

ILLINOIS POLLUTION CONTROL BOARD
March 20, 2014

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

Proposed Rule. Second Notice.

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

Today the Board adopts for second notice rules intended to satisfy the Illinois Environmental Protection Agency's (IEPA or Agency) 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). *See generally* 42 U.S.C. § 7502, *and see* 73 Fed. Reg. 66964 (November 12, 2008). This proposed rulemaking will add a new Part 226 to the Board's air regulations. The areas in which nonferrous metal production facilities would become subject to this proposed rulemaking are listed in Section 226.125 of the proposed rule language.

On November 15, 2013, the IEPA filed this proposal pursuant to Sections 10, 27, 28.2 and 28.5 (Clean Air Act rules; fast track) of the Environmental Protection Act (Act). 415 ILCS 5/10, 27, 28.2 and 28.5 (2012). In an order dated November 21, 2013, the Board accepted IEPA's proposed rulemaking for hearing without commenting on the merits of the proposal and submitted the proposal to first-notice publication pursuant to the "fast-track" procedures of Section 28.5 of the Act. 415 ILCS 5/28.5 (2012).

In this opinion, the Board first provides the procedural history of this rulemaking and the CAA background leading up to the IEPA's proposal. The opinion summarizes the IEPA's proposal before addressing issues raised at the hearing held on January 8, 2014. The order following this opinion then sets forth the proposed Part 226 of the Board's air regulations for second notice review by the Joint Committee on Administrative Rules (JCAR).

PROCEDURAL HISTORY

On November 15, 2013, the IEPA filed this rulemaking proposal with the Board along with a technical support document (TSD) and a statement of reasons (Statement) to satisfy certain requirements under the CAA.

On November 21, 2013, the Board adopted an order accepting the IEPA's proposal for hearing without commenting on its merits and sending the proposed rule to first notice under the Illinois Administrative Procedure Act. *See* 37 Ill. Reg. 19490-522; Standards and Limitations for Certain Sources of Lead: Proposed 35 Ill. Adm. Code 226, R14-19 (Nov. 21, 2013); *see also* 5 ILCS 100/1-1 *et seq.* (2012). Also on November 21, 2013, the hearing officer issued a notice of hearings and hearing officer order scheduling three hearings in Chicago.

On December 6, 2013, the proposed rules were published in the Illinois Register. *See* 37 Ill. Reg. 19490-522. The first hearing (Tr.) was held in Chicago on January 8, 2014. In anticipation of the hearing, IEPA pre-filed testimony of Rory Davis, an environmental protection engineer in the air quality planning section, air pollution control division of the IEPA. Mr. Davis' testimony was the only exhibit admitted into the record at the first hearing. (Tr. at 9-10). The only questions or comments at hearing came from the Board and Keith Harley of the Chicago Legal Clinic representing the Pilsen Environmental Rights and Reform Organization.

As required by Section 27 of the Act, the Board requested an economic impact study from the Department of Commerce and Economic Opportunity (DCEO) on the proposed rulemaking on November 21, 2013. Tr. at 39. Because the Board had received no response from DCEO at the time of the hearing, the hearing officer provided an opportunity for testimony on the Board's request for the economic impact study and the lack of DCEO response. *Id.* No testimony was offered. *Id.* The hearing officer also explained that any person could request, within seven days of the first hearing, that a second hearing be held for the presentation of testimony by any affected entities or interested parties. Tr. 49-50. No request for a second hearing was received by the Board. Therefore, the second and third hearings were cancelled by hearing officer order dated January 21, 2014. Hearing Officer Order (Jan. 21, 2014).

On January 13, 2014, the IEPA filed post hearing comments (Comm.).¹ No other comments were filed with the Board.

REGULATORY BACKGROUND

On November 12, 2008, the United States Environmental Protection Agency (USEPA) revised the NAAQS for lead. TSD at 6. Both the primary and secondary NAAQS for lead were lowered to 0.15 $\mu\text{g}/\text{m}^3$. *Id.*; *see* National Ambient Air Quality Standards for Lead, 73 Fed. Reg. 66,964, 66,965 (Nov. 12, 2008). As a result, the Granite City nonattainment area was designated as such for the lead NAAQS effective December 31, 2010, and the Chicago nonattainment area was designated as such effective December 31, 2011. *See* 75 Fed. Reg. 71033-44 (Nov. 22, 2010), 76 Fed. Reg. 72097-120 (Nov. 22, 2011). "These nonattainment designations triggered requirements for Illinois to revise its [SIP] for lead." TSD at 6.

The CAA requires states to submit SIPs that detail control programs aimed at pollution sources for the attainment and maintenance of NAAQS. Statement at 6; *see* 42 U.S.C. § 7410. Section 172(c)(1) of the CAA provides that a plan, "shall provide for the implementation of all reasonably available control measures as expeditiously as practicable . . . and shall provide for attainment of the national primary ambient air quality standards." 42 U.S.C. § 7502(c)(1).

This proposed rulemaking, "is intended to satisfy Illinois' obligation to submit a [SIP] to address requirements under Section 172 of the CAA and 40 C.F.R. § 51.117 for sources of lead emissions in areas designated as nonattainment with respect to the lead NAAQS." Statement at

¹ The IEPA's post-hearing comments do not include page numbers. For citation purposes, the Board has assigned page numbers to the post-hearing comments, not numbering the notice page of the filing, but beginning with the first page of questions.

1, citing 42 U.S.C. § 7502. More specifically, the IEPA is proposing “reasonable and cost-effective lead controls on nonferrous metal production facilities” located in the Granite City nonattainment area and the Chicago nonattainment area. Statement at 1, 13. The IEPA cited Section 10, 27, 28, and 28.5 of the Act as authority for the proposed rulemaking. Statement at 1; 415 ILCS 5/10, 27, 28, 28.5 (2012). Section 28.5 of the Act provides for “fast-track” proceedings applying “solely to the adoption of rules proposed by the Agency and required to be adopted by the State under the Clean Air Act as amended by the Clean Air Act Amendments (CAAA).” Statement at 5, citing 415 ILCS 5/28.5 (2012).

SUMMARY OF PROPOSED RULEMAKING

Introductory Sections and Definitions (Sections 226.100 to 226.115)

Section 226.100 states that if a portion of the proposed Part 226 is found invalid, that finding will not affect other portions of Part 226. Section 226.105 identifies the scope of Part 226 and states that air quality standards found at 35 Ill. Adm. Code 243 may not be violated regardless of the provisions in the proposed Part 226. Section 226.110 sets out abbreviations and acronyms found elsewhere in the rulemaking. Finally, Section 226.115 provides the definitions commonly used throughout the proposed Part 226.

At first notice, the JCAR proposed adding a definition for “Section Manager” to Section 226.115. Several sections of the proposed rulemaking require the submission of documents to the Section Manager of the IEPA’s Bureau of Air, compliance section. The Board includes the definition in the second notice order, below. The Board finds the use of the term “Section Manager” more efficient than spelling out the complete title each time that person is referred to throughout the proposed rule. In addition, the Board edited the definition of “rotary furnace,” replacing the parenthetical phrase “also known as a rotary reverberatory furnace” with “or ‘rotary reverberatory furnace’” in order to be consistent with other provisions in Section 226.115 that define more than one term.

Incorporations by Reference (Section 226.120)

Sections 226.120(a) and (b) incorporate by reference the two nonattainment areas as set out in the *Federal Register*. Sections 226.120(c)-(h), and (j) incorporate by reference several *Code of Federal Regulations* provisions that provide standard test methods specifically referred to and required by other sections of the proposed Part 226. Section 226.120(i) incorporates by reference USEPA’s Emission Measurement Center Guideline Document (GD-042), *Preparation and Review of Site-Specific Emission Test Plans*, revised March 1999, which is referred to in other sections of the proposed Part 226 and “details those measure[s] that must be set forth in testing protocols to be submitted to the [IEPA].” Statement at 19. Finally, Section 226.120(k) incorporates by reference OSHA [Occupational Safety & Health Administration] Method 1006 (approved January 2005) that may be used as an alternative emissions testing method as provided in Section 226.175(m).

During the January 8, 2014 hearing in this matter, the Board asked IEPA if it objected to the Board inserting language in provisions of the rule relying on an incorporated by reference document indicating that the document was incorporated by reference in Section 226.120. Tr. at

38. The IEPA had no objection to those insertions. *Id.* Therefore, the Board has inserted language, as necessary, referring to this section when an incorporated by reference document is cited.

Applicability (Section 226.125)

Section 226.125 defines the lead nonattainment areas, a portion of Madison County (Granite City nonattainment area) and a portion of Cook County (Chicago nonattainment area), subject of proposed Part 226. The Board added language indicating that the *Federal Register* citation defining each nonattainment area is incorporated by reference in the proposed rulemaking. The incorporation by reference language appears in the order below for second notice.

Compliance Date (Section 226.130)

Section 226.130 provides that the owner or operator of an existing lead emission unit in the Granite City or Chicago nonattainment areas must comply with the proposed rule no later than January 1, 2015. This section provides that new lead emission units must comply with the rule “by the date on which the unit initially begins operation.”

Lead Emission Standards (Section 226.140)

Section 226.140 provides different lead emission standards and requires specific emission controls based on the type of lead emission unit. Section 226.140(a) sets the standard for two types of “alloying and refining kettles.” Section 226.140(b) provides the standard for two types of “reverberatory furnaces or rotary furnaces.” Those subsections also require capture systems and total enclosure for the kettles and furnaces. Section 226.140(c) provides a standard for “emissions of lead exiting an uncontrolled stack during quenching or mold cooling operations” and sets a time limit on quenching operations. Section 226.140(d) sets the standard for induction furnaces and requires that they be equipped with a capture system. Section 226.140(e) provides a standard for “all other furnaces, lead kettles, or any other operation subject to this Part” and requires those emission units to be equipped with a capture system vented to a control device. Finally, Section 140.226(f) requires sources subject to Part 226 to operate under one of the specified state or federal permitting programs.

Operational Monitoring for Control Devices (Section 226.150)

Section 226.150(a) requires that owners or operators of lead emission units install, maintain, and operate parametric monitoring equipment to measure the pressure drop across the control devices mandated in Section 226.140. This subsection also sets out the requirements for recording data produced by the monitoring equipment. Section 226.150(b) requires lead emission units associated with a baghouse or other filter system and subject to specified total enclosure requirements to install, maintain, and operate parametric monitoring equipment that consists of a leak detection system. The leak detection system must be at the outlet of the baghouse or other filter system.

Section 226.150(c) requires the development, maintenance, and submittal to IEPA of Control Device Monitoring Plans (CDMP) by owners and operators of lead emission units. This

subsection provides a timeline for the submission of the CDMP for review and approval by the IEPA. The Board deleted language from this section that became unnecessary with the definition of “Section Manager.” This change is reflected in the order below for second notice.

Section 226.150(d) requires that the CDMP include procedures for the investigation of pressure changes and leaks, along with every alarm from the leak detection system. The section further provides that the CDMP must include corrective actions and preventive measures to address leaks, pressure changes, and alarms. Finally, this section provides that the owner or operator must operate pressure differential and leak detection systems according to the CDMP at all times.

Total Enclosure (Section 226.155)

Section 226.155 requires total enclosure of specified lead emission units when the unit is operating or housekeeping activities are being performed. Section 226.155(a) requires the installation, maintenance, and operation of the total enclosure and lists the types of lead emission units that require total enclosure. The Board made a non-substantive change to subsection (a)(6) in an attempt to clarify which areas of a facility are exempt from total enclosure requirements and includes that language for second notice in the order below. Section 226.155(b) requires that the gas stream collected by each total enclosure be ducted to a control device that satisfies Section 226.140.

Section 226.155(c) mandates an inward flow of air through natural draft openings in the total enclosure and specifies an average facial velocity for air flow and an average interior negative pressure that must be maintained to indicate total enclosure in compliance with the section. Section 226.155(d) requires that total enclosure be maintained at structural openings “except as needed for temporary access to conduct manufacturing operations.” Finally, Section 226.155(e) requires that a total enclosure be free of openings resulting from deterioration so that all natural draft openings must not exceed 5 percent of the total enclosure’s surface area.

Operational Measurement for Total Enclosure (Section 226.160)

Section 226.160(a) mandates that the owner or operator of a lead emission unit must measure all natural draft openings and the total surface area of the total enclosure. Section 226.160(b) requires that the owner or operator of a lead emission unit subject to the total enclosure requirements measure the facial velocity of air flowing through all natural draft openings in the total enclosure and sets out the equation to be used for that measurement. Section 226.160(c) provides an alternative to compliance with the facial velocity measurements provisions in Section 226.160(b).

Subsection (c) provides that an owner or operator must install, operate, and maintain instrumentation to monitor the pressure differential of a total enclosure to demonstrate compliance with the requirement of Section 226.155(c) that there be an inward flow of air through all natural draft openings. Subsection (c) provides where the instrumentation must be installed and differentiates between the amount of instrumentation required for total enclosures over 10,000 square feet as compared to those under 10,000 square feet. Finally, Section 226.160(c) requires that the differential pressure monitoring systems be: a) certified to a

specified level of accuracy; b) equipped with a continuous recorder; c) calibrated at least once every calendar year; and d) equipped with a backup, uninterruptible power supply.

Section 226.160(d) requires the development of a continuous parametric monitoring plan (CPMP) for owners and operators of a lead emission unit subject to the total enclosure requirements. Subsection (d) requires the owner or operator to update the CPMP as necessary and to conduct monitoring pursuant to the CPMP at all times. The CPMP must be submitted to the IEPA for review and approval by the date of compliance and again within 30 days after changes to the CPMP. Subsections (d)(1), (d)(2), and (d)(3) provide what information is required in the CPMP depending upon which method of compliance with the facial velocity requirements the owner or operator uses. Subsection (d)(1) provides the information necessary in the CPMP if the owner or operator demonstrates compliance with the facial velocity requirements by testing air flow at the total enclosure control device simultaneously with emissions testing required by Section 226.175. Subsection (d)(2) provides the information necessary in the CPMP if the owner or operator demonstrates compliance with the facial velocity requirements by monitoring the volumetric flow from all gas streams at the total enclosure's control device.

Section 226.160(d)(3) provides the CPMP informational requirements if the owner or operator demonstrates compliance with the total enclosure requirements using instrumentation to monitor the pressure differential of the total enclosure pursuant to Section 226.160(c). Finally, Section 226.160(e) provides that the owner or operator of a lead emission unit subject to the total enclosure requirements must notify the IEPA of any changes to the method used to demonstrate compliance with those requirements. The notification must include an updated CPMP and be submitted to IEPA at least 30 days before changing the compliance method.

Inspection (Section 226.165)

Section 226.165 requires the owner or operator of a lead emission unit to inspect the control devices and the total enclosures at least once per month. Further, Section 226.165 requires maintenance and repair of control devices and total enclosures on an "as necessary" basis.

Lead Fugitive Dust Operating Program (Section 226.170)

Section 226.170 requires the owner or operator of a lead emission unit to operate according to a fugitive dust operating program. Section 226.170(a) indicates areas, activities, and events subject to the fugitive dust operating program, including: source roadways; source buildings housing lead emission units; battery storage areas; equipment maintenance for equipment used in connection with the processing or handling of lead-containing materials; material storage and material handling areas for lead-containing materials, except where only finished products are stored or handled; spillage of lead-containing material; and sorting or handling of lead-bearing scrap if that sorting or handling is subject to the total enclosure requirements found earlier in the proposed Part 226.

Section 226.170(b) requires the development and maintenance of the fugitive dust operating program. Subsection (b) directs the owner or operator of a lead emissions unit to

submit the program to the IEPA for review and approval. Section 226.170(b) further mandates when the owner or operator must submit the fugitive dust operating program to the IEPA, that the owner or operator must update the program to ensure it is kept current, and operate according to the program at all times.

Section 226.170(c) provides specific details of what must be included in the fugitive dust operating program. Section 226.170(d) requires groundcover to minimize wind-blown dust leaving the property where a lead emission unit is housed. Finally, Section 226.170(e) states that the requirements of the proposed Part 226 do not exempt an owner or operator from applicable requirements of Part 212 of the Board's air pollution regulations. 35 Ill. Adm. Code 212.

Emissions Testing (Section 226.175)

Section 226.175 provides the emission testing requirements of Part 226. Section 226.175(a) requires that emission testing for existing lead emission units must be completed by January 1, 2015. Section 226.175(b) allows an owner or operator that completed emission testing after January 1, 2011 but prior to January 1, 2015 to avoid testing again to demonstrate compliance with Part 226 if the emission units are unchanged, the IEPA approved the completed testing, and the owner or operator complied with all applicable recordkeeping and reporting requirements. Section 226.175(b)(2) states that, despite Subsection (a), the IEPA or USEPA may require emission testing for an existing lead emission unit. The Board made non-substantive changes to subsection (b) in an attempt to eliminate ambiguity about whether retesting is required and includes the language in the order, below, for second notice.

Section 226.175(c) requires new lead emission units to complete testing within 60 days after achieving its maximum operating rate, but in no circumstances more than 180 days after initial startup of the unit. Section 226.175(d) requires the owner or operator of a lead emission unit to conduct emissions tests at least once every five years. Section 226.175(e) requires the owner or operator to conduct emissions testing within 90 days after receipt of notice from IEPA or USEPA that testing is necessary to demonstrate compliance with the emission standards of Section 226.140.

Section 226.175(f) states that the owner or operator must conduct all emission testing required by proposed Part 226 pursuant to subsections (g) through (m) of Section 226.175. The Board added language narrowing subsection (f) to emissions testing required by Section 226.175. Subsection (f) otherwise might have been interpreted to apply subsections (g) through (m) to a far broader range of "tests for lead." Section 226.175(g) requires submission of a testing protocol consistent with USEPA's Emission Measurement Center Guideline Document (GD-042) (incorporated by reference) to IEPA prior to the emissions testing. The Board used the definition of "Section Manager" in subsection (g) for consistency with other provisions of the proposed rulemaking. The Board includes the language changes to this section in the order below for second notice.

Section 226.175(h) requires notification of emission testing to IEPA at least 30 days prior to testing, and again five days prior to testing. Section 226.175 provides opportunities for IEPA to waive the submission deadlines set in both subsections (g) and (h). Section 226.175(i) provides steps for an owner or operator to notify IEPA of a delay in emissions testing after the

30-day notice has been submitted to IEPA. The Board notes that “compliance section” is not defined by proposed Part 226. Therefore, in this instance, the Board retained the language originally proposed by the IEPA, specifying that the Illinois EPA’s Bureau of Air compliance section must get the notification required by subsection (i), and included that language for second notice in the order below.

Section 226.175(j) requires submission of the emission testing results to IEPA within 60 days after completion of testing. Section 226.175(k) requires the owner or operator to use specific emission testing methods and provides for approval of alternative methods by IEPA. Section 226.175(l) provides specifics about the required emissions tests, including: what testing methods must be used; the minimum sample volume; minimum sample time; the procedure for averaging emissions test results, and an alternative if the averaging criteria is not met; and testing conditions. Section 226.175(m) provides for emissions testing from any lead emission unit that vents through an uncontrolled stack. The Board included, for second notice, language noting that the specific emissions testing method for uncontrolled stacks is incorporated by reference in the proposed rulemaking.

Recordkeeping and Reporting (Section 226.185)

Section 226.185 generally requires the owner and operator of lead emission units to maintain records of compliance with all elements of the proposed Part 226. Section 226.185(a) requires the owner or operator to submit records to the IEPA within 30 days after a written request. This subsection also requires maintenance of records for at least 5 years from the date a record is created. Section 226.185(b) requires IEPA notification of initial startup of any lead emission unit subject to Part 226 within 30 days after startup. Section 226.185(c) specifies what information the records maintained pursuant to the section must include. In subsection (c)(8) of Section 226.185 the Board replaced the word “record” with the word “log” in order to be consistent within the subsection. Sections 226.185(d), (e), and (f) provide that records demonstrating compliance with Sections 226.150(a) and (b), (c), and (d) respectively, must be maintained.

Section 226.185(g) specifically requires maintenance of records demonstrating compliance with the fugitive dust operating program found in Section 226.170. Section 226.185(h) requires additional recordkeeping in circumstances where the lead emission unit operated without control equipment and the potential for emissions existed. Section 226.185(i) specifically requires recordkeeping demonstrating compliance with Section 226.175. Section 226.185(j) mandates the maintenance of an inspection log for all inspections of control devices and the information that log must contain. Section 226.185(k) mandates the maintenance of an inspection log for all inspections of total enclosures and the information that log must contain. Section 226.185(l) requires the maintenance of records demonstrating compliance with Sections 226.155(c), 226.160, and the CPMP.

Section 226.185(m) requires notice to IEPA when any deviation from the requirements of Part 226 or any exceedance of an emission standard is discovered and what information that notice must include. Finally, Section 226.185(n) requires that the owner or operator of a lead emission unit subject to Part 226 submit semiannual reports to IEPA and specifies what information the semiannual reports must include.

TECHNICAL AND ECONOMIC CONSIDERATIONS

The IEPA addressed the technical feasibility and economic reasonableness of the proposed regulations in the technical support document and the statement of reasons. At hearing, Keith Harley, of the Chicago Legal Clinic representing the Pilsen Environmental Rights and Reform Organization, made comments regarding the level of control technology mandated by the rule in the Chicago nonattainment area. The IEPA responded to comments and questions from Mr. Harley and the Board at hearing and in post-hearing comments. In this section, the Board summarizes the pre-filed testimony and testimony offered in response to questions asked at the hearing.

Pre-filed Testimony

The Board received pre-filed testimony from Rory Davis (Test.)² of IEPA's Bureau of Air on December 26, 2013. In his testimony, Mr. Davis indicated that the proposed rulemaking was the result of ongoing communication between IEPA and the two sources within the lead nonattainment areas. Test. at 3. Mr. Davis testified that before the proposed rulemaking, "there were no numerical limits for lead emissions at these sources." *Id.* He described the control strategies used in the proposed rulemaking as "limiting stack emissions" and using control equipment and work practices to limit the fugitive emissions of lead from the two sources. *Id.* at 5. Mr. Davis described fugitive emissions, one kind of lead emissions reduced by the proposed rulemaking, as:

Emissions that escape emission capture systems and can end up being emitted through doors, windows, or openings in buildings, or end up settling inside buildings or on the surrounding grounds, only to be emitted later when they are disturbed by wind or cleaning operations. Fugitive emissions in the proposed rule are addressed by work practice requirements such as those for cleaning and material handling, and by operating the most significant sources of fugitive emissions inside total enclosures under negative pressure. *Id.*

Mr. Davis stated that the communication between the IEPA and the sources, "provided the Agency with a detailed working knowledge of the physical properties of the sources, including locations and dimensions of buildings, as well as locations, heights, and emission concentrations of potential lead emission release points." Test. at 4. He indicated that both sources "agreed that [the] changes [in the proposed rulemaking] can be made in order to limit lead emissions, and both sources have begun to implement the necessary changes for compliance at the time of this rulemaking," as evidence that the provisions of the proposed rulemaking can be completed in an economically reasonable manner. *Id.* at 6.

IEPA calculated that the proposed rulemaking would result in a greater than 50% reduction in lead emissions (both stack emissions and fugitive emissions) at each source. Test. at 7. Mr. Davis called the 50% reduction estimate conservative because it was based on "maximum allowable emissions" and "[i]t is unlikely that either source would emit the maximum allowable

² Mr. Davis' pre-filed testimony does not include page numbers. For citation purposes, the Board has assigned page numbers to the pre-filed testimony.

emissions during all hours of a given year.” *Id.* Mr. Davis indicated that dispersion modeling was used to ensure that the proposed rulemaking would result in compliance with the lead NAAQS. *Id.* at 7. Mr. Davis testified that USEPA had expressed agreement with the proposed rule including modeling results used to inform the rulemaking provisions. *Id.* at 4.

Hearing Testimony

Mr. Harley was the only person other than the Board who asked questions of the IEPA’s witnesses: Rory Davis and David Bloomberg, Manager, Air Quality Planning Section, Bureau of Air. Mr. Harley’s questions were specifically about the H. Kramer facility in the Chicago nonattainment area. Tr. at 11. As noted above, Mr. Harley’s questions focused on the levels of control technology required by the proposed rulemaking and how the control technology compared to other industry examples. *Id.* at 11-31. In response to Mr. Harley’s question regarding whether Reasonably Available Control Technology (RACT) or Reasonably Available Control Measures (RACM) were referenced when creating the proposed rulemaking, Mr. Davis indicated that the emission control provisions of the proposed rulemaking were more stringent than RACT. *Id.* at 11-12. Mr. Davis, however, later stated that he wasn’t sure what RACT would be for lead, and that the proposed rulemaking was based on what was achievable. *Id.* at 12. Mr. Bloomberg also testified that the controls were based on “research both by Illinois EPA and USEPA into what the best and most feasible controls would be at that facility.” *Id.* at 13. IEPA indicated that provisions of the proposed rulemaking were influenced by a consent decree entered between the United States, the State of Illinois, and H. Kramer.³

Mr. Harley questioned the IEPA about whether the lead emission reductions would come from stack reductions or fugitive emission reductions. Tr. at 14. In response, the IEPA indicated that most of the reduction figures enumerated in the IEPA’s proposal were a comparison of stack emissions before Part 226 and post-regulation stack emissions. *Id.* at 15. Fugitive emissions, on the other hand, were difficult for IEPA to quantify for a before-and-after comparison. *Id.* at 16. Mr. Harley asked how the IEPA is able to ensure that the H. Kramer facility would meet the emissions standards without comparison to RACT, RACM, Best Available Control Technology (BACT), and Lowest Achievable Emissions Rate (LAER). *Id.* at 19. IEPA testified that modeling data and communication with H. Kramer have both indicated that H. Kramer will achieve compliance with the emission standards set out in the rule. *Id.* at 20.

The Board asked IEPA about the possibility of a new source of lead emissions in the two lead nonattainment areas. Tr. at 25. Mr. Davis acknowledged the possibility of a new source of lead emissions at either nonattainment area, but indicated that any new source “would have to operate at levels . . . that would [] not result in a violation of the NAAQS at any point outside their boundaries.” *Id.* at 26. In addition, Mr. Davis testified that any new source of lead emissions would be subject to additional permitting requirements. *Id.* at 33. The Board asked

³ The consent decree, filed January 31, 2013 in the United States District Court for the Northern District of Illinois, is a part of the record in this matter and can also be found at <http://www.epa.gov/reg5oair/enforce/pilsen/pdf/hkramer-consentdecree.pdf>. At the January 8, 2014 hearing, IEPA testified that the consent decree document contains the information from H. Kramer’s enforcement case that the IEPA relied upon in developing the proposed rulemaking. Tr. at 21.

IEPA about controls on fugitive emissions outside of the total enclosure. *Id.* at 31. IEPA responded that a number of work areas on the H. Kramer and Mayco sites will be subject to work practices that will reduce fugitive emissions. *Id.* at 32.

Post-Hearing Comments

Prompted by questions by the Board at hearing, IEPA submitted more detailed information regarding the reduction in fugitive emissions of lead in its post-hearing comments. The IEPA states, “[t]he Agency did not attempt to quantify fugitive lead emissions at either of the affected sources prior to changes that will be necessary at each source in order to comply with the proposed rule.” Comm. at 1. In an attempt to clarify the distinction between point-source emissions and fugitive emissions, and where the emission reductions may be anticipated, the IEPA states,

processes that were the most significant sources of fugitive emissions will essentially now be point sources, because the emissions will take place within a permanent total enclosure and any lead particulate matter will either be captured by the control device or will be caught by the proposed regulation’s new cleaning mandate after settling out on the floor or other surfaces within the enclosure. *Id.*

IEPA concludes that “fugitive emissions are appropriately limited and will be significantly reduced by the measures in the proposed rule.” *Id.* at 2.

The IEPA also provided information on the timeline of installation and operation of new equipment at the H. Kramer facility in response to Mr. Harley’s questions at hearing. Comm. at 2. IEPA states that emission testing performed in September 2013 confirms that the new pollution control equipment, required by the proposed Part 226, is already in place and operational at H. Kramer. *Id.* The relevant emissions testing was performed under maximum emission operating conditions, as required, and, IEPA states:

Agency analysis also confirms that the pollution control equipment at Kramer is capable of meeting the standards for lead emissions in the proposed rule. Recent emissions testing confirmed that lead emissions from the two new baghouses were 0.0000033 gr/dscf and 0.0000009 gr/dscf. Accordingly, the test results were two orders of magnitude below the limit of 0.00010 gr/dscf in the proposed rule. *Id.*

Board Finding

The Board finds the proposed rulemaking is technically feasible and economically reasonable for the reduction of lead emissions in compliance with the CAA. In support of this finding, the Board notes the lack of objections filed by either affected entity and the considerable dialogue between the affected entities, IEPA, and USEPA in the development of proposed Part 226. The record in this matter also indicates that the affected sources of lead emissions have started installing the necessary equipment for complying with the proposed rulemaking and one entity (H. Kramer) has completed installation and currently operates under the proposed rule with reduced lead emissions. The Board also notes that the proposed rulemaking provides some flexibility in demonstrating compliance to the IEPA.

CONCLUSION

The Board finds that the IEPA's proposal for the reduction of lead emissions through Standards and Limitations for Certain Sources of Lead is technically feasible and economically reasonable. The Board has also made a limited number of technical changes that do not merit substantive discussion. Accordingly, the Board adopts for second notice the following order.

ORDER

The Board directs the Clerk to submit the following proposed amendments to its air pollution regulations to JCAR for second notice review under the Illinois Administrative Procedure Act. Proposed additions to the Board's first-notice proposal of a new Part 226 are underlined, and proposed deletions from that proposal are stricken.

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:

| | |
|---------|---|
| 226.100 | Severability |
| 226.105 | Scope and Organization |
| 226.110 | Abbreviations and Acronyms |
| 226.115 | Definitions |
| 226.120 | Incorporations by Reference |
| 226.125 | Applicability |
| 226.130 | Compliance Date |
| 226.140 | Lead Emission Standards |
| 226.150 | Operational Monitoring for Control Device |
| 226.155 | Total Enclosure |
| 226.160 | Operational Measurement for Total Enclosure |
| 226.165 | Inspection |
| 226.170 | Lead Fugitive Dust Operating Program |
| 226.175 | Emissions Testing |
| 226.185 | Recordkeeping and Reporting |

AUTHORITY: Implementing Section 10 of the Environmental Protection 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, that 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 |
| 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 context, all terms not defined in this Part 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 2 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. These 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 the particulate 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. These 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. These 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 or enclosures 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; these 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 area" 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~~ or "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.

"Section Manager" means the Manager of Illinois EPA's Bureau of Air, Compliance Section.

"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).

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, Methods 1, 1A (2012).

- e) 40 CFR 60, appendix A, Methods 2, 2A, 2C, and 2D (2012).
- f) 40 CFR 60, appendix A, Methods 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), as incorporated by reference in Section 226.120; 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)), as incorporated by reference in Section 226.120.

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 (see Section 226.125), 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. 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 each control device must not exceed 0.00010 gr/dscf.

- b) For reverberatory furnaces or rotary furnaces located at a source subject to this Part (see Section 226.125), 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. 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 each control device must not exceed 0.00010 gr/dscf.

- c) Notwithstanding the provisions for total enclosure in subsections (a) and (b), 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 (see Section 226.125), 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 (see Section 226.125), but not subject to subsection (a), (b), or (d), 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 (see Section 226.125) 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. 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).
 - 2) Data must be recorded at least once every 8 hours during operation of any lead emission unit subject to Section 226.140(d) or (e).
 - 3) If the control device used to control lead emission units subject to Section 226.140(a) or (b) is the same as the control device used to control other lead emission units subject to Section 226.140(d) or (e), the requirements in subsection (a)(1) 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 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. 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 Manager by the compliance date specified in Section 226.130 and within 30 days after any changes are made to the 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 the 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 (a)(1) through (6) 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).
- 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. ~~The, except that the~~ following areas are exempt from the total enclosure requirements unless the areas listed also contain operations listed in subsections (a)(1) through (5):
 - 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) during all sorting and handling activities and if the 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.
- 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) in the total enclosure is operating. 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 an 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) 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 or enclosures 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 those 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 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 must measure the facial velocity 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) 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):

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

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 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; or
 - 2) An owner or operator of a lead emission unit subject to the total enclosure requirement of Section 226.155 must install, maintain, and operate a flow monitor at the outlet of each control device required by Section 226.140 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), an owner or operator of a lead emission unit subject to the total enclosure requirement of Section 226.155 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). This instrumentation must be located and designed to operate in accordance with all of the requirements of subsections (c)(1) through (6) ~~of this Section~~:
- 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 3 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 10 meters of the midpoint of a straight line between the 2 other monitors specified. The midpoint monitor must not be located on the same wall as either of the other 2 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 Hg) with a minimum accuracy of plus or minus 0.001 inches of water (0.002 mm Hg).
 - 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 must develop and maintain a Continuous Parametric Monitoring Plan containing the information required in subsection (d)(1), (2), or (3). The CPMP must be submitted for review and approval to the Section Manager by the compliance date specified in Section 226.130 and within 30 days after any changes are made to the 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) using the total enclosure measurement method in subsection (b)(1), the CPMP must contain the information required by subsections (d)(1)(A) through (D).
 - 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 those 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) that demonstrate compliance with the facial velocity requirements in Section 226.155(c). 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), 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). 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), as well as the reporting frequency.
- 2) If electing to comply with the facial velocity requirement in Section 226.155(c) using the total enclosure monitoring method in subsection (b)(2), the CPMP must contain the information required by subsections (d)(2)(A) through (C).
- 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), 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). 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), as well as the reporting frequency.
- 3) If electing to comply with the average differential pressure requirement in Section 226.155(c) using the total enclosure measurement method in

subsection (c), the CPMP must contain the information required by subsections (d)(3)(A) through (C).

- A) The CPMP must identify the locations and design of each differential pressure monitoring instrumentation demonstrating compliance with the requirements of subsection (c) to ensure that the average differential pressure is measured properly, explain why those 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), 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). 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), 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 must notify the Section Manager of the measurement method by which the owner or operator will comply with the requirements of this Section. The 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. The inspections of control devices must include all structures that comprise the infrastructure of the affected control device and other structures that 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):
 - 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).
- 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 Section Manager by the compliance date specified in Section 226.130 and within 30 days after any changes are made to the program. 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).
 - 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 following frequencies:

- 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 for all production areas.
 - B) Cleanings of scrap sorting and handling areas subject to Section 226.155(a)(6)(D) 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 7 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 7 calendar days to remove dust or other accumulated material from paved areas within the property boundaries. The 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 7 calendar days. Within 72 hours after 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 in this subsection (c)(7). All vacuuming referenced in this subsection (c)(7) 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 in which filter bag replacement requires more than one operational day, the requirements of subsection (c)(7)(C) must be completed just prior to the end of each operational day.
- 8) Measures, including, but not limited to, those specified in subsections (c)(1) through (7) 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 or 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 must be conducted by January 1, 2015.
- b) Testing completed prior to January 1, 2015~~Retesting~~
 - 1) 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 prior to January 1, 2015 is not required to retest pursuant to subsection (a) if:
 - A) 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;
 - B) The owner or operator submitted the results of the tests to the Illinois EPA, and the tests were not rejected by the Illinois EPA;
 - C) The same capture system and control device or devices tested under subsection (b)(1)(A) are still being used by the subject lead emission unit; and
 - D) The owner or operator complies with all recordkeeping and reporting requirements in Section 226.185(i).
 - 2) 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).
- 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 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 5 years. The owner or operator of a lead emission unit that tested prior to January 1, 2015, in accordance with subsection (b) must use the original test date as the beginning of this 5-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, the owner or operator of a lead emission unit subject to this Part must, at his or her own expense, have the 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 that 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 ~~the~~ tests for lead required by this Section pursuant to subsections (g) through (m).
- g) The owner or operator of a lead emission unit required to test pursuant to subsection (a), (c), (d), or (e) must submit a testing protocol as described in USEPA's Emission Measurement Center Guideline Document (GD-042), as incorporated by reference in Section 226.120, to the Illinois EPA, directed to the Section 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 Section Manager, the Illinois EPA may, in its sole discretion, waive the 45-day requirement. A waiver is only effective if it is provided in writing by the Section Manager or his or her designee.
- h) Notification of a scheduled emissions test must be submitted to the Illinois EPA in writing, directed to the Section Manager, at least 30 days prior to the expected date of the emissions test and, again, 5 days prior to the testing. Upon written request directed to the Section Manager, the Illinois EPA may, in its sole discretion, waive the 30-day requirement or the 5-day requirement. A waiver is only effective if it is provided in writing by the Section Manager 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's 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 subsection (a), (c), (d), or (e) must submit the results of the test to the Illinois EPA, directed to the Section Manager.
- k) The owner or operator of a lead emission unit subject to the emissions testing requirements of this Section must conduct tests for lead emissions using 40 CFR 60, subpart A, and appendix A, Methods 1 (1 or 1A), 2 (2, 2A, 2C, or 2D), 3 (3 or 3A), and 4, and Method 12 or 29, as incorporated by reference in Section 226.120, 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;

- 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 3 runs must be performed and the arithmetic average of 3 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 3 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).
 - B) Notwithstanding subsection (l)(4)(A), if the owner or operator of a lead emission unit elects to perform more than 3 test runs, then the average must be calculated based upon the results of all valid test runs.
 - C) Notwithstanding subsection (l)(4)(A), 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 (l)(4)(C) and verification by the Section Manager or his or her 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 2 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 (l)(4), 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 those emissions in accordance with the requirements of this Section or calculate the emissions by means of collecting area time-weighted average lead samples and analyzing those

samples through the use of OSHA Method 1006, as incorporated by reference in Section 226.120. If an owner or operator of a lead emission unit subject to this Part elects to calculate lead emissions from an uncontrolled stack, the calculations must be completed at least once every 5 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 the 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 5 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 Section Manager 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 the 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. The 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 the 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 ~~log 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).
 - e) The owner or operator of a lead emission unit subject to this Part must maintain the CDMP required by Section 226.150(c). 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 the pressure changes and, if applicable, every alarm from the leak detection system, and any maintenance and repair activities performed as a result of the investigation. The records must also include the date of each aforementioned activity. Records must be maintained in order to demonstrate compliance with Section 226.150(d).
 - 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.
 - 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 the 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.
 - 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. The 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).
 - 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. The 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).
 - 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.
 - m) The owner or operator of a lead emission unit subject to this Part must notify the Section Manager within 5 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 the deviations, a discussion of the possible cause of the 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 Section Manager. The 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 reports must be certified by a responsible official that the information submitted is complete, true, and accurate.

IT IS SO ORDERED.

I, John T. Therriault, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above order on March 20, 2014, by a vote of 4-0.



John T. Therriault, Clerk
Illinois Pollution Control Board