refrigeration systems, including storage tanks used in refrigeration systems, but excluding any combustion equipment associated with such systems;
- tt) Activities associated with the construction, on-site repair, maintenance or dismantlement of buildings, utility lines, pipelines, wells, excavations, earthworks and other structures that do not constitute emission units;
- uu) Piping and storage systems for natural gas, propane and liquefied petroleum gas;
- vv) Water treatment or storage systems, as follows:
  - 1) Systems for potable water or boiler feedwater;

- 2) Systems, including cooling towers, for process water, provided that such water has not been in direct or indirect contact with process streams that contain volatile organic material or materials listed as hazardous air pollutants pursuant to section 112(b) of the Clean Air Act;
- ww) Lawn care, landscape maintenance and grounds keeping activities;
  - xx) Containers, reservoirs or tanks used exclusively in dipping operations to coat objects with oils, waxes or greases, provided no organic solvent has been mixed with such materials;
  - yy) Use of consumer products, including hazardous substances as that term is defined in the Federal Hazardous Substances Act (15 USC 1261 et seq.), where the product is used at a source in the same manner as normal consumer use;
  - zz) Activities directly used in the diagnosis and treatment of disease, injury or other medical condition;
  - aaa) Activities associated with the construction, repair or maintenance of roads or other paved or open areas, including operation of street sweepers, vacuum trucks, spray trucks and other vehicles related to the control of fugitive emissions of such roads or other areas;
  - bbb) Storage and handling of drums or other transportable containers, where the containers are sealed during storage and handling;
  - ccc) Activities at a source associated with the maintenance, repair or dismantlement of an emission unit or other equipment installed at the source, not including the shutdown of the unit or equipment, including preparation for maintenance, repair or dismantlement, and preparation for subsequent startup, including preparation of a shutdown vessel for entry, replacement of insulation, welding and cutting, and steam purging of a vessel prior to startup;
  - ddd) Equipment used for corona arc discharge surface treatment of plastic with a power rating of 5 kW or less or equipped with an ozone destruction device;
  - eee) Equipment used to seal or cut plastic bags for commercial, industrial or domestic use;
  - fff) Each direct-fired gas dryer used for a washing, cleaning, coating or printing line, excluding:
    - 1) Dryers with a rated heat input capacity of 2930 kW (10 mmbtu/hr) or more; and

- 2) Dryers for which emissions other than those attributable to combustion of fuel in the dryer, including emissions attributable to use or application of cleaning agents, washing materials, coatings or inks or other process materials that contain volatile organic material are not addressed as part of the permitting of such line, if a permit is otherwise required for the line;
- ggg) Municipal solid waste landfills with a maximum total design capacity of less than 2.5 million Mg or 2.5 million m<sup>3</sup> that are not required to install a gas collection and control system pursuant to 35 Ill. Adm. Code 220 or 800 through 849 or Section 9.1 of the Act;
- hhh) Replacement or addition of air pollution control equipment for existing emission units in circumstances where:
- 1) The existing emission unit is permitted and has operated in compliance for the past year;
  - 2) The new control equipment will provide equal or better control of the target pollutants;
  - 3) The new control device will not be accompanied by a net increase in emissions of any non-targeted criteria air pollutant;
  - 4) Different State or federal regulatory requirements or newly proposed regulatory requirements will not apply to the unit; and  
BOARD NOTE: All sources must comply with underlying federal regulations and future State regulations.
  - 5) Where the existing air pollution control equipment had required monitoring equipment, the new air pollution control equipment will be equipped with the instrumentation and monitoring devices that are typically installed on the new equipment of that type.  
BOARD NOTE: For major sources subject to Section 39.5 of the Act, where the new air pollution control equipment will require a different compliance determination method in the facility's CAAPP permit, the facility may need a permit modification to address the changed compliance determination method;
- iii) Replacement, addition, or modification of emission units at facilities with federally enforceable State operating permits limiting their potential to emit in circumstances where:
- 1) The potential to emit any regulated air pollutant in the absence of air pollution control equipment from the new emission unit, or the increase in the potential to emit resulting from the modification of any existing emission unit, is less than 0.1 pound per hour or 0.44 tons per year;

- 2) The raw materials and fuels used or present in the emission unit that cause or contribute to emissions, based on the information contained in Material Safety Data Sheets for those materials, do not contain equal to or greater than 0.01 percent by weight of any hazardous air pollutant as defined under section 112(b) of the federal Clean Air Act;
  - 3) The emission unit or modification is not subject to an emission standard or other regulatory requirement pursuant to section 111 of the federal Clean Air Act;
  - 4) Potential emissions of regulated air pollutants from the emission unit or modification will not, in combination with emissions from existing units or other proposed units, trigger permitting requirements under Section 39.5, permitting requirements under section 165 or 173 of the federal Clean Air Act, or the requirement to obtain a revised federally enforceable State operating permit limiting the source's potential to emit; and
  - 5) The source is not currently the subject of a Non-compliance Advisory, Clean Air Act Section 114 Request, Violation Notice, Notice of Violation, Compliance Commitment Agreement, Administrative Order, or civil or criminal enforcement action, related to the air emissions of the source;
- jjj) Replacement, addition, or modification of emission units at permitted sources that are not major sources subject to Section 39.5 of the Act and that do not have a federally enforceable State operating permit limiting their potential to emit, in circumstances where:
- 1) The potential to emit of any regulated air pollutant in the absence of air pollution control equipment from the new emission unit, or the increase in the potential to emit resulting from the modification of any existing emission unit is either:
    - A) Less than 0.1 pound per hour or 0.44 tons per year; or
    - B) Less than 0.5 pound per hour, and the permittee provides prior notification to the Agency of the intent to construct or install the unit. The unit may be constructed, installed or modified immediately after the notification is filed;
  - 2) The emission unit or modification is not subject to an emission standard or other regulatory requirement under section 111 or 112 of the federal Clean Air Act;
  - 3) Potential emissions of regulated air pollutants from the emission unit or modification will not, in combination with the emissions from existing

units or other proposed units, trigger permitting requirements under Section 39.5 of the Act or the requirement to obtain a federally enforceable permit limiting the source's potential to emit; and

- 4) The source is not currently the subject of a Non-compliance Advisory, Clean Air Act Section 114 Request, Violation Notice, Notice of Violation, Compliance Commitment Agreement, Administrative Order, or civil or criminal enforcement action, related to the air emissions of the source;
- kkk) The owner or operator of a CAAPP source is not required to obtain an air pollution control construction permit for the construction or modification of an emission unit or activity that is an insignificant activity as addressed by Section 201.210 or 201.211 of this Part. Section 201.212 of this Part must still be followed, as applicable. Other than excusing the owner or operator of a CAAPP source from the requirement to obtain an air pollution control construction permit for the emission units or activities, nothing in this subsection shall alter or affect the liability of the CAAPP source for compliance with emission standards and other requirements that apply to the emission units or activities, either individually or in conjunction with other emission units or activities constructed, modified or located at the source;
- lll) Plastic injection molding equipment with an annual through-put not exceeding 5,000 tons of plastic resin in the aggregate from all plastic injection molding equipment at the source, and all associated plastic resin loading, unloading, conveying, mixing, storage, grinding, and drying equipment and associated mold release and mold cleaning agents.

(Source: Amended at 38 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### SUBPART F: CAAPP PERMITS

##### Section 201.210 Categories of Insignificant Activities or Emission Levels

- a) The owner or operator of a CAAPP source, pursuant to 35 Ill. Adm. Code 270, shall submit to the Agency within its CAAPP application a list of the following activities or emission levels:
  - 1) Any emission unit determined to be an insignificant activity by the Agency pursuant to Section 201.211 of this Part;
  - 2) Emission units with emissions that never exceed 0.1 lbs/hr of any regulated air pollutant in the absence of air pollution control equipment and that do not emit any air pollutant listed as hazardous pursuant to ~~section~~Section 112(b) of the Clean Air Act;

- 3) Emission units with emissions that never exceed 0.44 tons/year of any regulated air pollutant in the absence of air pollution control equipment and that do not emit any air pollutant listed as hazardous pursuant to Section 112(b) of the Clean Air Act;
- 4) Direct combustion units designed and used for comfort heating purposes and fuel combustion emission units as follows:
  - A) Units with a rated heat input capacity of less than 2.5 mmbtu/hr that fire only natural gas, propane or liquefied petroleum gas;
  - B) Units with a rated heat input capacity of less than 1.0 mmbtu/hr that fire only oil or oil in combination with only natural gas, propane, or liquefied petroleum gas;
  - C) Units with a rated capacity of less than 200,000 btu/hr which never burn refuse or treated or chemically contaminated wood;
- 5) Extruders used for the extrusion of metals, minerals, plastics, rubber, or wood, excluding extruders used in the manufacture of polymers, provided that volatile organic materials or class I or II substances subject to the requirements of Title VI of the Clean Air Act are not used as foaming agents or release agents or were not used as foaming agents in the case of extruders processing scrap material;
- 6) Furnaces used for melting metals other than beryllium with a brim full capacity of less than 450 cubic inches by volume;
- 7) Equipment used for the melting or application of less than 50,000 lbs/yr of wax to which no organic solvent has been added;
- 8) Equipment used for filling drums, pails or other packaging containers, excluding aerosol cans, with soaps, detergents, surfactants, lubricating oils, waxes, vegetable oils, greases, animal fats, glycerin, sweeteners, corn syrup, aqueous salt solutions, or aqueous caustic solutions;
- 9) Equipment used for the mixing and blending of materials at ambient temperature to make water based adhesives provided each material contains less than 5% organic solvent by weight;
- 10) Storage tanks, as follows:
  - A) Storage tanks of organic liquids with a capacity of less than 10,000 gallons and an annual throughput of less than 100,000 gallons provided the tank is not used for the storage of any amount of gasoline, including gasoline/ethanol blend fuels, or any amount of

material or mixture of any material listed as a hazardous air pollutant pursuant to ~~section~~Section 112(b) of the Clean Air Act;

B) Storage tanks of gasoline, including gasoline/ethanol blend fuels, with a capacity of less than 2000 gallons;

- 11) Storage tanks of virgin or rerefined distillate oil (including kerosene and diesel fuel), hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil, or residual fuel oils;
- 12) Die casting machines where a metal or plastic is formed under pressure in a die;
- 13) Coating operations (excluding powder, architectural and industrial maintenance coating) with aggregate VOM usage that never exceeds 15 lbs/day from all coating lines at the source, including VOM from coating, dilutents, and cleaning materials;
- 14) Printing operations with aggregate organic solvent usage that never exceeds 750 gallons per year from all printing lines at the source, including organic solvent from inks, dilutents, fountain solutions, and cleaning materials;
- 15) Gas turbines and stationary reciprocating internal combustion engines of less than 112 kW (150 horsepower) power output;
- 16) Gas turbines and stationary reciprocating internal combustion engines of between 1118 and 112 kW (1500 and 150 horsepower) power output that are emergency or standby units;
- 17) Storage tanks of any size containing exclusively soaps, detergents, surfactants, waxes, glycerin, vegetable oils, greases, animal fats, sweetener, corn syrup, aqueous salt solutions, or aqueous caustic solutions provided an organic solvent has not been mixed with such materials; ~~and~~
- 18) Loading and unloading systems for railcars, tank trucks, or watercraft that handle only the following liquid materials provided an organic solvent has not been mixed with such materials: soaps, detergents, surfactants, lubricating oils, waxes, glycerin, vegetable oils, greases, animal fats, sweetener, corn syrup, aqueous salt solutions, or aqueous caustic solutions; and-
- 19) Fuel dispensing operations and fuel dispensing equipment for the fuels specified in subsections (a)(19)(A) and (B), for mobile sources, including on-road and off-road vehicles, for use in those mobile sources. For purposes of this subsection (a)(19), fuel dispensing equipment means

equipment for transferring fuel to a mobile source, including nozzles, hoses, swivels, breakaways, hose retractors, vapor valves, dispensers, vacuum-assist devices, vapor-return piping, and liquid collection points. Storage tanks and storage tank equipment are not included in fuel dispensing operations or fuel dispensing equipment and are addressed separately.

A) Gasoline, including gasoline/ethanol blend fuels, if the annual throughput of the fuel dispensed is less than 120,000 gallons (rolling 12 month total).

B) Distillate oil (including kerosene and diesel fuel), biodiesel, and biodiesel/distillate oil blends.

- b) The owner or operator of a CAAPP source is not required to individually list the following activities in a CAAPP application pursuant to 35 Ill. Adm. Code 270. The applicant shall denote whether any of the following activities are present at the source in its CAAPP application:
- 1) Air conditioning or ventilating equipment not designed to remove air contaminants generated by or released from associated equipment;
  - 2) Photographic process equipment by which an image is reproduced upon material sensitized to radiant energy;
  - 3) Equipment used for hydraulic or hydrostatic testing;
  - 4) General vehicle maintenance and servicing activities at the source, other than fuel handling or dispensing of gasoline (including gasoline/ethanol blend fuels), distillate oil (including kerosene and diesel fuel), biodiesel, or biodiesel/distillate oil blends ~~fuel handling~~;
  - 5) Cafeterias, kitchens, and other facilities used for preparing food or beverages primarily for consumption at the source;
  - 6) Equipment using water, water and soap or detergent, or a suspension of abrasives in water for purposes of cleaning or finishing provided no organic solvent has been added to the water;
  - 7) Administrative activities including, but not limited to, paper shredding, copying, photographic activities, and blueprinting machines. This does not include incinerators;
  - 8) Laundry dryers, extractors, and tumblers processing clothing, bedding, and other fabric items used at the source that have been cleaned with water solutions of bleach or detergents provided that any organic solvent present

in such items before processing that is retained from clean-up operations shall be addressed as part of the VOM emissions from use of cleaning materials;

- 9) Housekeeping activities for cleaning purposes, including collecting spilled and accumulated materials at the source, including operation of fixed vacuum cleaning systems specifically for such purposes, but not including use of cleaning materials that contain organic solvent;
- 10) Refrigeration systems, including storage tanks used in refrigeration systems, but excluding any combustion equipment associated with such systems;
- 11) Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including associated laboratory fume hoods, vacuum producing devices and control devices installed primarily to address potential accidental releases;
- 12) Restroom facilities and associated clean-up operations, and stacks or vents used to prevent the escape of sewer gases through plumbing traps;
- 13) Activities associated with the construction, on-site repair, maintenance or dismantlement of buildings, utility lines, pipelines, wells, excavations, earthworks and other structures that do not constitute emission units;
- 14) Storage tanks of organic liquids with a capacity of less than 500 gallons, provided the tank is not used for storage of any amount of material or mixture of any material listed as a hazardous air pollutant pursuant to section~~Section~~ 112(b) of the Clean Air Act;
- 15) Piping and storage systems for natural gas, propane, and liquefied petroleum gas;
- 16) Water treatment or storage systems, as follows:
  - A) Systems for potable water or boiler feedwater;
  - B) Systems, including cooling towers, for process water provided that such water has not been in direct or indirect contact with process streams that contain volatile organic material or materials listed as hazardous air pollutants pursuant to section~~Section~~ 112(b) of the Clean Air Act;
- 17) Lawn care, landscape maintenance, and groundskeeping activities;

- 18) Containers, reservoirs, or tanks used exclusively in dipping operations to coat objects with oils, waxes, or greases, provided no organic solvent has been mixed with such materials;
- 19) Cold cleaning degreasers that are not in-line cleaning machines, where the vapor pressure of the solvents used never exceed 2kPa (15 mmHg or 0.3 psi) measured at 38°C (100°F) or 0.7 kPa (5 mmHg or 0.1 psi) at 20°C (68°F);
- 20) Manually operated equipment used for buffing, polishing, carving, cutting, drilling, machining, routing, sanding, sawing, scarfing, surface grinding or turning;
- 21) Use of consumer products, including hazardous substances as that term is defined in the Federal Hazardous Substances Act (15 ~~USC~~U.S.C.—1261 et seq.), where the product is used at a source in the same manner as normal consumer use;
- 22) Activities directly used in the diagnosis and treatment of disease, injury or other medical condition;
- 23) Firefighting activities and training in preparation for fighting fires conducted at the source;

BOARD NOTE(~~Note~~: Open burning permits may be required for certain training activities.);

- 24) Internal combustion engine or boiler (including the fuel system) of motor vehicles, locomotives, aircraft, watercraft, lifttrucks, and other vehicles powered by nonroad engines;
- 25) Activities associated with the construction, repair or maintenance of roads or other paved or open areas, including operation of street sweepers, vacuum trucks, spray trucks and other vehicles related to the control of fugitive emissions of such roads or other areas;
- 26) Storage and handling of drums or other transportable containers where the containers are sealed during storage and handling;
- 27) Individual points of emission or activities as follows:
  - A) Individual flanges, valves, pump seals, pressure relief valves and other individual components that have the potential for leaks;
  - B) Individual sampling points, analyzers, and process instrumentation, whose operation may result in emissions;

- C) Individual features of an emission unit such as each burner and sootblowers in a boiler or each use of cleaning materials on a coating or printing line;
- D) Individual equipment that is transportable or activities within a facility established for testing units prior to sale or distribution or for purposes of research; and
- E) Individual equipment or activities within a pilot plant facility that is used for research or training;

BOARD NOTE(Note: Notwithstanding the foregoing, such points of emissions or activities shall be addressed in a CAAPP application in sufficient detail to identify applicable requirements and demonstrate compliance with such requirements. Emission data for such activities shall be addressed in the aggregate for each emission unit or group of related emission units.)

- 28) Activities at a source associated with the modification only or construction only of a facility, an emission unit or other equipment at the source; and

BOARD NOTE(Note: Notwithstanding the status of this activity as insignificant, a particular activity that entails modification or construction of an emission unit or construction of air pollution control equipment may require a construction permit pursuant to Section 201.142 of this Part and may subsequently require a revised CAAPP permit. A revised CAAPP permit may also be necessary for operation of an emission unit after completion of a particular activity if the existing CAAPP permit does not accommodate the new state of the emission unit.)

- 29) Activities at a source associated with the maintenance, repair, or dismantlement of an emission unit or other equipment installed at the source, not including the shutdown of the unit or equipment, including preparation for maintenance, repair or dismantlement, and preparation for subsequent startup, including preparation of a shutdown vessel for entry, replacement of insulation, welding and cutting, and steam purging of a vessel prior to startup.

(Source: Amended at 38 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

## SUBPART K: RECORDS AND REPORTS

### Section 201.302 Reports

- a) The owner or operator of any emission unit or air pollution control equipment meeting the applicability criteria contained in 35 Ill. Adm. Code 254.102, ~~unless specifically exempted in this Section~~, shall submit to the Agency as a minimum, annual reports detailing the nature, specific emission units and total annual quantities of all specified air contaminant emissions; provided, however, that the Agency may require more frequent reports ~~when~~ where necessary to accomplish the purposes of the Act and this Chapter.
- b) The Agency may adopt procedures which require that additional reports be submitted, and which set forth the format in which all reports shall be submitted. Such procedures and formats, and revisions thereto, shall not become effective until filed with the Secretary of State as required by the Illinois Administrative Procedure Act ~~APA~~.
- c) All emission data received by the Agency, shall be available for public inspection at reasonable times and upon reasonable notice.
- d) ~~Retail gasoline dispensing operations are exempt from the requirements of subsection (a) above unless the source has failed to comply with 35 Ill. Adm. Code 218.586(h) or to obtain a permit under this Part if applicable.~~

(Source: Amended at 38 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

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218.990	Exempt Emission Units
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218.APPENDIX A	List of Chemicals Defining Synthetic Organic Chemical and Polymer Manufacturing
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218.APPENDIX H      Baseline VOM Content Limitations for Subpart F, Section 218.212  
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 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. 13473, effective July 27, 2011; amended in R11-23(A) at 35 Ill. Reg. 18813, effective October 25, 2011; amended in R12-24 at 37 Ill. Reg. 1699, effective January 28, 2013; amended in R13-18 at 38 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

SUBPART A: GENERAL PROVISIONS

Section 218.112 Incorporations by Reference

The following materials are incorporated by reference and do not contain any subsequent additions or amendments.

- a) American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken PA 19428-9555:
  - 1) ASTM D 2879-86
  - 2) ASTM D 323-08
  - 3) ASTM D 86-82
  - 4) ASTM D 369-69 (1971)
  - 5) ASTM D 396-69

- 6) ASTM D 2880-71
  - 7) ASTM D 975-68
  - 8) ASTM D 3925-81 (1985)
  - 9) ASTM E 300-86
  - 10) ASTM D 1475-85
  - 11) ASTM D 2369-87
  - 12) ASTM D 3792-86
  - 13) ASTM D 4017-81 (1987)
  - 14) ASTM D 4457-85
  - 15) ASTM D 2697-86
  - 16) ASTM D 3980-87
  - 17) ASTM E 180-85
  - 18) ASTM D 2372-85
  - 19) ASTM D 97-66
  - 20) ASTM E 168-67 (1977)
  - 21) ASTM E 169-87
  - 22) ASTM E 260-91
  - 23) ASTM D 2504-83
  - 24) ASTM D 2382-83
  - 25) ASTM D 2099-00
- b) Standard Industrial Classification Manual, published by Executive Office of the President, Office of Management and Budget, Washington, D.C., 1987.
- c) American Petroleum Institute Bulletin 2517, "Evaporation Loss From Floating Roof Tanks", Second ed., February 1980.

- d) 40 CFR 60 (July 1, 1991) and 40 CFR 60, ~~appendix~~Appendix A, Method 24 (57 FR 30654, July 10, 1992).
- e) 40 CFR 61 (July 1, 1991).
- f) 40 CFR 50 (July 1, 1991).
- g) 40 CFR 51 (July 1, 1991) and 40 CFR 51, appendix M, Methods 204-204F (July 1, 1999).
- h) 40 CFR 52 (July 1, 1991).
- i) "A Guide for Surface Coating Calculation", July 1986, United States Environmental Protection Agency, Washington, D.C., EPA-340/1-86-016.
- j) "Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink and Other Coating" (revised June 1986), United States Environmental Protection Agency, Washington, D.C., EPA-450/3-84-019.
- k) "A Guide for Graphic Arts Calculations", August 1988, United States Environmental Protection Agency, Washington, D.C., EPA-340/1-88-003.
- l) "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations", December 1988, United States Environmental Protection Agency, Washington, D.C., EPA-450/3-88-018.
- m) "Control of Volatile Organic Emissions from Manufacturing of Synthesized Pharmaceutical Products", December 1978, United States Environmental Protection Agency, Washington, D.C., EPA-450/2-78-029.
- n) "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems", December 1978, Appendix B, United States Environmental Protection Agency, Washington, D.C., EPA-450/2-78-051.
- o) "Control of Volatile Organic Compound Emissions from Large Petroleum Dry Cleaners", September 1982, United States Environmental Protection Agency, Washington, D.C., EPA-450/3-82-009.
- p) "APTI Course SI417 Controlling Volatile Organic Compound Emissions from Leaking Process Equipment", 1982, United States Environmental Protection Agency, Washington, D.C., EPA-450/2-82-015.
- q) "Portable Instrument User's Manual for Monitoring VOC Sources", June 1986, United States Environmental Protection Agency, Washington, D.C., EPA-340/1-86-015.

- r) "Protocols for Generating Unit-Specific Emission Estimates for Equipment Leaks of VOC and VHAP", October 1988, United States Environmental Protection Agency, Washington, D.C., EPA-450/3-88-010.
- s) "Petroleum Refinery Enforcement Manual", March 1980, United States Environmental Protection Agency, Washington, D.C., EPA-340/1-80-008.
- t) "Inspection Manual for Control of Volatile Organic Emissions from Gasoline Marketing Operations: Appendix D", 1980, United States Environmental Protection Agency, Washington, D.C., EPA-340/1-80-012.
- u) "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals: Appendix A", December 1977, United States Environmental Protection Agency, Washington, D.C., EPA-450/2-77-026.
- v) "Technical Guidance – Stage II Vapor Recovery Systems for Control of Vehicle Refueling Emissions at Gasoline Dispensing Facilities", November 1991, United States Environmental Protection Agency, Washington, D.C., EPA-450/3-91-022b.
- w) California Air Resources Board, Compliance Division. Compliance Assistance Program: Gasoline Marketing and Distribution: Gasoline Facilities Phase I & II (October 1988, rev. November 1993) (CARB Manual).
- x) South Coast Air Quality Management District (SCAQMD), Applied Science & Technology Division, Laboratory Services Branch, SCAQMD Method 309-91, Determination of Static Volatile Emissions (February 1993).
- y) South Coast Air Quality Management District (SCAQMD), Applied Science & Technology Division, Laboratory Services Branch, SCAQMD Method 312-91, Determination of Percent Monomer in Polyester Resins (April 1996).
- z) "Guidelines for Determining Capture Efficiency", January 1995, Office of Air Quality Planning and Standards, United States Environmental Protection Agency, Research Triangle Park NC.
- aa) Memorandum "Revised Capture Efficiency Guidance for Control of Volatile Organic Compound Emissions", February 1995, John S. Seitz, Director, Office of Air Quality Planning and Standards, United States Environmental Protection Agency.
- bb) "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat Operations", September 2008, United States Environmental Protection Agency, Washington, D.C., EPA-453/R-08-002.

- cc) 40 CFR 63, subpart PPPP, appendix A (2008).
- dd) 46 CFR subchapter Q (2007).
- ee) 46 CFR subchapter T (2008).
- ff) Petroleum Equipment Institute, "Recommended Practices for Installation and Testing of Vapor-Recovery Systems at Vehicle-Fueling Sites", PEI/RP300-09 (2009).

(Source: Amended at 38 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

## SUBPART Y: GASOLINE DISTRIBUTION

### Section 218.583 Gasoline Dispensing Operations – Storage Tank Filling Operations

- a) Subject to subsection (b)~~-below~~, no person shall cause or allow the transfer of gasoline from any delivery vessel into any stationary storage tank at a gasoline dispensing operation unless:
  - 1) The tank is equipped with a submerged loading pipe; and
  - 2) The vapors displaced from the storage tank during filling are processed by a vapor control system that includes one or more of the following:
    - A) A vapor collection system that meets the requirements of subsection (d)(4)~~-below~~; or
    - B) A refrigeration-condensation system or any other system approved by the Agency and approved by the USEPA as a SIP revision, that recovers at least 90 percent by weight of all vaporized organic material from the equipment being controlled; and
    - C) The delivery vessel displays the appropriate sticker pursuant to the requirements of Section 218.584(b) or (d) of this Part; and
  - 3) By March 15, 1995, all tank vent pipes are equipped with pressure/vacuum relief valves with the following design specifications:
    - A) The pressure/vacuum relief valve shall be set to resist a pressure of at least 3.5 inches water column and to resist a vacuum of no less than 6.0 inches water column; or
    - B) The pressure/vacuum relief valve shall meet the requirements of Section 218.586(c) of this Part; and

- 4) The owner or operator of a gasoline dispensing operation demonstrates compliance with subsection (a)(3) of this Section, by March 15, 1995 or 30 days after installation of each pressure/vacuum relief valve, whichever is later, and at least annually thereafter, by measuring and recording the pressure indicated by a pressure/vacuum gauge at each tank vent pipe. The test shall be performed on each tank vent pipe within two hours after product delivery into the respective storage tank. For manifold tank vent systems, observations at any point within the system shall be adequate. The owner or operator shall maintain any records required by this subsection for a period of three years.
- b) The requirements of subsections (a)(2) and (a)(3) ~~above~~ shall not apply to transfers of gasoline to a stationary storage tank at a gasoline dispensing operation if:
- 1) The tank is equipped with a floating roof, or other system of equal or better emission control approved by the Agency and approved by the USEPA as a SIP revision;
  - 2) The tank has a capacity of less than 2000 gallons and was in place and operating before January 1, 1979; or
  - 3) The tank has a capacity of less than 575 gallons.
- c) Subject to subsection (b) ~~above~~, each owner of a gasoline dispensing operation shall:
- 1) Install all control systems and make all process modifications required by subsection (a) ~~above~~;
  - 2) Provide instructions to the operator of the gasoline dispensing operation describing necessary maintenance operations and procedures for prompt notification of the owner in case of any malfunction of a vapor control system; and
  - 3) Repair, replace or modify any worn out or malfunctioning component or element of design.
- d) Subject to subsection (b) ~~above~~, each operator of a gasoline dispensing operation shall:
- 1) Maintain and operate each vapor control system in accordance with the owner's instructions;

- 2) Promptly notify the owner of any scheduled maintenance or malfunction requiring replacement or repair of a major component of a vapor control system;
  - 3) Maintain gauges, meters or other specified testing devices in proper working order;
  - 4) Operate the vapor collection system and delivery vessel unloading points in a manner that prevents:
    - A) A reading equal to or greater than 100 percent of the lower explosive limit (LEL measured as propane) when tested in accordance with the procedure described in EPA 450/2-78-051 ~~appendix~~ Appendix B incorporated by reference in Section 218.112 of this Part-; and
    - B) Avoidable leaks of liquid during the filling of storage tanks; and
  - 5) Within 15 business days after discovery of the leak by the owner, operator, or the Agency, repair and retest a vapor collection system which exceeds the limits of subsection (d)(4)(A)-above.
- e) ~~Any retail gasoline dispensing operation subject to subsection (a) above, unless subject to Section 218.586 of this Part, shall be exempt from the permit requirements specified under 35 Ill. Adm. Code 201.142, 201.143, and 201.144 provided that:~~
- 1) ~~The owner or operator of the gasoline dispensing operation submits to the Agency a registration which provides, at a minimum, the operation name and address, signature of the owner or operator, the location (including contact person's name, address and telephone number) of records and reports required by this Section, the number of underground tanks, the number of tank pipe vents, and the date of completion of installation of the vapor control system and pressure/vacuum relief valve.~~
  - 2) ~~The registration is submitted to the Agency by March 15, 1995 or 30 days after installation of a vapor control system or pressure/vacuum relief valve, whichever is later.~~
  - 3) ~~The registration certification is displayed at the gasoline dispensing operation.~~
  - 4) ~~Upon modification of an existing vapor control system or pressure/vacuum relief valve, the owner or operator of the gasoline dispensing operation submits to the Agency a registration that details the changes to the information provided in the previous registration and which~~

~~includes the signature of the owner or operator. The registration must be submitted to the Agency within 30 days after completion of such modification.~~

(Source: Amended at 38 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### Section 218.586 Gasoline Dispensing Operations - Motor Vehicle Fueling Operations

- a) Definitions. For the purposes of this Section, the following definitions apply.
- 1) Average monthly volume means the amount of motor vehicle fuel dispensed per month from a gasoline dispensing operation based upon a monthly average for the 2-year period of November, 1990 through October, 1992 or, if not available, the monthly average for the most recent twelve calendar months. Monthly averages are to include only those months when the operation was operating.
  - 2) Certified means any vapor collection and control system which has been tested and approved by CARB as having a vapor recovery and removal efficiency of at least 95% (by weight) shall constitute a certified vapor collection and control system. CARB testing and approval is pursuant to the CARB manual, incorporated by reference at Section 218.112 of this Part.
  - 3) Completion of installation means the successful passing of one or more of the following tests applicable to the installed vapor collection and control system: Dynamic Backpressure Test, Pressure Decay/Leak Test, and Liquid Blockage Test, incorporated by reference at Section 218.112 of this Part.
  - 4) ~~Constructed means fabricated, erected or installed; refers to any facility, emission source or air pollution control equipment.~~
  - 45) CARB means California Air Resources Board, P.O. Box 2815, Sacramento, CA 95812.
  - 56) Employee means any person who performs work for an employer.
  - 67) Operation means any building, structure, installation, operation or combination thereof located on contiguous properties and under common ownership that provides for the dispensing of motor vehicle fuel.
  - 78) Gasoline dispensing operation means any operation where motor vehicle fuel is dispensed into motor vehicle fuel tanks or portable containers from a storage tank with a capacity of 2176 liters (575 gallons) or more.

- 89) Modification means any change, removal or addition, other than an identical replacement, of any component contained within the vapor collection and control system.
- 910) Motor vehicle means any self-propelled vehicle powered by an internal combustion engine including, but not limited to, automobiles and trucks. Specifically excluded from this definition are watercraft and aircraft.
- 1044) Motor vehicle fuel means any petroleum distillate having a Reid vapor pressure of more than 27.6 kilopascals (kPa) (four pounds per square inch) and which is used to power motor vehicles.
- 1142) Owner or operator means any person who owns, leases, operates, manages, supervises or controls (directly or indirectly) a gasoline dispensing operation.
- 1213) Reid vapor pressure for gasoline shall be measured in accordance with ~~either the method ASTM D323-08 or a modification of ASTM D323 known as the "dry method" as set forth in 40 CFR 80, Appendix E,~~ incorporated by references in ~~35 Ill. Adm. Code~~ Section 218.112 of this Part.
- 1314) Vapor collection and control system means any system certified by CARB which limits the discharge to the atmosphere of motor vehicle fuel vapors displaced during the dispensing of motor vehicle fuel into motor vehicle fuel tanks.
- b) Applicability. The provisions of subsection (c) ~~below~~ shall apply to any gasoline dispensing operation which dispenses an average monthly volume of more than 10,000 gallons of motor vehicle fuel per month. Compliance shall be required and demonstrated in accordance with the schedule provided in subsection (d) ~~below~~.
- c) Vapor Collection and Control Systems. No owner or operator of a gasoline dispensing operation subject to the requirements of subsection (b) ~~above~~ shall cause or allow the dispensing of motor vehicle fuel at any time from a motor fuel dispenser unless the dispenser is equipped with and utilizes a vapor collection and control system which is properly installed and operated as provided ~~below~~ in this subsection (c):
- 1) Any vapor collection and control system installed, used or maintained has been CARB certified.
  - 2) Any vapor collection and control system utilized is maintained in accordance with the manufacturer's specifications and the certification.

- 3) No elements or components of a vapor collection and control system are modified, removed, replaced or otherwise rendered inoperative in a manner which prevents the system from performing in accordance with its certification and design specifications.
  - 4) A vapor collection and control system has no defective, malfunctioning or missing components.
  - 5) Operators and employees of the gasoline dispensing operation are trained and instructed in the proper operation and maintenance of a vapor collection and control system.
  - 6) Instructions are posted in a conspicuous and visible place within the motor fuel dispensing area and describe the proper method of dispensing motor vehicle fuel with the use of the vapor collection and control system.
- d) Compliance. In conjunction with the compliance provisions of Section 218.105 of this Part, gasoline dispensing operations subject to the requirements of subsection (c) ~~above~~ shall comply and demonstrate compliance according to the following:
- 1) Gasoline dispensing operations that operate at any time prior to January 1, 2014 shall comply with subsection (c) until decommissioning is allowed and commenced in accordance with subsections (i)(1) and (i)(2)(B).
  - 2) The provisions of subsection (c) shall not apply to any new gasoline dispensing operation that commences operating for the first time on or after January 1, 2014.
  - 1) ~~Operations that commenced construction after November 1, 1990, must comply by May 1, 1993.~~
  - 2) ~~Operations that commenced construction before November 1, 1990, and dispense an average monthly volume of more than 100,000 gallons of motor fuel per month must comply by November 1, 1993.~~
  - 3) ~~Operations that commenced construction before November 1, 1990, and dispense an average monthly volume of less than 100,000 gallons of motor fuel per month must comply by November 1, 1994.~~
  - 4) ~~New operations constructed after the adoption of this Section shall comply with the requirements of subsection (c) above upon startup of the operation.~~
  - 5) ~~Existing operations previously exempted from but which become subject to the requirements of subsection (c) above after May 1, 1993 shall~~

~~comply with the requirements of subsection (c) above within six calendar months of the date from which the operation becomes subject.~~

- e) Except as provided in subsection (d), any Any gasoline dispensing operation that becomes subject to the provisions of subsection (c) ~~above~~ at any time shall remain subject to the provisions of subsection (c) ~~above~~ at all times.
- f) Upon request by the Agency, the owner or operator of a gasoline dispensing operation which claims to be exempt from the requirements of subsection (c) this Section shall submit records to the Agency within 30 calendar days from the date of the request which demonstrate that the gasoline dispensing operation is in fact exempt.
- g) Recordkeeping and Reporting~~reporting~~:
- 1) Any gasoline dispensing operation subject to subsection (c) ~~above~~ shall retain at the operation copies of the registration information required at subsection (h) ~~below~~.
  - 2) Except as provided in subsection (g)(4), records~~Records~~ and reports required pursuant to this subsection (g) shall be made available to the Agency upon request.
  - 3) Records and reports, which shall be maintained by the owner or operator of a the gasoline dispensing operation subject to subsection (c), shall clearly demonstrate:
    - A) That a certified vapor collection and control system has been installed and tested to verify its performance according to its specifications.
    - B) That proper maintenance has been conducted in accordance with the manufacturer's specifications and requirements.
    - C) The time period and duration of all malfunctions of the vapor collection and control system.
    - D) The motor vehicle fuel throughput of the operation for each calendar month of the previous year.
    - E) That operators and employees are trained and instructed in the proper operation and maintenance of the vapor collection and control system and informed as to the potential penalties associated with the violation of any provision of this Section.

- 4) Any and all records relating to decommissioning shall be maintained by the owner or operator of a gasoline dispensing operation for a period of 5 years after completion of decommissioning in accordance with subsection (i). For purposes of this subsection (g)(4), "records" include, but are not limited to, any documents, papers, reports, test results, logs, invoices, forms, certifications and receipts that relate to decommissioning. Records relating to decommissioning shall be made available to the Agency or its designee within 30 minutes after the Agency's, or its designee's, request.
- h) Any gasoline dispensing operation subject to subsection (c) ~~above~~ shall comply with the following registration requirements~~be exempt from the permit requirements specified under 35 Ill. Adm. Code 201.142, 201.143 and 201.144 for its vapor collection and control systems, provided that:~~
- 1) Upon the installation of a vapor collection and control system, the owner or operator of the gasoline dispensing operation ~~shall submit~~ submits to the Agency a registration which provides at minimum the operation name and address, signature of the owner or operator, the CARB Executive Order Number for the vapor collection and control system to be utilized, the number of nozzles (excluding diesel or kerosene) used for motor vehicle refueling, the monthly average volume of motor vehicle fuel dispensed, the location (including contact person's name, address, and telephone number) of records and reports required by this Section, and the date of completion of installation of the vapor collection and control system.
  - 2) The registration ~~shall be~~ is submitted to the Agency within 30 days ~~after~~ of completion of ~~the~~ such installation.
  - 3) A copy of the registration information ~~shall be~~ is maintained at the gasoline dispensing operation.
  - 4) Upon the modification of an existing vapor collection and control system, the owner or operator of the gasoline dispensing operation ~~shall submit~~ submits to the Agency a registration that details the changes to the information provided in the previous registration of the vapor collection and control system and which includes the signature of the owner or operator. The registration must be submitted to the Agency within 30 days ~~after~~ of completion of ~~the~~ such modification.
- i) Decommissioning. The owner or operator of a gasoline dispensing operation subject at any time to subsection (c) shall decommission vapor collection and control systems in accordance with the provisions of this subsection (i).
- 1) Compliance

- A) Beginning January 1, 2014, an owner or operator of a gasoline dispensing operation may commence decommissioning of vapor collection and control systems. The decommissioning of vapor collection and control systems must be conducted in accordance with all of the provisions specified in subsection (i)(2).
  - B) No later than December 31, 2016, an owner or operator of a gasoline dispensing operation shall complete the decommissioning of all vapor collection and control systems in accordance with all of the provisions specified in subsection (i)(2).
- 2) Decommissioning Procedures and Standards. The decommissioning of vapor collection and control systems shall be conducted as follows:
- A) The owner or operator of a gasoline dispensing operation shall complete and submit a notice of intent form, provided by the Agency, notifying the Agency of its intent to decommission. The completed notice of intent form shall be submitted to the Agency at least 10 days prior to commencing decommissioning in accordance with subsection (i)(2)(B);
  - B) The owner or operator of a gasoline dispensing operation shall decommission vapor collection and control systems in accordance with all of the procedures specified in Section 14.6, except Section 14.6.14, of the Petroleum Equipment Institute's "Recommended Practices for Installation and Testing of Vapor-Recovery Systems at Vehicle-Fueling Sites", PEI/RP 300-09 (PEI), incorporated by reference at Section 218.112 of this Part. In addition to Section 14.6 of the PEI, the following requirements apply to decommissioning:
    - i) All decommissioning procedures, except testing, shall be performed only by a contractor who is both registered with the Illinois Department of Agriculture, Bureau of Weights and Measures, in the 3-A Gasoline Pump Meters Code pursuant to Section 8.1 of the Weights and Measures Act [225 ILCS 470/8.1] and licensed by the Office of the State Fire Marshal (OSFM) in the installation/retrofitting licensure module pursuant to the Petroleum Equipment Contractors Licensing Act [225 ILCS 729] and implementing regulations at 41 Ill. Adm. Code 172. Any such contractor shall also have the appropriate dispenser-manufacturer certification and training, if any. In the event that product piping must be broken or an OSFM permit is otherwise required for any component of the work, the contractor shall ensure that the OSFM-permitted work is

performed by the appropriate OSFM-licensed contractor and personnel;

- ii) Decommissioning procedures related to testing shall be performed only by a contractor who is licensed by OSFM in the tank tightness testing licensure module pursuant to the Petroleum Equipment Contractors Licensing Act and implementing regulations at 41 Ill. Adm. Code 172; and
  - iii) The pressure decay test required by the PEI shall be passed in accordance with Appendix A of the PEI. The tie-tank test required by the PEI shall be conducted and passed in accordance with CARB TP201.3C to ensure that all tanks are properly vented; and
- C) The owner or operator of a gasoline dispensing operation and the contractors that performed the decommissioning shall complete and sign a decommissioning checklist and certification, provided by the Agency, documenting the decommissioning procedures performed. Within 30 days after completion of the decommissioning procedures specified by subsection (i)(2)(B), the owner or operator shall provide the completed checklist and certification and the test results to the Agency.

(Source: Amended at 38 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

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**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. 13676, effective July 27, 2011; amended in R11-23(A), at 35 Ill. Reg. 18830, effective October 25, 2011); amended in R12-24 at 37 Ill. Reg. 1722, effective January 28, 2013; amended in R13-18 at 38 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) However, if ~~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<sub>w</sub> = 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<sub>2</sub>, is used to obtain L. Method 204 in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part<sub>2</sub>, is used to obtain F<sub>w</sub>.

- 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<sub>2</sub>, and in which "F<sub>B</sub>" 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<sub>B</sub> = 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<sub>2</sub>, is used to obtain G. Method 204E in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part<sub>2</sub>, is used to obtain F<sub>B</sub>.

- 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<sub>B</sub>" 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<sub>B</sub> = 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<sub>B</sub>.

- 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,"<sup>2</sup> 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 this Part 249 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  $\pm 1$  percent of the temperature measured, expressed in degrees Celsius or  $\pm 0.5^{\circ}$  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  $28^{\circ}$  C ( $50^{\circ}$  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<sub>a</sub> = 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<sub>l</sub> = 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~~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 38 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### Section 219.112 Incorporations by Reference

The following materials are incorporated by reference and do not contain any subsequent additions or amendments:

- a) American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken PA 19428-9555
  - 1) ASTM D 2879-86
  - 2) ASTM D 323-08
  - 3) ASTM D 86-82
  - 4) ASTM D 369-69 (1971)
  - 5) ASTM D 396-69
  - 6) ASTM D 2880-71
  - 7) ASTM D 975-68
  - 8) ASTM D 3925-81 (1985)
  - 9) ASTM E 300-86
  - 10) ASTM D 1475-85
  - 11) ASTM D 2369-87
  - 12) ASTM D 3792-86
  - 13) ASTM D 4017-81 (1987)
  - 14) ASTM D 4457-85

- 15) ASTM D 2697-86
  - 16) ASTM D 3980-87
  - 17) ASTM E 180-85
  - 18) ASTM D 2372-85
  - 19) ASTM D 97-66
  - 20) ASTM E 168-87 (1977)
  - 21) ASTM E 169-87
  - 22) ASTM E 260-91
  - 23) ASTM D 2504-83
  - 24) ASTM D 2382-83
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- b) Standard Industrial Classification Manual, published by Executive Office of the President, Office of Management and Budget, Washington, D.C., 1987.
  - c) American Petroleum Institute Bulletin 2517, "Evaporation Loss From Floating Roof Tanks", Second ed., February 1980.
  - d) 40 CFR 60 (July 1, 1991).
  - e) 40 CFR 61 (July 1, 1991).
  - f) 40 CFR 50 (July 1, 1991).
  - g) 40 CFR 51 (July 1, 1991) and 40 CFR 51, appendix M, Methods 204-204F (July 1, 1999).
  - h) 40 CFR 52 (July 1, 1991).
  - i) "A Guide for Surface Coating Calculation", July 1986, United States Environmental Protection Agency, Washington, D.C., EPA-340/1-86-016.
  - j) "Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink and Other Coating" (revised June 1986), United States Environmental Protection Agency, Washington D.C., EPA-450/3-84-019.
  - k) "A Guide for Graphic Arts Calculations", August 1988, United States Environmental Protection Agency, Washington D.C., EPA-340/1-88-003.

- l) "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations", December 1988, United States Environmental Protection Agency, Washington D.C., EPA-450/3-88-018.
- m) "Control of Volatile Organic Emissions from Manufacturing of Synthesized Pharmaceutical Products", December 1978, United States Environmental Protection Agency, Washington, D.C., EPA-450/2-78-029.
- n) "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems", December 1978, Appendix B, United States Environmental Protection Agency, Washington, D.C., EPA-450/2-78-051.
- o) "Control of Volatile Organic Compound Emissions from Large Petroleum Dry Cleaners", September 1982, United States Environmental Protection Agency, Washington, D.C., EPA-450/3-82-009.
- p) "APTI Course SI417 Controlling Volatile Organic Compound Emissions from Leaking Process Equipment", 1982, United States Environmental Protection Agency, Washington, D.C., EPA-450/2-82-015.
- q) "Portable Instrument User's Manual for Monitoring VOM Sources", June 1986, United States Environmental Protection Agency, Washington, D.C., EPA-340/1-86-015.
- r) "Protocols for Generating Unit-Specific Emission Estimates for Equipment Leaks of VOM and VHAP", October 1988, United States Environmental Protection Agency, Washington, D.C., EPA-450/3-88-010.
- s) "Petroleum Refinery Enforcement Manual", March 1980, United States Environmental Protection Agency, Washington, D.C., EPA-340/1-80-008.
- t) "Inspection Manual for Control of Volatile Organic Emissions from Gasoline Marketing Operations: Appendix D", 1980, United States Environmental Protection Agency, Washington, D.C., EPA-340/1-80-012.
- u) "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals: Appendix A", December 1977, United States Environmental Protection Agency, Washington, D.C., EPA-450/2-77-026.
- v) ~~"Technical Guidance Stage II Vapor Recovery Systems for Control of Vehicle Refueling Emissions at Gasoline Dispensing Facilities", November 1991, United States Environmental Protection Agency, Washington, D.C., EPA 450/3-91-022b.~~

- vw) California Air Resources Board, Compliance Division. Compliance Assistance Program: Gasoline Marketing and Distribution: Gasoline Facilities Phase I & II (October 1988, rev. November 1993) (CARB Manual).
- wx) "Guidelines for Determining Capture Efficiency", January 1995, Office of Air Quality Planning and Standards, United States Environmental Protection Agency, Research Triangle Park NC.
- xy) Memorandum "Revised Capture Efficiency Guidance for Control of Volatile Organic Compound Emissions", February 1995, John S. Seitz, Director, Office of Air Quality Planning and Standards, United States Environmental Protection Agency.
- yz) "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat Operations", September 2008, United States Environmental Protection Agency, Washington, D.C., EPA-453/R-08-002.
- zaa) 40 CFR 63 subpart PPPP, appendix A (2008).
- aabb) 46 CFR subchapter Q (2007).
- bbee) 46 CFR subchapter T (2008).

(Source: Amended at 38 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### SUBPART Y: GASOLINE DISTRIBUTION

##### Section 219.583 Gasoline Dispensing Operations - Storage Tank Filling Operations

- a) Subject to subsection (b) below, no person shall cause or allow the transfer of gasoline from any delivery vessel into any stationary storage tank at a gasoline dispensing operation unless:
- 1) The tank is equipped with a submerged loading pipe; and
  - 2) The vapors displaced from the storage tank during filling are processed by a vapor control system that includes one or more of the following:
    - A) A vapor collection system that meets the requirements of subsection (d)(4) below; or
    - B) A refrigeration-condensation system or any other system approved by the Agency and approved by the USEPA as a SIP revision, that recovers at least 90 percent by weight of all vaporized organic material from the equipment being controlled; and

- C) The delivery vessel displays the appropriate sticker pursuant to the requirements of Section 219.584(b) or (d) of this Part; and
- 3) By March 15, 1995, all tank vent pipes are equipped with pressure/vacuum relief valves with the following design specifications:
    - A) The pressure/vacuum relief valve shall be set to resist a pressure of at least 3.5 inches water column and to resist a vacuum of no less than 6.0 inches water column; or
    - B) The pressure/vacuum relief valve shall meet the requirements of 35 Ill. Adm. Code 218.586(c); and
  - 4) The owner or operator of a gasoline dispensing operation demonstrates compliance with subsection (a)(3) of this Section, by March 15, 1995 or 30 days after installation of each pressure/vacuum relief valve, whichever is later, and at least annually thereafter, by measuring and recording the pressure indicated by a pressure/vacuum gauge at each tank vent pipe. The test shall be performed on each tank vent pipe within two hours after product delivery into the respective storage tank. For manifolded tank vent systems, observations at any point within the system shall be adequate. The owner or operator shall maintain any records required by this subsection for a period of three years.
- b) The requirements of subsections (a)(2) and (a)(3) above shall not apply to transfers of gasoline to a stationary storage tank at a gasoline dispensing operation if:
    - 1) The tank is equipped with a floating roof, or other system of equal or better emission control as approved by the Agency and approved by the USEPA as a SIP revision;
    - 2) The tank has a capacity of less than 2000 gallons and was in place and operating before January 1, 1979; or
    - 3) The tank has a capacity of less than 575 gallons.
  - c) Subject to subsection (b) above, each owner of a gasoline dispensing operation shall:
    - 1) Install all control systems and make all process modifications required by subsection (a) above;
    - 2) Provide instructions to the operator of the gasoline dispensing operation describing necessary maintenance operations and procedures for prompt

notification of the owner in case of any malfunction of a vapor control system; and

- 3) Repair, replace or modify any worn out or malfunctioning component or element of design.
- d) Subject to subsection (b) above, each operator of a gasoline dispensing operation shall:
- 1) Maintain and operate each vapor control system in accordance with the owner's instructions;
  - 2) Promptly notify the owner of any scheduled maintenance or malfunction requiring replacement or repair of a major component of a vapor control system;
  - 3) Maintain gauges, meters or other specified testing devices in proper working order;
  - 4) Operate the vapor collection system and delivery vessel unloading points in a manner that prevents:
    - A) A reading equal to or greater than 100 percent of the lower explosive limit (LEL measured as propane) when tested in accordance with the procedure described in EPA 450/2-78-051 Appendix B incorporated by reference at Section 219.112 of this Part, and
    - B) Avoidable leaks of liquid during the filling of storage tanks; and
  - 5) Within 15 business days after discovery of the leak by the owner, operator, or the Agency, repair and retest a vapor collection system which exceeds the limits of subsection (d)(4)(A) above.
- e) ~~Any retail gasoline dispensing operation subject to subsection (a) above shall be exempt from the permit requirements specified under 35 Ill. Adm. Code 201.142, 201.143, and 201.144 provided that:~~
- 1) ~~The owner or operator of the gasoline dispensing operation submits to the Agency a registration which provides, at a minimum, the operation name and address, signature of the owner or operator, the location (including contact person's name, address and telephone number) of records and reports required by this Section, the number of underground tanks, the number of tank pipe vents, and the date of completion of installation of the vapor control system and pressure/vacuum relief valve.~~

- 2) ~~The registration is submitted to the Agency by March 15, 1995 or 30 days after installation of a vapor control system or pressure/vacuum relief valve, whichever is later.~~
- 3) ~~The registration certificate is displayed at the gasoline dispensing operation.~~
- 4) ~~Upon modification of an existing vapor control system or pressure/vacuum relief valve, the owner or operator of the gasoline dispensing operation submits to the Agency a registration that details the changes to the information provided in the previous registration and which includes the signature of the owner or operator. The registration must be submitted to the Agency within 30 days after completion of such modification.~~

(Source: Amended at 38 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

IT IS SO ORDERED.

Section 41(a) of the Environmental Protection Act provides that final Board orders may be appealed directly to the Illinois Appellate Court within 35 days after the Board serves the order. 415 ILCS 5/41(a) (2010); *see also* 35 Ill. Adm. Code 101.300(d)(2), 101.906, 102.706. Illinois Supreme Court Rule 335 establishes filing requirements that apply when the Illinois Appellate Court, by statute, directly reviews administrative orders. 172 Ill. 2d R. 335. The Board's procedural rules provide that motions for the Board to reconsider or modify its final orders may be filed with the Board within 35 days after the order is received. 35 Ill. Adm. Code 101.520; *see also* 35 Ill. Adm. Code 101.902, 102.700, 102.702.

I, John T. Therriault, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on December 19, 2013, by a vote of 4-0.



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John T. Therriault, Clerk  
Illinois Pollution Control Board