

ILLINOIS POLLUTION CONTROL BOARD
November 21, 2013

IN THE MATTER OF:)
)
STANDARDS AND LIMITATIONS FOR) R14-19
CERTAIN SOURCES OF LEAD;) (Rulemaking - Air)
PROPOSED 35 ILL. ADM. CODE 226)

Proposed Rule. First Notice.

OPINION AND ORDER OF THE BOARD (by C.K. Zalewski):

On November 15, 2013, the Illinois Environmental Protection Agency (IEPA or Agency) filed this proposal for rulemaking. The proposal is filed pursuant to Sections 10, 27, 28.2 and 28.5 of the Environmental Protection Act (Act). 415 ILCS 5/10, 27, 28.2 and 28.5 (2012). In addition to the proposed rule language, the proposal includes a motion for waiver of copy requirements and the IEPA's statement of reasons (Statement). The proposal is intended to satisfy IEPA's obligation under the federal Clean Air Act (CAA) (42 U.S.C. § 7401 *et seq.*) to develop a State Implementation Plan (SIP) to address CAA requirements for lead emissions sources in nonattainment areas with respect to the lead National Ambient Air Quality Standards (NAAQS).

In its Statement, the IEPA explains that the proposed rule is meant to satisfy Illinois' obligation pursuant to Section 172 of the Clean Air Act (42 U.S.C. § 7502 (2012)) and Section 51.117 of Title 40 of the Code of Federal Regulations (40 C.F.R. § 51.117 (2013)) to address sources of lead emissions in areas designated as nonattainment with the lead NAAQS. Statement at 1. More specifically, IEPA is proposing "reasonable and cost-effective lead controls on nonferrous metal production facilities" located in two areas in Illinois designated as nonattainment for the 2008 lead NAAQS: the Granite City, Madison County designated area and the Chicago, Cook County designated area. *Id.*

The IEPA filed this proposal pursuant to Section 28.5 of the Act (415 ILCS 5/28.5 (2012)), and the Board accepts the proposal for hearing. Section 28.5 of the Act (415 ILCS 5/28.5 (2012)) requires the Board to proceed toward adoption of the proposed regulation by meeting a series of strict deadlines. The Act provides the Board no discretion to extend those deadlines. *See* 415 ILCS 5/28.5 (2012).

The first of those strict deadlines provides that the Board must, "within 14 days of receipt of the proposal," file the proposed rule for first notice under the Illinois Administrative Procedure Act (5 ILCS 100/1-1 *et seq.* (2012)). 415 ILCS 5/28.5(e) (2012). Therefore, the Board today accepts the proposal without commenting on the merits of the proposal and sends the proposed rule to first notice.

In that same 14-day period, the Board must also schedule all required hearings on the proposed rule. *Id.* The Board, within 55 days of accepting the proposal, must hold a first hearing "confined to testimony by and questions of the Agency's witnesses concerning the

scope, applicability, and basis of the rule.” 415 ILCS 5/28.5(f)(1) (2012). “Within 7 days after the first hearing, any person may request that the second hearing be held.” *Id.* The second hearing must commence within 30 days of the first day of the first hearing and “shall be devoted to presentation of testimony, documents, and comments by affected entities and all other interested parties.” 415 ILCS 5/28.5(f)(2) (2012). A third hearing must commence within 14 days after the first day of the second hearing and “shall be devoted solely to any Agency response to the material submitted at the second hearing and to any response by other parties.” 415 ILCS 5/28.5(f)(3) (2012). Section 28.5(f)(1) provides for cancellation of the second and third hearings under specified circumstances. 415 ILCS 5/28.5(f)(1) (2012). Hearings may continue day to day as necessary to complete the subject matter of the hearing. 415 ILCS 5/28.5(f) (2012).

The Board accepts IEPA’s proposed rulemaking for hearing. The Board directs the hearing officer to expeditiously schedule all hearings in this proceeding according to the following statutory deadlines:

First Notice	on or before November 29, 2013 (415 ILCS 5/28.5(e) (2012))
First Hearing	on or before January 15, 2014 (415 ILCS 5/28.5(f)(1) (2012))
Second Hearing	on or before February 14, 2014 (415 ILCS 5/28.5(f)(2) (2012))
Third Hearing	on or before February 28, 2014 (415 ILCS 5/28.5(f)(3) (2012))
Second Notice	on or before March 25, 2014 if no third hearing is held (415 ILCS 5/28.5(n) (2012)) or April 14, 2014 if a third hearing is held, <i>id.</i>
Final Filing	21 days after receipt of the Joint Committee on Administrative Rules certificate of no objection (<i>see</i> 415 ILCS 5/28.5(o) (2012))

In addition to the rulemaking proposal, the IEPA filed a motion for waiver of copy requirements (Waiver) found in Section 102.200 of the Board’s procedural rules. 35 Ill. Adm. Code 102.200. Specifically, IEPA “requests that the Board waive the normal copy requirements and allow [IEPA] to file the original and four complete copies of the documents.” Waiver at 4. Next, IEPA seeks leave to file no copies of documents relied upon by IEPA in the rulemaking, sourced from the Code of Federal Regulations, the Act, the Clean Air Act, and the Federal Registers. *Id.* at 3. In addition, IEPA seeks leave to file no copies of the Modeling Data for proposed Part 226, because, “Modeling Data is virtually meaningless without the appropriate software to run the data.” *Id.*

The Board grants the IEPA’s motion for waiver of copy requirements, except with respect to the Modeling Data for Part 226. The Board waives the requirement to file portions of the Code of Federal Regulations, the Act, the Clean Air Act, and the Federal Registers. The Board waives the requirement to file nine copies, instead requiring the filing of the original and four copies, of the remaining documents listed in IEPA’s motion. The Board notes that the documents which the IEPA seeks leave not to file are public documents readily accessible to the Board and the public. The Board withholds ruling on the motion with regard to the Modeling Data for Part 226 until a later date.

ORDER

Without commenting on the merits of the rulemaking proposal, the Board directs the Clerk to cause the publication of the following rule for first notice in the *Illinois Register*.

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION

CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: EMISSION STANDARDS AND LIMITATIONS
FOR STATIONARY SOURCES

PART 226
STANDARDS AND LIMITATIONS FOR CERTAIN SOURCES OF LEAD

Section:

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AUTHORITY: Implementing Section 10 of the Environmental Protection Act (Act) and authorized by Sections 27, 28.2, and 28.5 of the Act [415 ILCS 5/10, 27, 28.2, and 28.5]

SOURCE: Adopted at 38 Ill. Reg. ____, effective _____.

Section 226.100 Severability

If any Section, subsection, or clause of this Part is found invalid, such finding shall not affect the validity of this Part as a whole or any Section, subsection, or clause not found invalid.

Section 226.105 Scope and Organization

- a) This Part sets standards and limitations for emissions of lead from stationary sources.
- b) Notwithstanding the provisions of this Part, the air quality standards contained in 35 Ill. Adm. Code 243 must not be violated.

Section 226.110 Abbreviations and Acronyms

The following abbreviations and acronyms are used in this Part:

Act	Illinois Environmental Protection Act, 415 ILCS 5/1 <i>et seq.</i>
CPMP	continuous parametric monitoring plan
CDMP	control device monitoring plan
fpm	feet per minute
FV	facial velocity
gr/dscf	grains per dry standard cubic foot
Hg	mercury
Illinois EPA	Illinois Environmental Protection Agency
m/hr	meters per hour
mg/l	milligrams per liter
OSHA	Occupational Safety & Health Administration
Pb	lead
USEPA	United States Environmental Protection Agency

Section 226.115 Definitions

The following definitions apply for the purposes of this Part. Unless otherwise defined in this Section or a different meaning for a term is clear from its content, all terms not defined herein shall have the meaning given them in the Act and in 35 Ill. Adm. Code 211.

“Agglomerating furnace” means a furnace used to melt into a solid mass flue dust that is collected from a baghouse.

“Alloy” means a mixture or metallic solid solution composed of two or more elements.

“Alloying” means the process of combining or mixing metals or other substances in molten form for the purpose of producing a particular alloy.

“Alloying and refining kettle” means an open-top vessel that is heated from below and contains molten lead for the purpose of alloying and refining the lead. Such kettles include, but are not limited to, pot furnaces, receiving kettles, and holding kettles.

“Battery breaking area” means the source location at which lead-acid batteries are broken, crushed, disassembled, or separated into components.

“Casting” means the process of transferring molten lead-containing metal to a mold.

“Dross” means solid impurities removed from molten lead in lead kettles.

“Dryer” means a chamber that is heated and that is used to remove moisture from lead-bearing materials other than lead shot.

“Existing lead emission unit” means a lead emission unit in existence before January 1, 2015, at a nonferrous metal production facility.

“Housekeeping activities” means regular cleaning or maintenance activities conducted to reduce fugitive emissions from production areas.

“Induction furnace” means an electrical furnace used for heating metal by electromagnetic induction.

“Lead” means elemental lead or alloys in which the predominant component is lead (*i.e.*, lead being more prevalent than any other single component).

“Lead-bearing scrap” or “Lead-containing material” or “Lead-containing metal” or “Lead-containing wastes” or “Lead particulate” means scrap or material or metal or wastes or particulate with a lead content equal to or greater than 5 mg/l as measured by EPA Method 1311, incorporated by reference in Section 226.120.

“Lead emission unit” means any process that emits lead including, but not limited to, battery breaking areas; material handling areas; dryers and dryer areas; channel furnaces and channel furnace areas; coreless furnaces and coreless furnace areas; reverberatory furnaces and reverberatory furnace areas; rotary furnaces and rotary furnace areas; agglomerating furnaces and agglomerating furnace areas; kettles and casting areas; lead taps, slag taps, and molds during tapping; and areas where dust from fabric filters, sweepings, or used fabric filters are processed.

“Lead kettle” means a vessel that is heated from below and is used for the purpose of melting refined lead.

“Lead tap” means the pouring hole through which molten lead flows from a kettle or furnace.

“Leak detection system” means an instrument that is capable of monitoring relative particulate matter (dust) loadings in the exhaust of a particulate control in order to detect leaks in such control. A leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, transmittance, or other effect to monitor relative particulate matter loadings.

“Materials handling area” means any area in which lead-containing materials (including, but not limited to, broken battery components, flue dust, and dross) are handled in

between process steps. Such areas may include, but are not limited to, areas in which lead-bearing scrap, lead-containing materials, lead-containing metal, or lead-containing wastes are prepared.

“Materials storage area” means any area in which lead-containing materials (including, but not limited to, broken battery components, flue dust, and dross) are stored in between process steps. Such areas may include, but are not limited to, areas in which lead-bearing scrap, lead-containing materials, lead-containing metal, or lead-containing wastes are stored in open piles, bins, or tubs.

“Mold cooling” means the process of cooling a mold containing hot metal by direct contact of the mold, but not the hot metal itself, with cooling water or other liquids.

“Natural draft opening” means any permanent opening, including doors and windows, in a total enclosure that remains open during operation of the lead emissions unit in the enclosure(s) and is not connected to a duct in which a fan is installed.

“New lead emission unit” means a lead emission unit constructed on or after January 1, 2015, at a nonferrous metal production facility.

“Nonferrous metal” means a metal that is not an iron or steel alloy; such metals may include alloys of aluminum, copper, lead, and zinc.

“Nonferrous metal production facility” means any source that is alloying, refining, or casting nonferrous metal or manufacturing nonferrous metal products, and where the source includes lead in their alloys or products by design.

“Production areas” means an indoor space at a nonferrous metal production facility where lead emission units are operated.

“Quenching” means the process of cooling hot metal other than lead shot by direct contact of the metal with cooling water or other liquids.

“Refined lead” means a material composed of lead alloys of a specified composition from an onsite or offsite lead refining operation.

“Refining” means the process of removing impurities or oxides from a metal or metal alloy.

“Reverberatory furnace” means a refractory-lined furnace that uses one or more flames to heat the walls and roof of the furnace and lead-bearing scrap to such a temperature that lead compounds are chemically reduced to elemental lead metal.

“Rotary furnace” (also known as a rotary reverberatory furnace) means a furnace consisting of a refractory-lined chamber that rotates about a horizontal axis and that uses

one or more flames to heat the walls of the furnace and lead-bearing scrap to such a temperature that lead compounds are chemically reduced to elemental lead metal.

“Slag tap” means the pouring hole through which slag is removed from a kettle or furnace.

“Tap” means the pouring hole through which molten metal flows from a kettle or furnace.

“Tapping” means opening the tap.

“Total enclosure” means a complete enclosure with walls and a roof designed to minimize exposure to the elements and to maximize containment of emissions from one or more lead emission units and that meets the following performance standards: the average facial velocity of air flowing into the enclosure through all natural draft openings during operation of lead emission units in each total enclosure in any one hour period must be at least 200 fpm (3,600 m/hr) or average negative pressure value of 0.007 inches of water (0.013 mm Hg) must be maintained inside the enclosure over any one hour period.

“Valid test run” means a completed test run conducted in accordance with a testing protocol submitted to the Illinois EPA, as required under Section 226.175(f) of this Part.

Section 226.120 Incorporations by Reference

The following materials are incorporated by reference. These incorporations do not include any later amendments or editions.

- a) 75 FR 71033-01, Air Quality Designations for the 2008 Lead (Pb) National Ambient Air Quality Standards (Monday, November 22, 2010).
- b) 76 FR 72097-01, Air Quality Designations for the 2008 Lead (Pb) National Ambient Air Quality Standards (Tuesday, November 22, 2011).
- c) 40 CFR 60, Appendix A, Method 29 (2012).
- d) 40 CFR 60, Appendix A, Method 1, 1A (2012).
- e) 40 CFR 60, Appendix A, Method 2, 2A, 2C, and 2D (2012).
- f) 40 CFR 60, Appendix A, Method 3, 3A (2012).
- g) 40 CFR 60, Appendix A, Method 4 (2012).
- h) 40 CFR 60, Appendix A, Method 12 (2012).

- i) USEPA's Emission Measurement Center Guideline Document, (GD-042), Preparation and Review of Site-Specific Emission Test Plans, Revised March 1999.
- j) 40 CFR 260.11(c)(3)(v) and 261, Method 1311 (2012).
- k) OSHA. The following method from the Occupational Safety & Health Administration, Methods Development Team, Industrial Hygiene Chemistry Division, OSHA Salt Lake Technical Center, Sandy, UT 84070-6406, (801) 233-4900: OSHA Method 1006 (approved January 2005).

Section 226.125 Applicability

The provisions of this Part apply to all nonferrous metal production facilities located in the following areas in Illinois designated nonattainment for the 2008 lead National Ambient Air Quality Standards by USEPA:

- a) Part of Madison County, specifically the area bounded by Granite City Township and Venice Township, 75 FR 71033-01 (November 22, 2010); and
- b) Part of Cook County, specifically, the area bounded by Damen Avenue on the west, Roosevelt Road on the north, the Dan Ryan Expressway on the east, and the Stevenson Expressway on the south, 76 FR 72097-01 (November 22, 2011).

Section 226.130 Compliance Date

- a) For an existing lead emission unit that is subject to this Part, compliance with these requirements by an owner or operator of the unit is required by no later than January 1, 2015.
- b) For a new lead emission unit that is subject to this Part, compliance with these requirements by an owner or operator of the unit is required by the date on which the unit initially begins operation.

Section 226.140 Lead Emission Standards

- a) For all alloying and refining kettles located at a source subject to this Part, pursuant to Section 226.125 of this Part, each lead emission unit must be:
 - 1) Equipped with a capture system (including covers, hoods, ducts, and fans) that is vented to a control device for lead particulates. The emissions of lead into the atmosphere from each control device must not exceed 0.0010 gr/dscf; and

- 2) Operated in a total enclosure pursuant to Section 226.155 of this Part. The entire gas stream collected by each total enclosure must only be ducted to a control device such that the emissions of lead into the atmosphere from such control device must not exceed 0.00010 gr/dscf.
- b) For reverberatory furnaces or rotary furnaces located at a source subject to this Part pursuant to Section 226.125 of this Part, each lead emission unit must be:
 - 1) Equipped with a capture system (including hoods, ducts, and fans) that is vented to a control device for lead particulates. The emissions of lead into the atmosphere from each control device must not exceed 0.00010 gr/dscf; and
 - 2) Operated in a total enclosure pursuant to Section 226.155 of this Part. The entire gas stream collected by each total enclosure must only be ducted to a control device such that the emissions of lead into the atmosphere from such control device must not exceed 0.00010 gr/dscf.
 - c) Notwithstanding the provisions for total enclosure in subsections (a) and (b) above, any emissions of lead exiting an uncontrolled stack during quenching or mold cooling operations must not exceed 0.00010 gr/dscf. Quenching operations shall be limited to no more than 6 hours per associated unit in any 24 hour period.
 - d) For induction furnaces located at a source subject to this Part pursuant to Section 226.125 of this Part, each lead emission unit must be equipped with a capture system (including hoods, ducts, and fans) that is vented to a control device for lead particulates. The emissions of lead into the atmosphere from each control device must not exceed 0.000010 gr/dscf.
 - e) For all other furnaces, lead kettles, or any other operation subject to this Part pursuant to Section 226.125 of this Part, but not subject to subsections (a), (b), or (d) above, each lead emission unit must be equipped with a capture system (including ducts, fans, and hoods or covers) that is vented to a control device for lead particulates. The emissions of lead into the atmosphere from each control device must not exceed 0.00010 gr/dscf.
 - f) Any source subject to the requirements of this Part pursuant to Section 226.125 of this Part must operate pursuant to a lifetime operating permit, a federally enforceable state operating permit, a Clean Air Act Permit Program permit, or conditions within a construction permit.

Section 226.150 Operational Monitoring for Control Device

- a) The owner or operator of a lead emission unit subject to this Part must install, maintain, and operate parametric monitoring equipment that consists of a pressure differential system to measure the pressure drop across each control device

required by Section 226.140 of this Part. Data from this instrumentation must be recorded as follows:

- 1) Data must be automatically recorded every minute during operation of any lead emission unit subject to Section 226.140(a) or (b) of this Part.
 - 2) Data must be recorded at least once every eight hours during operation of any lead emission unit subject to Section 226.140(d) or (e) of this Part.
 - 3) If the control device used to control lead emission units subject to Section 226.140(a) or (b) of this Part is the same as the control device used to control other lead emission units subject to Section 226.140(d) or (e) of this Part, the requirements in subsection (a)(1) above apply to the control device.
- b) The owner or operator of a lead emission unit subject to this Part and using a baghouse or other filter system to control units subject to the total enclosure requirements of Section 226.155 of this Part must install, maintain, and operate parametric monitoring equipment that consists of a leak detection system. The leak detection system must be installed at the outlet of the baghouse or other filter system.
- c) The owner or operator of a lead emission unit subject to this Part must develop and maintain a Control Device Monitoring Plan (CDMP). The CDMP must be submitted for review and approval to the Illinois EPA, directed to the Manager of the Bureau of Air's Compliance Section by the compliance date specified in Section 226.130 of this Part and within 30 days after any changes are made to such plan. The CDMP must be amended by the owner or operator of a lead emission unit subject to this Part as necessary to ensure that it is kept current.
- d) The CDMP must include procedures to investigate and determine the cause of changes in pressure that could indicate a leak or other problem and, if applicable, every alarm from the leak detection system. The procedures must also include a means to determine appropriate corrective actions and preventative measures to address such pressure changes and to avoid future alarms. The owner or operator of a lead emission unit subject to this Part must operate and maintain each pressure differential system and each leak detection system according to the CDMP at all times.

Section 226.155 Total Enclosure

- a) An owner or operator of a lead emission unit subject to this Part must install, maintain, and operate one or more total enclosures to minimize fugitive emissions from the operations listed in subsections (1) through (6) below at all times that the

applicable lead emission unit in the total enclosure is operating or housekeeping activities are being performed. The total enclosure must meet the requirements specified in subsections (b) through (e) below.

- 1) Battery breaking areas.
 - 2) Dryer and dryer areas including transition pieces, charging hoppers, chutes, and skip hoists conveying any lead-containing material.
 - 3) Reverberatory furnaces or rotary furnaces charging any lead-containing material and the associated reverberatory furnace areas or rotary furnace areas, including any associated lead taps, slag taps, and molds during processing.
 - 4) Alloying and refining kettles and associated areas, including any associated lead taps, slag taps, and molds during processing.
 - 5) Areas where dross, dust from fabric filters, sweepings, or used fabric filters are handled except for areas where all such materials are in closed, leak-proof containers at all times.
 - 6) Material handling areas for any lead-containing materials except that the following areas are exempt from the total enclosure requirements unless the areas listed below also contain operations listed in subsections (1) through (5) above:
 - (A) Those areas where refined lead is melted and cast;
 - (B) Those areas where spent refractory brick is stored in closed containers prior to and after crushing;
 - (C) Those areas where ladle repairs take place; or
 - (D) Those areas where lead-bearing scrap is sorted and handled if the area is enclosed and equipped with a capture system ducted to a control device subject to the requirements of Section 226.140(e) of this Part during all sorting and handling activities and if such scrap is stored in closed containers at all other times.
- b) An owner or operator of a lead emission unit subject to this Part must duct the gas stream collected by each total enclosure to a control device that meets the applicable requirements of Section 226.140 of this Part.
 - c) The total enclosure must be maintained and operated with an inward flow of air through all natural draft openings while the lead emission unit applicable to the operation listed in subsection (a) above in the total enclosure is operating. The

average facial velocity of air flowing into the enclosure through all natural draft openings during operation of such lead emission units in each total enclosure in any one hour period must be at least 200 fpm (3,600 m/hr) or average negative pressure value of 0.007 inches of water (0.013 mm Hg) must be maintained inside the enclosure over any one hour period.

- d) The total enclosure required by subsection (a) above must be maintained at any opening including, but not limited to, vents, windows, passages, doorways, bay doors, and roll-ups while lead emission units in the total enclosure(s) are operating, except as needed for temporary access to conduct manufacturing operations (e.g., during load-in and load-out of materials or passage of personnel or equipment).
- e) The total enclosure must be free of cracks, gaps, corrosion, or other deterioration that could cause or result in dust being emitted to the atmosphere through such openings except that the total area of all natural draft openings must not exceed 5 percent of the surface area of the total enclosure's walls, floor, and ceiling.

Section 226.160 Operational Measurement for Total Enclosure

- a) An owner or operator of a lead emission unit subject to the total enclosure requirement of Section 226.155 of this Part must measure the total area of all natural draft openings and the total surface area of the total enclosure.
- b) An owner or operator of a lead emission unit subject to the total enclosure requirement of Section 226.155 of this Part must measure the facial velocity (FV) of air flowing through all natural draft openings using the following equation while any lead emission unit applicable to the operation listed in Section 226.155(a) of this Part is operating. Values for Q_o and Q_I must be obtained by means of testing pursuant to subsection (b)(1) or monitoring pursuant to subsection (b)(2) below:

$$FV = \frac{Q_o - Q_I}{A_n}$$

Where:

Q_o = the sum of volumetric flow from all gas streams exiting the total enclosure through the control device.

Q_I = the sum of the volumetric flow from all gas streams into the total enclosure through a forced makeup air duct; zero if there is no forced makeup air into the total enclosure.

A_n = total area of all natural draft openings in the total enclosure.

- 1) An owner or operator of a lead emission unit subject to the total enclosure requirement of Section 226.155 of this Part must conduct testing to determine the values for Q_o and Q_I at the same time as any emissions testing is conducted pursuant to Section 226.175 of this Part; or
 - 2) An owner or operator of a lead emission unit subject to the total enclosure requirement of Section 226.155 of this Part must install, maintain, and operate a flow monitor at the outlet of each control device required by Section 226.140 of this Part to measure the volumetric flow from all gas streams exiting the total enclosure through the control device (or the final control device emitting to the atmosphere if the source has more than one control device in series). This volumetric flow data must be monitored and automatically recorded every minute.
- c) As an alternative to compliance with the requirements of subsection (b) above, an owner or operator of a lead emission unit subject to the total enclosure requirement of Section 226.155 of this Part must install, operate, and maintain instrumentation to monitor the pressure differential between the interior and exterior of the enclosure, measured in inches of water, to demonstrate compliance with the differential pressure requirements in Section 226.155(c) of this Part. This instrumentation must be located and designed to operate in accordance with all of the requirements of subsections (c)(1) through (6) below:
- 1) An owner or operator of a total enclosure that has a total ground surface area of 10,000 square feet or more must install and maintain a minimum of one building digital differential pressure monitoring system at each of the following three walls in each total enclosure:
 - A) The leeward wall.
 - B) The windward wall.
 - C) An exterior wall that connects the leeward and windward wall at a location defined by the intersection of a perpendicular line between a point on the connecting wall and a point on its furthest opposite exterior wall, and intersecting within plus or minus ten meters of the midpoint of a straight line between the two other monitors specified. The midpoint monitor must not be located on the same wall as either of the other two monitors.

- 2) An owner or operator of a total enclosure that has a total ground surface area of less than 10,000 square feet must install and maintain a minimum of one building digital differential pressure monitoring system at the leeward wall of each total enclosure.
 - 3) Each digital differential pressure monitoring system must be certified by the manufacturer to be capable of measuring and displaying negative pressure in the range of 0.001 to 0.11 inches of water (0.002 to 0.2 mm mercury) with a minimum accuracy of plus or minus 0.001 inches of water (0.002 mm mercury).
 - 4) Each digital differential pressure monitoring system must be equipped with a continuous recorder.
 - 5) Each digital differential pressure monitoring system must be calibrated in accordance with manufacturer's specifications at least once every 12 calendar months or more frequently if recommended by the manufacturer.
 - 6) Each digital differential pressure monitoring system must be equipped with a backup, uninterruptible power supply to ensure continuous operation of the monitoring system during a power outage.
- d) An owner or operator of a lead emission unit subject to the total enclosure requirement of Section 226.155 of this Part must develop and maintain a continuous parametric monitoring plan (CPMP) containing the information required in subsections (d)(1), (2), or (3) below. The CPMP must be submitted for review and approval to the Illinois EPA, directed to the Manager of the Bureau of Air's Compliance Section, by the compliance date specified in Section 226.130 of this Part and within 30 days after any changes are made to such plan. The CPMP must be amended by the owner or operator of a lead emission unit subject to this Part as necessary to ensure that it is kept current. The owner or operator of a lead emission unit subject to this Part must conduct monitoring in accordance with the CPMP at all times.
- 1) If electing to comply with the facial velocity requirement in Section 226.155(c) of this Part using the total enclosure measurement method in subsection (b)(1) above, the CPMP must contain the information required by subsections (d)(1)(A) through (D) below.
 - A) The CPMP must identify the operating parameters to be monitored on an ongoing basis to ensure that the facial velocity measured during the most recent compliance test is maintained, explain why such parameters are appropriate for demonstrating ongoing

compliance, and identify the specific monitoring procedures for each parameter.

- B) The CPMP must specify limits or ranges of values of the operating parameters listed pursuant to subsection (d)(1)(A) above that demonstrate compliance with the facial velocity requirements in Section 226.155(c) of this Part. These limits or ranges must represent the conditions indicative of proper operation and maintenance of the facial velocity through all natural draft openings during operation of lead emission units in each total enclosure.
 - C) The CPMP must specify data to be recorded to demonstrate compliance with the facial velocity requirements in Section 226.155(c) of this Part as well as the recording frequency and methodology.
 - D) The CPMP must specify the information to be reported to the Illinois EPA to demonstrate compliance with the facial velocity requirements in Section 226.155(c) of this Part. This information must include, but is not limited to, all information to be submitted as part of the semiannual reports required by Section 226.185(n) of this Part as well as the reporting frequency.
- 2) If electing to comply with the facial velocity requirement in Section 226.155(c) of this Part using the total enclosure monitoring method in subsection (b)(2) above, the CPMP must contain the information required by subsections (d)(2)(A) through (C) below.
- A) The CPMP must specify limits or ranges of values of the sum of volumetric flow from all gas streams exiting the total enclosure through the control device and the sum of the volumetric flow from all gas streams into the total enclosure through a forced makeup air duct. These limits or ranges must represent the conditions indicative of proper operation and maintenance of the facial velocity through all natural draft openings during operation of lead emission units in each total enclosure.
 - B) The CPMP must specify data to be recorded to demonstrate compliance with the facial velocity requirements in Section

226.155(c) of this Part as well as the recording frequency and methodology.

- C) The CPMP must specify the information to be reported to the Illinois EPA to demonstrate compliance with the facial velocity requirements in Section 226.155(c) of this Part. This information must include, but is not limited to, all information to be submitted as part of the semiannual reports required by Section 226.185(n) of this Part as well as the reporting frequency.
- 3) If electing to comply with the average differential pressure requirement in Section 226.155(c) of this Part using the total enclosure measurement method in subsection (c) above, the CPMP must contain the information required by subsections (d)(3)(A) through (C) below.
- A) The CPMP must identify the locations and design of each differential pressure monitoring instrumentation demonstrating compliance with the requirements of subsection (c) above to ensure that the average differential pressure is measured properly, explain why such locations are appropriate for demonstrating ongoing compliance, and provide a schedule for instrumentation calibration.
 - B) The CPMP must specify data to be recorded to demonstrate compliance with the average differential pressure requirements in Section 226.155(c) of this Part as well as the recording frequency and methodology.
 - C) The CPMP must specify the information to be reported to the Illinois EPA to demonstrate compliance with the average differential pressure requirements in Section 226.155(c) of this Part. This information must include, but is not limited to, all information to be submitted as part of the semiannual reports required by Section 226.185(n) of this Part as well as the reporting frequency.
- e) The owner or operator of a lead emission unit subject to this Part electing to change the total enclosure measurement method for an existing lead emission unit subject to the total enclosure requirements of Section 226.155 of this Part must notify the Illinois EPA, directed to the Manager of the Bureau of Air's Compliance Section, of the measurement method by which the owner or operator will comply with the requirements of this Section. Such notification must include an updated CPMP complying with the appropriate requirements for the new

measurement method and must occur at least 30 days prior to changing the method.

Section 226.165 Inspection

- a) An owner or operator of a lead emission unit subject to this Part must inspect control devices for the control of lead particulate at least once per month. Such inspections of control devices must include all structures that comprise the infrastructure of the affected control device and other structures which are necessary for the affected control device to function in its intended capacity.
- b) An owner or operator of a lead emission unit subject to this Part must inspect all total enclosures for proper operation and physical integrity at least once per month.
- c) An owner or operator of a lead emission unit subject to this Part must maintain and repair any control device and total enclosure, including all structures that comprise the infrastructure of the affected control device and total enclosure, as necessary to ensure proper and compliant operation.

Section 226.170 Lead Fugitive Dust Operating Program

- a) An owner or operator of a lead emission unit subject to this Part must operate at all times according to a lead fugitive dust operating program that describes in detail the measures that are implemented to minimize lead fugitive dust emissions from the areas, activities, or events listed in subsections (a)(1) through (7) below:
 - 1) Source roadways;
 - 2) Source buildings housing lead emission units;
 - 3) Battery storage areas;
 - 4) Equipment maintenance for equipment used in connection with the processing or handling of lead-containing materials;
 - 5) Material storage and material handling areas for lead-containing materials, excluding areas where only finished products are stored or handled;
 - 6) Spillage of lead-containing material; and
 - 7) Sorting or handling of lead-bearing scrap subject to Section 226.155(a)(6)(D) of this Part.

- b) An owner or operator of a lead emission unit subject to this Part must develop and maintain a lead fugitive dust operating program. The lead fugitive dust operating program must be submitted for review and approval to the Illinois EPA, directed to the Manager of the Bureau of Air's Compliance Section, by the compliance date specified in Section 226.130 of this Part and within 30 days after any changes are made to such plan. The lead fugitive dust operating program must be amended by the owner or operator of a lead emission unit subject to this Part as necessary to ensure that it is kept current. The owner or operator of a lead emission unit subject to this Part must operate according to the lead fugitive dust operating program at all times.
- c) The measures specified in the lead fugitive dust operating program must, at a minimum, include the requirements specified in subsections (c)(1) through (8) below.
- 1) The lead fugitive dust operating program must meet all requirements of 35 Ill. Adm. Code 212.Subpart K.
 - 2) Cleanings must be performed by wet wash or by a vacuum cleaner equipped with a filter rated by the manufacturer to achieve at least 99.97 percent capture efficiency for 0.3 micron particles in a manner that does not generate fugitive dust. When performing cleanings by wet wash, a wet sweeper must employ a water flush followed by sweeping. Cleanings must be performed at the frequencies specified below:
 - A) Cleanings must be performed at least once every 24 hour period that a lead emission unit in an associated production area is operating and immediately before termination of negative pressure in any total enclosure required by Section 226.155 of this Part for all production areas.
 - B) Cleanings of scrap sorting and handling areas subject to Section 226.155(a)(6)(D) of this Part must be performed directly after sorting or handling is completed and before shutdown of the required capture and control equipment.
 - C) Cleanings must be performed at least once every seven calendar days for all areas where lead-containing wastes generated from housekeeping activities are stored, disposed of, recovered, or recycled.
 - D) Cleanings of all areas must be performed no later than one hour after detection of any accidental release of dust containing lead.
 - 3) All areas within the property boundaries subject to vehicle traffic must be paved and must be cleaned at least once every seven calendar days to

remove dust or other accumulated material from paved areas within the property boundaries. Such cleaning must be performed using a vacuum truck with a filter rated by the manufacturer to achieve at least 99.97 percent capture efficiency for 0.3 micron particles, or a wet sweeper, or a combination thereof. Limited access and limited use roadways such as unpaved roads to remote locations on the property are exempt from this requirement if they are used infrequently (no more than one round trip per day).

- 4) Broken batteries must only be stored in a total enclosure. Any battery storage areas that are not located in a total enclosure must be inspected at least once every seven calendar days. Within 72 hours of identification, any broken batteries must be moved to a total enclosure and all residue from broken batteries must be collected and the area must be cleaned.
- 5) All maintenance activities that could generate dust containing lead must be performed in a manner that minimizes emissions of dust including, but not limited to, the use of a vacuum cleaner equipped with a filter rated by the manufacturer to achieve at least 99.97 percent capture efficiency for 0.3 micron particles or the use of wet suppression sufficient to prevent dust formation.
- 6) All collected dross and dust must be stored and transported within closed conveyor and storage systems or in closed, leak-proof containers. All other lead-containing material must be contained and covered for transport outside of a total enclosure in a manner that minimizes spillage or dust formation. The transport outside of a total enclosure of scrap metal, spent refractory brick, ladles, and finished product must be addressed in the lead fugitive dust operating program so as to minimize the spillage of lead-containing material or the formation of dust.
- 7) Replacement of control equipment filter bags must be conducted in the manner specified below. All vacuuming referenced in this subsection must be performed by a vacuum cleaner equipped with a filter rated by the manufacturer to achieve at least 99.97 percent capture efficiency for 0.3 micron particles:
 - A) Used filter bags must be rolled-up and placed into sealed plastic bags or barrels prior to removal from the filter unit;
 - B) The filter unit floors, the dirty and clean plenum side, must be vacuumed of dust residues immediately following removal activity;

- C) The ground surface in and around the filter unit must be vacuumed immediately following the complete installation of new filter bags to remove any and all dust residue; and
 - D) In those instances where filter bag replacement requires more than one operational day, the requirements of subsection (c)(7)(C) above must be completed just prior to the end of each operational day.
- 8) Measures including, but not limited to, those specified in subsections (1) through (7) above must be implemented to minimize the tracking of dust containing lead out of the total enclosure by personnel or by equipment used in handling the material.
- d) All grounds on any source subject to this Part must be paved, oiled, or have sufficient groundcover planted to minimize the amount of wind-blown dust leaving the property.
 - e) The applicability of this Part to the owner or operator of a lead emission unit does not exempt the owner or operator from compliance with the applicable requirements in 35 Ill. Adm. Code 212.

Section 226.175 Emissions Testing

- a) For an existing lead emission unit that is subject to this Part, testing of lead emissions at control devices required by Section 226.140 of this Part must be conducted by January 1, 2015.
- b) The owner or operator of an existing lead emission unit that is subject to this Part and that performed all testing necessary to demonstrate compliance with Section 226.140 of this Part prior to January 1, 2015, is not required to retest pursuant to subsection (a) above if the conditions in subsections (b)(1) through (b)(4) below are met. Nothing in this subsection (b), however, shall limit the ability of the Illinois EPA or the USEPA to require that the owner or operator perform testing pursuant to subsection (e) below.
 - 1) On or after January 1, 2011, the owner or operator of an existing lead emission unit that is subject to this Part performed all testing necessary to demonstrate compliance with Section 226.140 of this Part;
 - 2) The owner or operator submitted the results of such tests to the Illinois EPA, and the tests were not rejected by the Illinois EPA;

- 3) The same capture system and control device(s) tested as referenced in subsection (b)(1) above are still being used by the subject lead emission unit; and
 - 4) The owner or operator complies with all recordkeeping and reporting requirements in Section 226.185(i) of this Part.
- c) For a new lead emission unit that is subject to this Part, testing of lead emissions at control devices required by Section 226.140 of this Part must be conducted within 60 days after achieving maximum operating rate but no later than 180 days after initial startup of the new lead emission unit in accordance with this Section.
 - d) The owner or operator of a lead emission unit subject to this Part must have subsequent emissions tests conducted at least once every five years. The owner or operator of a lead emission unit that tested prior to January 1, 2015, in accordance with subsection (b) above must use the original test date as the beginning of this five-year period.
 - e) When, as determined by the Illinois EPA or USEPA, it is necessary to conduct testing to demonstrate compliance with Section 226.140 of this Part, the owner or operator of a lead emission unit subject to this Part must, at his or her own expense, have such test conducted in accordance with the applicable test methods and procedures specified in this Section within 90 days after receipt of a notice to test from the Illinois EPA or USEPA, unless such notice specifies an alternative testing deadline.
 - f) The owner or operator of a lead emission unit subject to the emissions testing requirements of this Section must conduct all such tests for lead pursuant to subsections (g) through (m) below.
 - g) The owner or operator of a lead emission unit required to test pursuant to subsections (a), (c), (d), or (e) above must submit a testing protocol as described in USEPA's Emission Measurement Center Guideline Document (GD-042) to the Illinois EPA, directed to the Manager of the Bureau of Air's Compliance Section, at least 45 days prior to a scheduled emissions test. Upon written request directed to the Manager of the Bureau of Air's Compliance Section, the Illinois EPA may, in its sole discretion, waive the 45-day requirement. Such waiver is only effective if it is provided in writing by the Manager of the Bureau of Air's Compliance Section, or his or her designee.
 - h) Notification of a scheduled emissions test must be submitted to the Illinois EPA in writing, directed to the Manager of the Bureau of Air's Compliance Section, at least 30 days prior to the expected date of the emissions test and, again, 5 days prior to such testing. Upon written request directed to the Manager of the Bureau of Air's Compliance Section, the Illinois EPA may, in its sole discretion, waive

the 30-day requirement or the 5-day requirement. Such waiver is only effective if it is provided in writing by the Manager of the Bureau of Air's Compliance Section, or his or her designee.

- i) If, after the 30-days' notice for an initially scheduled test is sent, there is a delay (e.g., due to operational problems) in conducting the test as scheduled, the owner or operator of the lead emission unit must notify the Illinois EPA, Bureau of Air, Compliance Section as soon as practicable of the delay in the original test date, either by providing at least 7 days' notice of the rescheduled date of the test or by arranging a new test date with the Illinois EPA by mutual agreement.
- j) Not later than 60 days after the completion of the test, the owner or operator of a lead emission unit required to test pursuant to subsections (a), (c), (d), or (e) above must submit the results of the test to the Illinois EPA, directed to the Manager of the Bureau of Air's Compliance Section.
- k) The owner or operator of a lead emission unit subject to the emissions testing requirements of this Section must conduct such tests for lead emissions using 40 C.F.R. 60, subpart A, and appendix A, Methods 1 (1 or 1A), 2 (2, 2A, 2C, or 2D), 3 (3 or 3A), and 4; and Methods 12 or 29, as incorporated by reference in Section 226.120 of this Part, or other alternative USEPA methods approved by the Illinois EPA.
- l) Each emissions test must be in accordance with all of the following requirements:
 - 1) Method 12 or 29 must be used to determine compliance with the lead emission standard in Section 226.140 of this Part;
 - 2) The minimum sample volume must be 0.85 dry standard cubic meters (30 dry standard cubic feet);
 - 3) The minimum sampling time must be 60 minutes for each run. Consistent with the averaging and compliance requirements of this subsection (l), at least three runs must be performed and the arithmetic average of three valid runs must be used to determine compliance;
 - 4) The following procedure must be used to average emissions of tests results for any compliance determination:
 - A) The average of the emissions test results must be determined by the arithmetic average of three valid test run results, as long as the test runs are conducted in conformance with the provisions of an approved testing protocol as required by subsection (g) above.
 - B) Notwithstanding subsection (l)(4)(A) above, if the owner or operator of a lead emission unit elects to perform more than three

test runs, then the average must be calculated based upon the results of all valid test runs.

- C) Notwithstanding subsection (1)(4)(A) above, in the event that a sample is accidentally lost or conditions occur in which one of the test runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, malfunction, or other dissimilar or non-representative circumstances, upon the owner's or operator's documentation of the existence of any of the circumstances set forth in this subsection (1)(4)(C) and verification by the Illinois EPA, Manager of the Bureau of Air's Compliance Section, or his designee, that the conditions existed, compliance may be determined by using the arithmetic average of the test results of all remaining valid test runs; however, a minimum of two valid test runs is required to determine compliance;
- 5) Each test for lead emissions must be conducted during conditions representative of maximum lead emissions; and
- 6) If an owner or operator of a lead emission unit does not meet the criteria for averaging of subsection (1)(4) above, then each individual valid test run must meet the applicable limitation in order to demonstrate compliance.
- m) The owner or operator of any lead emission unit for which emissions are vented from an uncontrolled stack to the atmosphere must test such emissions in accordance with the requirements of this Section or calculate such emissions by means of collecting area time-weighted average lead samples and analyzing such samples through the use of OSHA Method 1006. If an owner or operator of a lead emission unit subject to this part elects to calculate lead emissions from an uncontrolled stack, such calculations must be completed at least once every five years.

Section 226.185 Recordkeeping and Reporting

- a) An owner or operator of a lead emission unit subject to this Part must keep and maintain all records used to demonstrate initial compliance and ongoing compliance with the requirements of this Part.
 - 1) Except as otherwise provided under this Part, copies of such records must be submitted by the owner or operator of the source to the Illinois EPA within 30 days after receipt of a written request by the Illinois EPA.
 - 2) The owner or operator must keep and maintain all records required by this Section at the source for at least five years from the date the document is

created and must make all records available to the Illinois EPA for inspection and copying upon request.

- b) Notification of the initial startup of any new lead emission unit subject to this Part must be submitted to the Illinois EPA, directed to the Manager of the Bureau of Air's Compliance Section, no later than 30 days after initial startup.
- c) The owner or operator of a lead emission unit subject to this Part must maintain records that demonstrate compliance with the requirements of this Part, as applicable, that include the following:
 - 1) Calendar date of the record;
 - 2) Reports for all applicable emissions tests for lead conducted on the lead emission unit, including the date of the test and the results;
 - 3) The date, time, and duration of any malfunction in the operation of any lead emission unit, any lead emission unit's control equipment, or any emissions monitoring equipment subject to this Part if such malfunction could cause an increase in emissions. The records must include a description of the malfunction, the probable cause of the malfunction, the date and nature of the corrective action taken, and any preventative action taken to avoid future malfunctions;
 - 4) A log of all inspections, cleanings, maintenance, and repair activities performed on a lead emission unit's control equipment. Said records must document the performance of the inspection, including the date of the inspection and the observed condition and operation of the control equipment. The records must also include the date and nature of the cleaning and the maintenance and repair activities performed on the lead emission unit's control equipment;
 - 5) Records including the date and nature of all pavement cleanings and any reason for not cleaning pavement (e.g., equipment breakdown);
 - 6) The date, time, and quantity of any spillage of dust containing lead. The records must include the date, time, and nature of the cleaning activity in response to the spill;
 - 7) A log of all battery storage inspection activities including the date of the inspection, a description of any broken batteries discovered during said inspections, and the date and nature of any required cleaning activities to control dust;
 - 8) A log of all maintenance activities that could generate dust containing lead. The record must include the date of the maintenance activity, a

description of the maintenance activity, and those measures implemented to minimize emissions of dust; and

- 9) A log of the hours of operation for all quenching operations.
- d) The owner or operator of a lead emission unit subject to this Part must maintain records to demonstrate compliance with Section 226.150(a) and (b) of this Part.
- e) The owner or operator of a lead emission unit subject to this Part must maintain the CDMP required by Section 226.150(c) of this Part. Records must be maintained demonstrating compliance with the CDMP.
- f) The owner or operator of a lead emission unit subject to this Part must maintain records of changes in pressure that could indicate a leak or other problem and, if applicable, every alarm from the leak detection system. A log must be maintained of all investigations into the cause of such pressure changes and, if applicable, every alarm from the leak detection system, and any maintenance and repair activities performed as a result of such investigation. Said records must also include the date of each aforementioned activity. Records must be maintained in order to demonstrate compliance with Section 226.150(d) of this Part.
- g) The owner or operator of a lead emission unit subject to this Part must maintain records demonstrating compliance with the lead fugitive dust operating program and with the activities required by Section 226.170 of this Part.
- h) The owner or operator of a lead emission unit subject to this Part must maintain records that include the following information for each period when the affected emission unit operated without the lead emission unit's control equipment for lead and had the potential for emissions:
 - 1) The date, time, and duration of such outage;
 - 2) The length of time that the affected lead emission unit subject to this Part operated uncontrolled before required control measures were in place or the affected lead emission unit was shut down (to resume operations only after required control measures were in place) and an explanation why the time the affected lead emission unit operated uncontrolled was not shorter, including a description of any mitigation measures that were implemented;
 - 3) A discussion of the probable cause of the outage of the control equipment; and
 - 4) A discussion of the date and nature of any preventative measures taken to avoid future outage.

- i) The owner or operator of a lead emission unit subject to this Part must maintain records demonstrating compliance with Section 226.175 of the Part.
- j) The owner or operator of a lead emission unit subject to this Part must maintain a log of all inspections of control devices for the control of lead particulate. Such records must document the date of the inspection, the observed condition and operation of the control devices, and the date and nature of any corrective action taken. Records must be maintained demonstrating compliance with Sections 226.165(a) and (c) of this Part.
- k) The owner or operator of a lead emission unit subject to this Part must maintain a log of all inspections of any total enclosures and source structures. Such records must document the date of the inspection, the observed condition and operation of the total enclosure, and the date and nature of any corrective action taken. Records must be maintained demonstrating compliance with Sections 226.155(e), 226.160(a), and 226.165(b) and (c) of this Part.
- l) The owner or operator of a lead emission unit subject to this Part must maintain records that include any data or information necessary to demonstrate compliance with the CPMP including, but not limited to, records demonstrating compliance with Sections 226.155(c) and 226.160 of this Part.
- m) The owner or operator of a lead emission unit subject to this Part must notify the Illinois EPA, directed to the Manager of the Bureau of Air's Compliance Section, within five days after discovery of deviations from any of the requirements of this Part or any exceedance of an applicable emission limitation. At a minimum, and in addition to any permitting obligations, these notifications must include a description of such deviations, a discussion of the possible cause of such deviations, any corrective actions, and any preventative measures taken.
- n) The owner or operator of a lead emission unit subject to this Part must submit semiannual reports to the Illinois EPA, directed to the Manager of the Bureau of Air's Compliance Section. Such reports must include all monitoring reports summarizing monitoring as required by this Part, as well as summaries of all instances of deviations from the requirements of this Part. For the January through June monitoring period, the owner or operator shall submit the monitoring report by July 31 of that year. For the July through December monitoring period, the owner or operator shall submit the monitoring report by January 31 of the following year. All such reports must be certified by a responsible official that the information submitted is complete, true, and accurate.

IT IS SO ORDERED.

I, Don A. Brown, Acting Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on November 21, 2013, by a vote of 4-0.

A handwritten signature in black ink that reads "Don A. Brown". The signature is written in a cursive style with a large, circular initial "D".

Don A. Brown, Acting Clerk
Illinois Pollution Control Board