

ILLINOIS POLLUTION CONTROL BOARD  
September 15, 1994

IN THE MATTER OF: )  
 )  
15% ROP PLAN CONTROL MEASURES )  
FOR VOM EMISSIONS - PART I: ) R94-12  
PRESSURE/VACUUM RELIEF VALVES ) (Rulemaking)  
AND 7.2 RVP (AMENDMENTS TO )  
35 ILL. ADM. CODE 201, 211, )  
218, AND 219) )

Adopted Rule.                      Final Order.

OPINION AND ORDER OF THE BOARD (by R.C. Flemal):

Section 182(b)(1) of the Clean Air Act (CAA), as amended in 1990, requires all moderate and above ozone nonattainment areas to achieve a 15% reduction of 1990 emissions of volatile organic material (VOM) by 1996. In Illinois, the Chicago and the Metro-East St. Louis (Metro-East) areas are classified as "severe" and "moderate" nonattainment for ozone, respectively, and as such are subject to the 15% reduction requirement. Also pursuant to Section 182(b) of the CAA, Illinois is to submit a 15% Rate of Progress Plan (ROP) within three years of the enactment of the CAA Amendments.

The instant rulemaking, which was filed on April 25, 1994 by the Illinois Environmental Protection Agency (Agency), represents Part I of the rules to be adopted in the State's 15% ROP.

The Board's responsibility in this matter arises from the Environmental Protection Act (Act) (415 ILCS 5/1 et seq. (1992)). The Board is charged therein to "determine, define and implement the environmental control standards applicable in the State of Illinois" (415 ILCS 5/5(b)). More generally, the Board's rulemaking charge is based on the system of checks and balances integral to Illinois environmental governance: the Board bears responsibility for the rulemaking and principal adjudicatory functions; the Illinois Environmental Protection Agency (Agency) has primary responsibility for administration of the Act and the Board's regulations. The latter includes administering today's new regulation.

The rules as proposed were filed pursuant to Section 28.5 of the Environmental Protection Act (Act). (415 ILCS 5/28.5 (1992).) That section requires the Board to proceed with rulemaking under set time-frames. The Board has no discretion to adjust these time frames under any circumstances. Today the Board acts to adopt this rule as final and send the amendments to the Administrative Code Division of the Secretary of State's

office for publication and assignment of an effective date pursuant to the Illinois Administrative Procedure Act (APA). (5 ILCS 100/1005-40 (1992).)

#### PROCEDURAL HISTORY

On May 5, 1994, the Board sent the rules as proposed to first notice under the APA, without commenting on their merits. The proposal was published in the Illinois Register on May 20, 1994, at 18 Ill. Reg. 7589 (Part 211), 18 Ill. Reg. 7602 (Part 218), 18 Ill. Reg. 7618 (Part 219), and 18 Ill. Reg. 7636 (Part 201). A hearing was held on June 17, 1994 in Chicago, Illinois before hearing officer Michelle C. Dresdow. Previously-scheduled second and third hearings were cancelled pursuant to Section 28.5(g) of the Act. (415 ILCS 5/28.5(g) (1992).) Pursuant to Section 28.5(1), the comment period closed July 8, 1994. On August 11, 1994, the Board sent the proposed amendments to the Joint Committee on Administrative Rules (JCAR) for review as required by the APA. On September 13, 1994, JCAR voted a certificate of no objection to the rule. JCAR recommended minor grammatical corrections which the Board today incorporates into the rules.

#### DISCUSSION OF TODAY'S AMENDMENTS

Today's amendments include the installation of pressure/vacuum (P/V) relief valves on storage tank vent pipes at certain gasoline dispensing operations. Also, for the Metro-East area a lowering of the Reid vapor pressure (RVP) of gasoline from 9.0 pounds per square inch (psi) to 7.2 psi is included. An addition of a definition and a few other minor changes are necessary for the pressure/vacuum relief valves and RVP rules.

#### P/V Relief Valves

A P/V relief valve is a device designed to control emissions resulting from "breathing" of a gasoline storage tank and escape of vapors through the tank's vent pipe. Neither the Stage I nor Stage II controls currently in place are designed to achieve such control, and VOM emissions in the form of gasoline vapors still occur as vapors are emitted via underground storage tank vent pipes. The vent pipe emissions result from breathing losses which are caused by vapor and liquid expansion due to diel changes in temperature, barometric pressure, and gasoline evaporation. The control of these emissions can be easily accomplished with the use of the P/V relief valve; control is cost effective. (Tech. Supp. Doc. P/V at 1<sup>1</sup>.)

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<sup>1</sup> Citations to the record are as follows: Documents from the Agency's proposal such as the Statement of Reasons as "St. of Reasons at X", and Technical Support Documents as "Tech. Supp.

The P/V relief valve uses a set of weights or springs to restrict outward or inward venting until the set pressure/vacuum has been reached. Vent pipes equipped with a P/V relief valve will greatly reduce breathing losses and VOM emissions, will increase the effectiveness of Stage I and Stage II controls, and still provide for storage tank safety. P/V relief valves have been in use for many years and several of the California local agencies require their use. (Tech. Supp. Doc. P/V at 2.)

The rule requires the installation by March 15, 1995 of a P/V relief valve on each gasoline storage tank vent in the Chicago and Metro-East ozone nonattainment areas. The P/V relief valve must be capable of resisting a pressure of at least 3 inches water column and a vacuum of at least 8 inches water column<sup>2</sup>. (Id.; Exh. 12 at 3.) The rule also requires the owner or operator to register the installation of the P/V relief valve, to maintain records of malfunctions, maintenance, and repair, and to annually test for proper system pressure/vacuum. (Tech. Supp. Doc. P/V at 3.)

The geographic areas subject to the rules for P/V valves on storage tank vent pipes at gasoline dispensing operations are the Chicago and Metro-East nonattainment areas, as described in 35 Ill. Adm. Code 218.103 and 219.103, respectively. The rule applies to any private or retail gasoline dispensing operation that has a storage tank of at least 575 gallons. (St. of Reasons at 3.) Utilizing information obtained from the Illinois Stage II vapor recovery program, the Agency estimates that 10,883 gasoline dispensing facilities are subject to this rule. (Tech. Supp. Doc. P/V at 3.) However, tanks installed before January 1, 1979, are exempt from the rule if they have a capacity of less than 2000 gallons, as are tanks equipped with floating roofs or equivalent control devices that have been approved by the State and USEPA. (St. of Reasons at 3; 35 Ill. Adm. Code 218.583 and 219.583.)

The Agency reports that P/V valves are a proven technology that has been in use for many years. The average cost range to install each valve is between \$67 and \$82 and there is no routine maintenance required. The valve has a life expectancy of 10 to 15 years. The Agency has estimated a cost effectiveness of the control measure to be \$139 per ton of VOM emissions reduced. The

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Doc. P/V at X" and "Tech. Supp. Doc. RVP at X". Exhibits are cited as "Exh. at X".

<sup>2</sup> If a facility is subject to Stage II vapor control requirements, the P/V relief valve used must be CARB (California Air Resources Board) certified. Today's rule allows for different pressure/vacuum requirements than here cited if the CARB certification so requires.

cost effectiveness is calculated from the total tons of VOM to be recovered and the total cost in dollars to the industry. (Tech. Supp. Doc. P/V at 5; Exh. 12 at 3-4.)

### 7.2 psi RVP Gasoline

Part of the ROP VOM emissions plan in the Metro-East nonattainment area is to place a limit on the volatility of gasoline, measured as RVP. A 7.8 psi RVP was originally recommended to coincide with the gasoline volatility requirement of the adjacent St. Louis, Missouri, area. However, in December 1993, the Missouri Department of Natural Resources proposed lowering the St. Louis area gasoline RVP to 7.2 psi. Therefore, in order to maintain consistency within the region, the Agency proposed to the Board the same 7.2 psi RVP limit<sup>3</sup>. This control measure is not being adopted for use in the Chicago area because that area is one of nine areas in the nation included in the federal reformulated gasoline program under Section 211(k) of the CAA (Tech. Supp. Doc. RVP at 1), and independent action such as that today adopted for the Metro-East area is accordingly unnecessary.

The Agency estimates a 1996 reduction of about 5.7 tons per day (TPD) from the use of gasoline with an RVP of 7.8 psi. This figure includes a growth factor, developed from Illinois Department of Transportation (IDOT) data, for estimating 1996 statewide gasoline sales. The Agency further estimates that use of 7.2 psi gasoline, and assuming the same sales growth and 30% ethanol-blend market share with an 8.2 psi RVP, would reduce 1996 VOM emissions by an additional 2.9 TPD, or by approximately 8.6 TPD from 1990 levels. (Tech. Supp. Doc. RVP at 4 and attachment A.) Estimated reduction for the entire control period June 1 through September 15 is 912 tons of VOM. (Id. at 5.)

The rule limits the gasoline sold in the Metro-East nonattainment counties to 7.2 psi RVP between June 1 and September 15, beginning in 1995, for retail outlets and wholesale consumers; and also beginning in 1995 between May 1 and September 15 for all other affected operations. The rule grants a 1.0 psi waiver for ethanol-blended gasolines that have an ethanol content of between 9% and 10%, by volume. The rule requires gasoline marketers to maintain records indicating that the volatility of each gasoline shipment is in compliance with the 7.2 psi RVP standard. (Tech. Supp. Doc. RVP at 5.)

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<sup>3</sup> At the time the Agency proposed this rule to the Board, Missouri announced that it was proposing a 7.0 psi RVP regulation. However, Missouri's proposal includes a 0.3 psi testing tolerance, so using a 7.2 psi RVP in the Metro-East area would continue to be consistent for the region. (Exh. 13 at 3.)

Gasoline sampling and testing to assure compliance will be performed by the Illinois Department of Agriculture. Sampling will be performed in accordance with procedures described by USEPA in its gasoline volatility regulations at 40 CFR 80 Appendix D. Gasoline volatility and ethanol content tests will be performed following the procedures prescribed by USEPA in 40 CFR Appendices E and F, respectively. Gasoline analysis results will be forwarded to the Agency for compliance assurance. (Id.)

The rule affects petroleum refiners and marketers, who will have to produce and sell the lower volatility gasoline, and the driving public, who will have to pay a marginally higher price for gasoline (St. of Reasons at 4) of about 1 to 2 cents per gallon (Tech. Supp. Doc. RVP at 5). This analysis does not take into consideration the consequences to the distributors of fuel savings from decreased gasoline evaporation and increased energy density. (Id.).

#### PUBLIC COMMENTS

The Board received public comments from the Department of Commerce and Community Affairs (DCCA) (PC# 1), the Administrative Code Division (Code Division) (PC# 2), the Illinois Petroleum Marketers Association and the Illinois Association of Convenience Stores (IPMA) (PC# 3), the City of Chicago (PC# 4), and the Agency (PC# 5).

The Board has considered all public comments, as well as all testimony and exhibits, in making its decisions in this matter. In general, there is no disagreement on the part of the participants and commenters on the substance of the amendments. A discussion of the public comments is contained in the Board's second notice opinion and order of August 11, 1994.

#### CONCLUSION

The Board finds that the rules are technically feasible and economically reasonable, and that the rules are necessary to meet the requirements of the Clean Air Act. We find that the record supports adopting the rules, as amended in the August 11, 1994 second notice opinion and order. The only additional changes made to the rules and non-substantive technical corrections, such as the addition or deletion of commas, at various places in the rules.

ORDER

The Board hereby adopts the following amendments to 35 Ill. Adm. Code 201, 211, 218, and 219. The Board directs the Clerk to submit the following adopted amendments to the Administrative Code Division of the Secretary of State<sup>4</sup>:

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 K: RECORDS AND REPORTS

Section 201.302 Reports

- a) The owner or operator of any emission source unit or air pollution control equipment, unless specifically exempted in this Section, shall submit to the Agency as a minimum, annual reports detailing the nature, specific ~~sources~~ emission units and total annual quantities of all specified air contaminant emissions; provided, however, that the Agency may require more frequent reports 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 APA.
- ~~e) All emissions data received by the Agency relative to specified air contaminants shall be correlated by the Agency with any emission limitations or standards set forth in Subchapter c of this Chapter.~~

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<sup>4</sup> For mailing purposes, the Board has omitted from the order those portions of the tables of contents amounting to some 20 pages that are not changed in this rulemaking. Interested persons may view the entirety of the tables of contents in the copy of the proposal submitted by the Agency and retained in the Clerk's file. An entire version including the full tables of contents has also been published in the Illinois Register, and a copy of that submittal will be available in the Clerk's file.

dc) 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 18 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

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

PART 211  
DEFINITIONS AND GENERAL PROVISIONS

211.5060 Pressure/Vacuum Relief Valve

SUBPART B: DEFINITIONS

Section 211.5060 Pressure/Vacuum Relief Valve

"Pressure/vacuum relief valve" means a device affixed to the storage tank vent pipe to prevent the escape or intrusion of gases.

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

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

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

SUBPART A: GENERAL PROVISIONS

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, 1916 Race Street, Philadelphia, PA 19103:
- 1) ASTM D2879-86
  - 2) ASTM D323-82
  - 3) ASTM D86-82
  - 4) ASTM D369-69 (1971)
  - 5) ASTM D396-69
  - 6) ASTM D2880-71
  - 7) ASTM D975-68
  - 8) ASTM D3925-81 (1985)
  - 9) ASTM E300-86
  - 10) ASTM D1475-85
  - 11) ASTM D2369-87
  - 12) ASTM D3792-86
  - 13) ASTM D4017-81 (1987)
  - 14) ASTM D4457-85
  - 15) ASTM D2697-86
  - 16) ASTM D3980-87
  - 17) ASTM E180-85
  - 18) ASTM D2372-85
  - 19) ASTM D97-66
  - 20) ASTM E168-67 (1977)
  - 21) ASTM E169-87
  - 22) ASTM E260-91
  - 23) ASTM D2504-83
  - 24) ASTM D2382-83
  - 25) ASTM D323-82 (approved 1982)
- 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 Part 60 (July 1, 1991) and 40 CFR 60, Appendix A, Method 24 (57 FR 30654, July 10, 1992).
- e) 40 CFR Part 61 (July 1, 1991).
- f) 40 CFR Part 50 (July 1, 1991).
- g) 40 CFR Part 51 (July 1, 1991).
- h) 40 CFR Part 52 (July 1, 1991).
- i) 40 CFR Part 80 (July 1, 1991) and 40 CFR Part 80 Appendixes D, E, and F (July 1, 1993).



- j) "A Guide for Surface Coating Calculation", United States Environmental Protection Agency, Washington, D.C., EPA-340/1-86-016.
- k) "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.
- l) "A Guide for Graphic Arts Calculations", August 1988, United States Environmental Protection Agency, Washington D.C., EPA-340/1-88-003.
- m) "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.
- n) "Control of Volatile Organic Emissions from Manufacturing of Synthesized Pharmaceutical Products", United States Environmental Protection Agency, Washington, D.C., EPA-450/2-78-029.
- o) "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems", Appendix B, United States Environmental Protection Agency, Washington, D.C., EPA-450/2-78-051.
- p) "Control of Volatile Organic Compound Emissions from Large Petroleum Dry Cleaners", United States Environmental Protection Agency, Washington, D.C., EPA-450/3-82-009.
- q) "APTI Course SI417 Controlling Volatile Organic Compound Emissions from Leaking Process Equipment", United States Environmental Protection Agency, Washington, D.C., EPA-450/2-82-015.
- r) "Portable Instrument User's Manual for Monitoring VOC Sources", United States Environmental Protection Agency, Washington, D.C., EPA-340/1-86-015.
- s) "Protocols for Generating Unit-Specific Emission Estimates for Equipment Leaks of VOC and VHAP", United States Environmental Protection Agency, Washington, D.C., EPA-450/3-88-010.
- t) "Petroleum Refinery Enforcement Manual", United States Environmental Protection Agency, Washington, D.C., EPA-340/1-80-008.

- u) "Inspection Manual for Control of Volatile Organic Emissions from Gasoline Marketing Operations: Appendix D", United States Environmental Protection Agency, Washington, D.C., EPA-340/1-80-012.
- v) "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals: Appendix A", United States Environmental Protection Agency, Washington, D.C., EPA-450/2-77-026.
- w) "Technical Guidance-Stage II Vapor Recovery Systems for Control of Vehicle Refueling Emissions at Gasoline Dispensing Facilities", United States Environmental Protection Agency, Washington, D.C., EPA-450/3-91-022b.
- x) California Air Resources Board, Compliance Division. Compliance Assistance Program: Gasoline Marketing and Distribution: Gasoline Facilities Phase I & II (October 1988, rev. ~~March 1991~~ November 1993) (CARB Manual).
- y) South Coast Air Quality Management District (SCAQMD), Applied Science & Technology Division, Laboratory Services Branch, SCAQMD Method 309-91, Determination of Static Volatile Emissions.
- z) 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.

(Source: Amended at 18 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### SUBPART Y: GASOLINE DISTRIBUTION

##### Section 218.583 Gasoline Dispensing ~~Facilities~~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 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 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 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 18 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

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ORGANIC MATERIAL EMISSION STANDARDS AND  
LIMITATIONS FOR METRO EAST AREA

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- o) "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems", Appendix B, United States Environmental Protection Agency, Washington, D.C., EPA-450/2-78-051.
- p) "Control of Volatile Organic Compound emissions from Large Petroleum Dry Cleaners", United States Environmental Protection Agency, Washington, D.C., EPA-450/3-82-009.
- q) "APTI Course SI417 Controlling Volatile Organic Compound Emissions from Leaking Process Equipment", United States Environmental Protection Agency, Washington, D.C., EPA-450/2-82-015.
- r) "Portable Instrument User's Manual for Monitoring VOM Sources", United States Environmental Protection Agency, Washington, D.C., EPA-340/1-86-015.
- s) "Protocols for Generating Unit-Specific Emission Estimates for Equipment Leaks of VOM and VHAP", United States Environmental Protection Agency, Washington, D.C., EPA-450/3-88-010.
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- v) "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals: Appendix A", United States Environmental Protection Agency, Washington, D.C., EPA-450/2-77-026.
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- x) California Air Resources Board, Compliance Division. Compliance Assistance Program: Gasoline Marketing and Distribution: Gasoline Facilities Phase I & II (October 1988, rev. ~~March 1991~~ November 1993) (CARB Manual).

(Source: Amended at \_\_\_\_\_ Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_  
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  - 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) of this Part.
- 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 facility 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 facility 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 facility 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 facility 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 18 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_ )

Section 219.585 Gasoline Volatility Standards

- a) No person shall sell, offer for sale, dispense, supply, offer for supply, or transport for use in Illinois gasoline whose Reid vapor pressure exceeds the applicable limitations set forth in subsections (b) and (c) ~~of this Section below~~ during the regulatory control periods, which shall be May June 1 to September 15 for retail outlets, and wholesale purchaser-consumer facilities, and from May 1 to September 15 for all other facilities.
- b) The Reid vapor pressure of gasoline, a measure of its volatility, shall not exceed ~~9.07.2~~ psi (62.0749.68 kPa) during the regulatory control period in 1990~~5~~ and each year thereafter.
- c) The Reid vapor pressure of ethanol blend gasolines having at least nine percent (9%) but not more than ten percent (10%) ethyl alcohol by volume of the blended mixture, shall not exceed the limitations for gasoline set forth in subsection (b) of this Section by more than 1.0 psi (6.9 kPa). Notwithstanding this limitation, blenders of ethanol blend gasolines whose Reid vapor pressure is less than 1.0 psi above the base stock gasoline immediately after blending with ethanol are prohibited from adding butane or any product that will increase the Reid vapor pressure of the blended gasoline.
- d) All sampling of gasoline required pursuant to the provisions of this Section shall be conducted ~~by one or more of the following approved methods or in accordance with the~~ procedures contained in 40 CFR Part 80, Appendix D, Sampling Procedures for Fuel Volatility, which are incorporated by reference in Section 215.105 219.112 of this Part.

~~1) For manual sampling, ASTM D4057;~~

- ~~2) For automatic sampling, ASTM D4177;~~
- ~~3) Sampling procedures for Fuel Volatility, 40 CFR 80 Appendix D.~~
- e) The Reid vapor pressure of gasoline shall be measured in accordance with the procedures contained in "Tests for Determining Reid Vapor Pressure (RVP) of Gasoline and Gasoline-Oxygenate Blends" ~~either test method ASTM D323 or a modification of ASTM D323 known as the "dry method"~~ as set forth in 40 CFR 80, Appendix E, incorporated by reference in 35 Ill. Adm. Code 219.112 of this Part. ~~For gasoline-oxygenate blends which contain water extractable oxygenates, the Reid vapor pressure shall be measured using the dry method test.~~
- f) The ethanol content of ethanol blend gasolines shall be determined by use of one of the approved testing methodologies specified in 40 CFR Part 80, Appendix F, incorporated by reference in 35 Ill. Adm. Code 219.112 of this Part.
- g) Any alternate to the sampling or testing methods or procedures contained in subsections (d), (e), and (f) of this Section must be approved by the Agency, which shall consider data comparing the performance of the proposed alternative to the performance of one or more approved test methods or procedures. Such data shall accompany any request for Agency approval of any alternate test procedure. If the Agency determines that such data demonstrates that the proposed alternative will achieve results equivalent to the approved test methods or will achieve results equivalent to the approved test methods or procedures, the Agency shall approve the proposed alternative.
- h) Recordkeeping and reporting:
- 1) Each refiner or supplier that distributes gasoline or ethanol blends shall:
- 1A) During the regulatory control period, state that the Reid vapor pressure of all gasoline or ethanol blends leaving the refinery or distribution facility for use in Illinois complies with the Reid vapor pressure limitations set forth in 35 Ill. Adm. Code 219.585(b) and (c) of this Part. Any source receiving this gasoline shall be provided with a copy of an invoice, bill of lading, or other documentation used in normal business practice stating that the Reid vapor pressure of the gasoline complies with the State Reid vapor pressure standard.

2B) Maintain records for a period of ~~one~~ three years on the Reid vapor pressure, quantity shipped and date of delivery of any gasoline or ethanol blends leaving the refinery or distribution facility for use in Illinois. The Agency shall be provided with copies of such records if requested.

2) Records and reports required by subsections (h)(2)(A) and (h)(2)(B) below shall be made available to the Agency upon request. During the regulatory control period, the owner or operator of a gasoline dispensing operation subject to this Section shall:

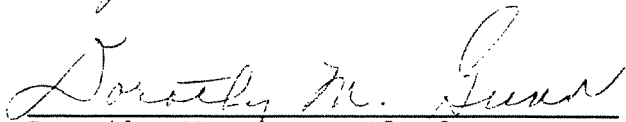
A) Retain a copy of an invoice, bill of lading, or other documentation used in normal business practice stating that the Reid vapor pressure of the gasoline complies with the State Reid vapor pressure standard as provided in subsection (h)(1)(A) above; and

B) Maintain records for a period of three years on the Reid vapor pressure, quantity received and date of delivery of any gasoline or ethanol blends arriving at the gasoline operation.

(Source: Amended at 18 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 15<sup>th</sup> day of September, 1994, by a vote of 6-0.

  
Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board