

RULE 1420.1. EMISSIONS STANDARD FOR LEAD FROM LARGE LEAD-ACID BATTERY RECYCLING FACILITIES

(a) Purpose

- (1) The purpose of this rule is to protect public health by reducing exposure and emissions of lead from large lead-acid battery recycling facilities, and to help ensure attainment of the National Ambient Air Quality Standard for Lead.

(b) Applicability

- (1) This rule applies to all persons who own or operate a lead-acid battery recycling facility that has processed more than 50,000 tons of lead a year in any one of the five calendar years prior to November 5, 2010, or annually thereafter, hereinafter a large lead-acid battery recycling facility. Applicability shall be based on facility lead processing records required under subdivision (m) of this rule, and Rule 1420 – Emissions Standards for Lead. Compliance with this rule shall be in addition to other applicable rules such as Rule 1420.

(c) Definitions

For the purposes of this rule, the following definitions shall apply:

- (1) **AGGLOMERATING FURNACE** means a furnace used to melt flue dust that is collected from a lead control device, such as a baghouse, into a solid mass.
- (2) **AMBIENT AIR** for purposes of this rule means outdoor air.
- (3) **BATTERY BREAKING AREA** means the plant location at which lead-acid batteries are broken, crushed, or disassembled and separated into components.
- (4) **DRYER** means a chamber that is heated and that is used to remove moisture from lead-bearing materials before they are charged to a smelting furnace.
- (5) **DRYER TRANSITION PIECE** means the junction between a dryer and the charge hopper or conveyor, or the junction between the dryer and the smelting furnace feed chute or hopper located at the ends of the dryer.
- (6) **DUCT SECTION** means a length of duct including angles and bends which is contiguous between two or more process devices (e.g., between a

- furnace and heat exchanger; baghouse and scrubber; scrubber and stack; etc.).
- (7) EMISSION COLLECTION SYSTEM means any equipment installed for the purpose of directing, taking in, confining, and conveying an air contaminant, and which at minimum conforms to design and operation specifications given in the most current edition of *Industrial Ventilation, Guidelines and Recommended Practices*, published by the American Conference of Government and Industrial Hygienists, at the time a complete permit application is on file with the District.
 - (8) FUGITIVE LEAD-DUST means any solid particulate matter containing lead that is in contact with ambient air and has the potential to become airborne.
 - (9) FURNACE AND REFINING/CASTING AREA means any area of a large lead-acid battery recycling facility in which:
 - (a) Smelting furnaces or agglomerating furnaces are located; or
 - (b) Refining operations occur; or
 - (c) Casting operations occur.
 - (10) LEAD-ACID BATTERY RECYCLING FACILITY means any facility, operation, or process in which lead-acid batteries are disassembled and recycled into elemental lead or lead alloys through smelting.
 - (11) LEAD means elemental lead, alloys containing elemental lead, or lead compounds, calculated as elemental lead.
 - (12) LEAD CONTROL DEVICE means any equipment installed in the ventilation system of a lead point source or emission collection system for the purposes of collecting and containing lead emissions.
 - (13) LEAD POINT SOURCE means any process, equipment, or total enclosure used in the lead-acid battery recycling operation, including, but not limited to, agglomerating furnaces, dryers, and smelting furnaces, that pass through a stack or vent designed to direct or control its exhaust flow prior to release to the atmosphere.
 - (14) LEEWARD WALL means the furthest exterior wall of a total enclosure that is opposite the windward wall.
 - (15) MAINTENANCE ACTIVITY means any of the following activities conducted outside of a total enclosure that generates fugitive lead-dust:
 - (a) building construction, renovation, or demolition;
 - (b) replacement or repair of refractory, filter bags, or any internal or

- external part of equipment used to process, handle, or control lead-containing materials;
- (c) replacement of any duct section used to convey lead-containing exhaust;
 - (d) metal cutting or welding that penetrates the metal structure of any equipment, and its associated components, used to process lead-containing material, such that lead dust within the internal structure or its components can become fugitive lead-dust; or
 - (e) resurfacing, repair, or removal of ground, pavement, concrete, or asphalt.
- (16) **MATERIALS STORAGE AND HANDLING AREA** means any area of a large lead-acid battery recycling facility in which lead-containing materials including, but not limited to, broken battery components, reverberatory furnace slag, flue dust, and dross, are stored or handled between process steps. Areas may include, but are not limited to, locations in which materials are stored in piles, bins, or tubs, and areas in which material is prepared for charging to a smelting furnace.
- (17) **MEASURABLE PRECIPITATION** means any on-site measured rain amount of greater than 0.01 inches in any complete 24-hour calendar day (i.e., midnight to midnight).
- (18) **PARTIAL ENCLOSURE** for purposes of this rule means a structure comprised of walls or partitions on at least three sides or three-quarters of the perimeter that surrounds areas where maintenance activity is conducted, in order to prevent the generation of fugitive lead-dust.
- (19) **PROCESS** means using lead or lead-containing materials in any operation including, but not limited to, the charging of lead-containing materials to smelting furnaces, lead refining and casting operations, and lead-acid battery breaking.
- (20) **RENOVATION** for purposes of this rule means the altering of a building or permanent structure, or the removal of one or more of its components that generates fugitive lead-dust emissions.
- (21) **SENSITIVE RECEPTOR** means any residence including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade twelve (k-12) schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes long term care

hospitals, hospices, prisons, and dormitories or similar live-in housing.

- (22) SLAG means the inorganic material by-product discharged, in molten state, from a lead smelting furnace that has a lower specific gravity than lead metal and contains lead compounds. This shall include, but not limited to, lead sulfate, lead sulfide, lead oxides, and lead carbonate consisting of other constituents charged to a smelting furnace which are fused together during the pyrometallurgical process.
- (23) SMELTING means the chemical reduction of lead compounds to elemental lead or lead alloys through processing in high temperatures greater than 980° C.
- (24) SMELTING FURNACE means any furnace where smelting takes place including, but not limited to, blast furnaces, reverberatory furnaces, rotary furnaces, and electric furnaces.
- (25) TOTAL ENCLOSURE means a permanent containment building/structure, completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, run-on), with limited openings to allow access and egress for people and vehicles, that is free of cracks, gaps, corrosion, or other deterioration that could cause or result in fugitive lead-dust.
- (26) WINDWARD WALL means the exterior wall of a total enclosure which is most impacted by the wind in its most prevailing direction determined by a wind rose using data required under paragraph (j)(5) of this rule, or other data approved by the Executive Officer.

(d) General Requirements

The owner or operator of a large lead-acid battery recycling facility shall be subject to the following requirements:

- (1) Prior to January 1, 2012, emissions shall not be discharged into the atmosphere which contribute to ambient air concentrations of lead that exceed 1.5 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) pursuant to District Rule 1420.
- (2) On and after January 1, 2012, emissions shall not be discharged into the atmosphere which contribute to ambient air concentrations of lead that exceed $0.15 \mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days. The ambient air concentrations of lead shall be determined by monitors pursuant to subdivision (j) or at any District-installed monitor.

- (3) No later than July 1, 2011, install, maintain, and operate total enclosures pursuant to subdivision (e) and lead point source emission control devices pursuant to subdivision (f). The owner or operator of a large lead-acid battery recycling facility shall comply with both subparagraphs (d)(3)(A) and (d)(3)(B):
 - (A) Submit complete permit applications for all construction and necessary equipment within 30 days of November 5, 2010.
 - (B) Complete all construction within 180 days of receiving Permit to Construct approvals from the Executive Officer, or by July 1, 2011, whichever is earlier.
 - (C) The Executive Officer may approve a request for an extension of the compliance deadline date if the facility can demonstrate that it timely filed all complete permit applications and is unable to meet the deadline due to reasons beyond the facility's control. The request shall be submitted to the Executive Officer no less than 30 days before the compliance deadline date.
 - (4) On and after July 1, 2011 submit a Compliance Plan pursuant to subdivision (g) if emissions are discharged into the atmosphere which contribute to ambient air concentrations of lead that exceed $0.12 \text{ } (\mu\text{g}/\text{m}^3)$ averaged over any 30 consecutive days determined by monitors pursuant to subdivision (j) or at any District-installed monitor.
- (e) Total Enclosures
- (1) Enclosure Areas

The owner or operator of a large lead-acid battery recycling facility shall enclose within a total enclosure the following areas in groups or individually:

 - (A) Battery breaking areas;
 - (B) Materials storage and handling areas, excluding areas where unbroken lead-acid batteries and finished lead products are stored;
 - (C) Dryer and dryer areas including transition pieces, charging hoppers, chutes, and skip hoists conveying any lead-containing material;
 - (D) Smelting furnaces and smelting furnace areas charging any lead-containing material;
 - (E) Agglomerating furnaces and agglomerating furnace areas charging

any lead-containing material; and

(F) Refining and casting areas.

(2) Total Enclosure Lead Emissions Control

The owner or operator of a large lead-acid battery recycling facility shall vent each total enclosure to an emission collection system that ducts the entire gas stream to a lead control device pursuant to subdivision (f).

(3) Total Enclosure Ventilation

Ventilation of the total enclosure at any opening including, but not limited to, vents, windows, passages, doorways, bay doors, and roll-ups shall continuously be maintained at a negative pressure of at least 0.02 mm of Hg (0.011 inches H₂O) measured pursuant to paragraph (e)(4).

(4) Digital Differential Pressure Monitoring Systems

The owner or operator of a large lead-acid battery recycling facility shall install, operate, and maintain a digital differential pressure monitoring system for each total enclosure as follows:

(A) A minimum of one building digital differential pressure monitoring system shall be installed and maintained at each of the following three walls in each total enclosure having a total ground surface area of 10,000 square feet or more:

(i) The leeward wall;

(ii) The windward wall; and

(iii) 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 (± 10) meters of the midpoint of a straight line between the two other monitors specified in clauses (e)(4)(A)(i) and (e)(4)(A)(ii). The midpoint monitor shall not be located on the same wall as either of the other two monitors described in clauses (e)(4)(A)(i) or (e)(4)(A)(ii).

(B) A minimum of one building digital differential pressure monitoring system shall be installed and maintained at the leeward wall of each total enclosure that has a total ground surface area of less than 10,000 square feet.

(C) Digital differential pressure monitoring systems shall be certified

by the manufacturer to be capable of measuring and displaying negative pressure in the range of 0.01 to 0.2 mm Hg (0.005 to 0.11 inches H₂O) with a minimum accuracy of plus or minus 0.001 mm Hg (0.0005 inches H₂O).

- (D) Digital differential pressure monitoring systems shall be equipped with a continuous strip chart recorder or electronic recorder approved by the Executive Officer. If an electronic recorder is used, the recorder shall be capable of writing data on a medium that is secure and tamper-proof. The recorded data shall be readily accessible upon request by the Executive Officer. If software is required to access the recorded data that is not readily available to the Executive Officer, a copy of the software, and all subsequent revisions, shall be provided to the Executive Officer at no cost. If a device is required to retrieve and provide a copy of such recorded data, the device shall be maintained and operated at the facility.
- (E) Digital differential pressure monitoring systems shall be calibrated in accordance with manufacturer's specifications at least once every 12 calendar months or more frequently if recommended by the manufacturer.
- (F) Digital differential pressure monitoring systems shall be equipped with a backup, uninterruptible power supply to ensure continuous operation of the monitoring system during a power outage.

(5) In-draft Velocity

The in-draft velocity of the total enclosure shall be maintained at ≥ 300 feet per minute at any opening including, but not limited to, vents, windows, passages, doorways, bay doors, and roll-ups. In-draft velocities for each total enclosure shall be determined by placing an anemometer, or an equivalent device approved by the Executive Officer, at the center of the plane of any opening of the total enclosure.

(f) Lead Point Source Emissions Controls

- (1) The owner or operator of a large lead-acid battery recycling facility shall vent emissions from each lead point source to a lead control device that meets the requirements of this subdivision and is approved by the Executive Officer.

- (2) The total facility mass lead emissions from all lead point sources shall not exceed 0.045 pounds of lead per hour. The maximum emission rate for any single lead point source shall not exceed 0.010 pounds of lead per hour. The total facility and maximum emission rates shall be determined using the most recent source tests conducted by the facility or the District.
 - (3) The owner or operator of a large lead-acid battery recycling facility shall install a secondary lead control device that controls lead emissions from the exhaust of the primary lead control device used for a dryer. The secondary lead control device shall be fitted with dry filter media, and the secondary lead control device shall only be used to vent the primary lead control device used for the dryer. An alternative secondary lead control method that is equally or more effective for the control of lead emissions may be used if a complete application is submitted as part of the permit application required under paragraph (d)(3) and approved by the Executive Officer.
 - (4) For any lead control device that uses filter media other than a filter bag(s), including, but not limited to, HEPA and cartridge-type filters, the filter(s) used shall be rated by the manufacturer to achieve a minimum of 99.97% capture efficiency for 0.3 micron particles.
 - (5) For any lead control device that uses a filter bag(s), the filter bag(s) used shall be polytetrafluoroethylene membrane-type, or any other material that is equally or more effective for the control of lead emissions, and approved for use by the Executive Officer.
 - (6) Each emission collection system and lead control device shall, at minimum, be inspected, maintained, and operated in accordance with the manufacturer's specifications.
- (g) **Compliance Plan**
- On and after July 1, 2011, the owner or operator of a large lead-acid battery recycling facility shall submit a Compliance Plan if emissions are discharged into the atmosphere which contribute to ambient air concentrations of lead that exceed $0.12 \mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days determined by monitors pursuant to subdivision (j) or at any District-installed monitor shall:
- (1) Notify the Executive Officer in writing within 72 hours of when the facility knew or should have known of exceeding an ambient air lead concentration of $0.12 \mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days.

- Notification shall only be required for the first time the ambient air lead concentration of $0.12 \mu\text{g}/\text{m}^3$ is exceeded;
- (2) Submit, within 30 calendar days of exceeding an ambient air lead concentration of $0.12 \mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days, a complete Compliance Plan to the Executive Officer for review and approval, subject to plan fees as specified in Rule 306. The Compliance Plan shall, at a minimum, include the following:
- (A) A description of additional lead emission reduction measures to achieve the ambient lead concentration of $0.15 \mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days, as required under paragraph (d)(2), including, but not limited to, requirements for the following:
- (i) Housekeeping, inspection, and maintenance activities;
 - (ii) Additional total enclosures;
 - (iii) Modifications to lead control devices;
 - (iv) Installation of multi-stage lead control devices;
 - (v) Process changes including reduced throughput limits; and
 - (vi) Conditional curtailments including, at a minimum, information specifying the curtailed processes, process amounts, and length of curtailment.
- (B) The locations within the facility and method(s) of implementation for each lead reduction measure of subparagraph (g)(2)(A); and
- (C) An implementation schedule for each lead emission reduction measure of subparagraph (g)(2)(A) to be implemented if lead emissions discharged from the facility contribute to ambient air concentrations of lead that exceed $0.15 \mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days measured at any monitor pursuant to subdivision (j) or at any District-installed monitor. The schedule shall also include a list of the lead reduction measures of subparagraph (g)(2)(A) that can be implemented immediately prior to plan approval.
- (3) The Executive Officer shall notify the owner or operator in writing whether the Compliance Plan is approved or disapproved. Determination of approval status shall be based on, at a minimum, submittal of information that satisfies the criteria set forth in paragraph (g)(2). If the Compliance Plan is disapproved, the owner or operator shall resubmit the Compliance Plan, subject to plan fees specified in Rule 306, within 30

calendar days after notification of disapproval of the Compliance Plan. The resubmitted Compliance Plan shall include any information necessary to address deficiencies identified in the disapproval letter. If the resubmitted Compliance Plan is denied, the operator or owner may appeal the denial by the Executive Officer to the Hearing Board under Rule 216 – Appeals and Rule 221 - Plans.

- (4) The owner or operator shall implement measures based on the schedule in the approved Compliance Plan if lead emissions discharged from the facility contribute to ambient air concentrations of lead to exceed $0.15 \mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days measured at any monitor pursuant to subdivision (j) or at any District-installed monitor.
- (5) The owner or operator may make a request to the Executive Officer to modify or update an approved Compliance Plan.

(h) Housekeeping Requirements

No later than 30 days after November 5, 2010, the owner or operator of a large lead-acid battery recycling facility shall control fugitive lead-dust by conducting all of the following housekeeping practices:

- (1) Clean by wet wash or a vacuum equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles in a manner that does not generate fugitive lead-dust, the following areas at the specified frequencies, unless located within a total enclosure vented to a lead control device. Days of measurable precipitation in the following areas occurring within the timeframe of a required cleaning frequency may be counted as a cleaning:
 - (A) Monthly cleanings of roof tops on structures ≤ 45 feet in height that house areas associated with the storage, handling or processing of lead-containing materials; and
 - (B) Quarterly cleanings, no more than 3 calendar months apart, of roof tops on structures > 45 feet in height that house areas associated with the storage, handling or processing of lead-containing materials; and
 - (C) Weekly cleanings of all areas where lead-containing wastes generated from housekeeping activities are stored, disposed of, recovered or recycled.
 - (D) Initiate immediate cleaning, no later than one hour, after any

maintenance activity or event including, but not limited to, accidents, process upsets, or equipment malfunction, that causes deposition of fugitive lead-dust onto areas specified in subparagraph (h)(1)(A) through (h)(1)(C). Immediate cleanings of roof tops shall be completed within 72 hours if the facility can demonstrate that delays were due to safety or timing issues associated with obtaining equipment required to implement this requirement.

- (2) Inspect all total enclosures and facility structures that house, contain or control any lead point source or fugitive lead-dust emissions at least once a month. Any gaps, breaks, separations, leak points or other possible routes for emissions of lead or fugitive lead-dust to ambient air shall be permanently repaired within 72 hours of discovery. The Executive Officer may approve a request for an extension beyond the 72-hour limit if the request is submitted before the limit is exceeded.
- (3) Upon receipt, any lead-acid battery that is cracked or leaking shall be immediately sent to the battery breaking area for processing or stored pursuant to paragraph (h)(6).
- (4) Pave, concrete, asphalt, or otherwise encapsulate all facility grounds as approved by the Executive Officer. Facility grounds used for plant life that are less than a total surface area of 100 square feet shall not be subject to encapsulation. Facility grounds requiring removal of existing pavement, concrete, asphalt or other forms of encapsulation, necessary for maintenance purposes shall not require encapsulation while undergoing work, and shall be re-encapsulated immediately after all required work is completed. All work shall be conducted in accordance with subdivision (i).
- (5) Remove any weather cap installed on any stack that is a source of lead emissions.
- (6) Store all materials capable of generating any amount of fugitive lead-dust including, but not limited to, slag and any other lead-containing waste generated from housekeeping requirements of subdivision (h) and maintenance activities of subdivision (i), in sealed, leak-proof containers, unless located within a total enclosure.
- (7) Transport all materials capable of generating any amount of fugitive lead-dust including, but not limited to, slag and any other waste generated from

housekeeping requirements of subdivision (h), within closed conveyor systems or in sealed, leak-proof containers, unless located within a total enclosure.

- (8) Initiate removal of any lead-containing material, including sludge, from the entire surface area of any surface impoundment pond or reservoir holding storm water runoff or spent water from housekeeping activities within 1 hour after the water level is \leq 1 inch above the bottom of the pond or reservoir. Removal of lead-containing material is required to be completed as soon as possible, and no later than six calendar days after the time initiation of the removal was required. Thereafter, surfaces shall be washed down weekly in a manner that does not generate fugitive lead-dust until the pond or reservoir is used again for holding water.
- (9) **Maintain and Use an Onsite Mobile Vacuum Sweeper or Vacuum**
The owner or operator of a large lead-acid battery recycling facility shall maintain an onsite mobile vacuum sweeper that is in compliance with District Rule 1186, or a vacuum equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles to conduct the following sweeping activities:
 - (A) Vacuum sweep all paved, concreted or asphalted facility areas subject to vehicular or foot traffic three times per day and occurring at least once per operating shift with each event not less than four hours apart, unless located within a total enclosure vented to a lead control device.
 - (B) Immediately vacuum sweep any area specified in subparagraph (h)(9)(A), no later than one hour after any maintenance activity or event including accidents, process upsets, or equipment malfunction that results in the deposition of fugitive lead-dust.
 - (C) Vacuum sweeping activities specified in paragraph (h)(9) shall not be required during days of measurable precipitation.
- (i) **Maintenance Activity**
 - (1) Beginning November 5, 2010, the owner or operator of a large lead-acid battery recycling facility shall conduct any maintenance activity in a negative air containment enclosure, vented to a permitted negative air machine equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles, that encloses all

affected areas where fugitive lead-dust generation potential exists, unless located within a total enclosure or approved by the Executive Officer. Any maintenance activity that cannot be conducted in a negative air containment enclosure due to physical constraints, limited accessibility, or safety issues when constructing or operating the enclosure shall be conducted:

- (A) In a partial enclosure, barring conditions posing physical constraints, limited accessibility, or safety issues;
 - (B) Using wet suppression or a vacuum equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles, at locations where the potential to generate fugitive lead-dust exists prior to conducting and upon completion of the maintenance activity. Wet suppression or vacuuming shall also be conducted during the maintenance activity barring safety issues;
 - (C) While collecting 24-hour samples at monitors for every day that maintenance activity is occurring notwithstanding paragraph (j)(2); and
 - (D) Shall be stopped immediately when instantaneous wind speeds are ≥ 25 mph. Maintenance work may be continued if it is necessary to prevent the release of lead emissions.
- (2) Store or clean by wet wash or a vacuum equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles, all lead-contaminated equipment and materials used for any maintenance activity immediately after completion of work in a manner that does not generate fugitive lead-dust.
- (j) Ambient Air Monitoring and Sampling Requirements
- Prior to January 1, 2011, ambient air monitoring and sampling shall be conducted pursuant to District Rule 1420. No later than January 1, 2011, the owner or operator of a large lead-acid battery recycling facility shall conduct ambient air monitoring and sampling as follows:
- (1) Collect samples from a minimum of four sampling sites. Locations for sampling sites shall be approved by the Executive Officer.
 - (A) Locations for sampling sites shall be based on maximum expected ground level lead concentrations, at or beyond the property line, as

determined by Executive Officer-approved air dispersion modeling calculations and emission estimates from all lead point sources and fugitive lead-dust sources, and other factors including, but not limited to, population exposure and seasonal meteorology.

- (B) The Executive Officer may require one or more of the four sampling sites to be at locations that are not based on maximum ground level lead concentrations, and that are instead at locations at or beyond the property line that are representative of upwind or background concentrations.
 - (C) Sampling sites at the property line may be located just inside the fence line on facility property if logistical constraints preclude placement outside the fence line at the point of maximum expected ground level lead concentrations.
- (2) Collect 24-hour, midnight-to-midnight, samples at all sites for 30 consecutive days from the date of initial sampling, followed by one 24-hour, midnight-to-midnight, sample collected at least once every three calendar days, on a schedule approved by the Executive Officer.
 - (3) Submit samples collected pursuant to paragraphs (j)(1) and (j)(2) to a laboratory approved under the SCAQMD Laboratory Approval Program for analysis within three calendar days of collection and calculate ambient lead concentrations for individual 24-hour samples within 15 calendar days of the end of the calendar month in which the samples were collected. Duplicate samples shall be made available and submitted to the District upon request by the Executive Officer.
 - (4) Sample collection shall be conducted using Title 40, CFR 50 Appendix B - *Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere (High Volume Method)*, or U.S. EPA-approved equivalent methods, and sample analysis shall be conducted using Title 40, CFR 50 Appendix G - *Reference Method for the Determination of Lead in Suspended Particulate Matter Collected from Ambient Air*, or U.S. EPA-approved equivalent methods.
 - (5) Continuously record wind speed and direction data at all times using equipment approved by the Executive Officer at a minimum of one location and placement approved by the Executive Officer.
 - (6) Ambient air quality monitoring shall be conducted by persons approved by the Executive Officer and sampling equipment shall be operated and

maintained in accordance with U.S. EPA-referenced methods.

- (7) All ambient air quality monitoring systems required by this subdivision shall be equipped with a backup, uninterruptible power supply to ensure continuous operation of the monitoring system during a power outage.
 - (8) Cleaning activities including, but not limited to, wet washing and misting, that result in damage or biases to samples collected shall not be conducted within 10 meters of any sampling site required under this subdivision.
 - (9) On and after January 1, 2012, if the owner or operator of a large lead-acid battery recycling facility exceeds an ambient air lead concentration $0.15 \mu\text{g}/\text{m}^3$ measured pursuant to paragraph (d)(2), the owner or operator shall:
 - (A) Begin daily ambient air monitoring and sampling no later than three calendar days of the time the facility knew or should have known of the exceedance. Conduct daily ambient air monitoring and sampling for sixty (60) consecutive days at each sampling site that measured an exceedance with paragraph (d)(2).
 - (B) The 60 consecutive-day period shall be restarted for any subsequent exceedance.
- (k) Source Tests
- (1) The owner or operator of a large lead-acid battery recycling facility shall conduct a source test of all lead point sources at least annually to demonstrate compliance with the control standards specified in subdivision (f). If the results of the most recent source test for a lead point source demonstrating compliance with the lead emission standard of subdivision (f) demonstrate emissions of 0.0025 pounds of lead per hour or less, the next test for that lead point source shall be performed no later than 24 months after the date of the most recent test.
 - (2) The owner or operator of a large lead-acid battery recycling facility with an existing lead control device in operation before November 5, 2010 shall conduct a source test for it no later than January 1, 2011. The owner or operator of a large lead-acid battery recycling facility with a new or modified lead control device with initial start-up on or after November 5, 2010 shall conduct the initial source test for it within 60 calendar days after initial start-up.
 - (3) Prior to the owner or operator of a large lead-acid battery recycling facility conducting a source test pursuant to paragraph (k)(1) or (k)(2),

shall submit a pre-test protocol to the Executive Officer for approval at least 60 calendar days prior to conducting the source test. The pre-test protocol shall include the source test criteria of the end user and all assumptions, required data, and calculated targets for testing the following:

- (A) Target lead control standard;
 - (B) Preliminary lead analytical data;
 - (C) Planned sampling parameters; and
 - (D) Information on equipment, logistics, personnel, and other resources necessary for an efficient and coordinated test.
- (4) The owner or operator of a large lead-acid battery recycling facility shall notify the Executive Officer in writing one week prior to conducting any source test required by paragraph (k)(1) or (k)(2).
- (5) The owner or operator of a large lead-acid battery recycling facility shall notify the Executive Officer within three business days, including Mondays, of when the facility knew or should have known of any source test result that exceeds any of the emission standards specified in paragraph (f)(2). Notifications shall be made to 1-800-CUT-SMOG.
- (6) Source tests shall be conducted while operating at a minimum of 80% of equipment maximum capacity and in accordance with any of the following applicable test methods:
- (A) SCAQMD Method 12.1 - *Determination of Inorganic Lead Emissions from Stationary Sources Using a Wet Impingement Train*
 - (B) ARB Method 12 - *Determination of Inorganic Lead Emissions from Stationary Sources*
 - (C) EPA Method 12 - *Determination of Inorganic Lead Emissions from Stationary Sources*
 - (D) ARB Method 436 - *Determination of Multiple Metal Emissions from Stationary Sources*
- (7) The average of triplicate samples, obtained according to approved test methods specified in paragraph (k)(6), shall be used to determine compliance.
- (8) The operator may use alternative or equivalent source test methods as defined in U.S. EPA 40 CFR 60.2, approved in writing by the Executive Officer, the Air Resources Board, and the U.S. EPA.

- (9) The operator shall use a test laboratory approved under the SCAQMD Laboratory Approval Program for the source test methods cited in this subdivision. If there is no approved laboratory, then approval of the testing procedures used by the laboratory shall be granted by the Executive Officer on a case-by-case basis based on SCAQMD protocols and procedures.
 - (10) When more than one source test method or set of source test methods are specified for any testing, the application of these source test methods to a specific set of test conditions is subject to approval by the Executive Officer. In addition, a violation established by any one of the specified source test methods or set of source test methods shall constitute a violation of the rule.
 - (11) An existing source test conducted on or after January 1, 2009 for lead control devices existing before November 5, 2010 may be used as the initial source test specified in paragraph (k)(1) to demonstrate compliance with the control standard of subdivision (f) upon Executive Officer approval. The source test shall meet, at a minimum, the following criteria:
 - (A) The test is the most recent conducted since January 1, 2009;
 - (B) The test demonstrated compliance with the control standard of subdivision (f); and
 - (C) The test is representative of the method to control emissions currently in use; and
 - (D) The test was conducted using applicable and approved test methods specified in paragraphs (k)(6), (k)(8), or (k)(9).
- (l) **New Facilities**
- The owner or operator of a large lead-acid battery recycling facility beginning construction or operations on or after November 5, 2010 shall:
- (1) Demonstrate to the satisfaction of the Executive Officer that the facility is not located in an area that is zoned for residential or mixed use; and
 - (2) Demonstrate to the satisfaction of the Executive Officer that the facility is not located within 1,000 feet from the property line of a sensitive receptor, a school under construction, park, or any area that is zoned for residential or mixed use. The distance shall be measured from the property line of the new facility to the property line of the sensitive

receptor.

- (3) Submit complete permit applications for all equipment required by this rule prior to beginning construction or operations, and otherwise on or before the time required by District rules.

(m) Recordkeeping

- (1) The owner or operator of a large lead-acid battery recycling facility shall keep records of the following:
 - (A) Daily records indicating amounts of lead-containing material processed, including, but not limited to, purchase records, usage records, results of analysis, or other District-approved verification to indicate processing amounts;
 - (B) Results of all ambient air lead monitoring, meteorological monitoring, and other data specified by subdivision (j); and
 - (C) Records of housekeeping activities completed as required by subdivision (h), maintenance activities of subdivision (i), and lead control device inspection and maintenance requirements of paragraph (f)(6), including the name of the person performing the activity, and the dates and times on which specific activities were completed.
 - (D) Records of unplanned shutdowns of any smelting furnace including the date and time of the shutdown, description of the corrective measures taken, and the re-start date and time.
- (2) The owner or operator of a large lead-acid battery recycling facility shall maintain all records for five years, at least two years onsite.

(n) Reporting

- (1) Ambient Air Monitoring Reports
 - (A) Beginning no later than January 1, 2011, the owner or operator of a large lead-acid battery recycling facility shall report by the 15th of each month to the Executive Officer, the results of all ambient air lead and wind monitoring for each preceding month, or more frequently if determined necessary by the Executive Officer. The report shall include the results of individual 24-hour samples and 30-day averages for each day within the reporting period.
 - (B) Any exceedances of ambient air lead concentrations specified in

paragraph (d)(2) shall be reported with a notification made to the 1-800-CUT-SMOG within 24 hours of receipt of the completed sample analysis required in paragraph (j)(3), followed by a written report to the Executive Officer no later than three calendar days after the notification. The written report shall include the causes of the exceedance and the specific corrective actions implemented.

(2) Shutdown, Turnaround, and Maintenance Activity Notification

The owner or operator of a large lead-acid battery recycling facility shall:

- (A) Notify the Executive Officer and the public within one hour after an unplanned shutdown of any lead control device has occurred. The notification shall include the associated processes or equipment vented by the shutdown lead control device. If the unplanned shutdown involves a breakdown pursuant to Rule 430, the breakdown notification report required by Rule 430 shall serve in lieu of this notification to the Executive Officer.
- (B) Notify the Executive Officer and the public at least ten calendar days prior to a planned turnaround or shutdown of any smelting furnace, battery breaker, or lead control device that result in lead emissions. The notification shall specify the subject equipment and the start and end date of the turnaround or shutdown period.
- (C) Notify the Executive Officer at least ten calendar days prior to the beginning of maintenance activity, as defined in paragraph (c)(15), that is conducted routinely on a monthly or less frequent basis. The notification and report required under subparagraph (n)(2)(E) shall include, at a minimum, the following:
 - (i) Dates, times, and locations of activities to be conducted;
 - (ii) Description of activities;
 - (iii) Name of person(s)/company conducting the activities;
 - (iv) Lead abatement procedures, including those specified in subdivision (i), to be used to minimize fugitive lead-dust emissions; and
 - (v) Date of expected re-start of equipment.
- (D) Notify the public at least ten calendar days prior to the beginning of building construction, renovation, or demolition, and resurfacing, repair, or removal of ground pavement, concrete or asphalt if such activities are conducted outside of a total enclosure

and generate fugitive lead-dust. The notification shall include, at a minimum, the following:

- (i) Dates, times, and locations of activities to be conducted;
 - (ii) Description of activities;
 - (iii) Date of expected re-start of equipment.
- (E) Provide the notification to the Executive Officer required under subparagraphs (n)(2)(A), (n)(2)(B), and (n)(2)(C) to 1-800-CUT-SMOG followed by a written notification report to the Executive Officer no later than three business days, including Mondays, after the unplanned shutdown occurred.
- (F) Provide notification to the public required under subparagraphs (n)(2)(A), (n)(2)(B), and (n)(2)(D) through a facility contact or pre-recorded notification center that is accessible 24 hours a day, 7 days a week, and through electronic mail using a list of recipients provided by the Executive Officer. Another method of notification to the public may be used provided it is approved by the Executive Officer.
- (G) Install a sign indicating the phone number for the facility contact or pre-recorded notification center that meets the following requirements, unless otherwise approved in writing by the Executive Officer:
- (i) Installed within 50 feet of the main entrance of the facility and in a location that is visible to the public;
 - (ii) Measures at least 48 inches wide by 48 inches tall;
 - (iii) Displays lettering at least 4 inches tall with text contrasting with the sign background; and
 - (iv) Located between 6 and 8 feet above grade from the bottom of the sign.
- (3) Initial Facility Status Report
- (A) Initial Facility Status Report Due Date
- The owner or operator of a large lead-acid battery recycling facility existing before November 5, 2010 shall submit an initial facility status report to the Executive Officer no later than January 1, 2011. Large lead-acid battery recycling facilities beginning construction or initial operations after November 5, 2010 shall submit the initial compliance status report upon start-up.

- (B) The initial facility status report shall contain the information identified in Appendix 1.
- (4) Ongoing Facility Status Report

The owner or operator of a large lead-acid battery recycling facility shall submit a summary report to the Executive Officer to document the ongoing facility status.

 - (A) Frequency of Ongoing Facility Status Reports

The report shall be submitted annually on or before February 1 for all sources and shall include information covering the preceding calendar year.
 - (B) The content of ongoing facility status reports shall contain the information identified in Appendix 2.
- (5) Adjustments to the Timeline for Submittal and Format of Reports

The Executive Officer may adjust the timeline for submittal of periodic reports, allow consolidation of multiple reports into a single report, establish a common schedule for submittal of reports, or accept reports prepared to comply with other state or local requirements. Adjustments shall provide the same information and shall not alter the overall frequency of reporting.
- (o) On and after July 1, 2011, if emission are discharged into the atmosphere which contribute to ambient air concentrations of lead that exceed $0.12 \mu\text{g}/\text{m}^3$, averaged over any 30 consecutive days, determined by monitors pursuant to subdivision (j) or at any District-installed monitor, the owner or operator of a large lead-acid battery recycling facility shall submit a study addressing the technical, economic and physical feasibility of achieving a total facility mass lead emission rate of 0.003 pounds per hour from all lead point sources. The study shall be submitted within 30 calendar days after exceeding $0.12 \mu\text{g}/\text{m}^3$, averaged over any 30 consecutive days.

Appendix 1 – Content of Initial Facility Status Reports

Initial compliance status reports shall contain, at a minimum, the following information:

1. Facility name, District Facility ID number, facility address, owner/operator name, and telephone number.
2. The distance from the property line of the facility to the property line of the nearest commercial/industrial building and sensitive receptor.
3. Worker and sensitive receptor locations, if they are located within one-quarter mile from the center of the facility.
4. Building parameters
 - Stack heights in feet (point sources); or
 - Building area in square feet (volume sources).
5. A description of the types of lead processes performed at the facility.
6. The following information shall be provided for each of the last five calendar years prior to November 5, 2010:
 - Annual amount of lead-containing material processed;
 - The maximum and average daily and monthly operating schedules;
 - The maximum and average daily and monthly lead-processing rates for all equipment and processes;
 - The maximum and average daily and annual emissions of lead from all emission points and fugitive lead-dust sources.
7. The approximate date of intended source tests for all lead control devices, as required by subdivision (k) of this rule.
8. Engineering drawings, calculations or other methodology to demonstrate compliance with paragraphs (d)(1) through (d)(3) and (k).
9. Air dispersion modeling calculations using procedures approved by the Executive Officer to determine the location of sampling sites as required by subdivision (j).
10. All information necessary to demonstrate means of compliance with subdivision (j).
11. The name, title, and signature of the responsible official certifying the accuracy of the report, attesting to whether the source has complied with the provisions of this rule.
12. The date of the report.

Appendix 2 – Content of Ongoing Facility Status Reports

Ongoing facility status reports shall, at a minimum, contain the following information:

1. Facility name, District Facility ID number, facility address, owner/operator name, and telephone number.
2. The beginning and ending dates of the calendar year for the reporting period.
3. The following information shall be provided for each of the last 12 calendar months of the reporting period:
 - Annual amounts of lead-containing material processed;
 - The maximum and average daily and monthly lead-processing rates for all equipment and processes;
 - The maximum and average daily and annual emissions of lead from all emission points and fugitive lead-dust sources.
4. Worker and sensitive receptor distances, if they are located within ¼ of mile from the center of the facility and facility maximum operating schedule, if changed since submittal of the initial compliance status report or prior year's ongoing compliance status and emission reports.
5. A description of any changes in monitoring, processes, or controls since the last reporting period.
6. The name, title, and signature of the responsible official certifying the accuracy of the report.
7. The date of the report.