BOARD MEETING DATE: March 6, 2015 AGENDA NO. 28

PROPOSAL: Proposed Amended Rule 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities

SYNOPSIS: At the January 2014 Board meeting, staff reported on two studies to address the technical, economic, and physical feasibility of achieving a total facility mass lead emission rate of 0.003 lb/hour from all lead point sources (stack emissions) at large lead-acid battery recycling facilities. Based on elevated levels of lead found in surface dust and soil samples collected and analyzed by the Department of Toxic Substances Control, the Board directed staff to amend Rule 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities to lower the lead point source emission rate and other possible revisions to reduce lead exposure to the surrounding communities. SCAQMD staff is proposing to lower the point source emission rate limit, lower ambient lead concentration limits, increase the frequency of lead and arsenic monitoring to daily, and other provisions that will further reduce lead exposure and the accumulation of lead in the soil and surface dust.

COMMITTEE: Stationary Source, November 21, 2014, Reviewed

RECOMMENDED ACTIONS:
Adopt the attached resolution:

1. Certifying the Final Subsequent Environmental Assessment for Proposed Amended Rule 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities; and
2. Amending Rule 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities

Barry R. Wallerstein, D.Env.
Executive Officer

EC:PF:SN:MM

Background
Rule 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities was adopted on November 5, 2010 and amended on January 10 and March 7, 2014, and applies to large lead-acid battery recycling facilities. There are currently two large lead-acid battery recycling facilities, Exide Technologies located in Vernon, and Quemetco Inc. located in the City of Industry. The rule includes ambient lead and arsenic concentration limits, point source limits for lead, arsenic, benzene, and 1,3-butadiene, and a series of housekeeping provisions.

At the January 10, 2014 Board meeting, SCAQMD staff presented findings regarding lowering the lead point source emission rate and information regarding elevated levels of lead found in surface dust and soil samples near the Exide facility that were collected and analyzed by the California Department of Toxic Substances Control. Based on this information, the Board directed staff to amend Rule 1420.1 to lower the lead point source emission rate and make other possible revisions to reduce lead exposure to the surrounding communities.

At the January 9, 2015 Board meeting, staff presented the approach for PAR 1420.1 to lower the ambient lead concentration limit to 0.110 µg/m^3, effective January 1, 2016, and then further reduce it to 0.100 µg/m^3 effective January 1, 2017. The Board agreed with staff's approach to lower the ambient lead concentration limit, and also asked that staff return with a proposal for possible adoption to further lower the overall stack emission rate to 0.003 lb/hr in six months.

Proposal
Proposed Amended Rule (PAR) 1420.1 proposes to lower the lead ambient air concentration limit from 0.150 µg/m^3 to 0.110 µg/m^3 averaged over any 30 consecutive days effective January 1, 2016 and then further reduce it to 0.100 µg/m^3 effective January 1, 2017. Under Rule 1420.1, affected facilities are required to have a minimum of four monitors that are strategically located to capture the expected maximum ground level concentration. These ambient monitors capture all emissions – point source and fugitive. PAR 1420.1 will increase the monitoring frequency from one in three days to daily, ensuring lead emissions are well controlled on a continuous basis, 24 hours a day. Staff believes that lowering the ambient lead concentration limit will require both facilities to control all lead sources and provides the greatest protection to the community.

Staff is also proposing to lower the lead point source emission limit from 0.045 lb/hr to 0.023 lb/hr. PAR 1420.1 also proposes to include housekeeping measures, add reporting requirements, and reduce the threshold for compliance plans and process curtailments consistent with the proposed ambient lead concentration and lead emission rate limits.

Public Process

PAR 1420.1 was developed through a public process. A PAR 1420.1 Working Group was composed of a variety of stakeholders including representatives and consultants for the regulated industry; the California Department of Toxic Substances Control and other agency representatives; environmental and community representatives; and other interested parties. The Working Group met four times, twice in October, once in November and once in February. In addition, two Public Workshops were held, one on October 30, 2014 and one on November 19, 2014. The November Public Workshop was held in East Los Angeles.

Key Outstanding Issues

Lead Point Source Emission Rate Limit

The SCAQMD staff has received a comment from Quemetco that the proposed amended rule should lower the lead point source emission rate limit to 0.003 pound per hour. Quemetco currently meets the 0.003 pounds per hour, while Exide's overall stack emission rate is about an order of magnitude higher. Exide asserts that attaining 0.003 pounds per hour for all lead point sources is infeasible for their facility and it must be given a chance to implement the SCAQMD-approved Risk Reduction Plan Projects without reference to a mass emissions rate. The comparison between both facilities' ambient lead concentration data averaged over 30 days, and averaged across all monitors at each facility in 2013 are similar. As the lead point sources have become more and more controlled, fugitive emissions have become the more dominating factor on the ambient lead concentrations.

PAR 1420.1 incorporates a holistic regulatory approach that addresses point and fugitive lead emissions. PAR 1420.1 lowers the overall point source lead limit by 50 percent to 0.023 pounds per hour and lowers the ambient concentration limit from 0.150 $\mu g/m^3$ to 0.100 $\mu g/m^3$. Since the adoption of Rule 1420.1 in 2010 the ambient lead concentration limit will have been reduced over 90 percent, from 1.50 $\mu g/m^3$ to 0.100 $\mu g/m^3$. The adoption resolution includes a commitment for staff to return to the Board in six months with a proposal to lower the overall point source lead emission limit to 0.003 lb/hour and other options.

California Environmental Quality Act (CEQA)

Pursuant to California Environmental Quality Act (CEQA) Guidelines §15162 and §15252 and SCAQMD Rule 110, the SCAQMD prepared a Draft Subsequent Environmental Assessment (SEA) for proposed amended Rule 1420.1. The Draft SEA included a project description and analysis of potential adverse environmental impacts that could be generated from the proposed project. The environmental analysis in the Draft SEA concluded that PAR 1420.1 would not generate any significant adverse impacts. Because the project will not result in significant adverse impacts, mitigation measures were not required and, thus, not made a condition of the approval of this project. Findings were not required pursuant to the provisions of CEQA Guidelines §

15091 and, thus, not adopted for this project. The Draft SEA was released for a 30-day public review and comment period beginning on January 27, 2015 and ending on February 25, 2015. One comment letter was received from the public relative to the environmental analysis in the Draft SEA and a response is included in the Final SEA.

Subsequent to the public release of the Draft SEA, minor additions and modifications were made to the SEA for clarification purposes. However, none of the additions or modifications alters any conclusions nor provides new information of significance relative to the Draft document. As a result, these minor revisions do not require recirculation of the document pursuant to CEQA Guidelines §15073.5. Therefore, the document is a now a Final SEA and is included as an attachment to this Board package.

Socioeconomic Analysis
The proposed amendments to Rule 1420.1 would affect two large lead-acid battery recycling facilities that can process more than 50,000 tons of lead annually. The total compliance cost from the proposed amendments is estimated to be $0.7 million annually, of which $0.6 million is incurred by Exide. An annual compliance cost of this magnitude, when compared to the relative total value of the local economy (about $1 Trillion), is expected to have no significant regional economic impacts. The socioeconomic assessment is part of the staff report.

AQMP and Legal Mandates
Pursuant to Health & Safety Code Section 40460 (a), the SCAQMD is required to adopt an Air Quality Management Plan (AQMP) demonstrating compliance with all federal regulations and standards. The SCAQMD is required to adopt rules and regulations that carry out the objectives of the AQMP. PAR 1420.1 is not a control measure of the 2012 AQMP but is needed to reduce exposure and associated health risk impacts from lead, arsenic and other toxic emissions from large lead-acid battery recycling facilities. However, PAR 1420.1 will be submitted for inclusion into the State Implementation Plan as a contingency measure to become federally enforceable upon a determination by the U.S. Environmental Protection Agency that all or part of the District has failed to attain the National Ambient Air Quality Standard for Lead by the time required by the federal Clean Air Act.

Implementation and Resource Impact
Implementation of Rule 1420.1 has taken a number of resources to ensure compliance. Existing SCAQMD resources will be used to implement PAR 1420.1.

Attachments
A. Summary of Proposal
B. Key Issues and Responses
C. Rule Development Process
D. Key Contacts List
E. Resolution
F. Proposed Amended Rule 1420.1 Rule Language
G. Proposed Amended Rule 1420.1 Staff Report
H. Final Subsequent Environmental Analysis

ATTACHMENT A

SUMMARY OF PROPOSAL

Proposed Amended Rule 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities

Ambient Concentration of Lead Limit

- Effective January 1, 2016, lower the lead ambient air concentration limit from 0.150 $\mu g/m^3$ to 0.110 $\mu g/m^3$ averaged over any 30 consecutive days
- Effective January 1, 2017, lower the lead ambient air concentration from of 0.110 $\mu g/m^3$ to 0.100 $\mu g/m^3$ averaged over any 30 consecutive days

Lead Point Source Emissions Controls

- Effective January 1, 2016, lower the total facility mass lead emission rate from all point sources from 0.045 pounds of lead per hour to 0.023 pounds of lead per hour

Monitoring

- Increase the frequency of lead and arsenic monitoring from once every 3 days to daily

Compliance Plan Requirements

- Trigger for compliance plan is consistent with compliance dates of ambient lead concentration limits

Housekeeping Requirements

- Require that all trash and debris containing lead or arsenic be contained in covered containers, free of leaks, that are opened only when adding or removing trash or debris
- Require signs limiting the plant-wide speed of vehicles to five miles per hour

Source Testing

- Reduce the lead point source emission rate that triggers annual source testing rather than biannual source testing by 50 percent, consistent with the lower total facility mass lead emission rate
- Clarify that changes to source test methods only need approval from Executive Officer, in addition to the California Air Resources Board or the U.S. EPA, as applicable.
- Require the submittal of source test reports in 90 days

Reporting

- Require reporting within 72 hours if any daily ambient lead sample is greater than 0.300 $\mu g/m^3$
- Require notification if a total enclosure is breached
- Clarify that unplanned shutdowns require notification regardless of potential

emissions

- Require caution signs with contact information around the facility to give the facility the opportunity to be notified of any pavement or soil work that may be occurring outside of the facility

Curtailment Requirements

- Revise curtailment provisions to be consistent with proposed changes to the ambient lead concentration limits and overall lead point source limit

ATTACHMENT B
KEY ISSUES AND RESPONSES

Proposed Amended Rule (PAR) 1420.1 – Emissions Standards for Lead and other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities
• Lead Point Source Emission Rate Limit: The SCAQMD staff has received a comment from Quemetco that the proposed amended rule should lower the lead point source emission rate limit from 0.045 pound per hour to 0.003 pound per hour. Quemetco is currently meeting the 0.003 pound per hour limit for lead, while Exide only meets the proposed 0.023 pound per hour limit and may not meet the 0.003 pound per hour limit for lead once new equipment is installed under a risk reduction plan. o PAR 1420.1 incorporates a holistic regulatory approach. The proposed rule lowers the overall point source lead limit 50 percent to 0.023 pounds per hour and lowers the ambient concentration limit from 0.150 $\mu g/m^3$ to 0.100 $\mu g/m^3$. Since the adoption of Rule 1420.1 in 2010 the ambient lead concentration limit will have been reduced over 90 percent, from 1.5 $\mu g/m^3$ to 0.100 $\mu g/m^3$. o Both facilities' ambient lead concentration data averaged over 30 days, and averaged across all monitors at each facility were similar in 2013. o As the lead point sources have become more and more controlled, fugitive emissions have become the more dominating factor on the ambient lead concentrations. o Exide is currently installing air pollution control equipment to reduce arsenic, benzene and 1,3 butadiene emissions. Concurrent lead emission reductions are expected. o Staff will return to the Board within six months with a proposal for possible adoption to lower the overall point source lead emission limit to 0.003 lb/hour and other options.

ATTACHMENT C

RULE DEVELOPMENT PROCESS

Proposed Amended Rule 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities

Six (6) months spent in rule development.
Four (4) Working Group Meetings.

ATTACHMENT D
KEY CONTACTS LIST

California Communities Against Toxics

Communities for a Better Environment

Department of Toxic Substances Control

Dolores Mejia (Exide Community Member)

Duncan McKee (Quemetco Community Member)

E4 Strategic Solutions, Inc.

Environ International Corporation

Envitech, Inc

Exide Technologies

Geosyntec Consultants

JE Compliance Services, Inc.

Kleinfelder

Leonard Grossberg (Exide Community Member)

Natural Resources Defense Council

Quemetco Incorporated

Teresa Marquez (Exide Community Member)

Thomas Lohff (Quemetco Community Member)

United Steelworkers Local 675

ATTACHMENT E

RESOLUTION NO. 14-_____

A Resolution of the Governing Board of the South Coast Air Quality Management District (SCAQMD) certifying the Final Subsequent Environmental Assessment (SEA) for Proposed Amended Rule 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities.

A Resolution of the SCAQMD Governing Board Adopting Proposed Amended Rule (PAR) 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities.

WHEREAS, the SCAQMD Governing Board has determined with certainty that PAR 1420.1 is a "project" pursuant to the California Environmental Quality Act (CEQA); and

WHEREAS, the SCAQMD staff has prepared a Draft Subsequent Environmental Assessment (SEA) pursuant to its certified regulatory program and CEQA Guidelines §15162 and §15251, setting forth the potential environmental consequences of PAR 1420.1; and

WHEREAS, the Draft SEA determined the proposed project would result in no significant adverse environmental impacts; and

WHEREAS, the Draft SEA was circulated for 30-day public review and comment period, and the Draft SEA has been revised such that it is now a Final SEA; and

WHEREAS, it is necessary that the adequacy of the Final SEA including responses to comments be determined by the SCAQMD Governing Board prior to its certification; and

WHEREAS, the Final SEA reflects the independent judgment of the SCAQMD; and

WHEREAS, the Governing Board prior to voting on PAR 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities, has reviewed and considered the Final SEA; and

WHEREAS, a Mitigation Monitoring Plan pursuant to Public Resources Code §21081.6, has not been prepared since no mitigation measures are necessary; and

WHEREAS, the SCAQMD Governing Board finds and determines, taking into consideration the factors in §(d)(4)(D) of the Governing Board Procedures, that the modifications which have been made to PAR 1420.1 since notice of public hearing was published do not significantly change the meaning of the proposed project within the meaning of Health and Safety Code §40726 and would not constitute significant new information requiring recirculation of the Draft SEA pursuant to CEQA Guidelines §15073.5; and

WHEREAS, lead has been identified as a toxic air contaminant by the Office of Environmental Health Hazard Assessment (OEHHA); and

WHEREAS, in December 2013 the California Department of Toxic Substances Control provided the SCAQMD staff letters explaining that elevated levels of lead were found in surface dust and soil samples near a large lead-acid battery recycling facility located in the District; and

WHEREAS, the SCAQMD Governing Board directed staff to begin rulemaking to consider lowering the lead point source emission rate and possibly other revisions to reduce the further accumulation of lead dust to the surrounding communities; and

WHEREAS, the SCAQMD staff conducted two public workshops regarding PAR 1420.1 on October 29, 2014 and November 19, 2014; and

WHEREAS, California Health and Safety Code §40727 requires that prior to adopting, amending or repealing a rule or regulation, the SCAQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the staff report; and

WHEREAS, PAR 1420.1 is needed to further protect public health by reducing lead emissions from large lead-acid battery recycling facilities. For a toxic air contaminant, such as lead, for which there is no level of exposure that can yet be identified with confidence as clearly not being associated with some risk of deleterious health effects, the intent of PAR 1420.1 is to reduce emissions to the lowest level achievable through the most effective feasible control method. Recent testing of surface dust and soil by the California Department of Toxic Substances Control in 2013 near a large lead-acid battery recycling facility located in the District showed elevated lead levels. Such levels pose a health risk to

people that live and work in the surrounding community when lead is re-entrained into the ambient air. The proposed amended rule establishes a lower ambient lead concentration limit that will ensure that lead emissions from point and fugitive sources are well controlled; and

WHEREAS, the SCAQMD Governing Board obtains its authority to adopt, amend or repeal rules and regulations from sections 39002, 40000, 40001, 40440, 40441, 40702, 40725 through 40728, 41508, 41700, and 41706 of the Health and Safety Code; and

WHEREAS, the SCAQMD Governing Board has determined that PAR 1420.1 is written and displayed so that the meaning can be easily understood by persons directly affected by it. To ensure clarity in the proposed amended rule language, four working group meetings were conducted with significant input received from working group members made up of the large lead-acid battery recycling facilities in the Basin, environmental organizations, other agencies, and the public at large; and

WHEREAS, the SCAQMD Governing Board has determined that PAR 1420.1 will be implementing, interpreting or making specific the provisions of the California Health and Safety Code Sections 40001 (rules to achieve and maintain ambient air quality standards), 41700 (nuisance), 41706(b) (emission standards for lead compounds from non-vehicular sources), Federal Clean Air Act Section 112 (Hazardous Air Pollutants), and CAA Section 116.

WHEREAS, the SCAQMD Governing Board has determined that PAR 1420.1 is in harmony with, and not in conflict with, or contradictory to, existing statutes, court decisions, or state or federal regulations; and

WHEREAS, the SCAQMD Governing Board has determined that PAR 1420.1 does not impose the same requirements as any existing state or federal regulations, and the proposed project is necessary and proper to execute the powers and duties granted to, and imposed upon, the SCAQMD; and

WHEREAS, PAR 1420.1 is not a control measure in the 2012 Air Quality Management Plan (AQMP) or the 2012 Lead State Implementation Plan and thus, was not ranked by cost-effectiveness relative to other AQMP control measures in the 2012 AQMP, and furthermore, pursuant to Health and Safety Code §40910, cost-effectiveness in terms of dollars per ton of pollutant reduced is only applicable to rules regulating ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide and does not apply to toxic air contaminants; and

WHEREAS, Health and Safety Code §40727.2 requires the SCAQMD to prepare a written analysis of existing federal air pollution control requirements applicable to the same source type being regulated whenever it adopts, or amends a rule, and that the SCAQMD's comparative analysis of PAR 1420.1 is included in the staff report; and

WHEREAS, the SCAQMD Governing Board has determined that the Socioeconomic Assessment of PAR 1420.1 is consistent with the March 17, 1989 and October 14, 1994 Governing Board Socioeconomic Resolutions for rule adoption; and

WHEREAS, the SCAQMD Governing Board has determined that PAR 1420.1 will result in increased costs to the large lead-acid battery recycling facilities, yet are considered to be reasonable, with a total annualized cost as specified in the Socioeconomic Assessment; and

WHEREAS, the SCAQMD Board has actively considered the Socioeconomic Assessment and has made a good faith effort to minimize such impacts; and

WHEREAS, the SCAQMD Governing Board has determined that the Socioeconomic Assessment is consistent with the provisions of the California Health and Safety Code Sections 40440.8, 40728.5, 40920.6; and

WHEREAS, the SCAQMD Governing Board specifies the director of PAR 1420.1 as the custodian of the documents or other materials which constitute the record of proceedings upon which the adoption of this proposed project is based, which are located at the South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, California; and

WHEREAS, a public hearing has been properly noticed in accordance with all provisions of Health and Safety Code §40725; and

WHEREAS, the SCAQMD Governing Board has held a public hearing in accordance with all provisions of law; and

WHEREAS, the proposed amendments to Rule 1420.1 will be submitted for inclusion into the State Implementation Plan as a contingency measure to become federally enforceable upon a determination by U.S. Environmental Protection Agency that all or part of the South Coast Air Basin has failed to attain the National Ambient Air Quality Standard for lead by the time required by the Clean Air Act; and

NOW, THEREFORE BE IT RESOLVED, that the SCAQMD Governing Board directs staff to return to the SCAQMD Governing Board within six months with a proposal to lower the overall point source lead emission limit to 0.003 lb/hour and other options; and

BE IT FURTHER RESOLVED, that the SCAQMD Governing Board hereby approves the responses to comments in the Final SEA and certifies, pursuant to the authority granted by law, that the Final SEA for PAR 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities was prepared in compliance with the requirements of CEQA; and

BE IT FURTHER RESOLVED, that because no significant adverse environmental impacts were identified as a result of implementing PAR 1420.1, a Statement of Findings, a Statement of Overriding Considerations, and a Mitigation Monitoring Plan are not required; and

BE IT FURTHER RESOLVED, that the SCAQMD Governing Board does hereby adopt, pursuant to the authority granted by law, PAR 1420.1 as set forth in Attachment F.

DATE: _____ _____

CLERK OF THE BOARDS

ATTACHMENT F

(Adopted November 5, 2010)(Amended January 10, 2014)
(Amended March 7, 2014)
(PAR 1420.1 February 2015)

PROPOSED AMENDED RULE 1420.1.

EMISSION STANDARDS FOR LEAD AND OTHER TOXIC AIR CONTAMINANTS 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 and maintenance of the National Ambient Air Quality Standard for Lead. The purpose of this rule is to also protect public health by reducing arsenic, benzene, and 1,3-butadiene exposure and emissions from these facilities.

(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 Rules 1407 and 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 an emission control device, such as a baghouse, into a solid mass.

(2) AMBIENT AIR for purposes of this rule means outdoor air.

(3) ARSENIC means the oxides and other compounds of the element arsenic included in particulate matter, vapors, and aerosols.

(4) BATTERY BREAKING AREA means the plant location at which lead-acid batteries are broken, crushed, or disassembled and separated into components.

(5) BENZENE means an organic compound with chemical formula C_6H_6 and

Chemical Abstract Service number 71-43-2.

(6) 1,3-BUTADIENE means an organic compound with chemical formula C_4H_6 and Chemical Abstract Service number 106-99-0.

(7) 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.

(8) 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.

(9) 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.).

(10) 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 filed with the District.

(11) EMISSION CONTROL DEVICE means any equipment installed in the ventilation system of a point source or emission collection system for the purposes of collecting and reducing emissions of arsenic, benzene, lead, 1,3-butadiene, or any other toxic air contaminant.

(12) FUGITIVE LEAD-DUST means any solid particulate matter containing lead that is in contact with ambient air and has the potential to become airborne.

(13) 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.

(14) 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.

(15) LEAD means elemental lead, alloys containing elemental lead, or lead compounds, calculated as elemental lead.

(16) LEEWARD WALL means the furthest exterior wall of a total enclosure that is opposite the windward wall.

(17) MAINTENANCE ACTIVITY means any of the following activities conducted outside of a total enclosure that generates or has the potential to generate 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, grading, repair, or removal of ground, pavement, concrete, or asphalt; or~~.~~

(f) soil disturbances, including but not limited to, soil sampling, soil remediation, or activities where soil is moved, removed, and/or stored.

(18) 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.

(19) 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).

(20) 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.

(21) POINT SOURCE means any process, equipment, or total enclosure used in a large lead-acid battery recycling facility, including, but not limited to, agglomerating furnaces, dryers, smelting furnaces and refining kettles, whose emissions pass through a stack or vent designed to direct or control

the exhaust flow prior to release into the ambient air.

(22) 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.

(23) 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~~.

(24) SENSITIVE RECEPTOR means, for the purposes of this rule, 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.

(25) 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 is 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.

(26) SMELTING means the chemical reduction of lead compounds to elemental lead or lead alloys through processing in high temperatures greater than 980° C.

(27) SMELTING FURNACE means any furnace where smelting takes place including, but not limited to, blast furnaces, reverberatory furnaces, rotary furnaces, and electric furnaces.

(28) STATIC DIFFERENTIAL FURNACE PRESSURE means the difference between the absolute internal pressure of the smelting furnace (P_f, in inches water column) and the absolute atmospheric pressure in the immediate vicinity outside the smelting furnace (P_a, in inches water column) and is calculated as follows: $P_f - P_a$.

(29) 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-off), 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.

(30) TOXIC AIR CONTAMINANT is an air pollutant which may cause or contribute to an increase in mortality or serious illness, or which may pose a present or potential hazard to human health.

(31) 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) Ambient Air Concentration of Lead

~~Prior to January 1, 2012, emissions~~ The owner or operator of a large lead-acid battery recycling facility shall not discharge emissions ~~shall not be discharged~~ into the atmosphere which contribute to ambient air concentrations of lead that exceed the following:

Effective Date	Ambient Air Concentration of Lead, micrograms per cubic meter ($\mu g/m^3$), averaged over 30 consecutive days
Prior to January 1, 2016	0.150 $\mu g/m^3$
January 1, 2016 to December 31, 2016	0.110 $\mu g/m^3$
On and after January 1, 2017	0.100 $\mu g/m^3$

~~1.50 micrograms per cubic meter ($\mu g/m^3$) pursuant to District Rule 1420.~~ An exceedance of the ambient air concentrations of lead specified in the above table shall occur if it is measured by any monitor installed pursuant to subdivision (j) or at any District-installed monitor.

~~(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 0.150 µg/m3 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~~2) ~~No later than July 1, 2011, install, maintain~~ The owner or operator of a large lead-acid battery recycling facility shall maintain~~,~~ and operate total

enclosures pursuant to subdivision (e) and lead point source emission control devices pursuant to paragraphs (f)(1) and (f)(6) through (f)(8). ~~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<u>3</u>) ~~On and after July 1, 2011~~ <u>The owner or operator of a large lead-acid battery recycling facility shall</u> submit a Compliance Plan ~~pursuant to subdivision (g)~~ if emissions are discharged into the atmosphere which contribute to ambient air concentrations of lead <u>or arsenic</u> that exceed <u>the ambient concentrations in paragraph (g)(1).</u> ~~0.120 (µg/m^3) averaged over any 30 consecutive days determined by monitors pursuant to subdivision (j) or at any District-installed monitor.~~

(~~5~~<u>4</u>) The owner or operator of a large lead-acid battery recycling facility shall:

(A) Within 30 days of January 10, 2014, submit a Compliance Plan Schedule to the Executive Officer for review and approval to ensure that the facility will comply with the January 1, 2015 total facility mass emissions limits for arsenic, benzene, and 1,3-butadiene point sources specified in paragraph (f)(2). The Compliance Plan Schedule shall be subject to plan fees specified in Rule 306 and include:

(i) a list of all control measures to be implemented that includes a description of the control technology, the equipment that will be affected, the affected pollutants, the anticipated reductions, and the dates the measures will be implemented; and

(ii) a schedule that identifies dates for completion of engineering

design(s), equipment procurement, construction, demolition (if any), equipment installation, and testing for each control measure described pursuant to clause (d)(4)(A)(i) ~~(d)(5)(A)(i)~~.

(B) Submit complete permit applications for all equipment specified in the Compliance Plan Schedule that requires a District permit within 90 days of January 10, 2014.

(C) Complete all construction within 180 days of receiving Permit to Construct approvals from the Executive Officer.

(D) The owner or operator of a large lead-acid battery recycling facility shall not be subject to requirements of subparagraphs (d)(4)(A) through (d)(4)(C) ~~(d)(5)(A) through (d)(5)(C)~~ if the most recent District-approved source tests, conducted no earlier than January 1, 2011, show that the facility is meeting all of the emission limits specified in paragraph (f)(2).

(~~6~~5) Ambient Air Concentration of Arsenic

~~On and after February 1, 2014, the~~ The owner or operator of a large lead-acid battery recycling facility shall not ~~allow~~ discharge emissions ~~to be discharged~~ into the atmosphere which contribute to an ambient air concentration of arsenic that exceeds 10.0 nanograms per cubic meter (ng/m^3) averaged over a 24-hour time period as determined by monitors pursuant to subdivision (j) or by any District-installed monitor. An exceedance of 10.0 ng/m^3 averaged over a 24-hour period shall be based on the average of the analysis of two sample results on the same filter. A second analysis is required if the first sample exceeds 10.0 ng/m^3.

(~~7~~6) If the ambient air concentration of arsenic is determined to exceed 10.0 ng/m^3 averaged over a 24-hour time period as calculated pursuant to paragraph (d)(~~6~~5), then the owner or operator shall notify the Executive Officer in writing within 72 hours of when the facility knew or should have known it exceeded the ambient air arsenic concentration of 10.0 ng/m^3 averaged over a 24-hour time period.~~:~~

~~(A) Notify the Executive Officer in writing within 72 hours of when the facility knew or should have known it exceeded the ambient air arsenic concentration of 10.0 ng/m^3 averaged over a 24-hour time period; and~~

~~(B) Comply with the monitoring and sampling requirements in paragraph~~

~~(j)(10).~~

(~~8~~7) The owner or operator of a large lead-acid battery recycling facility shall fund and participate in a multi-metal continuous emissions monitoring system (CEMS) demonstration program to continuously monitor lead, arsenic, and other metals emitted from a stack within its facility for a period specified by the District. Participation and funding of the multi-metals CEMS demonstration program shall require the owner or operator to:

(A) Submit payment to the District for District personnel or its contractor to assemble, install, maintain, train, test, analyze, and decommission a multi-metals CEMS demonstration program not to exceed the following amounts and schedule:

(i) $63,500 by April 1, 2014; and an additional

(ii) $143,225 by September 1, 2014

(B) Provide continuous facility access to District personnel and its contractors to deliver, assemble, install, monitor, maintain, test, analyze, and decommission a multi-metals CEMS;

(C) Provide the necessary location and infrastructure for the multi-metals CEMS including:

(i) siting location with sufficient spacing, clearance, and structural support;

(ii) electric power circuits;

(iii) compressed air;

(iv) sampling port(s);

(v) access to wireless modem connection for data retrieval;

(vi) any necessary moving or lifting equipment and personnel to operate such equipment in order to install the system; and

(vii) day to day instrument and equipment operation.

(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 dryer 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 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 which may contain lead to a lead emission control device and the entire gas stream which may contain arsenic to an arsenic emission control device, respectively, 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 H_2O) 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 ($\pm$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 H_2O) with a minimum increment of measurement of plus or minus 0.001 mm Hg (0.0005 inches H_2O).

(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 $\geq$ 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) Point Source Emissions Controls

The owner or operator of a large lead-acid battery recycling facility shall vent emissions from each lead, arsenic, benzene, and 1,3-butadiene point source to a lead, arsenic, benzene, and 1,3-butadiene emission control device, respectively, that meets the requirements of this subdivision and is approved in writing by the Executive Officer.

(1) Lead Point Source Emission Controls

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

(A) Prior to January 1, 2016, ~~Meet~~ meet a total facility mass lead emissions from all lead point sources not to exceed 0.045 pounds of lead per hour. On and after January 1, 2016, meet a total facility mass lead emissions from all lead point sources not to exceed 0.023 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 mass lead emission rate and maximum emission rates for any single lead point source shall be determined using the most recently approved source tests conducted on behalf of the facility or the District; and

(B) Install a secondary lead emission control device that controls lead emissions from the exhaust of the primary lead emission control device used for a dryer. The secondary lead emission control device shall be fitted with dry filter media, and the secondary lead control device shall only be used to vent the primary lead emission 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~~2) and approved by the Executive Officer.

(2) Arsenic, Benzene and 1,3-Butadiene Point Source Emission Controls

The mass emissions from all arsenic, benzene, and 1,3-butadiene point sources at a large lead-acid battery recycling facility shall meet the following hourly emissions thresholds for the dates specified:

(A) No later than 60 days after January 10, 2014, the total facility emission rate for a large lead-acid battery recycling facility from all

point sources shall not exceed 0.00285 pound of arsenic per hour.

(B) No later than January 1, 2015, the total facility emission rate for a large lead-acid battery recycling facility from all point sources shall not exceed 0.00114 pound of arsenic per hour.

(C) No later than January 1, 2015, the total emission rate for a large lead-acid battery recycling facility from all point sources excluding point sources from emission control devices on total enclosures shall not exceed the following:

(i) 0.0514 pound of benzene per hour; and

(ii) 0.00342 pound of 1,3-butadiene per hour.

(D) The point source mass emission rates shall be determined based on the average of triplicate samples, using the most recent District-approved source tests conducted by the facility or the District, pursuant to subdivision (k).

(E) For purposes of this rule, only point sources that have a source test result of greater than 1 part per billion shall be included in determining the total facility mass emission rates for benzene and 1,3-butadiene.

(3) Monitoring Device

~~No later than 90 days after January 10, 2014, the~~ The owner or operator of a large lead-acid battery recycling facility shall, for each smelting furnace, install, calibrate, operate and maintain a monitoring device that has been approved by the Executive Officer pursuant to paragraph (f)(4). The monitoring device shall measure and record the static differential furnace pressure in inches water column. Each smelting furnace shall be operated such that static differential furnace pressure, in inches of water column averaged over 30 minutes, is maintained at a value -0.02 or more negative. A reverberatory furnace may be operated at an alternative static differential furnace pressure if the owner or operator can demonstrate that it can achieve emission reductions that are equivalent to or better than those achieved when operating at a pressure of -0.02 or more negative. Demonstration shall be based on source test protocols and source tests conducted pursuant to the requirements of subdivision (k) and approved by the Executive Officer. The alternative static differential furnace pressure shall not exceed 0.4 inches water column and must be approved by the Executive Officer in the Continuous Furnace Pressure Monitoring Plan of paragraph (f)(4). For the

purposes of this requirement, the owner or operator shall ensure that the monitoring device:

(A) Continuously measures the instantaneous static differential furnace pressure;

(B) Has a resolution of at least 0.01 inches water column;

(C) Has an increment of measurement of 0.01 inches water column;

(D) Has a range from -10 inches to +10 inches water column for the measuring device;

(E) Is equipped with ports to allow for periodic calibration in accordance with manufacturer's specifications;

(F) Is calibrated according to manufacturer's specifications at a frequency of not less than twice every calendar year;

(G) Is equipped with a continuous data acquisition system (DAS). The DAS shall record the data output from the monitoring device at a frequency of not less than once every sixty (60) seconds;

(H) Generates a data file from the computer system interfaced with each DAS each calendar day. The data file shall be saved in electronic ASCII character format, Microsoft Excel (xls or xlsx) format, PDF format, or other format as approved by the Executive Officer. The file shall contain a table of chronological date and time and the corresponding data output value from the monitoring device in inches of water column. The operator shall prepare a separate data file each day showing the 30-minute average pressure readings recorded by this device each calendar day; and

(I) Is maintained in accordance with manufacturer's specifications.

(4) No later than 30 days after January 10, 2014, the owner or operator of a large lead-acid battery recycling facility shall submit to the Executive Officer for approval an application for a Continuous Furnace Pressure Monitoring (CFPM) Plan for the monitoring device required in paragraph (f)(3). The CFPM Plan shall contain the information identified in Appendix 3 of this rule and is subject to the fees specified in Rule 306.

(5) The Executive Officer shall notify the owner or operator in writing whether the CFPM 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 (f)(4). If the CFPM Plan is disapproved, the owner or operator shall resubmit the CFPM Plan, subject to

plan fees specified in Rule 306, within 30 calendar days after notification of disapproval of the CFPM Plan. The resubmitted CFPM Plan shall include any information necessary to address deficiencies identified in the disapproval letter. It is a violation of the rule for a facility not to have an approved CFPM Plan after the second denial. If the resubmitted CFPM Plan is denied, the operator or owner may appeal the denial by the Executive Officer to the Hearing Board pursuant to Rule 216 – Appeals and Rule 221 - Plans.

(6) For any emission 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.

(7) For any emission 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.

(8) Each emission collection system and emission control device subject to this subdivision shall, at minimum, be inspected, maintained, and operated in accordance with the manufacturer's specifications.

(9) The owner or operator of a large lead-acid battery recycling facility shall comply with the curtailment requirements in subdivision ~~(p)~~(o) if the total facility mass lead emissions from all lead point sources exceeds the limits specified in subparagraph (f)(1)(A), and/or the total facility emission rate from all arsenic point sources exceeds the limits specified in subparagraph (f)(2)(A) or (f)(2)(B).

(g) Compliance Plan

(1) ~~On and after July 1, 2011, t~~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 or arsenic that exceed the following:

Air Contaminant	Effective Date	Ambient Air Concentration
Lead	Prior to January 1, 2016	0.120 µg/m^3, averaged over 30 consecutive days
	January 1, 2016 to December 31, 2106	0.110 µg/m^3, averaged over 30 consecutive days
	On and after January 1, 2017	0.100 µg/m^3, averaged over 30 consecutive days
Arsenic	On and after February 1, 2014	8 ng/m^3, averaged over a 24 hour time period as determined under paragraph (g)(8)

~~averaged over any 30 consecutive days, or an ambient air concentration of arsenic that exceeds 8.0 ng/m^3 averaged over a 24-hour time period pursuant to paragraph (g)(7)~~The ambient air concentrations of lead and arsenic shall be~~, as~~ determined by monitors pursuant to subdivision (j) or at any District-installed monitor.~~, and shall:~~

(~~1~~2) The owner of operator of a large lead-acid battery recycling facility shall ~~Notify~~ notify the Executive Officer in writing within 72 hours of when the facility knew or should have known it exceeded an ambient air concentration of lead or arsenic specified in paragraph (g)(1).~~of 0.120 µg/m^3 averaged over any 30 consecutive days, or an ambient air concentration of arsenic of 8.0 ng/m^3 averaged over a 24-hour time period as determined in paragraph (g)(7)~~. Notification shall only be required the first time the ambient air concentration of lead or arsenic exceeds the concentration limits in paragraph (g)(1) ~~of 0.120 µg/m^3 or an ambient air concentration of arsenic of 8.0 ng/m^3 is exceeded~~ for each monitor;

(~~2~~3) The owner or operator of a large lead-acid battery recycling facility shall ~~Submit~~submit, within 30 calendar days of exceeding an ambient air concentration of lead or arsenic pursuant to paragraph (g)(1),~~ of 0.120 µg/m^3 averaged over any 30 consecutive days, or exceeding an ambient air concentration of arsenic of 8.0 ng/m^3 averaged over a 24-hour time period as determined in paragraph (g)(7),~~ 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 and/or arsenic emission reduction measures to achieve the ambient air concentration of lead as specified in paragraph (d)(1)~~of 0.150 µg/m^3 averaged over any 30 consecutive days~~, or the ambient air concentration of arsenic of 10.0 ng/m^3 averaged over a 24-hour time period, as required under paragraph (~~d)(2) and (d)(6)~~ (d)(5), including, but not limited to, requirements for the following:

(i) Housekeeping, inspection, and maintenance activities;

(ii) Additional total enclosures;

(iii) Modifications to lead and arsenic emission control devices;

(iv) Installation of multi-stage lead and arsenic emission control devices;

(v) Process changes including reduced throughput limits;

(vi) Conditional curtailments including, at a minimum, information specifying the curtailed processes, process amounts, and length of curtailment; and

(vii) Identification of lead and/or arsenic reduction measures to be implemented relative to increasing ranges of exceedance levels of the ambient air concentration limits.

(B) The locations within the facility and method(s) of implementation for each lead and/or arsenic reduction measure of subparagraph ~~(g)(2)(A)~~(g)(3)(A); and

(C) An implementation schedule for each lead and/or arsenic emission reduction measure of subparagraph ~~(g)(2)(A)~~ (g)(3)(A) to be implemented if lead and/or arsenic emissions discharged from the facility contribute to ambient air concentrations of lead that exceed the requirements in paragraph (d)(1) ~~0.150 µg/m^3 averaged over any 30 consecutive days~~, or ambient air concentrations of arsenic that exceed 10.0 ng/m^3 averaged over a 24-hour time period, measured at any monitor pursuant to subdivision (j) or at any District-installed monitor. The schedule shall also include a list of the lead and/or arsenic reduction measures of subparagraph (g)(2)(A) that can be implemented immediately, prior to plan approval.

(~~3~~4) 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), and whether the plan is likely to lead to avoiding future exceedances of the ambient air concentration levels set forth in paragraph (g)(1). 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. It is a violation of the rule for a facility not to have an approved Compliance Plan after the second denial. 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~~5) 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 the requirements in paragraph (d)(1) ~~0.150 µg/m^3 averaged over any 30 consecutive days,~~ or an ambient air concentration of arsenic of 10.0 ng/m^3 averaged over a 24-hour time period as determined in paragraph ~~(d)(6)~~(d)(5), measured at any monitor pursuant to subdivision (j) or at any District-installed monitor.

(~~5~~6) The owner or operator may make a request to the Executive Officer to modify or update an approved Compliance Plan.

(~~6~~7) The owner or operator shall update the Compliance Plan 12 months from January 10, 2014 and annually thereafter, in order to update measures that have been implemented and to identify any new measures that can be implemented.

(~~7~~8) An exceedance of an ambient air concentration of arsenic of 8.0 ng/m^3 averaged over a 24-hour period shall be based on the average of the analysis of two sample results on the same filter. A second analysis is required if the first sample exceeds 8.0 ng/m^3.

(h) Housekeeping Requirements

~~No later than 30 days after November 5, 2010, the~~ 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 emission control device. Days of measurable precipitation in the following areas occurring within the specified 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~~ If the facility can demonstrate that delays were due to safety or timing issues associated with obtaining equipment required to implement this requirement, immediate cleanings of roof tops shall be completed within 72 hours.

(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, immediately send any lead-acid battery that is cracked or leaking ~~shall be immediately sent~~ to the battery breaking area for processing or ~~stored~~ storage 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 the 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.

(10) Except when inside a total enclosure, all lead or arsenic containing trash and debris shall be placed in covered containers that remain covered at all times except when trash or debris is actively transferred. Trash and debris containers shall be free of liquid or dust leaks.

(11) Post signs at all entrances and truck loading and unloading areas indicating a plant-wide speed limit of 5 miles per hour.

(i) Maintenance Activity

(1) ~~Beginning November 5, 2010, the~~ 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~~ 20 mph. Maintenance work may be continued if it is necessary to prevent the release of lead emissions.~~.~~;

(E) All concrete or asphalt cutting or drilling performed outside of a total enclosure shall be performed under 100% wet conditions; and

(F) Grading of soil shall only be performed on soils sufficiently wet to prevent fugitive dust.

(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~~ 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 and/or arsenic concentrations, at or beyond the property line, as determined by Executive Officer-approved air dispersion modeling calculations and emission estimates from all lead and arsenic point sources and fugitive lead-dust and arsenic-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 and/or arsenic 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 and/or arsenic concentrations.

(2) Collect ambient lead and arsenic samples as follows:

(A) Lead samples shall be collected daily as 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~~.

(B) Arsenic samples shall be collected daily as 24-hour, midnight-to-midnight, samples collected at all sites~~least once every three calendar days, on a schedule approved by the Executive Officer~~.

(C) If a 24-hour, midnight-to-midnight sample was not collected due to a monitor malfunction or other occurrence beyond the control of the facility, the owner or operator shall:

(i) Report with a notification made to 1-800-CUT-SMOG within 2 hours of knowing that the 24-hour, midnight-to-midnight sample was not collected providing the facility name, name of the monitor, the date of the occurrence, and the reason that the 24-hour midnight-to-midnight sample was not collected; and

(ii) The operator shall not miss a 24-hour, midnight-to-midnight sample for more than one day over a consecutive 30 day period.

(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 and arsenic 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 for lead and/or arsenic 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 for lead 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. Sample analysis

for arsenic shall be conducted using U.S. EPA Compendium Method IO-3.5 - *Determination of Metals in Ambient Particulate Matter Using Inductively Coupled Plasma/Mass Spectrometry (ICP/MS); EPA Compendium Method IO-3.5; In IO Compendium of Methods for the Determination of Inorganic Compounds in Ambient Air*. Alternatively, sample analysis for arsenic may be conducted using the District's *Standard Operating Procedure for The Determination of Metals in Ambient Particulate Matter by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)*.

(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, Prior to 1, 201, if~~ If the owner or operator of a large lead-acid battery recycling facility exceeds an ambient air lead concentration ~~0.150 µg/m^3 measured~~ pursuant to paragraph ~~(d)(2)~~(d)(1),the owner or operator shall comply with the curtailment provisions of subdivision (o).~~:~~

~~(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.~~

~~(C) Comply with the curtailment requirements of subdivision (p).~~

(10) ~~On and after February 1, 2014, if~~ If a large lead-acid battery recycling facility exceeds an ambient air concentration of arsenic of 10.0 ng/m^3 pursuant to paragraph ~~(d)(6)~~(d)(5), the owner or operator shall comply with

the curtailment requirements of subdivision (o).~~:~~

~~(A) Begin daily ambient air monitoring and sampling no later than three calendar days from 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 pursuant to paragraph (d)(6).~~

~~(B) Restart the 60-day consecutive period for any subsequent exceedance.~~

~~(C) Comply with the curtailment requirements of subdivision (p).~~

(11) The owner or operator of a large lead-acid battery recycling facility shall retain lead and arsenic samples collected pursuant to this subdivision for one year. The samples shall be stored in an individually sealed container and labeled with the applicable monitor and date. Upon request, the samples shall be provided to the Executive Officer within one business day.

(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 mass emissions 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~~ are below an emission~~s~~ rate of ~~0.0025~~0.0012 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) ~~Beginning January 10, 2014, the~~ The owner or operator of a large lead-acid battery recycling facility shall conduct a source test for all arsenic point sources, and all benzene and 1,3-butadiene point sources, excluding emission control devices on total enclosures, at least annually to demonstrate compliance with the mass emissions standards specified in subdivision (f). If the results of the most recent source test demonstrating compliance with the arsenic, benzene, and 1,3-butadiene mass emissions standards of subdivision (f) are below the emission rates specified in subparagraphs (k)(2)(A) through (k)(2)(C), the next source test for those point sources shall be performed no later than 24 months after the date of the most recent source test.

(A) 0.000860 pound of arsenic per hour;

(B) 0.0386 pound of benzene per hour; and

(C) 0.00257 pound of 1,3-butadiene per hour.

(3) ~~The owner or operator of a large lead-acid battery recycling facility with an existing lead emission 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.

(4) Prior to conducting a source test pursuant to paragraph (k)(1), (k)(2), (k)(3), or (k)(13), the owner or operator of a large lead-acid battery recycling facility 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 arsenic, benzene, lead, or 1,3-butadiene mass emission standard;

(B) Preliminary target pollutant analytical data;

(C) Planned sampling parameters; and

(D) Information on equipment, logistics, personnel, and other resources necessary for an efficient and coordinated test.

(5) 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), (k)(2), (k)(3), or (k)(13).

(6) 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 subdivision (f). Notifications shall be made to 1-800-CUT-SMOG and followed up in writing with the results of the source tests within seven (7) days of notification.

(7) Source tests shall be conducted while operating at a minimum of 80% of equipment permitted 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*

(E) EPA Method TO-15 – *Determination of Volatile Organic Compounds (VOCs) in Air Collected in Specially-Prepared Canisters and Analyzed By Gas Chromatography/Mass Spectrometry (GC/MS)*

(F) CARB Method 410A – *Determination of Benzene from Stationary Sources (Low Concentration Gas Chromatographic Technique)*

(G) CARB Method 422.102 – *Determination of Volatile Organic Compounds (VOCs) in Emissions from Stationary Sources*

(8) The average of triplicate samples, obtained according to approved test methods specified in paragraph (k)(7), shall be used to determine compliance or to report source test results required under paragraph (k)(13).

(9) 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, in addition to the Air Resources Board ~~and~~ or the U.S. EPA, as applicable.

(10) 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.

(11) 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.

(12) An existing source test conducted on ~~or~~ and after January 1, 2009 for lead emission 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)(7), (k)(9), or (k)(10).

(13) Beginning January 10, 2014, the owner or operator of a large lead-acid battery recycling facility shall conduct two source tests for benzene and 1,3-butadiene emissions from all emission control devices on total enclosures as follows:

(A) First source test conducted no later than March 1, 2014.

(B) Second source test conducted no later than September 1, 2014.

(C) Source tests on all emission control devices on total enclosures must be completed within a time period of 72 hours or less.

(14) Testing conducted by the facility, by the District, or by a contractor acting on behalf of the District or the facility to determine compliance with this rule shall be performed according to the most recent District-approved test protocol for the same purpose or compounds.

(15) Reports from source testing conducted pursuant to subdivision (k) shall be submitted to the District in 90 days or less after completion of testing.

(l) New Facilities

The owner or operator of a large lead-acid battery recycling facility beginning construction or operations on ~~or~~ and 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~~.~~; and

(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 and arsenic 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 emission control device inspection and maintenance requirements of paragraph (f)(8), including the name of the person performing the activity, and the dates and times on which specific activities were completed; and~~.~~

(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, and keep records onsite for at least two years ~~onsite~~.

(n) Reporting

(1) Ambient Air Monitoring Reports

(A) ~~Beginning no later than January 1, 2011, the~~ 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 rolling averages for each day within the reporting period.

(B) ~~Beginning no later than March 15, 2014, the~~ 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

arsenic and wind monitoring for each preceding month, or more frequently if determined necessary by the Executive Officer and the owner or operator is notified in writing of the required frequency.

(C) Any exceedances of ambient air concentrations specified in paragraphs (d)(1) ~~(d)(2)~~ and (d)(~~6~~5) 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.

(D) On and after July 1, 2015, the owner or operator of a large lead-acid battery recycling facility shall report the following information in writing to the Executive Officer within 72 hours of when the facility knew or should have known that the ambient air concentration of lead was greater than 0.300 $\mu g/m^3$ for any 24-hour sample:

(i) Date of the occurrence;

(ii) Name of the monitor;

(iii) Ambient lead concentration at the monitor for the 24 hour sample;

(iv) Potential cause or causes of the occurrence; and

(v) Potential remedies to prevent the reoccurrence.

(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 emission control device has occurred, regardless of whether any emissions were associated with or caused by the unplanned shutdown. 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. The notification shall include the following information:

(i) Date and time the unplanned shutdown of the emission control device(s) occurred;

(ii) Description of the shutdown emission control device and the processes and/or equipment vented by the emission control

device;

(iii) Description of when the processes and/or equipment vented by the emission control device were shutdown, including expected shutdown time;

(iv) Reason why the emission control device was shutdown;

(v) Total duration of the unplanned shutdown, if known; and

(vi) Facility contact name and phone number for further information regarding the unplanned shutdown.

(B) ~~Beginning May 1, 2014, if~~ If an unplanned shutdown of any emission control device occurs, and the reason for the unplanned shutdown cannot be determined within the one-hour reporting period under subparagraph (n)(2)(A), the owner or operator shall investigate the reason for the unplanned shutdown and notify the Executive Officer of the reason for the unplanned shutdown within 5 business days of the event. If the reason for the unplanned shutdown is still not known within 5 business days of the event, the owner or operator shall notify the Executive Officer within 5 business days of the event and:

(i) Use an independent third party approved by the Executive Officer to conduct an investigation at the facility to determine the reason for the unplanned shutdown of any emission control device subject to this rule~~, . which~~ The investigation shall include~~s~~ but is not limited to:

(I) Physically inspecting the control equipment and surrounding portions of the facility which may provide information to understand the reason for the unplanned shutdown of emission control equipment; and

(II) Reviewing equipment maintenance and operation records, logs, and other documentation which may provide information to understand the reason for the unplanned shutdown of emission control equipment;

(ii) Use an independent third party approved by the Executive Officer to inspect all equipment repaired or replaced in response to the unplanned shutdown of emission control equipment, to ensure affected control equipment can operate

properly; and

(iii) Within 30 calendar days of the reported unplanned shutdown, provide a written report to the Executive Officer and the Director of the California Department of Toxic Substances Control. The owner or operator shall notify the Executive Officer if an approved independent third party is not available for use, or the list of approved independent third parties has not yet been developed by the Executive Officer, and shall submit the written report 30 days from when an approved third party is available. The written report shall include the following information:

(I) Date of the unplanned shutdown of emission control equipment;

(II) Reason for the unplanned shutdown of emission control equipment;

(III) List of all equipment repaired or replaced in response to the unplanned shutdown and corrective actions taken to prevent recurrence of the unplanned shutdown of emission control equipment; and

(IV) Written verification that the affected emission control equipment is operational. If the affected equipment is not operational, provide an approximate date the subject equipment is expected to be operational.

(iv) The owner or operator shall be responsible for reimbursement to the District for any and all expenses incurred by the independent third-party investigator in the investigation, inspection, and generation of a written report to determine the cause of an unplanned shutdown of any emission control equipment subject to this rule, as required by subparagraph (n)(2)(B). The owner or operator shall reimburse the District within 30 days of notification from the Executive Officer that payment is due.

(v) The reimbursement specified in clause (n)(2)(B)(iv) shall not exceed $12,000 per third-party investigation.

(C) 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 emission control device subject to this rule that results in arsenic, benzene, 1,3-butadiene, or lead emissions. The notification shall specify the subject equipment and the start and end date of the turnaround or shutdown period.

(D Notify the Executive Officer at least ten calendar days prior to the beginning of maintenance activity, as defined in paragraph (c)(17), that is conducted routinely on a monthly or less frequent basis. The notification and report required under subparagraph (n)(2)(F) 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.

(E) 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; and

(iii) Date of expected re-start of equipment.

(F) Provide the notification to the Executive Officer required under subparagraphs (n)(2)(A), (n)(2)(C), and (n)(2)(D) 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.

(G) Provide notification to the public required under subparagraphs (n)(2)(A), (n)(2)(C), and (n)(2)(E) 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.

(H) 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.

(I) 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 at all entrances and at intervals of 330 feet or less along the property line of the site or along the perimeter of the facility;

(ii) Measures at least 30 inches wide by 30 inches tall;

(iii) Displays lettering at least 2 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; and

(v) In addition to the phone number, the sign shall also display the following information:

Caution

Lead-Acid Battery Recycling Facility

Call before digging

(J) Notify the Executive Officer at least ten calendar days prior to a planned breach or within one hour after an unplanned breach to a total enclosure such that it no longer meets the definition of a total enclosure pursuant to paragraph (c)(29). The notification shall include the following information:

(i) Date and time of planned or unplanned breach to the total enclosure;

(ii) Explanation of breach to the total enclosure;

(iii) Total duration or if not known, estimated duration of breach to the total enclosure; and

(iv) Facility contact name and phone number for further information.

(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) Lead Emission Rate Feasibility Study~~

~~On and after July 1, 2011, the first time emissions are discharged into the atmosphere which contribute to ambient air concentrations of lead that exceed 0.120 µg/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 0.120 µg/m^3, averaged over any 30 consecutive days. Subsequent exceedances of ambient air concentrations of lead of 0.120 µg/m^3 do not trigger another feasibility study.~~

(~~p~~o) Curtailment Requirements

(1) ~~On and after February 1, 2014, the~~ The owner or operator of a large lead-acid battery recycling facility shall implement the following mandatory daily process curtailments if emissions are discharged into the atmosphere which contribute to monitored ambient air concentrations of lead, as determined pursuant to paragraph (d)(1) ~~and (d)(2)~~, and/or ambient air concentrations of arsenic, as determined pursuant to paragraph (d)(~~6~~5), that exceed the thresholds listed below in Table 1:

Table 1 – Process Curtailments Based on Ambient Air Concentrations of Lead and/or Arsenic

Air Contaminant	Monitored Ambient Air Concentration	Reduction in Feedstock Charged to Reverberatory Furnace
Lead	Prior to January 1, 2016: >0.150 – 0.230 µg/m^3 January 1, 2016 to December 31, 2016: >0.110 – 0.230 µg/m^3 On and after January 1, 2017: >0.100 – 0.230 µg/m^3	15%
	>0.230 – 0.300 µg/m^3	25%
	>0.300 – 0.375 µg/m^3	50%
	>0.375 µg/m^3	75%
Arsenic	>10.0 – 15.0 ng/m^3	15%
	>15.0 – 20.0 ng/m^3	25%
	>20.0 – 25.0 ng/m^3	50%
	>25.0 ng/m^3	75%

(A) The process curtailments for exceedances of the ambient air concentration of lead thresholds in Table 1 shall remain in effect until the monitoring results at each affected monitoring station are at or below the ambient lead concentration limits specified in paragraph (d)(1) ~~0.150 µg/m^3 of lead averaged over any 30 consecutive days,~~ for a period of 30 consecutive days, or the monitoring results at each affected monitoring station are at or below ~~0.120 µg/m^3~~ 0.100 µg/m^3 for at least 10 consecutive days and no other monitor exceeds the thresholds specified in subdivision (d); and

(B) The process curtailments for exceedances of the ambient air concentration of arsenic thresholds in Table 1 shall remain in effect until the monitoring results at each affected monitoring station are at or below 10.0 ng/m^3 of arsenic averaged over a 24-hour time period, for a period of at least 30 consecutive days.

(2) The owner or operator of a large lead-acid battery recycling facility shall implement the following mandatory daily process curtailments if the total facility mass emissions from all lead and/or arsenic point sources exceed the thresholds listed below in Table 2:

Table 2 – Process Curtailments Based on Total Facility Mass Lead and/or Arsenic Emissions From All Point Sources

Effective Date	Air Contaminant	Total Facility Mass Emission Rate (lbs/hour)	Reduction in Feedstock Charged to Reverberatory Furnace
On and after January 10, 2014	Lead	Prior to January 1, 2016 >0.045 – 0.0675 On and after January 1, 2016 >0.023 – 0.0675	15%
		>0.0675 – 0.09	25%
		>0.09 – 0.1125	50%
		>0.1125	75%
No later than 60 days after January 10, 2014 to December 31, 2014	Arsenic	>0.00285 – 0.00428	15%
		>0.00428 – 0.00570	25%
		>0.00570 – 0.00713	50%
		>0.00713	75%
On and after January 1, 2015	Arsenic	>0.00114 – 0.00171	15%
		>0.00171 – 0.00228	25%
		>0.00228 – 0.00285	50%
		>0.00285	75%

(A) The process curtailments in Table 2 shall remain in effect until the facility demonstrates compliance using the most recent District-approved source tests conducted by the facility or the District, pursuant to subdivision (k).

(3) Reductions in feedstock charged to the reverberatory furnace required by paragraphs ~~(p)(1) or (p)(2)~~(o)(1) or (o)(2) shall be based on the daily average of materials charged to the reverberatory furnace over the previous 90 days of operation prior to when the facility knew or should have known of the exceedance~~;~~.

(4) The process curtailments in Table 1 and Table 2 shall begin within 48 hours of the time when the owner or operator receives sampling results indicating

an exceedance of any lead and/or arsenic threshold listed in Table 1 or Table 2~~; and~~.

(5) The owner or operator of a large lead-acid battery recycling facility may temporarily exceed the mandatory process curtailments specified in Table 1 of paragraph ~~(p)(1)~~(o)(1) and Table 2 of paragraph ~~(p)(2)~~(o)(2), only for the period of time required to perform source tests to demonstrate compliance with this rule.

(~~q~~p) Severability

If any provision of this rule is held by judicial order to be invalid, or invalid or inapplicable to any person or circumstance, such order shall not affect the validity of the remainder of this rule, or the validity or applicability of such provision to other persons or circumstances.

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 emission 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.

Appendix 3 – Continuous Furnace Pressure Monitoring (CFPM) Plan

The CFPM Plan shall, at a minimum, contain the following information:

1. A description of the type and design of the differential pressure monitoring device(s).
2. The specifications of the resolution, increment of measurement, and range of the differential pressure monitoring device(s).
3. A drawing and description of the exact location where each differential pressure monitoring device is to be located.
4. If differential pressure monitoring device(s) are already installed, all available recorded data of the static differential furnace pressure(s) as requested by the Executive Officer.
5. If applicable, the maximum alternative static differential furnace pressure in inches water column that the owner or operator will operate the reverberatory furnace at, and a demonstration that it can achieve emission reductions that are equivalent to or better than those achieved when operating at a pressure of -0.02 or more negative. The alternative static differential furnace pressure shall not exceed 0.4 inches water column.

ATTACHMENT G

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

~~Draft~~ Final Staff Report
Proposed Amended Rule 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities

February 2015

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INTRODUCTION

Rule 1420.1 – Emission Standards for Lead from Large Lead-acid Battery Recycling Facilities was adopted on November 5, 2010 in order to help ensure attainment of the 2008 National Ambient Air Quality Standards (NAAQS) for lead of 0.15 µg/m^3. Rule 1420.1 controls emissions of lead and other toxic air contaminants from large lead-acid battery recycling facilities. The rule also requires large lead-acid battery recyclers to meet a lead ambient air concentration of 0.150 µg/m^3, averaged over any 30 consecutive days, which is more stringent than the lead NAAQS, which has a longer averaging period of a rolling three month average. In addition, Rule 1420.1 includes housekeeping provisions such as regular cleaning periods, inspections and proper handling of lead containing dust and waste.

In January 2014 the SCAQMD staff reported to the Governing Board on the review of two studies that examined the technical, economic, and physical feasibility of achieving a total facility mass lead emission rate of 0.003 lb/hour from all lead point sources. Based on elevated levels of lead found in soil and surface dust by the California Department of Toxics Substances Control (DTSC), the Governing Board directed staff to begin rulemaking to consider lowering the lead point source emission rate and possibly other revisions to reduce the further accumulation of lead dust in the surrounding communities. Proposed Amended Rule (PAR) 1420.1 would, among other things, lower the ambient lead concentration limit and the point source emission rate for lead.

PUBLIC PROCESS

PAR 1420.1 is being developed through a public process. A PAR 1420.1 Working Group was formed to provide an opportunity to discuss the proposed rule in greater detail and provide input to the SCAQMD staff throughout the rule development process. The working group was composed of a variety of stakeholders including representatives and consultants for the regulated industry; the DTSC and other agency representatives; environmental and community representatives; and other interested parties who met with SCAQMD staff to discuss elements of the proposed rule in more detail. The Working Group, which is open to the general public, met twice in October and once in November. In addition, a Public Workshop was held on October 30, 2014 to present the proposed rule and receive public comment. A second Public Workshop was held November 19, 2014.

At the January 9, 2015 Governing Board meeting, staff presented the approach for PAR 1420.1 which will lower the lead point source emission rate to 0.023 lb/hr and also lower the ambient lead concentration limit to 0.110 µg/m^3 effective January 1, 2016, and then to 0.100 µg/m^3 effective January 1, 2017. Staff also presented Quemetco's proposal to lower the overall stack emission rate to 0.003 lb/hr. As a result, the Board asked that in the adoption resolution for PAR 1420.1 that staff include a commitment to return to the Governing Board with a rule proposal in six months to lower the point source lead emission rate to 0.003 lb/hr and other options.

The SCAQMD staff maintains a PAR 1420.1 rule development webpage that includes Working Group meeting dates and times, presentations for the Working Group meetings, and other upcoming meetings and dates. The PAR 1420.1 webpage can be found at: http://www.aqmd.gov/rules/proposed.html#1420.1.

BACKGROUND

Lead

Lead is deemed a carcinogenic toxic air contaminant (TAC) by the Office of Environmental Health Hazard Assessment (OEHHA). Chronic health effects include nervous and reproductive system disorders, neurological and respiratory damage, cognitive and behavioral changes, and hypertension. Exposure to lead can also potentially increase the risk of contracting cancer or result in other adverse health effects. Lead has been classified as a probable human carcinogen by the International Agency for Research on Cancer, based mainly on sufficient animal evidence, and as reasonably anticipated to be a human carcinogen by the U.S. National Toxicology Program. Young children are especially susceptible to the effects of environmental lead because their bodies accumulate lead more readily than do those of adults, and because they are more vulnerable to certain biological effects of lead including learning disabilities, behavioral problems, and deficits in IQ.

Under the federal Clean Air Act, lead is classified as a "criteria pollutant." Lead has observed health effects at ambient concentrations. The U.S. EPA has thoroughly reviewed the lead exposure and health effects research, and has prepared substantial documentation in the form of a Criteria Document to support the selection of the 2008 NAAQS for lead. The Criteria Document used for the development of the 2008 NAAQS for lead states that studies and evidence strongly substantiate that lead concentrations in a range of 5-10 µg/dL, or possibly lower, could likely result in neurocognitive effects in children. The report further states that "there is no level of lead exposure that can yet be identified with confidence, as clearly not being associated with some risk of deleterious health effects."[1]

Lead National Ambient Air Quality Standard

In October 1978, the U.S. Environmental Protection Agency (EPA) promulgated the first primary and secondary NAAQS for lead under Section 109 of the Clean Air Act. Both primary and secondary standards were set at a level of 1.5 $\mu g/m^3$ averaged over a calendar quarter. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against visibility impairment, damage to animals, crops, vegetation, and buildings.

On October 15, 2008, the EPA amended both the primary and secondary NAAQS for lead from a level of 1.5 $\mu g/m^3$ to 0.15 $\mu g/m^3$ averaged over a rolling 3-month period, and made changes to monitoring and reporting requirements. On December 31, 2010, the EPA designated a portion of Los Angeles County as nonattainment for the 2008 NAAQS for lead based on monitored air quality data from 2007-2009 that indicated a violation of the NAAQS due to, and near, two large lead-acid battery recycling facilities. In May of 2014, the U.S. EPA released its "Policy Assessment for the Review of the Lead National Ambient Air Quality Standards", reaffirming the primary (health-based) and secondary (welfare-based) staff conclusions regarding whether to retain or revise the current standards. In January 2015 the U.S. EPA announced that the ambient lead concentration standard of 0.15 $\mu g/m^3$ averaged over a rolling 3-month period would remain unchanged.

[1] Environmental Protection Agency, Office of Research and Development, "Air Quality Criteria Document for Lead, Volumes I-II," October 2006.

Rule 1420.1 Regulatory History

Large lead-acid battery recycling facilities were originally regulated under Rule 1420 - Emission Standards for Lead which was adopted in 1992 and is applicable to any facility that uses or processes lead-containing materials. In November 2010, Rule 1420.1 was adopted to establish additional requirements for large (facilities that process more than 50,000 tons of lead annually) lead-acid battery recycling facilities, namely Exide Technologies located in Vernon, and Quemetco Inc. located in the City of Industry, to ensure compliance with the NAAQS. Rule 1420.1 included an ambient lead concentration limit of 0.150 µg/m^3 and a point source limit of 0.01 lb/hr from any single source and 0.045 lb/hr from all point sources. Additionally, the rule included a series of housekeeping provisions to further control fugitive lead emissions. During the rulemaking process there was testimony from one of the affected facilities requesting to lower the total facility lead mass emission rate limit from point sources from 0.045 lb/hr to 0.003 lb/hr. Air dispersion modeling indicated that controlling lead point source emissions to 0.01 lb/hr or less for each point source and to 0.045 lb/hr or less for total point sources, and strict adherence to the housekeeping provisions of Rule 1420.1, would achieve compliance with the ambient lead concentration limits of 0.150 µg/m^3. Because of the air dispersion modeling and more stringent housekeeping and maintenance provisions in the rule, the Governing Board decided the retain staff's recommended limits of 0.045 lb/hr or less for total point sources and 0.01 lb/hr or less for each point source. In addition, the Governing Board strengthened the rule by requiring facilities to submit a compliance plan identifying additional lead reductions strategies and a curtailment plan and a study assessing the economic, technical, and physical feasibility of achieving a lower point source emission limit of 0.003 lb/hour, if the ambient lead concentration exceeded 0.120 µg/m^3over a 30 day rolling average.

In March 2013, the approved AB 2588 Health Risk Assessment for Exide Technologies reported a Maximum Individual Cancer Risk of 156 in one million, a non-cancer chronic HI of 63, a non-cancer acute HI of 3.8, and a cancer burden of 10. Arsenic, benzene, and 1,3-butadiene emissions were the main contributors to the high cancer risk. As a result, on January 10, 2014, Rule 1420.1 was amended to include an arsenic ambient concentration limit of 10.0 ng/m^3 averaged over a 24-hour period and point source emission limits for arsenic, benzene, and 1,3-butadiene. Curtailment provisions for lead and arsenic and requirements for installation and operation of differential pressure monitors were also included in the amendments.

In March 2014, Rule 1420.1 was amended to include requirements for the large lead-acid battery recycling facilities to participate in a multi-metals continuous emissions monitoring program with the SCAQMD.

Lead Emission Rate Feasibility Studies

By 2011, both large lead-acid battery recycling facilities, Quemetco and Exide, had exceeded the 0.120 µg/m^3 ambient lead concentration Compliance Plan limit and submitted feasibility studies. Quemetco's exceedances were noteworthy as they occurred despite having a lead mass emission rate limit of less than 0.003 lb/hr from their point sources. This indicates that some portion of the exceedances might be attributed to fugitive emissions from the facilities. At the January 2014 Governing Board Hearing, staff presented the two feasibility studies of lowering lead point source emissions subject to Rule 1420.1. Quemetco's study included source tests from 2011

indicating that a total facility mass lead emission rate of 0.003 lb/hr was already being met with their existing air pollution control systems. Exide's feasibility study stated that existing controls represented greater than 99% reductions in point source lead emissions and that further emission reduction measures should be focused on fugitive emission reductions. Exide's study stated that ambient air quality modeling indicated that "additional stack emissions reductions are not expected to further reduce ambient lead concentrations." Exide's study also concluded that lowering lead point source emissions to 0.003 lb/hr were not technically, economically, or physically feasible.

In the staff findings and recommendations on the feasibility studies, staff believed that the January 2014 proposed amendments to Rule 1420.1 to reduce arsenic and other toxic organics would result in concurrent lead emission reductions. Staff had also reported that since the implementation of Rule 1420.1 and its point source emission limit of 0.045 lb/hour, although there had been exceedances of the Rule 1420.1 lead ambient limit of 0.150 µg/m^3 averaged over any 30 consecutive days, there had not been any exceedances of the lead NAAQS of 0.15 µg/m^3 over a rolling 3-month average. This was a good indication that the point source emission limit of 0.045 lb/hour was sufficient to ensure compliance with the lead NAAQS and also an indicator that the spikes in ambient lead concentrations were likely attributed to activities related to fugitive emissions instead of point source emissions.

In December 2013, staff received letters from DTSC to Exide explaining that DTSC had conducted soil samples and found elevated levels of lead in surface dust and soil samples in and around the Exide facility. DTSC had commented that the lead dust is likely an accumulation of lead from decades of use, as well as fragmentation from handling and erosion. As a result of DTSC's findings, staff was concerned that lead contained in surface dust and soil can be re-entrained into the air impacting people that live and work in the surrounding community. SCAQMD staff recommended and was directed by the Governing Board to begin rulemaking to consider lowering the lead point source emission rate and possibly other revisions to reduce the further accumulation of lead dust to the surrounding communities.

Lead Ambient Concentration

Blood lead is used as a biomarker of lead exposure by health agencies and in epidemiological and toxicological studies. Lead in ambient air contributes to lead in blood by multiple exposure pathways by both inhalation and ingestion. The relationship between ambient air lead and blood lead is the primary methodology in determining the health impacts coming from lead air pollution sources. Additionally, ambient lead is the best measure of all the lead air pollution coming from a facility. The measure of ambient lead concentration captures all potential sources: lead emitted directly through exhaust stacks (point sources), fugitive lead emissions not captured by control equipment and accumulated lead in dust and soil in the surrounding area.

Rule 1420.1 required large lead-acid battery recycling facilities to meet the 0.150 µg/m^3 ambient lead concentration, averaged over any 30 consecutive days, beginning January 1, 2012. Based on monthly averages of ambient monitoring data, there has been a reduction of ambient lead emissions at both Quemetco and Exide. Figures 1A and 1B below illustrate the reductions from Quemetco and Exide respectively.

Figure 1A – Quemetco Fence Line Monitoring (µg/m^3)
(30 Day Averages)

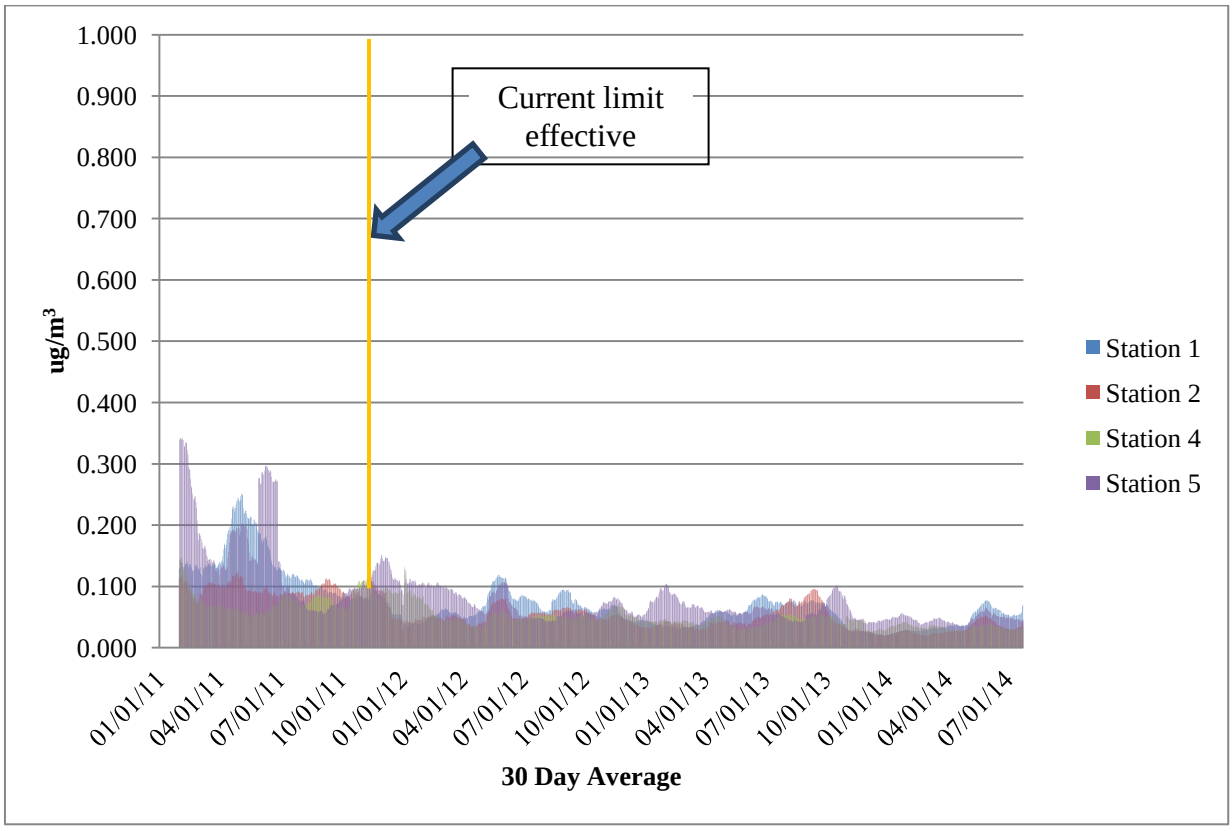
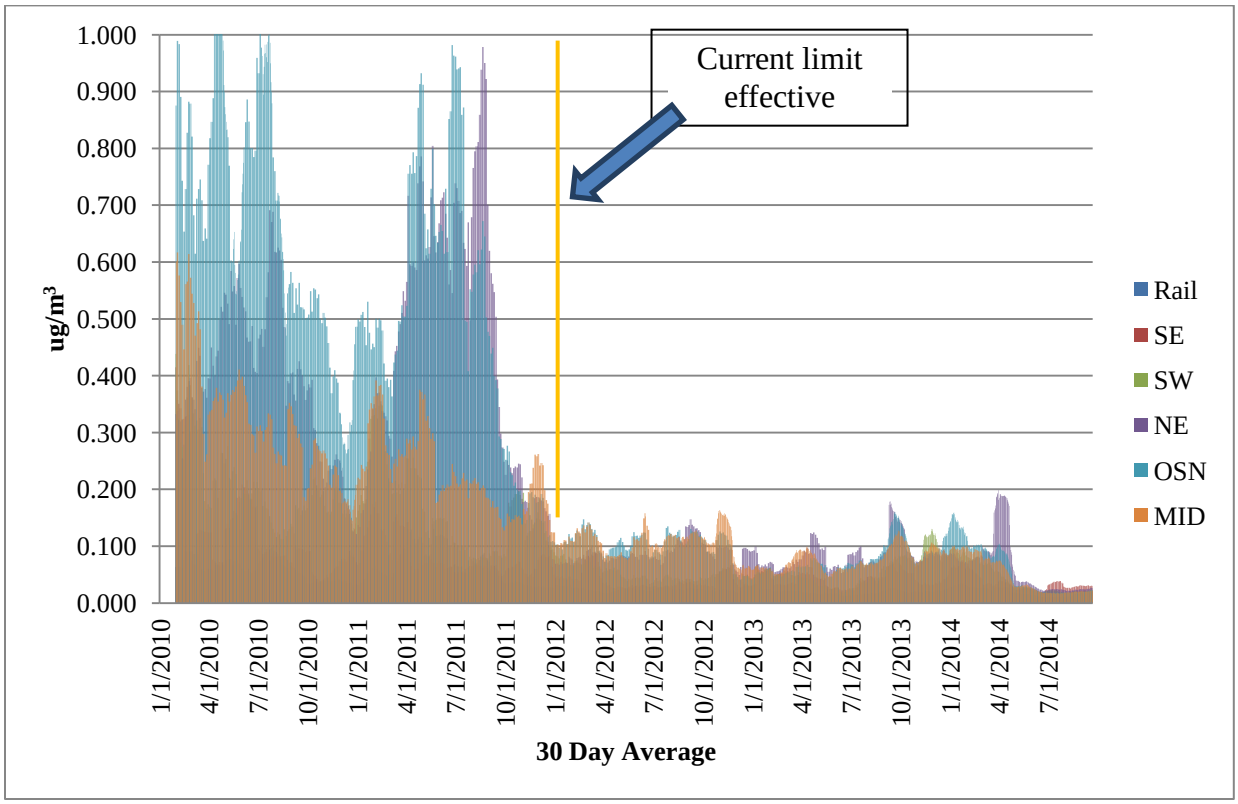


Figure 1B - Exide Fence Line Monitoring (µg/m^3)
(30 Day Averages)



PROPOSED AMENDED RULE 1420.1

Proposed Amended Rule (PAR) 1420.1 would include revisions to the lead ambient air concentration limit, frequency of ambient lead samples, point source emission rates, compliance plan and curtailment thresholds, housekeeping and maintenance provisions, additional reporting requirements and other administrative changes detailed below.

Ambient Air Concentration Limit (Subdivision (d))

PAR 1420.1 proposes to lower the lead ambient air concentration limit from 0.150 µg/m^3 to 0.110 µg/m^3 averaged over any 30 consecutive days as specified in subparagraph (d)(1), effective January 1, 2016. The proposed amended rule would further reduce the lead ambient air concentration limit to 0.100 µg/m^3 effective January 1, 2017. Prior to January 1, 2016, the lead ambient concentration of 0.150 µg/m^3 will remain in effect as shown in Table 1 below.

Table 1 - PAR 1420.1 Proposed Lower Ambient Lead Limit

Effective Date	Ambient Air Concentration of Lead, micrograms per cubic meter (µg/m^3), averaged over any 30 days
Prior to January 1, 2016	0.150 µg/m^3
January 1, 2016 – December 31, 2016	***0.110 µg/m^3***
On and after January 1, 2017	***0.100 µg/m^3***

The objective of the proposed requirement is to be more protective of public health by limiting the lead concentration in the ambient air. By limiting the ambient air lead concentration to the lowest level feasible, it will further reduce the accumulation of lead dust and reduce lead exposure from large lead-acid battery recyclers to the surrounding community. Lowering the ambient lead concentration is not inconsistent with studies that USEPA reviewed indicating that lower ambient lead concentrations would result in less impacts to children. According to USEPA, the assessment of the currently available studies continues to recognize a non-linear relationship between blood lead and effects on cognitive function, with a greater incremental effect (greater slope) at lower relative to higher blood lead levels.[1] Chronic health effects include increased risk of cancer, nervous and reproductive system disorders, neurological and respiratory damage, cognitive and behavioral changes, and hypertension. In addition, young children accumulate lead more readily than do those of adults are more vulnerable to certain biological effects of lead including learning disabilities, behavioral problems, and deficits in IQ.

Because of the primary, secondary, tertiary and even quaternary controls at Quemetco and Exide, combined with the fugitive nature of lead emissions associated with lead-acid battery recycling operations, stack emissions are not the main contributors to lead at all the ambient monitors. In Quemetco's case, according to emission modeling, stack emissions represent 2% or less of the

[1] U.S. EPA's "Policy Assessment for the Review of the Lead National Ambient Air Quality Standards," Environmental Protection Agency, May 2014

ambient lead concentrations found on the monitors. For Exide, stack emissions represent between 8% and 65% of ambient lead concentrations at the various monitors, according to source testing conducted in 2010 and 2012. As discussed below, Exide has installed additional particulate controls since then and is in the process of installing controls for arsenic that are expected to have concurrent lead emission reductions from point sources. These additional enhancements are expected to also reduce the contribution from point sources to the overall ambient concentration. Staff believes that reducing the ambient lead concentration limit will minimize further accumulation of lead from both point and fugitive sources. DTSC is in the process of requiring clean-up of the lead-containing soil. During the clean-up process, the proposed limit, along with implementation of housekeeping and specific requirements to minimize fugitive emissions during specific maintenance activities, will minimize lead emitted during soil disturbances and/or excavation. The ambient concentration limit will further minimize the rate of accumulation of lead dust.

Lead Point Source Emission Rate (Subdivision (f))

PAR 1420.1 will lower the lead point source emission limit. Staff is proposing to reduce the total facility mass lead emissions from all lead point sources under subparagraph (f)(1)(A) from 0.045 lb/hour to 0.023 lb/hour, effective January 1, 2016. Based on source testing conducted over the past six years, Quemetco can meet the proposed limit. Exide can also meet the proposed reduced lead point source emission limit based on source test results from testing conducted in 2010 and 2012 that was used in their 2013 approved AB2588 Health Risk Assessment. As seen in Table 2 below the combined point source emissions from Exide were just under 0.023 lb/hour.

Table 2 – Exide Health Risk Assessment Source Test Rates

Associated Control Device at Exide	2010 Lead Emission Rate (lb/hr)	2012 Lead Emission Rate (lb/hr)	Lead Emission Rate (lb/hr)
RMPS Scrubber	0.000358	---	0.000358
Material Handling BH	0.00115	---	0.00115
Soft Lead BH	0.000851	---	0.000851
Hard Lead BH	0.00102	0.0018	0.0018
Feed dryer BH	0.0105	---	0.0105
Neptune Scrubber	0.000175	0.000819	0.000819
North Torit BH	0.00141	---	0.00141
South Torit BH	0.0036	---	0.0036
MAC BH	0.000572	---	0.000572
All Devices at Exide			**0.02106**

Since the source testing conducted in 2010 and 2012, additional controls have been installed at Exide, including the modification/ installation of HEPA filtration on the control systems serving two furnace feed room areas. To ensure compliance with Rule 1420.1 emission limits and implementation of their Rule 1402 Risk Reduction Plan, Exide is in the process of installing a series of air pollution controls, including: a new scrubber on the blast furnace air pollution control system; a repurposed baghouse and a new regenerative thermal oxidizer on the blast furnace charging enclosure; a new regenerative thermal oxidizer to be placed on the reverberatory furnace feed dryer stack; replacement of the reverbatory feed mechanism;

enclosure of the blast furnace charge area; installation of charge level and temperature sensors in the blast furnace; changes to hoods and ducting; and installation of a secondary HEPA filtration system downstream of the hard lead ventilation system baghouse and MAC feed room baghouse. The added pollution control equipment is intended to reduce arsenic, benzene and 1,3 butadiene emission but will also further reduce lead emissions. The proposed lead point source emission rate limit will codify the reductions that are known to be feasible. The extent of the further reductions will not be known until source tests are conducted to confirm the actual lead point source emission rates.

Regulatory Approach

PAR 1420.1 incorporates a holistic regulatory approach that addresses point and fugitive lead emissions, as well as other toxic air contaminants. PAR 1420.1 is lowering both the point source emission rate and the ambient lead concentration limit. Lowering the point source emission rate will reduce the ambient lead concentration. Lowering the ambient lead concentration limit will ensure point and fugitive sources are well controlled. Based on the level of controls that have been installed at both facilities, fugitive emissions contribute the majority of emissions that are captured at the ambient monitors for both facilities. Based on implementation of Rule 1420.1, staff has found that the best control of fugitive emissions is use of total enclosures and strict adherence to housekeeping and maintenance provisions. The best measure of the efficacy of these measures is the ambient monitors. Increasing the frequency of monitoring the ambient lead and arsenic concentration from one in three days to daily will provide even greater assurance that housekeeping and maintenance activities are being consistently implemented, and all lead emissions are well controlled. In addition, lowering the ambient concentration establishes a prescribed limit, but allows each facility to identify the appropriate mix of point and fugitive control strategies to achieve that limit.

Lowering the ambient concentration lead limit to 0.100 $\mu g/m^3$ combined with daily monitoring will ensure that lead emissions from all sources, point and fugitive sources, are well controlled. Rule 1420.1 requires that ambient monitors be placed where the maximum ground level concentration is expected and that samples are collected over a 24-hour period. As discussed above, PAR 1420.1 will increase the frequency of sampling to daily thereby providing continuous ambient lead and arsenic data.

Staff is not recommending, at this time, to reduce the lead point source emission limit to 0.003 lb/hour. The lead and arsenic pollution control strategy that is being implemented at Exide has the potential of meeting a low lead point source emission rate, but it is not certain that it can meet a lead point source emission limit of 0.003 lb/hour. As discussed above, the additional pollution controls that have been installed as part of Exide's Compliance Plan and the additional arsenic pollution controls that are in the process of being installed at Exide are expected to further reduce the overall lead emission rate. ~~After the pollution controls are installed and source testing is conducted, staff can evaluate the feasibility of further reducing the lead point source emission rate.~~

Compliance Plan (Subdivision (g))

The threshold for the Compliance Plan submittal required in subdivision (g) will be reduced to reflect the proposed ambient lead concentration limits which drops to 0.110 $\mu g/m^3$ in January

2016 and of 0.100 μg/m^3 in January 2017. The effective date of the Compliance Plan will be the same as the effective date of the proposed reduction in the ambient lead concentration limit. This will require the facility with exceedances to identify additional measures to ensure the facility can meet the ambient lead concentration limit.

Housekeeping and Maintenance Requirements (Subdivision (h) and (i))

The definition for Maintenance Activity is proposed to be amended to include soil disturbances during sampling and remediation or other activities where soil is moved, removed or stored. Several housekeeping and maintenance provisions included in dust mitigation plans, required by the rule when facilities initially exceed the ambient lead concentration limit, have been proposed for inclusion in the rule. They reflect best management practices intended to minimize fugitive emissions that occur on facility grounds. The following measures are proposed:

- All trash or debris outside of a total enclosure containing lead or arsenic shall be placed in covered refuse containers that are free of dust or liquid leaks. The cover shall remain in place at all times except when trash or debris is placed into or removed from the refuse containers. This provision applies only to trash or debris within the facility.
- Postage of signs indicating a facility-wide vehicle speed limit of five miles per hour.
- Outside work stoppage if instantaneous wind speeds exceed 20 miles per hour.
- Concrete or asphalt cutting conducted outside of a total enclosure shall be performed under 100 percent wet conditions where there is a continuous flow of water applied to the cutting activity
- Grading of soil shall be conducted only on soils sufficiently wet to prevent fugitive emissions.

The provisions are intended to address fugitive sources of lead and arsenic which are significant contributors to ambient concentrations. Soil disturbances from vehicle movement, construction, maintenance, and remediation activities are likely causes of spikes in ambient concentrations and the proposed provisions have been found to be effective in existing dust mitigation plans at the applicable sites.

Ambient Sampling (Subdivision (j))

Rule 1420.1 paragraph (j)(2) currently requires that lead and arsenic samples be collected at least once every three calendar days and daily sampling for lead or arsenic only if there is an exceedance in the Rule 1420.1 ambient lead or arsenic concentration limits. PAR 1420.1 would require that 24-hour, midnight-to-midnight lead and arsenic samples be collected daily. This provision would be effective upon adoption of PAR 1420.1.

During the January 2014 rulemaking, staff expressed interest in continuous emission and ambient monitoring. The SCAQMD staff with, assistance from the large lead-acid battery recycling facilities, are implementing a demonstration program for continuous in-stack emissions monitoring and a continuous ambient monitor. Quemetco commented that they already are collecting daily samples and do not object to the idea of daily monitoring. In addition, Exide had also commented that they are collecting daily samples on some monitors.

During the Working Group meeting, representatives from both affected facilities suggested a provision to cover a monitor malfunction. In response, PAR 1420.1 subparagraph (j)(2)(C),

includes a provision to address monitor malfunction such as equipment failure, vandalism, lightning strikes or other events beyond the facility's control. Since Rule 1420.1 paragraph (j)(7) requires that all ambient air quality monitoring systems be equipped with a backup, uninterruptible power supply to ensure continuous operation of the monitoring system during a power outage, loss of power to an ambient monitor is not considered a "monitor malfunction." Under PAR 1420.1, in the event a 24–hour, midnight-to-midnight sample was not collected due to a monitor malfunction or other occurrence beyond the control of the facility, the owner or operator must report the monitor failure by calling 1-800-CUT-SMOG within 2 hours of knowing that the 24-hour midnight-to-midnight sample was not collected. The operator is also required to provide the reason, the name of the monitor and the date of the occurrence. The operator shall submit a 24-hour midnight to midnight sample for the following day as sampling cannot be missed for more than one day over a consecutive 30-day period.

PAR 1420.1 includes provisions for retaining ambient daily samples for one year and providing the samples to the Executive Officer within one business day upon request.

Rule 1420.1 paragraphs (j)(9) and (j)(10) currently require daily sampling if there is an exceedance of the lead or arsenic ambient concentration, respectively. PAR 1420.1 would remove these paragraphs, since paragraph (j)(2) proposes to require daily sampling on an ongoing basis.

Source Tests (Subdivision (k))

Rule 1420.1 paragraph (k)(1) allows facilities that demonstrate a lead point source emission rate of 0.0025 lb/hr or less to conduct source testing every 24 months rather than annually. The rate was based on an overall facility point source rate of 0.045 lb/hr. The overall facility rate is proposed to be reduced by 50 percent as noted in the Lead Point Source Emission Rate discussion above. Thus the source test provision will be reduced by the same proportion, or 0.0012 lb/hr. This is projected to require one additional stack at Exide to test annually rather than every 24 months.

Currently under paragraph (k)(9), any changes for an alternative or equivalent source test method must be approved by the SCAQMD Executive Officer as well as the California Air Resources Board (CARB) and U.S. EPA, as applicable. Staff is proposing that the approval beyond the SCAQMD Executive Officer be limited to the agency that developed the test method in question. For example, if an equivalent procedure was sought for EPA Method TO-15, then only SCAQMD and U.S. EPA approval would be necessary. <u>If the South Coast Air Basin has failed to attain the NAAQS for lead by the time required by the Clean Air Act, the alternative or equivalent source test method must be approved by U.S. EPA.</u>

PAR 1420.1 (k)(15), requires that the reports from source testing conducted pursuant to the rule to be submitted to the SCAQMD within 90 days or less after the completion of the source testing.

Reporting and Notification (Subdivision (n))

Based on comments from the Rule 1420.1 Working Group, Proposed Amended Rule 1420.1 will also include a provision requiring large lead-acid battery recycling facilities to provide specific

information if there is a spike in the daily ambient lead concentration. Under PAR 1420.1, if any daily ambient lead sample is greater than 0.300 µg/m^3, large lead-acid battery recycling facilities would be required to notify the Executive Officer in writing within 72 hours of when the facility was informed via laboratory report or other written or verbal communication that the ambient air concentration of lead was greater 0.300 µg/m^3 for any 24-hour sample. The operator is required to provide the date of the occurrence, the name of the monitor, the ambient lead concentration for the 24-hour sample, the potential cause or causes of the occurrence, and potential remedies to prevent the reoccurrence. The reports are not intended to be a full investigation but to provide facilities and the SCAQMD staff with general information on spike prevention.

Under PAR 1420.1, paragraph (n)(1), caution signs shall be posted at all entrances and the perimeter of the facilities stating, "Caution, Lead-Acid Battery Recycling Facility, Call Before Digging, Facility Contact." The proposed amended rule specifies the location to post these signs, the size of the size, and specific lettering requirements. The purpose of this provision is to give the facility the opportunity to be notified of any pavement or soil work that may be occurring outside of their facility.

The notification provision for unplanned shutdowns is revised to require notification regardless of potential emissions. The provision now applies even when the unplanned shutdown will not result in lead emissions and supersedes previous interpretations.

Under PAR 1420.1 subparagraph (n)(2)(J), notifications are proposed for planned or unplanned breaches to total enclosures. Planned openings require notice to the Executive Officer at least ten calendar days prior while unplanned openings require notification within one hour afterwards. The notice shall include the date and time of the breach, an explanation of why it occurred, the duration or estimated duration of the event and facility contact information.

Curtailment Requirements (Subdivision (o))

Under the current provisions of Rule 1420.1, sources are required to curtail their process if they exceed either the ambient lead concentration limit or the total facility mass emission rate. The rate of curtailment is dependent on the level of exceedance with the first tier coinciding with the respective limits in the rule as found in Tables 1 and 2 of Rule 1420.1. Thus, effective January 1, 2016, the first tier of the monitored ambient air concentration rate for mandatory daily process curtailments in Table 1 of subparagraph (p)(1) will be reduced to coincide with the proposed limit for ambient air concentrations of lead, 0.110 µg/m^3, as specified in paragraph (d)(1). The timeframe for the duration of the curtailment would also be amended to reflect the proposed ambient air concentration limit. Similarly, staff is proposing to reduce the first tier of the total facility mass emission rate for process curtailments in Table 2 of subparagraph (p)(2) to coincide with the proposed reduction of total facility lead point sources emission rate under subparagraph (f)(1)(A) from 0.045 lb/hour to 0.023 lb/hour.

ASSESSMENT OF LOWERING THE LEAD AMBIENT CONCENTRATION

Under Rule 1420.1, large lead-acid battery recycling facilities are required to have fence line monitors. Quemetco has four fence line monitors as seen in Figure 2A while Exide has six fence line monitors as depicted in Figure 2B. The monitors are placed upwind and downwind of the

facilities at locations where maximum ground level concentrations are expected at or beyond the property line.

Figure 2A – Quemetco Fence Line Monitors

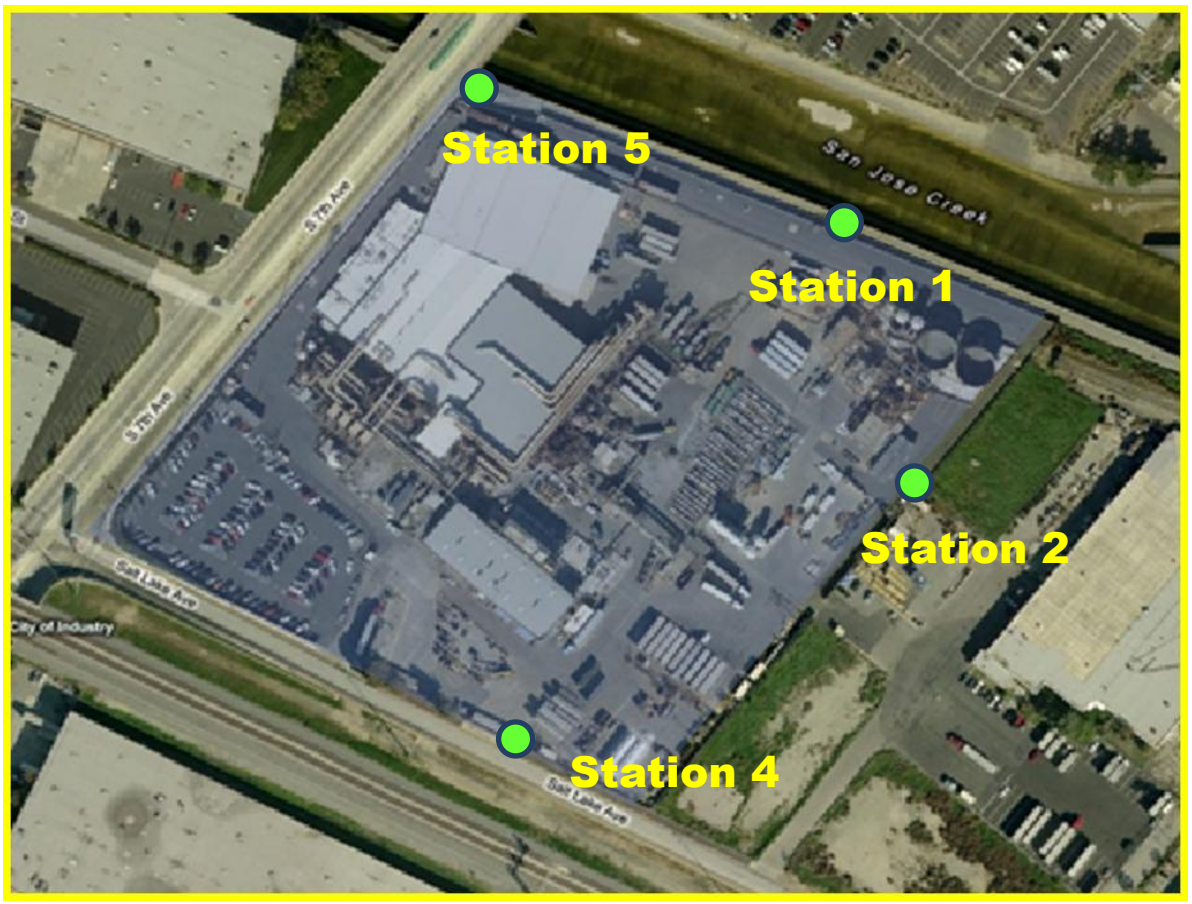
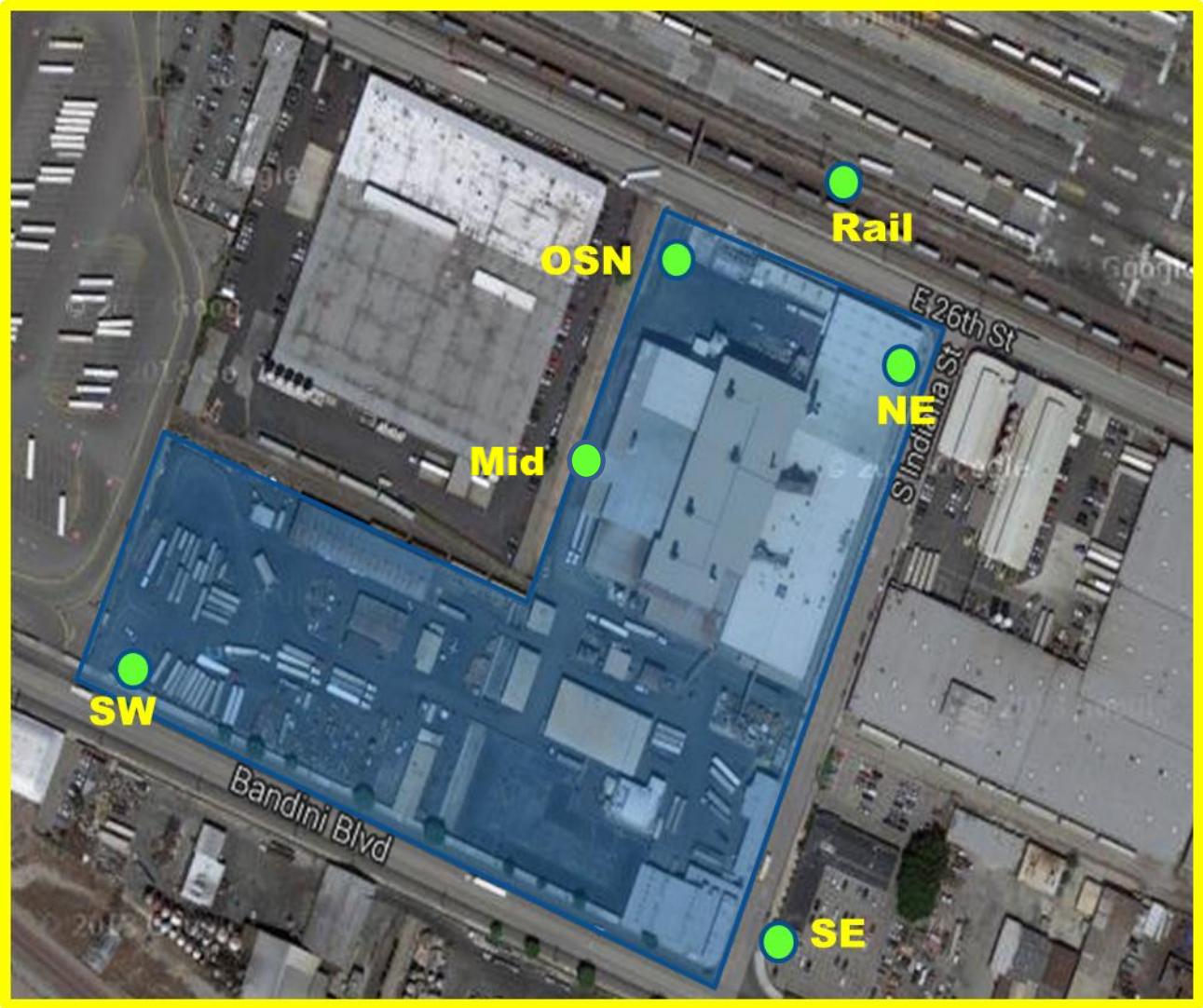


Figure 2B – Exide Fence Line Monitors



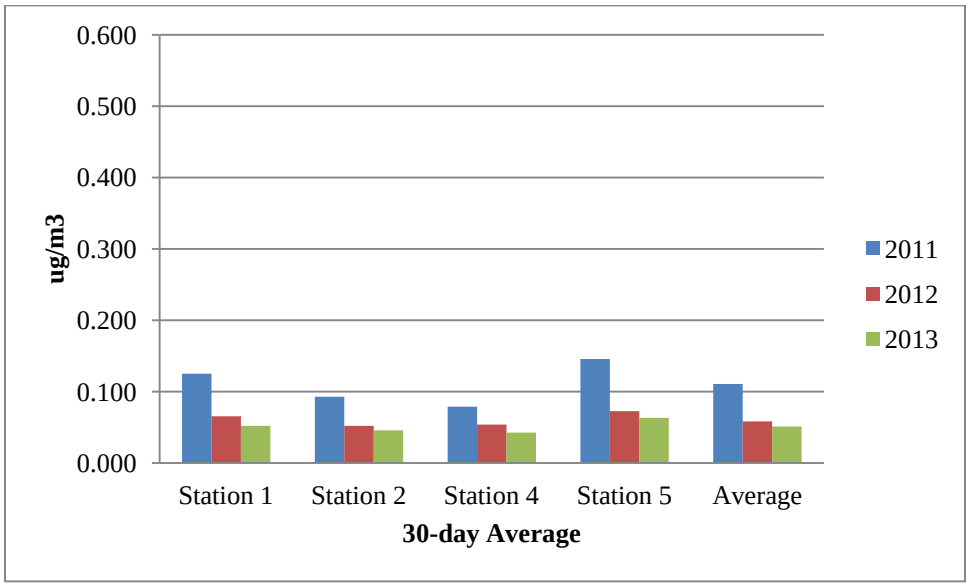
Staff evaluated the historical daily and the rolling 30-day average results for all monitors at both applicable facilities from 2008 until present to determine an appropriate lead ambient concentration limit and assess the feasibility of lowering the ambient lead concentration limit. The rolling 30-day average is calculated by determining the average over the 30 days prior to that particular day. Currently, in most 30-day averages, there would be ten data points that would be averaged assuming that samples were collected 1 in three days. The daily sampling under Proposed Amended Rule 1420.1 would yield 30 data points over the 30-day average. As noted in Figures 1A and 1B above, there have been significant decreases, notably after the January 2012 effective date of the current Rule 1420.1.

Based on analysis of historical lead monitoring data at PAR 1420.1 facilities, both facilities have demonstrated that it is feasible, if large spikes (> 0.300 µg/m^3) can be avoided, to consistently achieve the proposed ambient air concentration standard of 0.110 µg/m^3 averaged over any 30 consecutive days. Better implementation of housekeeping provisions, both existing and

proposed, particularly in situations where there is a greater opportunity for fugitive emissions such as construction activities and soil disturbances, will minimize spike generation and avoid exceedances.

For most of the monitors at Quemetco, there has been more than a 50% decrease in the ambient monitor results over the three year period of 2011 through 2013 as shown in Figure 3 below.

Figure 3 – Quemetco Ambient Lead Concentration (30-day Averages)



Examination of ambient lead concentrations in 2012 and 2013 indicate Quemetco complies with current ambient lead concentration limit of 0.150 µg/m^3. Furthermore, Quemetco had no exceedances of the proposed ambient lead concentration limit of 0.110 µg/m^3 in 2013. There were nine days at the Station 5 monitoring site that would not have met the proposed limit of 0.100 µg/m^3 in 2013 as seen below in Table 3.

Table 3 - Quemetco 2013 30-Day Average, Number of Days Above the Proposed Ambient Lead Limits

Site Monitor	Station 1	Station 2	Station 4	Station 5
Days Exceeding 0.150 µg/m^3	0	0	0	0
Days Exceeding 0.110 µg/m^3	0	0	0	0
Days Exceeding 0.100 µg/m^3	0	0	0	9

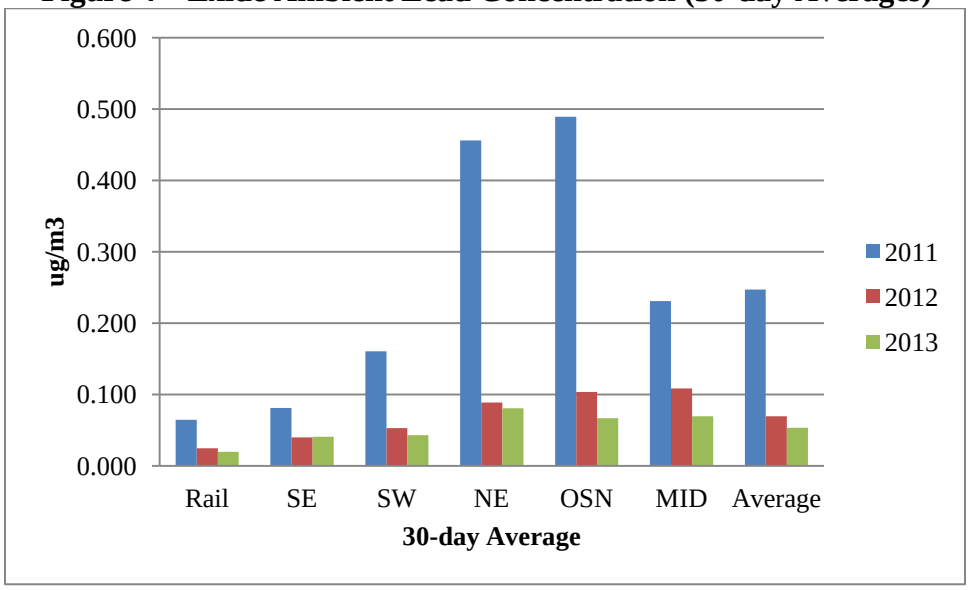
If large spikes greater than 0.300 µg/m^3 were avoided, Quemetco would have met the proposed limit of 0.100 µg/m^3 on all but three days over all four monitors in 2013 as seen below in Table 4. The three days occurred because of several spikes that were less than 0.300 µg/m^3 but more than 0.200 µg/m^3. If any one of those values were to have impacted by increased vigilance for spike abatement, then based on the 2013 monitored data there would be no values over the proposed 0.100 µg/m^3 ambient lead limit.

Table 4 - Quemetco 2013 30-Day Average, Number of Days Above the Proposed Ambient Lead Limits – Reduced Spikes Above 0.300 µg/m^3

Site Monitor	Station 1	Station 2	Station 4	Station 5
Days Exceeding 0.150 µg/m^3	0	0	0	0
Days Exceeding 0.110 µg/m^3	0	0	0	0
Days Exceeding 0.100 µg/m^3	0	0	0	3

Similar analysis was conducted on the monitor results at Exide. In Figure 4 below, the average of the 30-day average ambient lead concentration results at the various Exide monitors are presented. The average decrease across all monitors at Exide was nearly 80% over the three year period. Monitoring data in late 2013 and onward at Exide was not included as there was soil excavation required by DTSC and Exide has halted production in 2014 while installing additional control equipment.

Figure 4 – Exide Ambient Lead Concentration (30-day Averages)



Exide had eight exceedances of the 0.150 µg/m^3 ambient lead concentration limit in 2013 as seen in Table 5 below. Exide would have exceeded the proposed 0.110 µg/m^3 limit on 23 days at the NE monitor and 9 days at the OSN monitor. Furthermore, Exide would have exceeded the proposed 0.100 µg/m^3 limit on 26 days at the NE monitor, 15 days at the OSN monitor and 10 days at the MID monitor

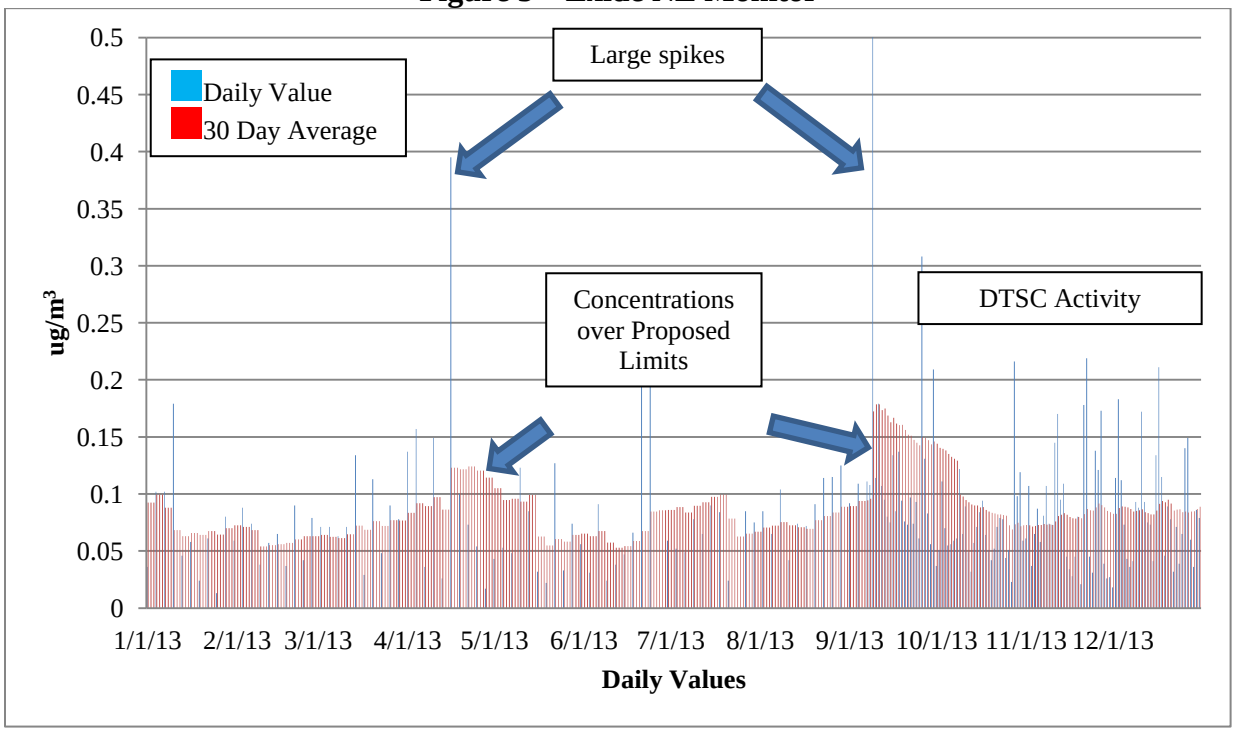
Table 5 - Exide 2013[1] 30-Day Average, Number of Days Above the Proposed Ambient Lead Limits

Site Monitor	Rail	SE	SW	NE	OSN	MID
Days Exceeding 0.150 µg/m^3	0	0	0	8	0	0
Days Exceeding 0.110 µg/m^3	0	0	0	23	9	0
Days Exceeding 0.100 µg/m^3	0	0	0	26	15	10

1. Excludes 9/16/13 through 12/31/13 due to DTSC activity

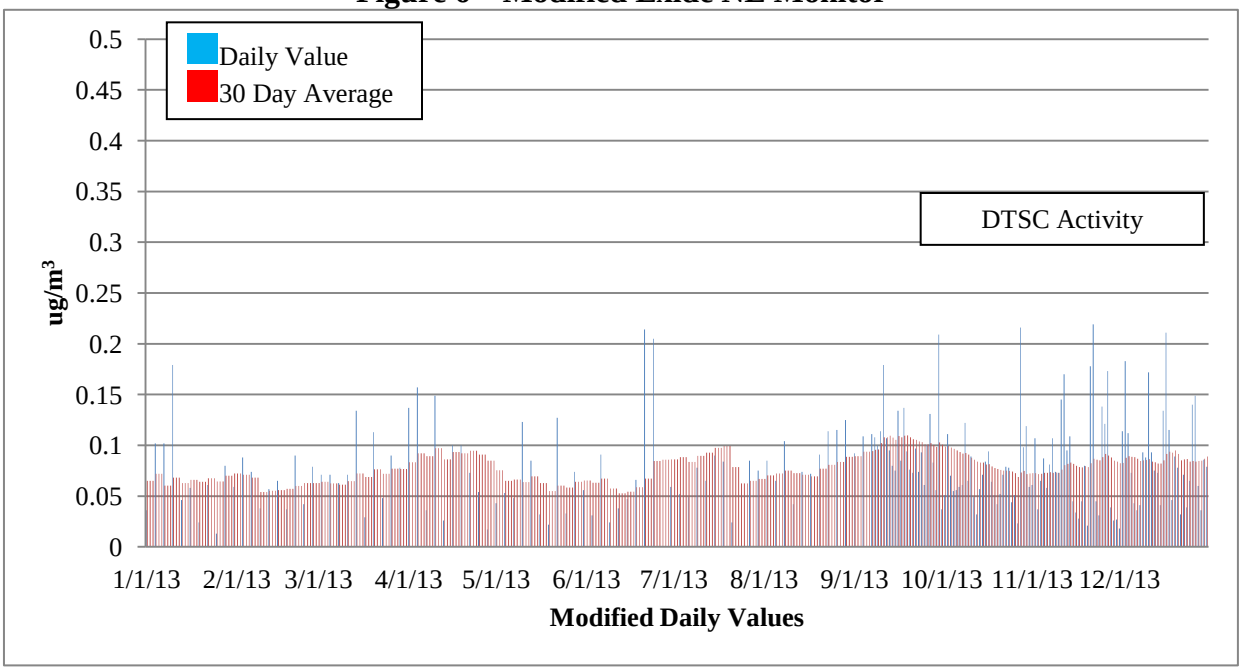
Figure 5 below shows daily monitored values in blue and the 30-day average in red. Examination of Exide's 2013 monitoring data reveals that the ambient lead concentrations over the current limit and proposed limits of 0.110 µg/m^3 and 0.100 µg/m^3 can be attributed to two large (>0.300 µg/m^3) spikes. There was a third spike that was >0.300 µg/m^3, however it occurred during the period that Exide was conducting DTSC related soil excavation activities. Aside from the days immediately following the spikes, the 30-day averages are all below the proposed limits.

Figure 5 – Exide NE Monitor



If the two spikes are reduced to the annual average value, there would be no exceedances of either the current or proposed 0.110 µg/m^3 ambient lead concentration limit. Aside from the two spikes, all other monitor values remain unchanged, including those that are well above the proposed limit, as seen in Figure 6 below. The proposed limit of 0.100 µg/m^3 would have been exceeded on seven days at the NE monitor in that same time period.

Figure 6 – Modified Exide NE Monitor



A similar analysis on spikes done on the other Exide monitors, as presented below in Table 6, indicates nine days of exceedances over the proposed limit of 0.110 µg/m^3 occurred in 2013, excluding 9/16/13 through 12/31/13 when DTSC activity was taking place. Additionally, all exceedances of the proposed limit at the OSN monitor occur beginning the same date (9/6/13) as the second spike seen on Figure 5. The exceedances noted at the MID, OSN and NE monitors at Exide all occur during the same timeframe where initial DTSC work, including trenching within the facility, was commencing. This correlation between spikes and exceedances suggests that the proposed limit of 0.110 µg/m^3 can be met by avoiding large spikes and implementing measures specified in Table 7.

Table 6 - Exide 30-Day Average, Number of Days Above the Proposed Ambient Lead Limits – Reduced Spikes Above 0.300 µg/m^3

Site Monitor	Rail	SE	SW	NE	OSN	MID
Days Exceeding 0.150 µg/m^3	0	0	0	0	0	0
Days Exceeding 0.110 µg/m^3	0	0	0	0	9	0
Days Exceeding 0.100 µg/m^3	0	0	0	7	15	10

Achieving the 0.100 µg/m^3 Ambient Lead Concentration Limit

Staff evaluated the measures in Table 7 that could be implemented at both facilities to ensure they meet the 0.100 µg/m^3.

Table 7 – Measures to Reduce Lead Emissions

Measures to Reduce Lead Emissions	Description/Frequency	Action To Be Taken By:	
		Exide	Quemetco
Enhanced Measures During Maintenance Activities	• During maintenance activities such as concrete/asphalt cutting, drilling, or soil grading, increase wash down areas as well as dusting, vacuuming and sweeping to minimize dust • 4 additional workers; 4 times/year	☑	☑
Enhanced Housekeeping Measures (beyond the new proposed housekeeping requirement of PAR 1420.1 (h))	• Implement existing housekeeping provisions more frequently or with better efficacy such as watering and street sweep to minimize dust created by vehicle and foot traffic • Wash, vacuum, and sweep inside and outside of building and parking area • 24 additional workers to implement enhanced daily housekeeping	☑	☐
Enhancements to Total Enclosures	• Seal roof on total enclosure • Install 8 - vestibules to improve maintenance of negative air pressure for doors and other openings, and • Install 8 - air curtains to improve maintenance of negative air pressure for loading and unloading areas and other openings where vestibules are not practicable	☑	☐
Additional Wheel Washing Station	1 additional station to water down vehicle wheels before exiting site~~/~~	☑	☐
Increased Maintenance of Baghouses	Increase frequency of baghouses maintenance activities	☑	☐
Additional Air Pollution Control (Point Source)	New two-cell WESP or additional scrubber	☑	☐

It is expected that Exide and Quemetco will likely implement measures to eliminate spikes that could occur during specific maintenance activities. This is expected to bring both facilities in compliance with 0.110 µg/m^3 proposed limit and to bring Quemetco into compliance with the 0.100 µg/m^3 proposed limit as their increased vigilance on spike control will also limit smaller spikes from occurring. All other measures in Table 7 such as enhanced housekeeping, enhancements to the total enclosure, an additional wheel washing station, increased maintenance of baghouses, and installation of either a scrubber or 2-cell WESP on the feed dryer could be implemented by Exide to ensure the facility can consistently meet the lower ambient lead concentration limit of 0.100 µg/m^3. The improvements were identified by staff based on review of source tests and ambient monitoring data, comparing housekeeping practices before and after 2013, and comparing practices between the two impacted facilities. As part of the enhanced

housekeeping provisions, the SCAQMD staff believes that increasing the number of workers to implement these provisions at Exide will improve the efficacy of implementing these measures. It is the SCAQMD staff's observation that the other large lead-acid battery recycling facility generally uses more workers when conducting daily housekeeping measures.

In addition, many of the improved measures are based on the respective facilities' Rule 1420.1 Compliance Plan and dust mitigation measures. With the exception of baghouse maintenance and potentially installing additional control equipment, the improvements focus on reducing fugitive emissions. Improved baghouse maintenance such as more frequent inspection and replacement of PTFE (Polytetrafluoroethylene) bags would help prevent equipment failures and ensures the baghouse is operating properly. Finally, the additional air pollution control would likely be on the Feed Dryer and addresses the highest emitting point source at Exide, according to 2012 source test data. Based on the 2012 source test the feed dryer was approximately three times higher than the next highest lead emission point source. Since the 2012 source test, Exide has installed HEPA on the feed dryer which would reduce the lead emission rate. However, it is expected that the lead emission rate from the feed dryer would still be about two times higher than the next highest lead emission point source. Thus, it is reasonably foreseeable that Exide would likely further control the feed dryer to ensure compliance with the ambient lead concentration limit under PAR 1420.1. Based on review of 2013 ambient lead monitored data combined strict adherence with point source emission limit, housekeeping and maintenance provisions, and implementation of some or all of the enhanced measures discussed above, the SCAQMD staff believes both facilities can meet the lower ambient lead concentration limit of 0.100 $\mu g/m^3$. The exceedances noted at the MID, OSN and NE monitors at Exide all occur during the same timeframe where initial DTSC work, including trenching within the facility, was commencing.

COMMENTS AND RESPONSES

Comment 1: Given Exide's investment in control equipment to comply with the existing provisions of Rule 1420.1, it is critically important that any District proposed amendments reflect realistic and achievable limits with a reasonable buffer.

Response: SCAQMD acknowledges Exide's efforts to comply with the existing provisions in Rule 1420.1. Based on source tests in 2010 and 2012 and the additional pollution controls that have been and are in the process of being installed, the SCAQMD staff is confident that Exide can meet the proposed overall lead emission rate of 0.023 lb/hour. Regarding the lower ambient lead concentration limit of 0.100 $\mu g/m^3$, based on the 2013 ambient monitored data Exide can achieve this lower ambient concentration limit with some improvements in their point source air pollution controls and housekeeping and maintenance activities.

Comment 2: The control equipment being installed at Exide is designed to satisfy the January 2014 amendments to Rule 1420.1 ("negative pressure" and limits on benzene, arsenic and 1,3 butadiene) and to satisfy Rule 1402. Though additional lead reductions are reasonably expected, the actual amount of reduction in unknown until after their implementation. Exide hopes that it can achieve the proposed lead mass emission rate of 0.023 pounds per hour, but the rate should be established at 0.036 lb/hr to provide an adequate "buffer".

Response: Based on earlier source testing conducted in 2010 and 2012 for approved AB2588 Health Risk Assessments, the combined lead point source emissions at Exide were under the proposed lead mass emission limit of 0.023 pound per hour. Since the 2012 source test, Exide has installed a HEPA filter on their feed dryer. In addition, Exide is installing a scrubber on their furnace and high efficiency particulate arrestors on several baghouses that will further reduce the lead emission rate as part of their risk reduction projects. The proposed amendment will codify the emission reductions achieved in practice.

Comment 3: Exide appreciates the District's rationale for not lowering the mass emission rate to 0.003 lb/hr, as sought by Quemetco. Exide must be given a chance to implement its District-approved project.

Response: At the January 9, 2015 Governing Board meeting, staff presented the approach for PAR 1420.1 which will lower the lead point source emission rate to 0.023 lb/hour and also lower the ambient lead concentration limit to 0.110 µg/m3 effective January 1, 2016, and then to 0.100 $\mu g/m^3$ effective January 1, 2017. The Board has also asked ~~that in the adoption resolution for PAR 1420.1~~ that staff include a commitment to return to the Governing Board with a rule proposal in six months to lower the point source lead emission rate to 0.003 lb/hr and other options~~regarding the feasibility of lowering the point source lead emission rate beyond those in PAR 1420.1~~. ~~Allowing Exide to complete emission reduction projects and source test will provide a more accurate representation of point~~

~~source emissions at Exide and the feasibility and potential for further lead emission reductions from point sources~~.

Comment 4: There is inherent variability in ambient data, and it cannot be assumed that any daily result above 0.150 $\mu g/m^3$ is either: (1) problematic, or (2) the result of an assignable and correctable site-related cause. The District should consider keeping the existing standard while adding a second compliance standard of 0.12 $\mu g/m^3$ measured over a longer averaging period of 60 to 90 days to account for the variability.

Response: Staff analysis of ambient monitor results during 2013 found that if daily ambient readings greater than 0.300 lb/hour are eliminated, an ambient air concentration lead limit to 0.110 $\mu g/m^3$ averaged over a 30-day period is feasible. Based on 2013 ambient lead data, spikes over 0.300 $\mu g/m^3$ are infrequent, occurring just 0.2% of the time, and strongly correlate to exceedances of both the proposed limit and the existing limit. Staff agrees that a daily value above 0.150 $\mu g/m^3$ is not uncommon and does occur. However, over a 30 day averaging period a daily value of 0.150 $\mu g/m^3$ did not lead to any exceedances of the current limit and would not lead to any exceedances of the proposed limit as most daily values are well below 0.100 $\mu g/m^3$. Additionally, the exceedances noted at the MID, OSN and NE monitors at Exide all occur during the same timeframe where initial DTSC work, including trenching within the facility, was commencing. Enhance measures during maintenance activities would likely address spikes occurring because of remediation activities.

A daily spike or series of spikes over 0.300 $\mu g/m^3$ are problematic and PAR 1420.1 requires notification and that the facility identify recommendations for potential remedies when they occur. As the primary indicator of health impacts to the surrounding community, staff believes that reducing the ambient concentration limit to the lowest feasible limit is a priority. Furthermore, in practice, shorter averaging periods is more stringent and will result in lowering average monitored values. This more stringent averaging methodology is more health protective. The proposed amended rule will require daily monitoring, which will provide more data points within the 30 day average which should help to account for variability.

Comment 5: We do not oppose daily sampling but request similar data completeness requirements and implementation concepts for federal lead NAAQS monitoring at 40 CFR 50, Appendix R, Section 4(c)(i) which could be adapted to a daily sampling program.

Response: Staff has included monitor failure provisions in the proposed rule as requested. The daily sampling, data completeness requirements are similar to those in 40 CFR 50, Appendix R. With respect to missing daily samples, the proposed rule allows up to one missing daily sample over a consecutive 30 day period provided

the missing sample was due to monitor malfunction or other occurrence beyond the control of the facility.

Comment 6: The compliance date for the new lead mass emission and ambient standards should be extended 90 days from January 1, 2016 to April 1, 2016 to accommodate completion of installing control equipment, commissioning and testing.

Response: Staff has already proposed extending the compliance dates from July 1, 2015 to January 1, 2016 to accommodate the completion of the RRP Projects and subsequent source testing at Exide. RRP Projects completion is scheduled for Spring 2015 allowing ample time for troubleshooting and source testing the newly installed equipment. The facility will have approximately nine months to make adjustments as systems go online and testing should take no more than three months.

Comment 7: As the District has acknowledged, ambient emissions are more reflective of health protection and exposure risks than stack emissions. Ambient lead concentrations are driven more by fugitive sources than point sources. Over time Exide's ambient lead levels are comparable to Quemetco's ambient lead levels, even though Quemetco has lower measured mass emissions.

Response: Staff agrees that ambient lead concentration limits are more reflective of health protection and exposure risks. Stack emissions are a contributing source to ambient lead concentrations as are fugitive emissions and lead-contaminated surface dust and soil. Staff is proposing to limit all three contributing sources with the primary aim of reducing the ambient lead concentration to the lowest feasible limit.

Comment 8: Exide conducted a detailed Feasibility Study concluding that the 0.003 lb/hr mass emission limit was infeasible. Multiple control technologies were carefully assessed, including wet electrostatic precipitators. Exide was not able to find an emissions control equipment vendor that would guarantee the 0.003 lb/hr emission rate on a facility-wide basis. Exide's physical space constraints are such that there is no suitable space for a wet electrostatic precipitator. Finally, the $30 million cost to implement the control technologies would potentially provide only a marginal, if any, benefit on emissions reductions.

Response: Thank you for summarizing the Feasibility Study you provided regarding the 0.003 pound per hour mass emission limit. Staff found the infeasibility assertion to be more nuanced than stated in the study or the comment above. It is the SCAQMD staff's understanding that the vendor of the WESP was willing to guarantee an emission reduction efficiency of 92%, provided the Feed Dryer lead emissions were reduced by half. This, combined with improvements to the general ventilation control system could potentially reduce overall lead emissions

to a level near 0.003 pounds per hour. In addition, the SCAQMD staff believes that one option to install a WESP would be over the surface pond.

The SCAQMD staff is aware, however, that Exide has chosen a control strategy to reduce lead and arsenic emissions that does not include installing a WESP. Exide's control strategy does include secondary, tertiary and quaternary pollution controls, depending on the stack. As previously stated, at the January 9, 2015 Governing Board meeting, staff presented the approach for PAR 1420.1 which will lower the lead point source emission rate to 0.023 lb/hour and also lower the ambient lead concentration limit to 0.110 µg/m3 effective January 1, 2016, and then to 0.100 µg/m^3 effective January 1, 2017. The Board also asked ~~that in the adoption resolution for PAR 1420.1~~ that staff include a commitment to return to the Governing Board <u>with a rule proposal in six months to lower the point source lead emission rate to 0.003 lb/hr and other options</u>~~regarding the feasibility of lowering the point source lead emission rate~~. ~~Allowing Exide to complete emission reduction projects and source test will provide a more accurate representation of point source emissions at Exide and the feasibility and potential for further lead emission reductions from point sources~~.

Comment 9: Quemetco supports the adoption of the 0.110 µg/m^3 ambient lead concentration as proposed by SCAQMD.

Response: Thank you for your comment.

Comment 10: Quemetco urges SCAQMD to adopt a facility-wide lead mass emission rate limit of 0.003 pounds per hour. While the proposed limit of 0.023 pounds per hour appears significant, further examination reveals it to be far more modest. The District's proposed point source emission standard will result in no meaningful reduction of lead in the greater Los Angeles area. Quemetco's proposal, however, will reduce lead point source emissions to 25 pound per year, nearly ten times less than what is proposed.

Response: At the January 9, 2015 Governing Board meeting, staff presented the approach for PAR 1420.1 which will lower the lead point source emission rate to 0.023 lb/hour and also lower the ambient lead concentration limit to 0.110 µg/m3 effective January 1, 2016, and then to 0.100 µg/m^3 effective January 1, 2017. The Board also asked ~~that in the adoption resolution for PAR 1420.1~~ that staff include a commitment to return to the Governing Board <u>in six months with a proposal to lower the overall point source lead emission limit to 0.003 lb/hour and other options</u>~~regarding the feasibility of lowering the point source lead emission rate~~. ~~Allowing Exide to complete emission reduction projects and source test will provide a more accurate representation of point source emissions at Exide and the feasibility and potential for further lead emission reductions from point sources~~.

Based on source tests, Quemetco has demonstrated a lead point source emission rate less than 0.003 pound per hour. The point sources represent only one aspect

of contributing emission sources. Ambient concentrations are the sum of point source and fugitive emissions ~~as well as contaminated surface dust and lead dust that is re-entrained into the ambient air~~. The SCAQMD staff believes that lowering the ambient lead concentration limit will minimize all lead emissions from large lead-acid battery recycling facilities and is directly associated with protecting public health. In addition, ambient lead and arsenic concentrations are sampled over a 24-hour period and collected daily provided more continuous compliance information as opposed to point source limits which require a source test done on an annual basis.

Comment 11: Quemetco has six years of test data demonstrating that the Quemetco's wet electrostatic precipitator achieves its proposed 0.003 pound per hour lead emission rate.

Response: The wet electrostatic precipitator has been proven to be successful at Quemetco. Quemetco's operation is different than Exide's operation. Quemetco operates an electric resistance furnace while Exide operates a blast furnace. The configuration of the two facilities is also different and the engineering, design, and construction for the two facilities would also be different. Both facilities realize control efficiencies of 99% or greater. The variability in efficiencies between different equipment, different process weights and different pollutants makes determining an overall control efficiency problematic, particularly when the control equipment is in the midst of changes.

Comment 12: The lead emission rates established by Quemetco are both technologically feasible, as demonstrated through testing, and economically feasible. In short, Quemetco's lead emission rates represent Best Available Control Technology (BACT), Best Available Retrofit Control Technology (BARCT), Toxics Best Available Control Technology (TBACT) and Lowest Achievable Emission Rate (LAER).

Response: Again, while the wet electrostatic precipitator has been proven successful at Quemetco with their electric ~~arc~~ resistance furnace, it has not formally been demonstrated to be BACT, BARCT, TBACT and LAER. These designations require careful evaluation to determine the applicable scope and processes. ~~There may be limitations placed upon the designation including the specific type of equipment (i.e. electric arc furnace). All of these limits (BACT, BARCT, etc.) are based on individual pieces of equipment, not an entire facility. Where two facilities have different types of equipment, they may legitimately produce different total point source emissions.~~

Comment 13: Quemetco requests that the Governing Board be presented the option to adopt a lead mass point source emission rate of 0.003 pounds per hour when it considers the currently proposed changes.

Response: At the January 9, 2015 Governing Board meeting, staff presented the approach for PAR 1420.1 which will lower the lead point source emission rate to 0.023 lb/hour and also lower the ambient lead concentration limit to 0.110 µg/m3 effective January 1, 2016, and then to 0.100 µg/m^3 effective January 1, 2017. Staff did highlight Quemetco's proposal to lower the overall stack emission rate to 0.003 lb/hour. As a result, the Board asked that in the adoption resolution for PAR 1420.1 that staff include a commitment to return to the Governing Board ~~regarding the feasibility of~~in six months with a rule proposal lowering the point source lead emission rate and other options. ~~SCAQMD staff believes that allowing Exide to complete emission reduction projects and source test will provide a more accurate representation of point source emissions at Exide and the feasibility and potential for further lead emission reductions from point sources.~~

Comment 14: It takes approximately three days for the lab to analyze an ambient sample, and, in the days before receiving a result, the facility has little ability to correct the problem or assess the event that may have resulted in what is later learned to be a high result. By the time the result is known, the facility may have already exceeded the 30-day average without a reasonable opportunity to assess the cause and take corrective action if needed.

Response: Ambient 24-hour sampling by definition only provides a result after the events of a day. Regardless of whether the results become known immediately afterwards or three days later, a high result may lead to several days of exceedances. It is incumbent upon the facility to prevent the exceedances by operating equipment properly and strict adherence to Rule 1420.1 operating, housekeeping, and maintenance provisions. It is expected that both facilities will implement additional measures to ensure compliance with the lower ambient concentration limit of 0.100 µg/m^3. Review of the lead ambient concentration results between 2012 and 2013 demonstrate that over time both facilities are already assessing the cause of exceedances and taking corrective actions.

Under Rule 1420.1, both facilities are required to participate and fund an in-stack multi-metals continuous emissions monitoring demonstration program. In addition to this demonstration program, the SCAQMD has been also evaluating through a demonstration program an ambient multi-metals continuous monitoring system. If these systems are successful, they may provide more instantaneous continuous emissions and/or ambient air data.

Comment 15: There have been instances where third-parties not under Exide's control have caused or contributed to exceedances of the 30-day average. As such, Exide respectfully requests that language be included in the rule to allow the facility to seek a waiver to avoid a notice of violation and/or curtailment. The facility shall provide credible supporting evidence.

Response: There is no prohibition in the rule against requesting such a waiver and/or offering credible supporting evidence. Relief from the curtailment provisions

may be sought through a variance. Notices of Violations are simply allegations that the District believes a violation has occurred. Before the District obtains any penalties, it first needs to prove a violation. The specific amount of penalties paid in settlement or ordered by a court must be based on an analysis of the factors set forth in Health and Safety Code section 42403.

Comment 16: One IQ point, or 1 μg/dL is established by state law. I don't see how allowing 200 pounds per year of lead emissions with the proposed limit of 0.023 pounds per hour from stack emissions will comply with state law.

Response: The California Office of Environmental Health Hazard Assessment (OEHHA) has developed a 1 μg/dL benchmark for source-specific incremental change in blood levels for protection of children. The California Human Health Screening Levels (CHHSL) represent concentrations in soil that have no more than a 2.5% probability of decreasing IQ by more than 1 point in a 90th percentile child or fetus. The benchmark was established to estimate a concentration in soil that would lead to an incremental increase in blood lead of up to 1 μg/dL to a child resident. Using DTSC's Leadspread model, OEHHA determined that a residential exposure to lead in soil or dust of 77 μg/g would result in an incremental increase in blood lead to 1 μg/dL. However, there is no established way to translate stack emissions at a point source directly to lead content in soil. Stack emissions are dispersed over an area in and around the facility in relatively small amounts. However, when allowed to accumulate over many years, as they clearly have in the two communities surrounding the Exide and Quemetco, the levels could exceed 77 μg/g. The U.S. EPA examined similar thresholds when establishing the lead NAAQS. However, rather than using stack emission limits with its inherent limitations, U.S. EPA established a standard based on the ambient lead concentration. When reviewing the current federal standard, U.S. EPA reviewed the median IQ loss associate with lead exposure for the median child. Their estimations of risk are approximate as noted by the ranges presented below in Table 3-11 taken from the U.S. EPA's Policy Assessment for the Review of the Lead National Ambient Air Quality Standards, May 2014. The bolded range represents the range with the highest overall confidence. The current ambient concentration limit in Rule 1420.1 is a maximum monthly average of 0.150 $\mu g/m^3$ which, as seen below, is more health protective than the existing federal limit. The proposed maximum monthly average limits of 0.110 $\mu g/m^3$ and 0.100 $\mu g/m^3$ will be even more health protective but the uncertainties in the estimates prevent a determination if the proposed limit, or even the current limit, prevent the loss of one IQ point in a child resident. It should be noted that U.S. EPA and SCAQMD staff concur that ambient lead concentrations, and not total facility mass lead emissions are the primary indicator of health impacts to the surrounding community.

U.S. EPA's Policy Assessment for the Review of the Lead National Ambient Air Quality Standards, May 2014

Table 3-11. Estimates of air-related risk for the generalized (local) urban case study, including interpolated estimates for current standard.

Air Quality Scenario Just meeting specified metric (µg/m³)			Median Air-related IQ Loss [A] for Generalized (local) Urban Case Study
Maximum Quarterly Average [D]	Maximum Monthly Average	Maximum 3-month Average	
1.5 (previous NAAQS)			**3.5 - 4.8** (1.5 - 7.7)
	0.5		**1.9 - 3.6** (0.7 - 4.8)
0.2			**1.5 – 3.4** (0.5 – 4.3)
		0.15 [B] (current NAAQS)	**1.5 – 3.4** (0.5 – 4.3)
	0.2		**1.2 - 3.2** (0.4 - 4.0)
	0.05		**0.5 - 2.8** (0.2 - 3.3)
	0.02		**0.3 - 2.6** (0.1 - 3.1)

A - Air-related risk is bracketed by "recent air" (lower bound of presented range) and "recent" plus "past air" (upper bound of presented range) (see section 3.4.4 for additional detail on these categories). Boldface estimates are generated using the C-R function in which we have the highest overall confidence (the log-linear with low-exposure linearization). Values in parentheses reflect the range of estimates associated with all four concentration-response functions (see discussion in section 3.4.3.3.1). Values in parentheses reflect the range of estimates associated with all four concentration-response functions.
B – Risk estimates interpolated - see text.

SOCIOECONOMIC ASSESSMENT

PAR 1420.1 would include revisions to the lead ambient air concentration limit, frequency of ambient lead samples, point source emission rates, compliance plan and curtailment thresholds, housekeeping and maintenance provisions, additional reporting requirements and other administrative changes.

Affected Facilities and Industries

The proposed amendments affect two facilities that process greater than 50,000 tons of lead annually. These two facilities belong to the industry of secondary lead smelting, refining, and alloying of nonferrous metal [North American Industrial Classification System (NAICS) 331492].

Compliance Costs

The proposed ambient air concentration limit of 0.110 µg/m^3 can be achieved by eliminating large spikes through improved implementation of housekeeping provisions and enhanced maintenance measures, particularly in situations where there is a greater opportunity for fugitive emissions such as construction activities and soil disturbances. On average, two to four spikes per year were observed over the past three years. Staff estimates that four additional workers will be necessary to implement the enhanced maintenance measures during certain soil disturbance activities at a cost of approximately $3,200 per activity, assuming four additional employees working 40 hours each at $20 per hour to limit the soil disturbances. Assuming four incidents per year at each facility, the annual additional cost for improved housekeeping implementation is $25,600.

To comply with the proposed 0.100 µg/m^3 ambient lead concentration limit, it is estimated that Exide will need to implement enhanced housekeeping measures. Staff estimates that a crew of eight for each shift will be necessary to do additional sweeping, wash downs, baghouse maintenance and other dust abatement activities. This would result in an additional $175,200 in annual housekeeping costs. Additionally, a second wheel washing station and enhancements to the total enclosures would also be necessary. The wheel washing station cost is estimated to be $65,000, with an annualized cost of $8,000. The enhancements to total enclosures would include sealing the roof to improve the negative pressure in the building and installing two sets of doors with associated vestibules and air curtains. The estimated cost is $984,000. The annualized cost of the enhancements to total enclosures is $121,430. Installation of a scrubber or WESP on the Feed Dryer system may also be a consideration. Because the cycling process of the WESP, two cells would be required making the WESP more capital intensive and more expensive to operate. Therefore, it is assumed that Exide would install a scrubber. It is estimated that the cost to Exide for the scrubber would be approximately $325,000 which includes installation, permitting and source testing. The annualized cost would be $40,100. There would also be an increase in electricity costs of approximately $44,200 per year to run the equipment.

PAR 1420.1 would also require each facility to submit a Compliance Plan if the ambient lead concentration limit was exceeded. The one-time cost of a compliance Plan is estimated at $20,000 for each facility. The mass emission limit reduction proposed is not expected to result in any additional costs to either facility as both facilities can meet the proposed limit with existing control equipment. However, the decrease in the mass emission limit will result in one additional source test in one facility annually at a cost of $50,000 every other year for an annualized cost of $25,000.

PAR 1420.1 would also require Exide to install three additional monitors to increase the frequency of ambient sampling. Currently Quemetco has at least two monitors at each of their four monitoring sites. Exide has two monitors at three of their monitoring sites and would need to purchase three more for the remaining three sites. The cost of each monitor is estimated at $30,000. Lastly, PAR 1420.1 would require additional laboratory tests for lead and arsenic. Ten additional laboratory tests would be needed to be done on 243 days for a total of 2,430 tests annually. At a cost of $99 per test, the daily sampling proposal in the rule would increase costs by $241,000 annually. The one-time cost of Compliance Plan and capital cost of monitors were annualized over 10-years and with four percent real interest rate. There will also be costs of less

than $200 annually for signage and additional notifications. Table ~~7~~ 8 presents the total annual cost of the proposed amendments by category, and by facility. The total annual cost of PAR 1420.1 is estimated to be $667,310, out of which 83 percent is expected to be incurred by the Exide Company.

Table ~~7~~ 8 - Annual Compliance Cost of PAR 1420.1 by Category

Proposed Rule Requirement	Exide	Quemetco
Enhanced Measures During Maintenance (0.110 µg/m^3)	$12,800	$12,800
Enhanced Housekeeping Measures (0.100 µg/m^3)	$175,200	0
Enhancements to Total Enclosures	$121,420	0
Wheel Washing Station	$8,000	0
Scrubber	$40,100	0
Electricity	$44,200	0
Compliance Plans	$2,460	$2,460
Additional Source Testing	$25,000	0
Ambient Monitors	$11,070	0
Daily Sampling	$144,600	$96,400
Total Cost per Facility	$555,650	$111,660
Total Cost of PAR 1420.1	**$667,310**	

The total annual cost of the PAR 1420.1 is estimated at approximately $700,000. When the annual compliance cost is less than one million dollars, the Regional Economic Impact Model (REMI) is not used to analyze impacts on jobs and other socioeconomic impacts because the impact results would be very small and would fall within the noise of the model. A major portion of the socioeconomic report covers the regional jobs and other socioeconomic impacts generated from the REMI model. As such, when the REMI model is not run, the socioeconomic assessment is included in the staff report.~~The annual compliance cost of this magnitude when compared relative to the total value of local economy (about $1 Trillion) is expected to have no significant economic impacts. As such, the job impacts on the local economy are expected to be small, or within the noise of the Regional Economic Model (REMI) model. Therefore, the REMI model was not used.~~

Rule Adoption Relative to the Cost-effective Schedule

On October 14, 1994, the Governing Board adopted a resolution that requires staff to address whether rules being proposed for adoption are considered in the order of cost-effectiveness. The 2012 Air Quality Management Plan (AQMP) ranked, in the order of cost-effectiveness, all of the control measures for which costs were quantified. It is generally recommended that the most cost-effective actions be taken first. PAR 1420.1 is not a control measure in the 2012 Air Quality Management Plan (AQMP), and thus was not ranked by cost-effectiveness relative to other AQMP control measures in the 2012 AQMP.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

Pursuant to the California Environmental Quality Act (CEQA) and SCAQMD Rule 110, SCAQMD staff evaluated the proposed project and made the appropriate CEQA determination.

The public workshop meeting also served as a CEQA scoping meeting to solicit public input on any potential environmental impacts from the proposed project. Comments received at the public workshop on any environmental impacts were considered when making the CEQA determination. One comment letter was received from the public relative to the environmental analysis in the Draft Subsequent Environmental Assessment (SEA) and a response is included in the Final SEA.

DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE SECTION 40727

Requirements to Make Findings

California Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the SCAQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the staff report.

Necessity

PAR 1420.1 is needed to further protect public health by reducing lead emissions from large lead-acid battery recycling facilities. For a toxic air contaminant, such as lead, for which there is no level of exposure that can yet be identified with confidence, as clearly not being associated with some risk of deleterious health effects, the intent of this ~~control measure~~proposed rule is to reduce emissions to the lowest level achievable through the most effective feasible control method. Recent testing of surface dust and soil have shown lead-contamination sufficiently high to pose a threat to the health of the people that live and work near in the surrounding community when re-entrained into the ambient air. The proposed rule will reduce lead emissions from point sources as well as fugitive emissions including lead from surface dust and soil re-entrained into the air from facility operations.

Lowering the ambient lead concentration is not inconsistent with studies that USEPA reviewed indicating that lower ambient lead concentrations would result in less impacts to children. According to USEPA, the assessment of the currently available studies continues to recognize a non-linear relationship between blood lead and effects on cognitive function, with a greater incremental effect (greater slope) at lower relative to higher blood lead levels.[2] Chronic health effects include increased risk of cancer, nervous and reproductive system disorders, neurological and respiratory damage, cognitive and behavioral changes, and hypertension. In addition, young children accumulate lead more readily than do those of adults are more vulnerable to certain biological effects of lead including learning disabilities, behavioral problems, and deficits in IQ.

Authority

The SCAQMD Governing Board has authority to adopt PAR 1420.1 pursuant to the California Health and Safety Code Sections 39002, 39650 et. seq., 40000, 40001, 40440, 40441, 40702, 40725 through 40728, 41508, 41700 and 41706.

[2] U.S. EPA's "Policy Assessment for the Review of the Lead National Ambient Air Quality Standards," Environmental Protection Agency, May 2014

Clarity
PAR 1420.1 is written or displayed so that its meaning can be easily understood by the persons directly affected by it.

Consistency
PAR 1420.1 is in harmony with and not in conflict with or contradictory to, existing statutes, court decisions or state or federal regulations.

Non-Duplication
PAR 1420.1 will not impose the same requirements as any existing state or federal regulations. The proposed amended rule is necessary and proper to execute the powers and duties granted to, and imposed upon, the SCAQMD.

Reference
By adopting PAR 1420.1, the SCAQMD Governing Board will be implementing, interpreting or making specific the provisions of the California Health and Safety Code Sections 40001 (rules to achieve and maintain ambient air quality standards), 41700 (nuisance), 41706(b) (emission standards for lead compounds from non-vehicular sources), Federal Clean Air Act Section 112 (Hazardous Air Pollutants), and CAA Section 116.

COMPARATIVE ANALYSIS

Health and Safety Code section 40727.2 requires a comparative analysis of the proposed amended rule with any Federal or District rules and regulations applicable to the same source. See Table ~~8~~ 9 below.

Table ~~8~~9: Comparison of PAR 1420.1 with SCAQMD Rule 1420.1, SCAQMD Rule 1420, the 2008 Lead NAAQS, and the NESHAP for Secondary Lead Smelters

Rule Element	PAR 1420.1	SCAQMD Rule 1420.1	SCAQMD Rule 1420	CARB 1998-12-30 Non Ferrous Metal Melting ATCM	2008 Lead NAAQS	NESHAP from Secondary Lead Smelting
Applicability	No proposed changes	Lead-acid battery recycling facilities that have ever processed more than 50,000 lead-tons/year	Facilities that use or process lead-containing materials	Facilities that melt non-ferrous metals including lead	All States	Secondary lead smelters
Ambient Air Quality Standard	January 1, 2016, to December 31, 2016 meet 0.110 µg/m^3 averaged over 30 consecutive days. On and after January 1, 2017 meet 0.100 µg/m^3 averaged over 30 consecutive days.	Meet 0.150 µg/m^3 averaged over 30 consecutive days	1.5 µg/m^3 averaged over 30 days	None	0.15 µg/m^3: 3-month rolling average Demonstrated over a 3-year period.	None
Total Enclosures	No proposed changes	Total enclosures for main areas where processing, handling and storage of lead-containing materials occur	None	Enclosed storage area for dust-forming material including, but not limited to, dross, ash, or feed material	None	Total or partial enclosures for: - Smelting furnace and dryer charging hoppers, chutes, and skip hoists; - Smelting furnace lead taps, and molds during tapping; - Refining kettles; - Dryer transition pieces; and Agglomerating

Rule Element	PAR 1420.1	SCAQMD Rule 1420.1	SCAQMD Rule 1420	CARB 1998-12-30 Non Ferrous Metal Melting ATCM	2008 Lead NAAQS	NESHAP from Secondary Lead Smelting
						furnace product taps
Emission Standard and Requirements for Lead Control Devices	Total facility mass emission rate of 0.023 lb/hr of lead from all lead point sources; Maximum emission rate, use of filters and secondary lead controls on dryer remain unchanged.	Total facility mass emission rate of 0.045 lb/hr of lead from all lead point sources; maximum emission rate of 0.010 lb/hr of lead for any individual lead point source Use of filters or bags that are rated by the manufacturer to achieve 99.97 percent control efficiency on 0.3 micron particles or made of PTFE membrane material Secondary lead controls on dryer	99% control efficiency for particulate matter; 98% control efficiency for lead	99% control efficiency	None	Concentration of 2.0 mg/dscm
Compliance Plan	Only required if a facility exceeds ambient lead concentration limit of 0.110 µg/m^3 from January 1, 2016 to December 31, 2016 or 0.100 µg/m^3on or after January 1, 2017Identifies additional lead control measures beyond the rule.	Only required if a facility exceeds 0.120 µg/m^3; 30 consecutive day avg.; Identifies additional lead control measures beyond the rule.	Specifies general facility information	None	None	None

Rule Element	PAR 1420.1	SCAQMD Rule 1420.1	SCAQMD Rule 1420	CARB 1998-12-30 Non Ferrous Metal Melting ATCM	2008 Lead NAAQS	NESHAP from Secondary Lead Smelting
Ambient Air Monitoring Requirements	- Daily sampling for lead and arsenic - Provisions included for monitor failure - One year sample retention - Number of monitors and reporting frequency remain unchanged	Minimum of four monitors at facility locations approved by the Executive Officer Samples collected at least once every three days Results reported monthly Daily sampling if 0.120 µg/m^3 is exceeded after January 1, 2015	Minimum of two monitors at facility locations approved by the Executive Officer Samples collected every six days Results reported quarterly	None	For states, a minimum of: - One source-oriented monitor at all facilities emitting 1.0 tons of lead/year; and - One non-source-oriented monitor in urban areas with a population of at least 500,000 people - Samples collected every six days	None
Housekeeping and Maintenance Requirements	- All lead or arsenic containing trash or debris outside of a total enclosure shall be kept in closed containers free of leaks - Posted facility vehicle speed limit of 5 miles per hour - All outside concrete or asphalt cutting performed under 100% wet conditions - Grading of soil only on soils sufficiently wet to prevent fugitive emissions	Prescribed requirements for cleaning frequencies of specific areas; maintenance activity; building integrity inspections; storage and transport of lead-containing materials; onsite mobile sweeping; and surface impoundment	Requirements for storage of dust-forming material; weekly cleaning of surfaces subject to vehicular or foot traffic; and storage, disposal, recovery, and recycling of lead or lead-containing wastes generated from housekeeping	Surfaces subject to vehicular or foot traffic shall be vacuumed, wet mopped or otherwise maintained	None	Periodic wash down of plant roadways (lower frequency than PAR 1420.1); wet suppression of battery breaking area storage piles; vehicle wet washing of vehicles exiting the materials handling and storage areas

Rule Element	PAR 1420.1	SCAQMD Rule 1420.1	SCAQMD Rule 1420	CARB 1998-12-30 Non Ferrous Metal Melting ATCM	2008 Lead NAAQS	NESHAP from Secondary Lead Smelting
		cleanings	activities			
Reporting Requirements	- Reporting to Executive Officer within 72 hours of daily ambient air lead concentration of 0.300 $\mu g/m^3$ with the following information: o Date of the occurrence; o Name of the monitor; o Ambient lead concentration at the monitor for the 24 hour sample; o Potential cause or causes of the occurrence; and o Potential remedies to prevent the reoccurrence. o Caution signs posted at entrances and perimeter o Notification of breach of total enclosure		Ambient air lead and wind monitoring for any lead-processing facility that is required or elects to do ambient air monitoring	- Source test results Amount of metal processed if requesting exemption	For states: - State Implementation Plan submittal; - Periodic emissions reports from stationary source monitors; - Ambient air quality data and associated assurance data	- Lead control alarm/failure reports including fugitive dust control measures performed during failures

REFERENCES

REFERENCES

"DTSC Review of Step-out Dust and Soil Sampling Report and Order to Perform Emergency Response Interim Measures to Clean Up Off-site Contaminated Soil, Dust, and Sediment, Exide Technologies, Vernon, CA (Corrective Action Consent Order, Docket Number P3-01/02-100)" P3-01 /02-010)", Department of Toxics Substances Control, https://www.dtsc.ca.gov/HazardousWaste/Projects/upload/Exide_Technologies_Letter_Emergency_Response_Intertim_Measure.pdf, accessed January 12, 2015.

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"Lead in Air," Environmental Protection Agency, (*http//www.epa.gov/air/lead.html*), June 12, 2009.

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"Prioritization of Toxic Air Contaminants Under the Children's Health Act," Environmental Protection Agency, Office of Environmental Health Hazard Assessment, October 2001.

"Staff Report for Proposed Rule 1420.1: Emission Standards for Lead from Large Lead-Acid Battery Recycling Facilities," South Coast Air Quality Management District, November 2010.

"Staff Report for Proposed Amended Rule 1420.1: Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities," South Coast Air Quality Management District, January 2014.

U.S. EPA's "Policy Assessment for the Review of the Lead National Ambient Air Quality Standards," Environmental Protection Agency, May 2014

ATTACHMENT H

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Subsequent Environmental Assessment for:

Proposed Amended Rule 1420.1 Emissions Standard for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities

February 2015

SCAQMD No. 150127CC

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PREFACE

This document constitutes the Final Subsequent Environmental Assessment (SEA) for Proposed Amended Rule (PAR) 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities. This SEA is subsequent to PAR 1420.1 Final EA –January 2014. The Draft SEA was released for a 30-day public review and comment period from January 27 to February 25, 2015. One comment letter was received from the public relative to the environmental analysis in the Draft SEA. The comment letter and response to the comments on the Draft SEA are included in Appendix C.

Subsequent to the release of the Draft SEA, minor additions and modifications were made to this SEA for clarification purposes. To facilitate identifying the modifications in the document, changes are included as underlined text and text removed from the document are indicated by ~~strikethrough~~. None of the modifications alter any conclusions reached in the Draft SEA. As a result, these minor revisions do not require recirculation of the document pursuant to CEQA Guidelines §15073.5. Therefore, this document now constitutes the Final SEA for PAR 1420.1.

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CHAPTER 1

PROJECT DESCRIPTION

INTRODUCTION

Rule 1420.1 – Emission Standards for Lead from Lead-Acid Battery Recycling Facilities was adopted on November 5, 2010 and applies to large lead-acid battery recycling facilities that process more than 50,000 tons of lead a year. Rule 1420.1 was amended on January 10, 2014 to reduce other toxic (i.e. arsenic, benzene, and 1,3-butadiene) emissions from affected facilities. It was amended again on March 7, 2014, to include a multi-metals demonstration program to continuously monitor lead, arsenic, and other metals and clarify language that requires affected facilities to reimburse SCAQMD for funds spent to deploy independent third-party contractors who conduct investigations of unplanned shutdowns according to Rule 1420.1. The amendment renamed the rule as Rule 1420.1 - Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities, to reflect these changes. The purpose of Rule 1420.1 is to protect public health by reducing exposure to emissions of lead, arsenic, benzene, and 1,3 butadiene from these facilities and to help ensure attainment of the National Ambient Air Quality Standard for lead.

SCAQMD staff is currently proposing amendments to Rule 1420.1 to further reduce lead emissions at large lead acid battery recycling facilities to continue to protect public health. Proposed Amended Rule (PAR) 1420.1 lowers the ambient lead concentration and point source limits to reduce the amount of lead emitted into the air from point and fugitive sources thereby reducing the further accumulation of lead dust in and around the facility to better ensure protection of public health.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

Amending Rule 1420.1 is a discretionary action, which has the potential to result in direct or indirect changes to the environment and, therefore, is considered a "project" as defined by the California Environmental Quality Act (CEQA). SCAQMD is the lead agency for the proposed project and has prepared this ~~Draft~~ Final Subsequent Environmental Assessment (SEA) pursuant to its Certified Regulatory Program (CEQA Guidelines § 15251). California Public Resources Code §21080.5 allows public agencies with regulatory programs to prepare a plan or other written document in lieu of an environmental impact report or negative declaration once the Secretary of the Resources Agency has certified the regulatory program. SCAQMD's regulatory program was certified by the Secretary of the Resources Agency on March 1, 1989, and is codified as SCAQMD Rule 110.

CEQA and SCAQMD Rule 110 require that potential adverse environmental impacts of proposed projects be evaluated and that feasible methods to reduce or avoid significant adverse environmental impacts of these projects be identified. To fulfill the purpose and intent of CEQA, this ~~Draft~~ Final SEA addresses the potential adverse environmental impacts associated with the proposed project according to CEQA Guidelines § ~~15252~~ 15064. It states that the lead agency has an obligation to identify and evaluate the environmental effects of the project. The ~~Draft~~ Final SEA is an informational document intended to: (a) provide the lead agency, responsible agencies, decision makers and the general public with information on the environmental effects of the proposed project; and, (b) identify possible ways to minimize the significant effects.

A Subsequent EA is the appropriate CEQA document for the proposed project because there are subsequent changes proposed to Rule 1420.1 (CEQA Guidelines §15162). The proposed project is a modification of an earlier project and this analysis considered only the incremental effects of the proposed project.

The California Environmental Quality Act (CEQA) Guidelines Sections 15162 through 15164 set forth the criteria for determining the appropriate additional environmental documentation, if any, to be completed when there is a previously adopted EIR or Negative Declaration covering the project for which a subsequent discretionary action is required. The SCAQMD prepared this SEA to the previously adopted EA. This SEA is governed by Section 15162 (a) of the CEQA Guidelines, which provides that where a negative declaration has been adopted for a project, "no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

a) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

b) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

c) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

d) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative."

Section 15162(b) provides that if a subsequent EIR is not required under 15162 (a), then "the lead agency shall determine whether to prepare a subsequent negative declaration, an addendum, or no further documentation."

SCAQMD's review of the proposed project shows that the proposed project is not expected to generate significant adverse affects on the environment. Pursuant to CEQA Guidelines §§ 15126.4 (a)(3), and 15126.6, mitigation measures and alternative are not required for effects which are not found to be significant, thus, no mitigation measures or alternatives to the project are included in the ~~Draft~~ Final SEA. In addition, because SCAQMD has a certified regulatory program, the Environmental Assessment is an appropriate substitute for an EIR or Negative Declaration (CEQA Guidelines § 15252). Pursuant to CEQA Guidelines § 15252(a)(2)(B) and supported by the environmental checklist (in Chapter 2), if the project would not have any significant or potentially significant effect on the environment, "no alternatives or mitigation measures are proposed to avoid or reduce any significant effects on the environment." Comments received on the Draft SEA during the 30-day public review period ~~will be~~ have been addressed and included in the Final SEA. One comment letter was received on the Draft SEA. The comment letter and response to comments are included in Appendix C.

PROJECT LOCATION

The SCAQMD has jurisdiction over an area of 10,473 square miles (referred to hereafter as the district), consisting of the four-county South Coast Air Basin (Basin) and the Riverside County portions of the Salton Sea Air Basin (SSAB) and the Mojave Desert Air Basin (MDAB). The Basin, which is a subarea of the SCAQMD's jurisdiction, is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The 6,745 square-mile Basin includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The Riverside County portion of the SSAB and MDAB is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley. The federal nonattainment area (known as the Coachella Valley Planning Area) is a subregion of both Riverside County and the SSAB and is bounded by the San Jacinto Mountains to the west and the eastern boundary of the Coachella Valley to the east (see Figure 1-1).

Figure 1-1 Boundaries of the South Coast Air Quality Management District

PROJECT OBJECTIVES

The objectives of PAR 1420.1 are to protect public health by further reducing lead emissions from large lead-acid battery recycling facilities by:

- Reducing the ambient air lead concentration limit
- Reducing the point source emission limit for lead
- Requiring daily sampling for ambient lead and arsenic
- Altered thresholds for compliance plans and curtailments are reduced to correlate with the proposed limits for ambient lead concentrations and total mass facility emission rates
- Requiring additional housekeeping and maintenance provisions
- Requiring additional reporting requirements

PROJECT BACKGROUND

Health Effects of Lead

Lead in the atmosphere is present as a mixture of a number of lead compounds. Leaded gasoline and lead smelters have been the main sources of lead emitted into the air. Due to the phasing out of leaded gasoline, there was a dramatic reduction in atmospheric lead in the Basin over the past three decades.

Fetuses, infants, and children are more sensitive than others to the adverse effects of lead exposure. Exposure to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure.

Lead poisoning can cause anemia, lethargy, seizures, and death. It appears that there are no direct effects of lead on the respiratory system. Lead can be stored in the bone from early-age environmental exposure, and elevated blood lead levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland), and osteoporosis (breakdown of bone tissue). Fetuses and breast-fed babies can be exposed to higher levels of lead because of previous environmental lead exposure of their mothers.

The old federal and current state standards for lead were not exceeded in any area of the district in 2010. There have been no violations of these standards at the SCAQMD's regular air monitoring stations since 1982, as a result of removal of lead from gasoline. The maximum quarterly average lead concentration (0.01 $\mu g/m^3$ at monitoring stations in South San Gabriel Valley, South Central Los Angeles County, and Central San Bernardino Valley No. 2) was 0.7 percent of the old federal quarterly average lead standard (1.5 $\mu g/m^3$). The maximum monthly average lead concentration (0.01 $\mu g/m^3$ in South San Gabriel Valley and South Central Los Angeles County), measured at special monitoring sites immediately adjacent to stationary sources of lead was 0.7 percent of the state monthly average lead standard. No lead data were obtained at SSAB and Orange County stations in 2010. Because historical lead data showed concentrations in SSAB and Orange County areas to be well below the standard, measurements have been discontinued.

Regulatory History

Lead-acid battery recyclers have been subject to environmental air quality regulations for more than two decades. Below is a chronology of regulatory activities:

- In November 1970, CARB set the state ambient air quality standard for lead at 1.5 microgram per cubic meter averaged over 30 days.
- In October 1978, the U.S. EPA adopted the National Ambient Air Quality Standards (NAAQS) for lead requiring attainment with a lead ambient concentration of 1.5 microgram per cubic meter averaged over a calendar quarter.
- In September 1992, the SCAQMD adopted Rule 1420 – Emissions Standard for Lead. The rule incorporated the state ambient air quality standard and required control devices on lead emission points, control efficiency requirements for lead control devices, housekeeping, and monitoring or modeling of ambient air quality.
- In October 1992, OEHHA classified lead as a carcinogenic toxic air contaminant and assigned to it a cancer potency factor and a cancer unit risk factor.
- In June 1997, the EPA adopted the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) from Secondary Lead Smelting. The federal regulation required lead emission concentration limits for lead control devices, control of process fugitive emissions, monitoring, recordkeeping, and reporting.
- On November 12, 2008, the EPA signed into regulation an amended NAAQS for lead of 0.15 microgram per cubic meter[1].

On November 12, 2008, U.S. EPA published new national ambient air quality standards for lead, which became effective January 12, 2010. The existing national lead standard, 1.5 µg/m3, was reduced to 0.15 µg/m3, averaged over a rolling three-month period. The new federal standard was not exceeded at any source/receptor location in 2010. Nevertheless, U.S. EPA designated the Los Angeles County portion of the Basin as non-attainment for the new lead standard, effective December 31, 2010, primarily based on emissions from two battery recycling facilities. In response to the new federal lead standard, the SCAQMD adopted Rule 1420.1 – Emissions Standard for Lead from Large Lead-Acid Battery Recycling Facilities, in November 2010, to ensure that lead emissions do not exceed the new federal standard. The rule established an ambient lead concentration limit of 0.15 $\mu g/m^3$, averaged over 30 consecutive days, a mass emission limit of 0.045 pounds per hour as well as housekeeping, maintenance and other provisions. Further, in May 2012, the SCAQMD adopted the 2012 Lead SIP to address the revision to the federal lead standard, which outlines the strategy and pollution control activities to demonstrate attainment of the federal lead standard before December 31, 2015. on January 10, 2014, Rule 1420.1 was amended to include an arsenic ambient concentration limit of 10.0 ng/m^3 averaged over a 24-hour period and point source emission limits for arsenic, benzene, and 1,3-butadiene. Curtailment provisions for lead and arsenic and requirements for installation and operation of differential pressure monitors were also included in the amendments.

[1] Environmental Protection Agency, "National Ambient Air Quality Standards for Lead; Final Rule," 40 CFR Parts 50, 51, 53, and 58, November 2008.

Compliance Determination-Monitoring

The demonstration of attainment of the lead standard is to be based on measurements using a rolling 3-month averaging form to be evaluated over a three-year period. Measurements are to be determined by EPA-required monitoring networks within each state which consist of both source-oriented and non-source-oriented monitors. The SCAQMD has already established the required monitoring network for both source and non-source-oriented lead monitors.

Ambient monitors are high-volume total suspended particulate samplers placed throughout the South Coast Air Basin and at both upwind and downwind locations of the facilities where maximum ambient concentrations are expected. They measure lead and arsenic concentrations in the ambient air over a midnight-to-midnight, 24 hour period.

Point source emission rates are determined by source tests to demonstrate compliance with the mass emission standards specified in the rule. They are "snapshots" of the efficiency of the control equipment and are conducted when the equipment is installed and annually or biannually thereafter. The tests are conducted in accordance with SCAQMD, CARB or EPA test methods.

Affected Facilities

PAR 1420.1 applies to large lead-acid battery recycling facilities that process more than 50,000 tons of lead annually. Currently there are only two facilities subject to Rule 1420.1 in the Basin: Exide Technologies and Quemetco Inc. Both facilities are currently permitted to process approximately 600 tons of lead per day through a combination of smelting furnaces. Exide Technologies is located in Vernon (Los Angeles County) and Quemetco, Inc. is located in the City of Industry (Los Angeles County).

The affected facilities have several air monitors throughout their sites. These monitors are the litmus test to determine compliance with the ambient concentration limits. They measure lead and arsenic concentrations in the ambient air over a midnight-to-midnight, 24 hour period. See ~~**Error! Reference source not found.**~~ Figure 1-2 and Figure 1-3 for Exide's and Quemetco's Ambient Monitoring Locations, respectively.

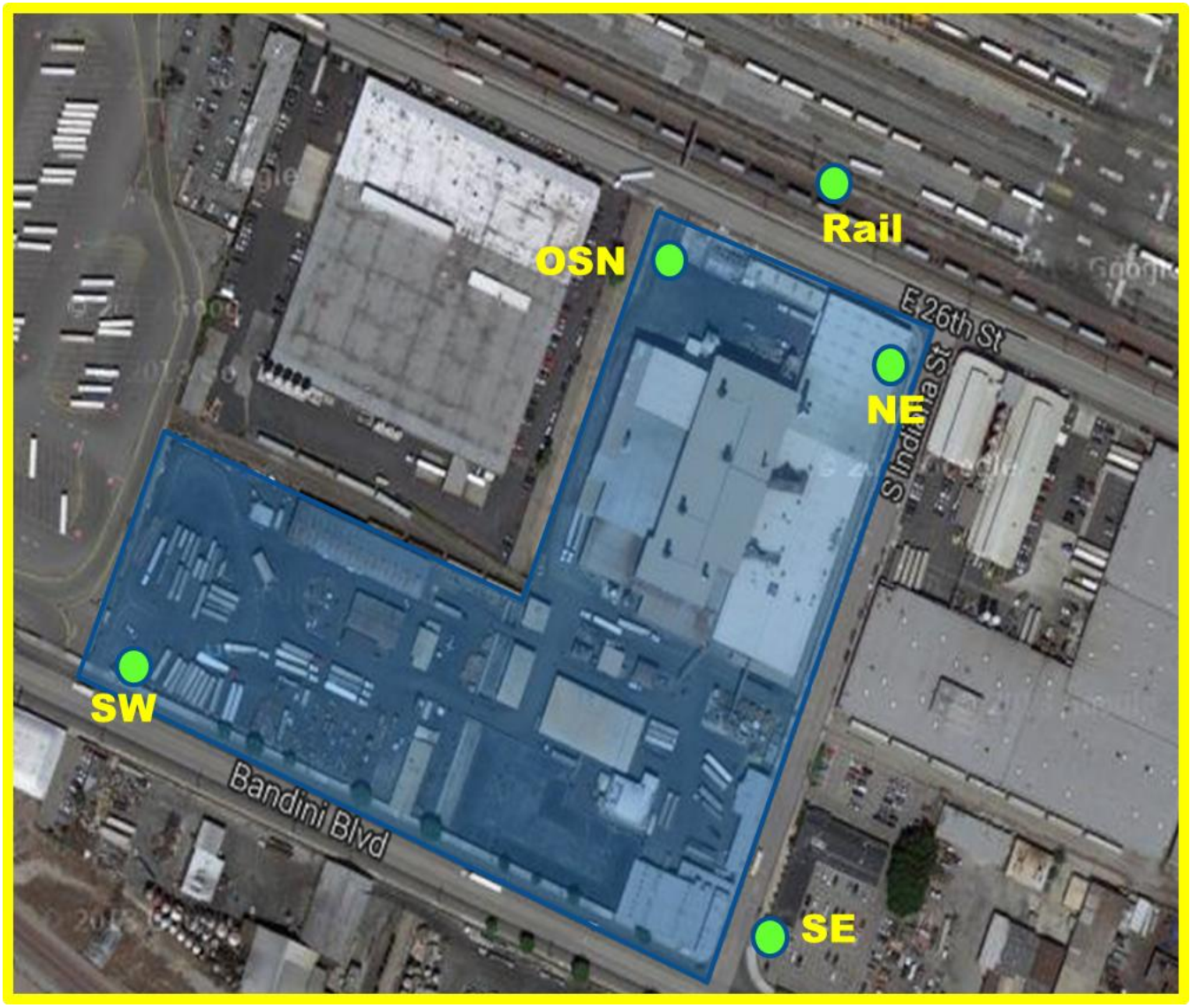

Figure 1-2 Exide's Ambient Monitoring Stations

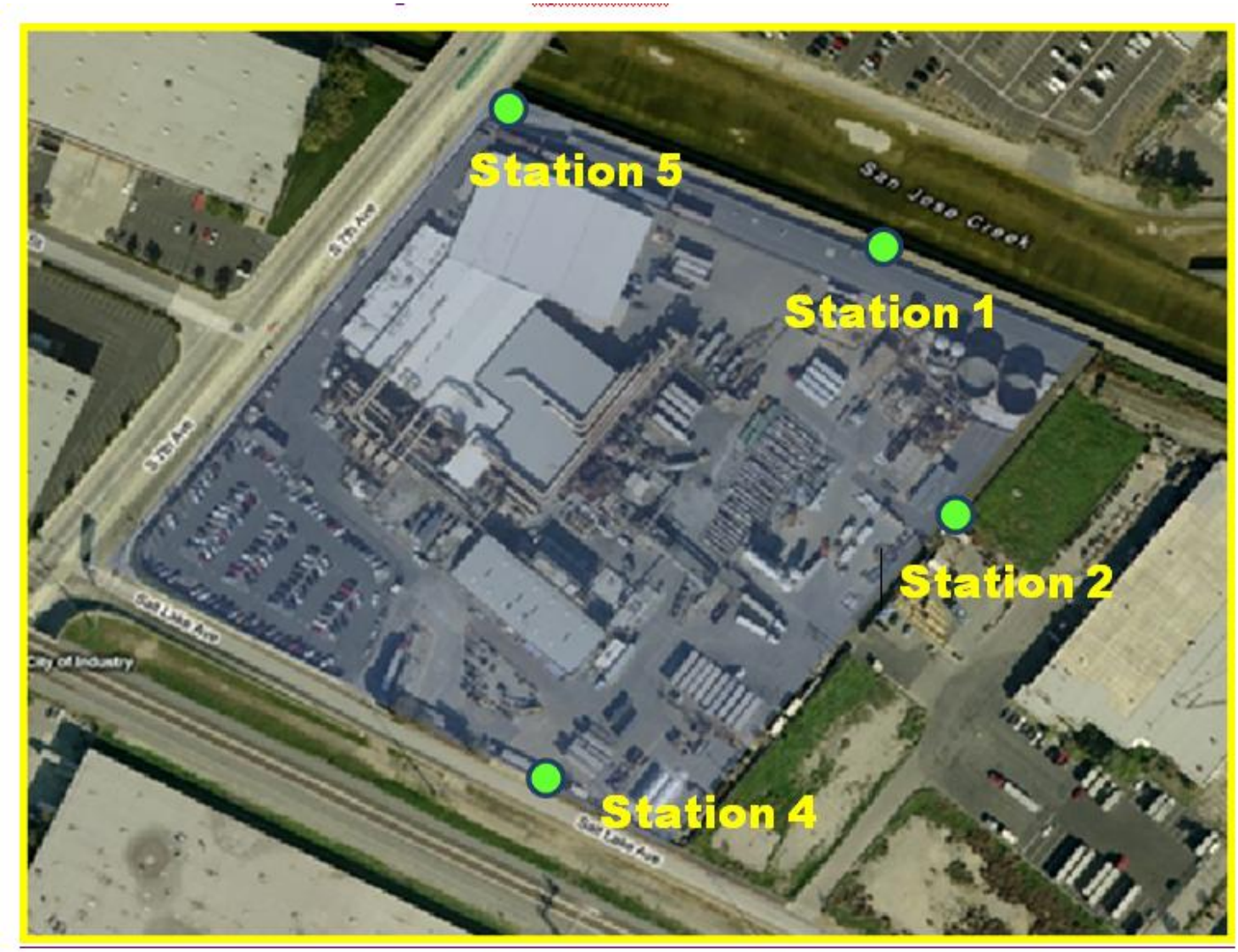

Figure 1-3 Quemetco's Ambient Monitoring Stations

Exide's New Air Pollution Control Equipment

Exide is currently engaged in construction activities associated with the implementation of their Toxic Air Contaminant Reduction Project (compliance with SCAQMD Rules 1420.1 and 1402), which was approved by the SCAQMD on December 5, 2014. This project is intended to improve their control of air pollution emissions from their process gas streams containing gaseous organic air contaminants, carbon monoxide, and oxides of sulfur. The new and modified equipment to be installed includes several air pollution controls (two new scrubbers, two new regenerative thermal oxidizers (RTOs), a new baghouse, filtration systems, and the re-purposing of an existing baghouse). Exide is planning on completing the project in the Spring of 2015. To read more about the project:
http://www.aqmd.gov/docs/default-source/exide/id-124838-exide-mnd_final-(1).pdf?sfvrsn=4

Overview of Existing Operations

Lead-acid battery recycling facilities are secondary lead smelting operations where spent lead-acid batteries, mostly automotive, and other lead-bearing materials are received from various sources and processed to recover lead, plastics, and acids. The process mainly involves the sorting, melting, and refining of lead-acid batteries, which ultimately produces lead ingots that are then made into new batteries or sold to other entities. Figure 1-4 is a Simplified Flow Diagram of the Process. Below is a general description of the lead recycling process at the affected facilities including potential lead emission points:

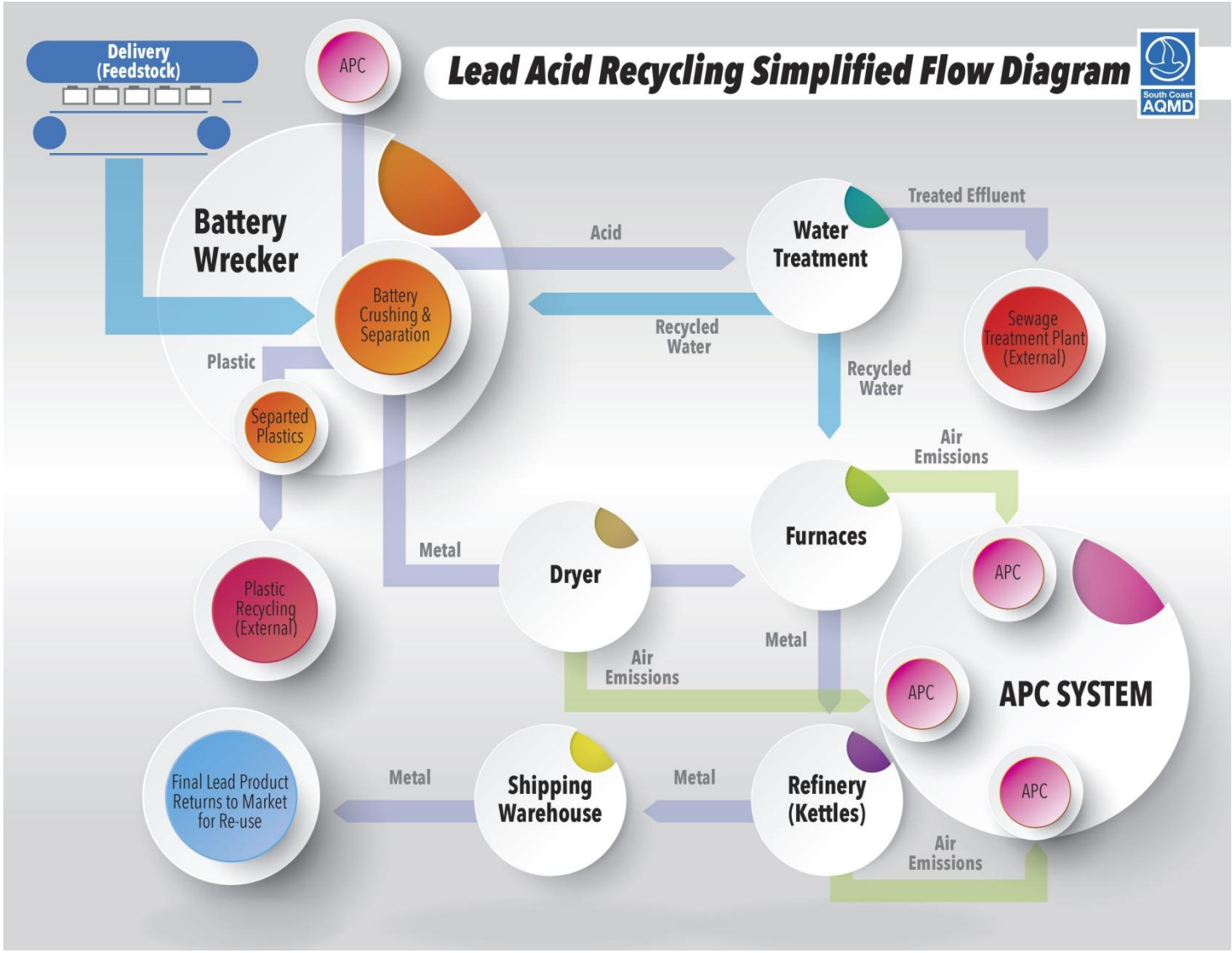

Figure 1-4-Lead Acid Recycling Simplified Flow Diagram

Phase I – Raw Materials Processing: Lead-bearing materials recovered from lead-acid batteries are prepared and processed prior to being charged (loaded) to a smelting furnace. The feedstock for lead-acid battery recycling facilities can fluctuate. Although the majority of the feedstock is plastic-cased car batteries, there has been indication that the number of steel-cased batteries may be increasing for one of the facilities.

Receiving and Storage: Spent lead-acid batteries are usually received on pallets that are either stored or sent directly to conveyors for immediate crushing.

Battery Breaking/Crushing: The spent lead-acid batteries are unloaded from conveyors and loaded into a hammer mill system where they are crushed whole. Both Quemetco and Exide's battery breaking areas are located in a total enclosure that is vented to an emission collection system pursuant to Rule 1420.1. The crushed material is then placed into a series of tanks filled with water in order to filter out any plastic and rubber components of the battery casing and to clean materials of the acids. Through buoyancy effects, the crushed metal material sinks to the bottom of the tanks and goes through a series of screens to further isolate lead-bearing materials. Arsenic and other metals can be found in the lead-bearing materials due to battery parts such as the posts and grids containing alloys of arsenic and lead. The materials are then typically stored in open or partially covered piles if not required for immediate charge preparation.

Charge Preparation/Rotary Drying/Sweating: Recovered lead-bearing materials are prepared by blending it with stored lead scrap and reagents prior to being charged to a furnace. The metallic scrap materials are placed in dryers to remove moisture prior to charging to a furnace in order to reduce furnace upsets (puffs and explosions). Some unfiltered plastic and rubber components of the battery casing may be inadvertently introduced into the dryer during this process. The materials are then sweated (subjected to temperatures above the melting temperature of lead, but below that of the other metals) to separate lead from other metals with higher melting points. The process of melting of plastic and rubber parts from the partial combustion of carbon coke (mainly in the dryers) generates toxic organic emissions.

Phase II – Smelting: Smelting is the production of crude lead by melting and separating the lead from metallic and non-metallic contaminants and by reducing lead compounds to elemental lead. Smelting is carried out in the blast, electric resistance, reverberatory, and rotary kiln furnaces. These furnaces emit high levels of metal particulates during the charging and tapping processes in addition to toxic organic emissions.

Cupola (Blast) furnaces: Typically, "hard" lead, or antimonial lead (containing approximately 10 percent antimony) is produced in blast furnaces. Scrap metal, re-run slag, scrap iron, coke, recycled dross, flue dust (which contain lead and arsenic), and limestone are used as charge materials to the furnace. Process heat is produced by the reaction of the charged coke with blast air that is blown into the furnace. Currently, Exide utilizes a blast furnace, which generates benzene and 1,3-butadiene emissions.

Electric resistance furnaces: Electric resistance furnaces generate heat from molten slag that offers resistance to the passage of a current through it. Electric energy is converted into heat when a current flows through electrodes directly into the furnace charge (i.e., the material to be heated). Electric resistance furnaces typically generate less airborne emissions (lead and arsenic) compared to blast or reverberatory furnaces, which utilize combustion processes to generate the

heat necessary to melt the furnace charge materials. Currently, Quemetco is the only lead-acid battery recycler in the Basin utilizing an electric resistance furnace. Quemetco's electric resistance furnace is typically used to further separate lead-containing materials from non lead-containing materials contained in the lead slag produced from the reverberatory furnace.

Reverberatory furnaces: Semi-soft lead (containing approximately three to four percent antimony) is produced in reverberatory furnaces, which generate lead and arsenic emissions. Lead scrap, metallic battery parts, oxides, dross, and other residues are used as charge materials to the furnace. The charge materials are heated directly using natural gas, which generate benzene and 1,3-butadiene emissions. Reverberatory furnaces are used by both Exide and Quemetco.

Phase III – Refining and Casting: Refining and casting the crude lead from the smelting process can consist of softening, alloying, and oxidation, depending on the degree of purity or alloy type desired. Crude lead produced during smelting operations is remelted and refined by the addition of reagents, such as sulfur and caustic soda. The purified lead is then cast into molds or ingots. Refining furnaces and kettles are typically gas or oil-fired and maintained at operating temperatures between 600 to 1,300 degrees Fahrenheit. Arsenic fumes may be emitted when molten lead is transferred to refining kettles and lead particulates may become airborne off refining kettle contents due to thermal rise processes.

Alloying furnaces: Alloying furnaces are kettle furnaces used to simply melt and mix ingots of lead and alloy materials, such as antimony, tin, arsenic, copper, and nickel. Other reagents used include sodium hydroxide, sodium nitrate, carbon coke, calcium metal, sodium metal, and phosphates.

Refining furnaces: Refining furnaces are used to either remove copper and antimony for soft lead production, or to remove arsenic, copper, and nickel for hard lead production. Sulfur may be added to the molten lead to remove copper. The resultant copper sulfide is skimmed off as dross and may be processed in a blast furnace to recover residual lead. Aluminum chloride is used to remove copper, antimony, and nickel.

Oxidizing furnaces: Either kettle or reverberatory units are used to oxidize lead and to entrain the product lead oxides in the combustion air stream for subsequent recovery in high-efficiency baghouses.

PROJECT DESCRIPTION

The following is a summary of the proposed amendments to PAR 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Lead-Acid Battery Recycling Facilities. A copy of PAR 1420.1 with the specific details of the amendments can be found in Appendix A. Both the following and Appendix A constitute a robust project description.

Subdivision (a) – Purpose
No change.

Subdivision (b) – Applicability
No change.

Subdivision (c) – Definitions
The definition for Maintenance Activity was modified to include grading and soil disturbances. Soil disturbances include soil sampling, soil remediation or other activities where soil is moved, removed or stored.

Subdivision (d) – General Requirements
The ambient air concentration of lead in paragraph (d)(1) would require a reduction from 0.150 µg/m^3 to 0.110 µg/m^3 averaged over any 30 consecutive days as specified in subparagraph (d)(1), effective January 1, 2016. The ambient lead concentration limit would be further reduced to 0.100 µg/m^3 effective January 1, 2017, see Table 1-1. Other minor changes are made for administrative purposes.

Table 1-1 PAR 1420.1 Proposed Lower Ambient Lead Limit

Effective Date	Ambient Air Concentration of Lead, micrograms per cubic meter (µg/m^3), averaged over 30 consecutive days
Prior to January 1, 2016	0.150 µg/m^3
On and after January 1, 2016	***0.110 µg/m^3***
On and after January 1, 2017	***0.100 µg/m^3***

Subdivision (e) – Total Enclosures
No changes.

Subdivision (f) – Lead and Arsenic Point Source Emissions Controls
Effective January 1, 2016, the total facility mass lead emissions from all sources will be reduced from 0.045 pounds per hour to 0.023 pounds per hour.

Subdivision (g) – Compliance Plan
New Compliance Plans would be required if emissions are discharged into the atmosphere which contribute to an ambient lead air concentration exceeding the requirements specified in paragraph (d)(1). The effective dates for the Compliance Plan would be the same as paragraph (d)(1). Other minor administrative changes are also proposed.

Subdivision (h) – Housekeeping Requirements
Provisions in (h)(10) would require that all lead or arsenic containing trash and debris be contained in covered containers, free of leaks, that are opened only when adding or removing trash or debris.

New signs are proposed to limit the plant-wide speed of vehicles to 5 miles per hour.

Subdivision (i) – Maintenance Activity
Requirements in (i)(1)(D) prohibit maintenance work done outside of an enclosure if instantaneous wind speeds exceed 20 miles per hour. Subparagraphs (i)(1)(E) and (i)(1)(F) require concrete or asphalt cutting or drilling to be performed under 100% wet conditions and for soil grading to be done on wet soil respectively.

Subdivision (j) –Ambient Air Monitoring Sampling Requirements
Effective upon adoption of the rule, lead and arsenic samples shall be conducted daily at all monitoring sites. Provisions are included for sample failures that occur beyond the control of the facility. Samples shall be retained for one year and be available upon request. Other minor administrative changes are also proposed.

Subdivision (k) – Source Tests
Rule 1420.1 paragraph (k)(1) allows facilities that demonstrate a facility wide lead point source emission rate of 0.0025 lb/hr or less to conduct source testing every 24 months rather than annually. The rate was based on an overall facility point source rate of 0.045 lb/hr. The proposed overall facility rate is to be reduced by 50 percent as noted in the Lead Point Source Emission Rate discussion above. Thus the source test provision will be reduced by the same proportion, or 0.0012 lb/hr. This is projected to require one additional source test at Exide to test annually rather than every 24 months.

Currently under paragraph (k)(9), the operator may use an alternative or equivalent source test method that shall be approved by the SCAQMD Executive Officer as well as the California Air Resources Board (CARB) and U.S. EPA. Staff is proposing that the approval beyond the SCAQMD Executive Officer be limited to the agency that developed the test method in question. For example, if an equivalent procedure was sought for EPA Method TO-15, then only SCAQMD and U.S. EPA approval would be necessary.

PAR 1420.1 (k)(15), requires that the reports from source testing conducted pursuant to the rule to be submitted to the SCAQMD within 90 days or less after the completion of the source testing.

Subdivision (l) – New Facilities
No change.

Subdivision (m) – Recordkeeping
No change.

Subdivision (n) – Reporting
Proposed Amended Rule 1420.1 will include a provision requiring large lead-acid battery recycling facilities to provide specific information if there is a spike in the daily ambient lead

concentration. Under PAR 1420.1, if any daily ambient lead sample is greater than 0.300 µg/m^3, large lead-acid battery recycling facilities would be required to notify the Executive Officer in writing within 72 hours of when the facility was informed via laboratory report or other written or verbal communication that the ambient air concentration of lead was greater 0.300 µg/m^3 for any 24-hour sample. The operator is required to provide the date of the occurrence, the name of the monitor, the ambient lead concentration for the 24-hour sample, the potential cause or causes of the occurrence, and potential remedies to prevent the reoccurrence.

Under PAR 1420.1, paragraph (n)(1), caution signs shall be posted at all entrances and the perimeter of the facilities stating, "Caution, Lead-Acid Battery Recycling Facility, Call Before Digging, Facility Contact". The proposed amended rule specifies the location sign postings, the size of the sign, and specific lettering requirements.

The notification provision for unplanned shutdowns is revised to require notification regardless of potential emissions. The provision now applies even when the unplanned shutdown will not result in lead emissions and supersedes previous interpretations.

Under PAR 1420.1, paragraph (n)(2)(J), notifications are proposed for planned or unplanned breaches to total enclosures. Planned openings require notice to the Executive Officer at least ten calendar days prior while unplanned openings require notification within one hour afterwards. The notice shall include the date and time of the breach, an explanation of why it occurred, the duration or estimated duration of the event and facility contact information.

Subdivision (o) – Curtailment Requirements
Effective January 1, 2016, the first tier of the monitored ambient air concentration rate for mandatory daily process curtailments in Table 1 of subparagraph (p)(1) will be reduced to coincide with the proposed limit for ambient air concentrations of lead as specified in paragraph (d)(1). The timeframe for the duration of the curtailment would also be amended to reflect the proposed ambient air concentration limit. Similarly, staff is proposing to reduce the first tier of the total facility mass emission rate for process curtailments in Table 2 of subparagraph (p)(2) to coincide with the proposed reduction of total facility lead point sources emission rate under subparagraph (f)(1)(A) from 0.045 lb/hour to 0.023 lb/hour.

Subdivision (p) – Severability
No change.

Appendix 1 – Content of Initial Facility Status Reports
No change.

Appendix 2 – Content of Ongoing Facility Status Reports
No change.

Additional changes would be made to improve readability.

EMISSIONS CONTROL TECHNOLOGIES

Existing Controls

The two impacted facilities are secondary lead smelting operations where spent automotive and other lead-bearing materials are processed to recover lead, plastics and acids. The process generally involves the sorting, smelting and refining; ultimately producing lead ingots. Lead, arsenic and other toxic or criteria pollutant emissions are vented directly to air pollution control equipment, captured in building enclosures and then vented to air pollution control equipment or are fugitive emissions that do not get captured by air pollution control equipment and come into contact with ambient air.

Both facilities use baghouses or filter systems to control arsenic and lead emissions from process operations and building enclosures. Quemetco vents all the exhaust from particulate control to a centralized wet electrostatic precipitator (WESP). In addition, Quemetco has a RTO and scrubber. It is anticipated that the proposed rule will not result in any additional control devices to be installed at Quemetco. Exide vents particulate emissions to a variety of secondary, tertiary and even quaternary control devices. These devices include high efficiency particulate arrestors, cyclones, scrubber and thermal oxidizers. In the proposed rule, it is anticipated that Exide will have to make substantial improvements to their housekeeping procedures and consider installing a scrubber or WESP on their feed dryer to comply with the proposed ambient concentration limit of 0.100 $\mu g/m^3$.

Compliance with PAR 1420.1

To meet the ambient lead concentration and point source limits, the facilities are expected to further control lead emissions. The following discusses the control equipment currently or could potentially be installed to assist in achieving compliance of the proposed lower limits. However, the control of fugitive lead dust is anticipated to be the primarily method to comply with the new ambient lead concentration limits.

Several types of controls for lead emissions are currently used at the lead-acid battery recycling facilities in the Basin. Emissions at the large lead-acid battery recycling facilities are generally categorized as either point source emissions or fugitive emissions. Point source emissions are those emissions that are vented to a stack where the stack can be from a specific piece of equipment such as a furnace or building. Fugitive emissions are emissions that are not contained and/or not captured in air pollution control device and are released to the ambient air. Fugitive emissions can settle on surfaces such as roof tops and ground surfaces and can be re-entrained in the ambient air.

Fugitive emissions can accumulate in and around process areas, from point sources, raw material storage areas, on roof tops, and during maintenance operations to name a few. There are a variety of housekeeping and containment strategies that can be implemented to minimize fugitive emissions. Rule 1420.1 currently controls fugitive emissions through requirements for control strategies such as total enclosures with negative air pressure that are vented to pollution control devices, procedures for containment during maintenance activities, and a number of housekeeping provisions.

Point Source Control Strategies for Lead

The following describes lead point source control strategies. As with any type of control device, maintenance and proper operation of the control device are important to ensure the control device can achieve its maximum control efficiency. The following provides a description of baghouses and filter controls, wet scrubbers, high efficiency particulate arrestors (HEPA), electrostatic precipitators and wet electrostatic precipitators. Use of multistage point source controls such as use of baghouse filters and HEPA filters can improve the capture efficiency and provide additional protection. Lead emissions from lead processes discussed in the previous section are vented to one or more lead control devices listed below:

Point source emissions from the processes discussed in the previous section can be vented to one or more emission control devices listed below. In general for lead particulate controls, a series of filter media and/or scrubbers can be used to control lead emissions. Lead controls at both large lead-acid battery recycling facilities use secondary, tertiary, and some cases quaternary pollution controls to control lead emissions. It is imperative that the control of emissions, including the routing of these emissions to the appropriate emission control device, is designed, maintained, and operated properly in order to achieve the intended level of control described herein.

Baghouses and Filters

Baghouses operate by collecting particles on a fabric filter. Typically, they consist of fabric bags of tubular or envelope shapes. As an air stream flows through the bags, small particles are initially captured and retained on the fabric filter by one or a combination of the following collection mechanisms: impaction, direct interception, diffusion, electrostatic attraction, and gravitational settling. Once dust has accumulated on the walls of the bags, the "dust mat" acts as a sleeve to further increase particulate matter capture. Rule 1420.1 requires that filter bags be polytetrafluoroethylene or materials that are equally as effective for control of particulate emissions.

Baghouses are commonly used in metal melting operations. They have one of the highest control efficiencies for particulate emissions, and the captured particulate can be recycled to recover metal. Operating parameters of melting operations, such as exhaust stream temperature, gas stream velocity, and particulate chemical properties must be taken into account when designing the baghouse.

Daily maintenance and monitoring of the baghouse is necessary to ensure that it continuously meets the required standard of efficiency. Gas volume, temperature, pressure drop, and dust load are monitored continuously or intermittently. Baghouse shaking and sending pulses of air backwards through the bags is done at specific intervals, or when the bags are overloaded, to remove the captured particulate matter from the bags and drop it into a hopper below the bags.

Baghouse and filter technology combined can achieve overall particulate matter efficiencies. The well designed baghouse can control 99 percent of particulate emissions. The control efficiency of arsenic particulates is anticipated to be slightly lower, since metals are found in greater amounts on smaller particles. Arsenic particulate removal efficiency is at least 98 percent for a baghouse with 99 percent efficiency for particulates. Organic and arsenic vapors are not controlled by baghouses.

Arrays of filters are also used to collect particulate matter. They can be used after the bags in a baghouse to further reduce emissions or can be used alone as in a spray booth. Filters are often used in combination with a prefilter which is "changed out" on a regular basis allowing the bank of filter cartridges to last longer.

Used in conjunction with a prefilter, high-efficiency particulate air (HEPA) filters can trap particles as small as 0.3 µm at an efficiency of 99.97 percent or greater. Like cartridge filters, HEPA filter elements are of pleated construction. HEPA filters are generally limited to ambient temperature (100 degrees Fahrenheit), though special applications for higher temperatures are available. Unlike bags or cartridge filters, HEPA filters are not automatically cleaned. When a HEPA filter element becomes loaded with particulate matter, the element is changed out and disposed of as hazardous waste. Filters can be applied to controls such as baghouses to reduce arsenic emissions from lower temperature exhaust streams and fugitive dust emissions collected within total enclosures. They can also be utilized in negative air equipment or vacuums used to conduct housekeeping activities throughout the facility. Rule 1420.1 requires filter media including HEPA and cartridge-type filters to be rated by the manufacturer to achieve a minimum of 99.97 percent controlled efficiency for 0.3 micron particles.

Both Exide and Quemetco use baghouses or filter systems to control particulate arsenic emissions from most all operations in the lead-acid battery recycling processes. Examples include arsenic emissions coming from the battery breaking areas and all smelting, refining, and casting operations.

Wet Scrubbers

Wet scrubbers remove both particulate matter and gases from industrial process gas streams. In lead-acid battery recycling operations, wet scrubbers are typically used to remove residual metal particulates such as lead and arsenic, and sulfur oxides from the exhaust of baghouses that control emissions from rotary dryers and smelting furnaces. There are a variety of scrubber designs. However, only a limited number can remove small particulates from an exhaust stream. Wet scrubbers are capable of 98 percent collection efficiencies for particles as small as 5 microns in size. Two scrubbers designed to remove small particulates are the ionizing wet scrubber and the venturi scrubber.

In an ionizing wet scrubber, the gas stream first enters a chamber where a high voltage is used to ionize the gas stream. The second chamber is a wet scrubbing chamber, where the ionized particles and gases are attracted to the surface of the chamber and the scrubbing liquid. Larger size particles are removed by water through inertial impaction.

Venturi scrubbers are used by some facilities in the Basin. A venturi scrubber is another type of scrubber in which, the exhaust stream is passed through a constriction (the venturi) where the scrubbing liquid is sprayed in. The turbulence of the gases at and after the venturi promotes contact of particles with the scrubbing liquid droplets. High particulate matter removal efficiencies for small particles can be achieved with this type of scrubber. Exide currently uses a venturi scrubber.

Thermal Oxidizers

Equipment commonly used to control VOC emissions are thermal oxidizers (also referred to as direct flame incinerators, regenerative thermal oxidizers, or afterburners). Thermal oxidizers effectively destroy VOCs and some particulate matter (commonly composed of soot) emissions by raising the temperature of the material above its auto-ignition point in the presence of oxygen and maintaining it at high temperature to complete combustion to carbon dioxide and water. Direct flame incinerators operate using a combustion chamber fired by a flame maintained by a combination of auxiliary fuel (e.g., natural gas), waste gas compounds, and supplemental air is added when necessary. Waste gases pass through the flame (at temperatures typically ranging from 1,200 to 2,000 degrees Fahrenheit), where it is heated to its combustion temperature. Regenerative thermal oxidizers (RTO) operate under a similar principle, but utilize heat transfer media (typically a porous ceramic material) to recover waste heat energy from the exhaust gas stream. This heat is typically used to preheat the incoming waste gases, thereby reducing the amount of supplemental fuel required to heat the gas stream to combustion temperatures. Thermal oxidizers are highly effective methods of destroying VOCs, with efficiencies up to 99.99 percent. Quemetco currently utilizes a regenerative thermal oxidizer to control toxic organic emissions from the feed drying process.

Electrostatic Precipitators/Wet Electrostatic Precipitators

Electrostatic precipitators (ESPs) operate by charging the effluent particulate matter with a highly ionized gas stream and then attracting the charged particles to an oppositely charged metal wall. Typically, a cylindrical metal tube is used with an ionized wire running through it. As the ions move outward toward the oppositely charged cylinder, the particles are also ionized, and are deposited on the cylinder. The cylinder wall is periodically vibrated to collect particulate matter into a hopper (in a dry ESP). This technology can achieve 99 percent efficiency for total particulate matter as small as one micrometer. ESPs in lead-acid battery recycling operations are typically used downstream from other particulate controls such as baghouses, and treat exhaust streams with smaller arsenic particulates.

A wet ESP (hereinafter referred to as WESP) can be employed on gas streams that include oily and sticky particulates or gas streams that must be cooled to saturation in order to condense aerosols that were formerly in the gas phase. WESPs use a water flushing system to remove the particles from the collecting surface. The gas stream is either saturated before entering the collection area or the collecting surface is continually wetted to prevent large chunks of material from forming. Quemetco currently uses a five-cell WESP downstream of primary or secondary controls to further reduce their process emissions. In a previous Final Environmental Assessment for Rule 1420.1, staff analyzed Exide installing a ten-cell WESP that would control process emissions, however that WESP was never installed. The airflow from all process emissions at Exide is 220,000 cfm. In this project, the WESP would be installed only for the Feed Dryer which is 10,000 cfm. One WESP cell is capable of handling the airflow from the Feed Dryer. However, because the WESP cycles down periodically to flush particles, a second cell is necessary to ensure optimal control efficiency at all times. Therefore, this project will analyze the installation of a two-cell WESP.

Ambient Source Control Strategies for Lead

Fugitive Lead-Dust Control

Fugitive lead-dust at lead-acid battery recycling facilities can be a major source of lead emissions. Fugitive lead-dust accumulates in and around process areas, from lead point sources, on roof tops, in and around facility, and during maintenance operations to name a few. There are a variety of housekeeping and containment strategies that can be implemented to minimize fugitive lead dust. Housekeeping activities must be implemented frequently and properly to ensure they are effective. The concept behind many of these strategies is to either contain or remove lead dust so it cannot become airborne. Housekeeping practices specifying adequate frequencies and locations for all cleanings to be performed are also critical in the effectiveness to control fugitive lead-dust emissions. The following summarizes some potential fugitive lead dust control strategies:

- Pave roadways subject to vehicular and foot traffic;
- Clean paved areas through vacuuming, vacuum sweepers, and use of wet suppression;
- Wet wash or vacuum areas where lead particulate and accumulate such as roof tops, areas where lead-containing wastes are stored or disposed of;
- Clean (i.e. sweeping, vacuuming, dusting) areas where lead dust may accumulate due to accidents, process upsets or equipment malfunctions;
- Clean and rinse surface impoundments ponds before lead-containing sludge dries;
- Use enclosures or containment areas during maintenance activities or storage of lead-containing materials;
- Use total enclosures under negative air pressure vented to point lead point source controls to ensure that lead dust that accumulates in and around process areas does not become fugitive;
- Designate a vehicle wet washing station would be a designated vehicle wet washing area. The system would be capable of removing dust and other accumulated material from the wheels, body, and vehicle underside to prevent the inadvertent transfer of lead contaminated material to public roadways. All vehicles traversing facility areas associated with the lead-acid battery recycling process prior to exiting the facility and onsite mobile sweepers after operation, would be sufficiently washed. Ground surfaces where vehicles are washed would be required to be wet washed prior to the vehicle wet washed areas becoming dry to prevent any fugitive lead-dust or residue from becoming airborne. Practices that minimize the potential for further releases of lead emission when collecting and disposing of lead contaminated water accumulated during washing processes would be required. Practices would include the minimization of the amount of water which is allowed to dry exposed to the atmosphere prior to collection for treatment.

CHAPTER 2

Introduction

General Information

Environmental Factors Potentially Affected

Determination

Discussion and Evaluation of Environmental Checklist

INTRODUCTION

The environmental checklist provides a standard evaluation tool to identify a project's adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the proposed project.

GENERAL INFORMATION

Project Title:	Proposed Amended Rule 1420.1
Lead Agency Name:	South Coast Air Quality Management District
Lead Agency Address:	21865 Copley Drive, Diamond Bar, CA 91765
Rule Contact Person:	Michael Morris, (909) 396-3282
CEQA Contact Person:	Cynthia Carter, (909) 396-2431
Project Sponsor's Name:	South Coast Air Quality Management District
Project Sponsor's Address:	21865 Copley Drive, Diamond Bar, CA 91765
General Plan Designation:	Not applicable
Zoning:	Not applicable
Description of Project:	PAR 1420.1 would further protect public health by reducing lead emissions produced by large lead-acid battery recycling facilities. PAR 1420.1 would accomplish this by lowering the ambient lead concentration limit, imposing additional housekeeping, lowering the point source limit, and requiring daily monitoring. Owner/operators of affected facilities would be required to meet an interim ambient lead limit of 0.110 micrograms per cubic meter (ug/m^3) averaged over ~~a rolling~~ any 30 consecutive days ~~by~~ effective January 1, 2016. The limit would be further reduced to 0.100 ug/m^3 by January 1, 2017. Improvements to building enclosures and additional control equipment may be necessary to comply with the proposed ambient standard.
Surrounding Land Uses and Setting:	Large industrial/commercial facilities recycling lead-acid batteries
Other Public Agencies Whose Approval is Required:	Not applicable

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The following environmental impact issues have been assessed to determine their potential to be affected by the proposed project. As indicated by the checklist on the following pages, environmental topics marked with an "✓" may be adversely affected by the proposed project. An explanation relative to the determination of the significance of the impacts can be found following the checklist for each area.

☑	Aesthetics	☐	Geology and Soils	☐	Population and Housing
☐	Agricultural Resources	☑	Hazards and Hazardous Materials	☐	Public Services
☑	Air Quality	☑	Hydrology and Water Quality	☐	Recreation
☐	Biological Resources	☐	Land Use and Planning	☑	Solid/Hazardous Waste
☐	Cultural Resources	☐	Mineral Resources	☐	Transportation/Traffic
☑	Energy	☑	Noise	☑	Mandatory Findings

DETERMINATION

On the basis of this initial evaluation:

☑ I find the proposed project, in accordance with those findings made pursuant to CEQA Guideline §15252, COULD NOT have a significant effect on the environment, and that a SUSEQUENT ENVIRONMENTAL ASSESSMENT with no significant impacts has been prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will NOT be significant effects in this case because revisions in the project have been made by or agreed to by the project proponent. A SUBSEQUENT ENVIRONMENTAL ASSESSMENT with no significant impacts will be prepared.

☐ I find that the proposed project MAY have a significant effect(s) on the environment, and a SUBSEQUENT ENVIRONMENTAL ASSESSMENT will be prepared.

☐ I find that the proposed project MAY have a "potentially significant impact" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. A SUBSEQUENT ENVIRONMENTAL ASSESSMENT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL ASSESSMENT pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL ASSESSMENT, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Date: January 26, 2015 **Signature:** 

Michael Krause
Program Supervisor, CEQA Section
Planning, Rules, and Area Sources

DISCUSSION AND EVALUATION OF ENVIRONMENTAL IMPACTS

The objective of PAR 1420.1 is to further reduce the public's exposure to lead that is associated with lead emissions from large lead-acid recycling facilities. PAR 1420.1 is establishing additional and more stringent requirements for these facilities. One of the key components of PAR 1420.1 is reducing the lead point source and the ambient concentration limits (see Chapter 1- Project Description for a thorough discussion on the new proposed rule requirements). Based on existing lead point source tests and ambient monitoring data, Quemetco and Exide are already complying with the current rule's point source limit (0.045 lb/hr) and ambient concentration limit (0.150 $\mu g/m^3$). Furthermore, these facilities can also meet PAR 1420.1 (f)(1)(A) lower lead point source emission limits of 0.023 pounds per hour (see Table 2-10 for more details). Based on source testing, Quemetco and Exide have demonstrated they can achieve a lead point source emission rate less than 0.023 pound per hour. Additionally, Exide is in the process of installing further controls to reduce arsenic, benzene and 1,3 butadiene emissions but will concurrently further reduce lead emissions. The extent of the reductions will not be known until source tests are conducted to confirm the actual lead point source emission rates.

Based on ambient monitors at both facilities, year 2013 ambient lead concentrations data show potentially some excursions that exceed the proposed interim ambient lead concentration limit of 0.110 $\mu g/m^3$ and final ambient lead concentration limit of 0.100 $\mu g/m^3$. In order to comply with the proposed ambient concentration limits, it is expected based on past monitoring data that both facilities need to do further actions to control lead emissions. PAR 1420.1 is not prescribing the sources or the pollution control technologies that the facilities must choose to implement to comply with the proposed limits. There are a variety of different housekeeping measures, engineering modifications, and air pollution control (APC) equipment scenarios that the facilities could use to achieve the proposed ambient lead emissions limits for PAR 1420.1. The facilities may utilize some or all of the scenarios to comply with the proposed limits.

Staff believes both facilities would need to control their fugitive dust emissions and it is reasonable to assume that Exide may also elect to further reduce point source emissions to comply with the proposed lead ambient concentration limit. For the purpose of the CEQA analysis, reasonable worst-case assumptions have been made: both facilities will need to control fugitive dust lead emissions from maintenance activities, and Exide will need to do some or all considered measures; such as enhanced housekeeping, total enclosure enhancements, installing a second wheel washer station, and installing a additional APC device (i.e. new WESP or third additional wet scrubber). For the purpose of analyzing potential environmental impacts, it is assumed that Exide will implement all lead control measures identified in Table 2-1, but may actually only need some of the measures to meet the ambient lead concentration limit. No construction is expected at Quemetco. See Table 2-1 for a summary of control measures. Although the facilities could potentially utilize unstated measures, that would be speculative at this time.

Table 2-1 CEQA Summary of Fugitive Emissions Control Options

Menu of Options to Reduce Fugitive Emissions	Action To Be Taken By:		Environmental Topics to be Analyzed:
	Exide	Quemetco	
Enhanced Measures During Maintenance Activities	☑	☑	Air Quality, Hydrology &Water Quality
Enhanced Housekeeping Measures	☑	☐	Air Quality, Energy, Hydrology &Water Quality, Population & Housing, Transportation
Enhancements to Total Enclosure	☑	☐	Air Quality, Energy, Hydrology &Water Quality
Additional Wheel Washing Station	☑	☐	Air Quality, Hydrology &Water Quality
Increased Maintenance of Baghouse	☑	☐	Air Quality, Hazards & Hazardous Materials, Soild/Hazardous Waste
New Additional Air Pollution Control (Point Source)	☑	☐	Aesthetics, Air Quality, Energy, Hydrology & Water Quality, Noise, Hazards, Solids/Hazardous Waste

Exide is currently engaged in construction activities associated with the implementation of their Toxic Air Contaminant Reduction Project to install new and modified equipment that includes several APC devices. In addition to all of Exide's existing air pollution control equipment and APCs under construction, Exide may also consider installing either a 10,000 cubic feet per minute (cfm) two cell new WESP or an additional new 10,000 cfm wet scrubber to provide additional control of the feed dryer's lead emissions. Please note that installation of a WESP has been previously analyzed for the January 2014 PAR 1420.1 Final EA[2] and that the equipment was never installed. A smaller WESP is still considered as a viable APC option and the environmental effects of installing and operating a WESP will be analyzed in this ~~Draft~~ Final SEA.

No physical environmental changes are anticipated during monitoring, source testing, or reporting. PAR 1420.1 did not change the frequency of source testing, however, the threshold to source test once every two years is lower. Based on the both of the affected facilities' point source emissions, it is not expected that PAR 1420.1 would change the frequency of source testing. Curtailment activities may benefit the environment, but at this time these types of activities are not quantifiable. PAR 1420.1 is also requiring additional reporting and recordkeeping. Because these rule requirements are administrative in nature, no environmental impacts would be expected.

[2] SCAQMD, PAR 1420.1 Final EA –January 2014. Available at: http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2014/par_1420_fea.pdf?sfvrsn=0

ENVIRONMENTAL CHECKLIST AND DISCUSSION

I. AESTHETICS.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☑
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☑
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☑	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☑	☐

SIGNIFICANCE CRITERIA

The proposed project impacts on aesthetics will be considered significant if:

- The project will block views from a scenic highway or corridor.
- The project will adversely affect the visual continuity of the surrounding area.
- The impacts on light and glare will be considered significant if the project adds lighting which would add glare to residential areas or sensitive receptors.

DISCUSSION

I. a) & b) Both facilities are located in industrial areas. See Figure 2-1 and Figure 2-2 for Quemetco and Exide, respectively.

Figure 2-1 Bird's Eye View of Quemetco

Both facilities will need to have a team to minimize their fugitive dust from quarterly maintenance activities (i.e. concrete/asphalt cutting, drilling, or soil grading). No aesthetics will be affected from these activities.

No construction is expected at Quemetco for PAR 1420.1 compliance. However, to comply with the proposed lower ambient limit, Exide may need to do some physical changes to their facility. Exide would potentially need to do building improvements, install a wheel washing station, install three new air monitors, 8 new vestibules/air curtains, modify their air handling systems and install a new APC device (either a WESP or third scrubber). All activities would occur on-site at Exide.

Exide is located in the City of Vernon's M-2 heavy industrial/warehousing zone and is within the Rendering Overly District. In addition to a large lead-acid battery recycling facility, this area also allows operations of rendering plants, fertilizer plants and junk/salvage yards. These industries are not located near scenic vistas, rock outcroppings, historical buildings or state scenic highways[3]. However, there are trees on the outside of the facility, but all of Exide's construction and operation activities are within the affected facility.

Installation of the new air pollution control equipment and supporting structures may require the construction of temporary enclosures or the use of a crane, which may be visible from outside of the facility. The enclosures and construction equipment would be temporary (i.e., taken offsite after construction is finished), and therefore, are not expected to permanently alter the visual character or quality of the site and its surroundings. In addition, the temporary enclosures would hide construction work and reduce visible construction emissions, which would reduce adverse aesthetic construction impacts.

The new APC equipment is expected to be similar in visual characteristics to the existing industrial setting at Exide. A wheel washing station is not expected to be visible from outside of the affected facility. Therefore, the proposed project would not affect views of the trees from outside of the affected facility and would not significantly affect scenic vistas or damage scenic resources.

I. c) No construction is expected at Quemetco from PAR 1420.1. The only physical changes to Exide would be the installation of a new APC and wheel washer station. Exide may consider a new scrubber or the installation of a WESP for the feed dryer's stack. However, because of space limitations, the new APC would need to be installed near the property boundary. This location could potentially be visible from the street, but would not change the existing visual character of the facility or the quality of the site and its surroundings. To make space for the new APC, an existing storm water retention pond would be removed and replaced with new storm water storage tanks, which would also be installed within the affected facility, but potentially could be visible from outside of the facility. However, the area is highly industrial, with rail staging areas, industrial storage, storage tanks and power lines that are visible from the streets in adjacent facilities; as well as stacks, ducting and power lines at the affected facility property currently visible from the streets. The installation of these either of a new APC may require the installation of additional ducting, blowers and other air handling support equipment. Therefore,

[3] DTSC, Exide Corporation hazardous Waste Facility Permit Draft Environmental Impact Report, SCH No. 93051013, June 2006

while the WESP and additional equipment may be visible from outside of the affected property, it would not be inconsistent with the views seen at adjacent facilities. See Figure 2-2 for the existing visual characteristic of Exide's facility.

Figure 2-2 Bird's Eye View of Exide

Therefore, PAR 1420.1 would not add significant degradation to the existing visual character or quality of the site and its surroundings. On the contrary, with an additional APC, emissions from visible particulate matter would be reduced and could provide a beneficial visual character.

I. d) Both affected facilities are twenty-four hour operations. The facilities are also located in industrial areas that are zoned for continuous operation. No construction is expected at Quemetco from PAR 1420.1.

To comply with the proposed lower ambient limit, Exide may consider installing and operating a new APC device and associated support equipment 24 hours per day. In order to operate at night, additional lighting may be required on the outside of the new structures. The new lighting would be placed to illuminate the operations onsite and not directed off-site. As a result, any additional lighting is expected to be similar to the existing onsite lighting and the surrounding facilities. Therefore, PAR 1420.1 is not expected to create a new source of substantial light or glare which would significantly adversely affect day or nighttime views in the area beyond current conditions.

Based upon these considerations, significant adverse aesthetics impacts are not anticipated and will not be further analyzed in this Draft SEA. Since no significant aesthetics impacts were identified, no mitigation measures are necessary or required.

II. AGRICULTURE AND FOREST RESOURCES.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program of the California Resources Agency, to non- agricultural use?	☐	☐	☐	☑
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☑
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104 (g))?	☐	☐	☐	☑
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☑

Significance Criteria

Project-related impacts on agriculture and forest resources will be considered significant if any of the following conditions are met:

- The proposed project conflicts with existing zoning or agricultural use or Williamson Act contracts.
- The proposed project will convert prime farmland, unique farmland or farmland of statewide importance as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.
- The proposed project conflicts with existing zoning for, or causes rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined in Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code § 51104 (g)).

- The proposed project would involve changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

DISCUSSION

II. a) & b) In general, the affected facilities and surrounding industrial areas are not located on or near areas zoned for agricultural use, Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program of the California Resources Agency. Therefore, the proposed project would not result in any construction of new buildings or other structures that would require converting farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract. Since the proposed project would not substantially change the facility or process at the facilities, there are no provisions in PAR 1420.1 that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements relative to agricultural resources would be altered by the proposed project.

IV. c) & d) The affected facilities are located in an industrial area in the urban portion of Los Angeles County that is not near forest land. Therefore, the proposed project is not expected to conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104 (g)) or result in the loss of forest land or conversion of forest land to non-forest use.

Since PAR 1420.1 would not affect the placement of affected equipment near farmland, the proposed project is not expected to result in converting farmland to non-agricultural use; or conflict with existing zoning for agricultural use, or a Williamson Act contract. Similarly, it is not expected that PAR 1420.1 would conflict with existing zoning for, or cause rezoning of, forest land; or result in the loss of forest land or conversion of forest land to non-forest use. Consequently, the proposed project would not create any significant adverse agriculture or forestry impacts. Since no significant agriculture or forestry resources impacts were identified, this topic need not be evaluated further and no mitigation measures are necessary or required.

III. AIR QUALITY AND GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☑	☐
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☐	☑	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☑	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☑	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☑	☐
f) Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)?	☐	☐	☑	☐
g) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☑	☐
h) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☑	☐

Significance Criteria

To determine whether or not air quality impacts from the proposed project may be significant, impacts will be evaluated and compared to the criteria in Table 2-2.

Table 2-2 SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds [a]		
Pollutant	**Construction** [b]	***Operation*** [c]
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs), Odor, and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000 MT/yr CO2eq for industrial facilities	
Ambient Air Quality Standards for Criteria Pollutants [d]		
NO2 1-hour average annual arithmetic mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.03 ppm (state) and 0.0534 ppm (federal)	
PM10 24-hour average annual average	10.4 μg/m^3 (construction)[e] & 2.5 μg/m^3 (operation) 1.0 μg/m^3	
PM2.5 24-hour average	10.4 μg/m^3 (construction)[e] & 2.5 μg/m^3 (operation)	
SO2 1-hour average 24-hour average	0.25 ppm (state) & 0.075 ppm (federal – 99th percentile) 0.04 ppm (state)	
Sulfate 24-hour average	25 μg/m^3 (state)	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day Average Rolling 3-month average Quarterly average	1.5 μg/m^3 (state) 0.15 μg/m^3 (federal) 1.5 μg/m^3 (federal)	

[a] Source: SCAQMD CEQA Handbook (SCAQMD, 1993)
[b] Construction thresholds apply to both the South Coast Air Basin and Coachella Valley (Salton Sea and Mojave Desert Air Basins).
[c] For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.
[d] Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.
[e] Ambient air quality threshold based on SCAQMD Rule 403.

KEY: lbs/day = pounds per day ppm = parts per million μg/m^3 = microgram per cubic meter ≥ = greater than or equal to
MT/yr CO2eq = metric tons per year of CO2 equivalents > = greater than

DISCUSSION

Staff evaluated the historical daily and the rolling 30-day average results for all monitors at both applicable facilities from 2008 until the present to determine an appropriate lead ambient concentration limit. The rolling 30-day average is calculated by determining the average over the 30 days prior to that particular day. Significant improvements have been made after the January 2012, when the ambient lead concentration limit was lowered from 1.5 to 0.150 ug/m3. Additional reductions in the ambient lead concentration limit were further lowered in 2013 as additional controls and measures were implemented. The tables below summarize the number of days in Year 2013 that exceeded the lead limits over 30-day rolling averages for Exide and Quemetco for their monitors and provides the average over all of their monitors.

Table 2-3 Exide's 2013[1] 30-Day Average Exceedances of Proposed Limits (days)

Site Monitor	Rail	SE	SW	NE	OSN	MID
Days Exceeding 0.150 µg/m^3	0	0	0	8	0	0
Days Exceeding 0.110 µg/m^3	0	0	0	23	9	0
Days Exceeding 0.100 µg/m^3	0	0	0	26	15	10

1. Excludes 9/16/13 through 12/31/13 due to DTSC activity

Table 2-4 Quemetco's 2013 30-Day Average Exceedances of Proposed Limits (days)

Site Monitor	Site 1	Site 2	Site 4	Site 5
Days Exceeding 0.150 µg/m^3	0	0	0	0
Days Exceeding 0.110 µg/m^3	0	0	0	0
Days Exceeding 0.100 µg/m^3	0	0	0	9

During the days that exceeded the proposed limits (Table 2-3 and Table 2-4) some days "spiked" or exceeded > 0.3 µg/m^3. Tables 2-5 and 2-6 show the number of days the "spiking" did not occur. By controlling spikes (daily monitor readings greater than 0.300 µg/m^3) ~~and by~~ through the ~~implementing~~ implementation of housekeeping and maintenance provisions; such as sweeping, watering and other dust abatement techniques prior to cutting or other soil disturbing activities, the measures prescribed in the proposed rule during cutting or other soil disturbing activities, and thorough cleaning afterwards, both sites can limit spikes from occurring. Based on 2013 ambient lead concentrations and if spikes are limited, both facilities can meet the proposed interim ambient lead concentration limit of 0.110 µg/m^3 and Quemetco can meet the proposed ambient lead concentration limit of 0.100 µg/m^3. As discussed below, it is expected that Exide can also meet the 0.100 µg/ µg/m^3 with implementation of additional measures to further reduce lead emissions.

Table 2-5 Exide's 2013[1] 30-Day Average Exceedances of Proposed Limits (days) – No Spikes Above 0.300 µg/m^3

Site Monitor	Rail	SE	SW	NE	OSN	MID
Days Exceeding 0.110 µg/m^3	0	0	0	0	0	0
Days Exceeding 0.100 µg/m^3	0	0	0	21	7	10

1. Excludes 9/16/13 through 12/31/13 due to DTSC activity

Table 2-6 Quemetco's 2013 30-Day Average Exceedances of Proposed Limits (days) - No Spikes Above 0.300 µg/m^3

Site Monitor	Site 1	Site 2	Site 4	Site 5
Days Exceeding 0.110 µg/m^3	0	0	0	0
Days Exceeding 0.100 µg/m^3	0	0	0	3

As shown in Table 2-5, additional measures at Exide beyond controlling spikes will be needed to meet the 0.100 µg/m^3. To meet the proposed ambient lead concentration limit of 0.100 µg/m^3, improvements to housekeeping practices are likely necessary at Exide and there will likely also be a need for additional control equipment. Table 2-7 below summarizes potential control strategies that both facilities could implement to meet the 0.100 µg/m^3. As shown in Table 2-7, it is expected that Exide and Quemetco will likely implement measures to eliminate spikes that could occur during specific maintenance activities. All other measures discussed in Table 2-7 will likely be implemented by Exide to ensure the facility can consistently meet the lower ambient lead concentration limit of 0.100 µg/m^3.

The improvements analyzed were developed by staff based on review of source tests and ambient monitoring data, comparing housekeeping practices before and after 2013, and comparing practices between the two impacted facilities. Many of the improved practices are based on the respective facilities' Rule 1420.1 Compliance Plans and dust mitigation measures. With the exception of the baghouses' maintenance and potentially installing additional control equipment, the improvements focus on reducing fugitive emissions. Improved baghouse maintenance would help prevent equipment failures. Finally, the additional control on the Feed Dryer addresses the highest emitting point source at Exide, according to 2012 source test data.

Table 2-7 CEQA Detailed Summary of Emissions Control Options

Menu of Options to Reduce Fugitive Emissions	Description/Frequency	Action To Be Taken By:	
		Exide	Quemetco
Enhanced Measures During Maintenance Activities	• During maintenance activities such as concrete/asphalt cutting, drilling, or soil grading, increase wash down areas as well as dusting, vacuuming and sweeping to minimize dust • 4 additional workers; 4 times/year	☑	☑
Enhanced Housekeeping Measures (beyond the new proposed housekeeping requirement of PAR 1420.1 (h))	• Implement existing housekeeping provisions more frequently or with better efficacy such as watering and street sweep to minimize dust created by vehicle and foot traffic • Wash, vacuum, and sweep inside and outside of building and parking area • 24 additional workers to implement enhanced daily housekeeping	☑	☐
Enhancements to Total Enclosures	• Seal roof on total enclosure • Install 8 – vestibules to improve maintenance of negative air pressure for doors and other openings, and	☑	☐

Menu of Options to Reduce Fugitive Emissions	Description/Frequency	Action To Be Taken By:	
		Exide	Quemetco
	• Install 8 – air curtains to improve maintenance of negative air pressure for loading and unloading areas and other openings where vestibules are not practicable		
Additional Wheel Washing Station	1 additional station to water down vehicle wheels before exiting site/	☑	☐
Increased Maintenance of Baghouse	Increase frequency of baghouse maintenance activities	☑	☐
Additional Air Pollution Control (Point Source)	New two-cell WESP or additional scrubber	☑	☐

The improvements for consideration were developed by staff based on review of source tests and ambient monitoring data, comparing housekeeping practices before and after 2013, and comparing practices between the two impacted facilities. Many of the improved practices are based on submitted Compliance Plans and dust mitigation measures. With the exception of bag house maintenance and potentially installing additional control equipment, the improvements focus on reducing fugitive emissions. Improved baghouse maintenance such as more frequent inspection and replacement of PTFE (Polytetrafluoroethylene) bags would help prevent equipment failures and ensures the bag house is operating properly. Finally, the additional air pollution control would likely be on the Feed Dryer and addresses the highest emitting point source at Exide, according to 2012 source test data. Based on the 2012 source test the feed dryer was approximately three times higher than the next highest lead emission point source. Since the 2012 source test, Exide has installed HEPA on the feed dryer which would reduce the lead emission rate. However, it is expected that the lead emission rate from the feed dryer would still be about two times higher than the next highest lead emission point source. Thus, it is reasonable forseeable that Exide would likely further control the feed dryer to ensure compliance with the ambient lead concentration limit under PAR 1420.1. The CEQA analysis evaluates two air pollution control options that Exide can implement to further control lead emissions from the feed dryer, a two-cell WESP or a wet scrubber.

For the purpose of the CEQA analysis, reasonable worst-case assumptions have been made: both facilities will implement enhanced measures during maintenance activities, and Exide will need to do all considered measures such as enhanced housekeeping measures, enhancements to total enclosures, installing a wheel washer station, and installing an additional new APC device(s) to further reduce lead point source emissions (i.e. new two cell WESP or new additional wet scrubber). It is likely that both facilities would implement enhanced measures during maintenance activities to reduce spikes that can occur during these types of activities. It is the SCAQMD staff's understanding, that Quemetco implements a number of enhanced housekeeping measures and generally uses more workers than Exide to implement these measures, thus no additional enhancements to housekeeping measures are assumed to occur at Quemetco. No construction is expected at Quemetco as their lead point source overall stack emission rate is less than 0.003 lb/hour.

III. a) The SCAQMD is required by law to prepare a comprehensive district-wide Air Quality Management Plan (AQMP) which includes strategies (e.g., control measures) to reduce emission levels to achieve and maintain state and federal ambient air quality standards, and to ensure that new sources of emissions are planned and operated to be consistent with the SCAQMD's air quality goals. The AQMP's air pollution reduction strategies include control measures which target stationary, area, mobile and indirect sources. These control measures are based on feasible methods of attaining ambient air quality standards. Pursuant to the provisions of both the state and federal Clean Air Acts (CAA)s, the SCAQMD is required to attain the state and federal ambient air quality standards for all criteria pollutants, including lead. PAR 1420.1 would not obstruct or conflict with the implementation of the AQMP because lead emission reductions are in addition to emission reductions in the AQMP. The SCAQMD adopted the 2012 Lead State Implementation Plan (SIP) for Los Angeles County on May 4, 2012, which relies upon Rule 1420.1 for lead emission reductions. Further, on November 5, 2010, the Governing Board approved the 2010 Clean Communities Plan (CCP). The CCP is an update to the 2000 Air Toxics Control Plan (ATCP)[4] and its 2004 Addendum. The objective of the 2010 CCP is to reduce the exposure to air toxics and air-related nuisances throughout the district, with emphasis on cumulative impacts. The elements of the 2010 CCP are community exposure reduction, community participation, communication and outreach, agency coordination, monitoring and compliance, source-specific programs, and nuisance.

PAR 1420.1 would reduce lead emissions and therefore, be consistent with the goals of the AQMP, 2012 Lead SIP for Los Angeles County, and the 2010 CCP. Therefore, implementing PAR 1420.1 that further reduces lead emissions would not conflict or obstruct implementation of the 2012 Lead SIP for Los Angeles County, AQMP or 2010 CCP.

III. b) and f) ***Criteria Pollutants***

Construction Impacts

New Affected Facilities

SCAQMD staff is not aware of any new large lead recycling facilities planned to be constructed in the future. So the focus of the analysis will be on the two known affected facilities. Construction related to PAR 1420.1 at new facilities would be similar to construction of structures to support the new large lead recycling processes. The same construction equipment used to build the facility is expected to build enclosures and control equipment at new facilities. However, at this time, construction of new large lead recycling facilities is considered speculative according to CEQA Guidelines §15145 and will not be evaluated further in this analysis.

Quemetco

Quemetco may implement additional measures to ensure lead dust is well controlled during specific maintenance activities to reduce potential emission spikes during activities such as concrete/asphalt cutting, drilling, or soil grading by increasing wash down areas as well as dusting, vacuuming, and sweeping to minimize lead dust. As previously discussed, Quemetco implements enhanced housekeeping, their lead point sources are less than ~~0.003 lb/hour~~ the

[4] SCAQMD Air Toxics Control Plan: http://www.aqmd.gov/home/library/clean-air-plans/clean-communities-plan/air-toxics-control-plan

proposed lower limit of 0.023 lb/hr, therefore, it is reasonably foreseeable that no construction activities will occur at Quemento as part of PAR 1420.1.

Exide

As discussed, there are two air pollution control devices strategies that could be implemented to further control lead emissions from the feed dryer. Staff has identified two potential air pollution control device options to control lead emissions from the feed dryer: a two-cell WESP or a venturi and tray type wet scrubber. It is expected that Exide would likely choose the wet scrubber over the WESP because the facility is currently using this type of air pollution control system and it is a lower cost option. However, for completeness of the analysis, this Environmental Assessment includes both control options to ensure that environmental impacts from either option are fully analyzed.

The January 2014 PAR 1420.1 Final EA evaluated the potential impacts of installation of a 10 cell WESP. This present EA evaluates a two-cell WESP, but assumes (similar to the January 2014 Final EA) that the two-cell WESP would be installed outside near the building (current location of a storm water retention pond). As such, the existing storm water retention pond would be removed and replaced with new storage tanks. These tanks would also be placed within the affected facility's property. At Exide, the new scrubber could be placed either inside or outside their enclosed building. The approximate size of the scrubber would be approximately 5 feet in diameter and 15 feet in height. Regardless of where the scrubber is placed, it would be on existing paved surface where construction impacts are the installation of the scrubber. The installation of either new APC may require the installation of additional ducting, blowers and other air handling support equipment.

Exide is expected to control its fugitive dust from enhanced measures during maintenance activities, enhanced housekeeping measures, enhancements to total enclosures, additional wheel washer station, and additional air pollution controls in order to comply with the proposed lead ambient concentration limit. No construction impacts are expected from installation of an additional wheel washer station as these systems are prefabricated and installed on flat paved surfaces. Enhancements to the total enclosure such as implementing housekeeping provisions specified under paragraph PAR 1420.1 (h)(2) more frequently to inspect and ensure that the total enclosure is free of gaps, breaks, separations, leak points or other possible routes for emissions of lead or fugitive lead-dust can escape to ambient air will not result in construction impacts. Installation of vestibules will require some construction, but no physical modifications to the total enclosure would be needed as the prefabricated vestibules can be added to the existing structure. Regarding the additional APC devices, Exide could elect to install a WESP or an additional wet scrubber to further control lead point sources. Either APC will require construction. Installation of a two-cell WESP will require more construction as it is assumed it would be located on the containment pond, similar to the analysis done in the January 2014 PAR 1420.1 Final EA. Construction impacts from both a WESP and wet scrubber are presented in this Environmental Assessment to show the potential environmental impacts from either control option.

Exide is expected to install 3 new air monitors to ensure that they can comply with the daily monitoring requirement. Additional monitors would be side by side existing monitors. Since these monitors would be side by side existing monitors, any electrical needs would already be

met such that no additional construction impacts would be expected. Air monitors are placed on two meter height platforms that are two feet wide by eight feet long. Other than placing the monitors on the platforms, air monitors do not require construction. Therefore, no construction emissions are associated with the air monitors. The delivery of the air monitors would be less than the construction's peak day emissions.

Exide's Construction for Air Pollution Control Equipment

Based on previous source tests, one area where additional controls may be installed to ensure compliance with the 0.100 ug/m3 ambient lead concentration limit would be to further control lead emissions from the feed dryer. SCAQMD staff has identified two control options: 2-cell WESP or wet scrubber. It is possible that because a 2-cell WESP would require less space than a 5-cell WESP that it could be placed in another location other than the storm water pond where excavation, fill, and paving would not be necessary. As a conservative assumption and similar to the January 2014 PAR 1420.1 Final EA, it is assumed that a 2-cell WESP would be placed on the storm water retention pond.

Construction of a 2-cell WESP is expected to occur in four phases: demolition/excavation, fill, paving and building of the structure. Construction of a scrubber is expected to occur in two phases: paving and building structure. All the construction phases for either control option will take place on site and will generally need to be completed before moving on to the next phase. No demolition of existing structures for the WESP is expected for the new additional APC because the new equipment will be placed either at an empty area or storm water pond.

Due to compliance issues and as a result of an action brought by the SCAQMD in front of the SCAQMD Hearing Board, Exide prepared a Mitigation Plan for Construction of Risk Reduction Measures, RCRA RFI Sampling, and Other Plant Activities (hereinafter referred to as Construction and Activity Mitigation Plan) dated July 2014 (See Appendix C of Exide's Toxic Reduction Project[5]). The Construction and Activity Mitigation Plan was incorporated into an Order for Abatement (Case No. 3151-32) which was issued and made enforceable by the SCAQMD Hearing Board on July 10, 2014, pursuant to Health and Safety Code section 42451(b). The plan details how Exide will control fugitive metal TAC dust during construction and other plant activities. The goal of the Construction and Activity Mitigation Plan is to exceed SCAQMD regulatory requirements to prevent emissions of lead and other toxic metals during any construction and maintenance activity occurring onsite.

Construction emissions were estimated for the various construction phases for the two control options as discussed below: demolish, excavate the ground, In addition, criteria pollutant emissions were calculated for all on-road vehicles transporting workers, vendors, and material removal and delivery. Since all phases must be entirely completed before the next phase can commence, there would be no overlap of construction phases for the construction of the new APC.

[5] Exide's Toxic Reduction Project: http://www.aqmd.gov/docs/default-source/exide/id-124838-exide-mnd_final-(1).pdf?sfvrsn=4

Demolition/Excavation Phase

The demolition and excavation phase would involve the excavation of the storm water pond for installation of a 2-cell WESP or flooring for a new foundation for an additional wet scrubber. Demolition/excavation for a foundation for a wet scrubber is assumed to include removing a 10 foot by 10 foot section of concrete with a soil depth of two feet. For either APC control options, demolition would involve cranes, saws and loaders. It is assumed that under either control approach, the same equipment would be used on a daily basis; however, demolition/excavation of the surface pond would occur over a longer period of time.

Soil beneath the Exide facility is contaminated with metals, primarily arsenic and lead. Trichloroethylene (TCE), Tetrachloroethylene (PCE), and other volatile organic compounds (VOCs) also have been identified in soils and groundwater beneath the facility. The proposed project may include removing some ground soil/concrete and installing new foundations; hence, some earthwork is expected. Rule 1420.1 includes requirements for maintenance activities, which would include removal of ground pavement, concrete or asphalt associated with the proposed project. Specifically, it requires that the activity must be conducted in a partial enclosure using wet suppression, requires increased sampling and restricts construction during high wind conditions. These provisions will control fugitive dust.

The concrete and soil would be considered hazardous waste and the facility owner/operators have stated that the debris would be sent to US Ecology Beatty Facility, Beatty Nevada. Based on a capacity of 30 cubic yards per haul truck, seventeen haul truck trips would be required to haul the concrete and soil debris for demolition of the surface retention and 17 haul truck trips would be required to haul concrete and soil debris for demolition for installation of a new foundation for a scrubber. The distance traveled by haul trucks within SCAQMD jurisdiction (distance from the affected facility to Castaic) is approximately 68 miles one-way. The distance traveled by haul trucks within MDAQMD jurisdiction (distance from the Castaic to Nevada) is approximately 191 miles one-way. Emissions calculations for vehicle trips were based on two-way trips.

However, to ensure that all emissions were identified, it was assumed that that the demolished material/soil was contaminated and sent to either to the Chemical Waste Management Kettleman Hills Landfill or the Clean Harbors Buttonwillow Landfill for treatment and disposal. In either case, 17 haul trucks transporting contaminated material/ soil would travel from the facility to the district boundary at the I-5 freeway.

Fill Phase

The fill phase would involve the filling of the flooring with any soil needed to balance the area before paving. Backhoes would be used during the fill phase. The fill phase would occur for filling the surface retention pond and only for the 2-cell WESP.

Paving Phase

The paving phase would involve the pouring of concrete for the new foundations for the new APC and any footings needed for either the 2-cell WESP or scrubber. Concrete mixers would be used during this phase. For either a 2-cell WESP or scrubber control approach, the same equipment would be used on a daily basis, however, paving phase of the surface pond would occur over a longer period of time.

Structure Construction Phase

The structure construction phase would include the installation of air pollution control equipment for either a 2-cell WESP or scrubber . Because the equipment would arrive on-site pre-manufactured, the construction impacts are from the delivery of the equipment and operation of a crane to install them. Also, loaders and forklifts are expected to be used during this phase.

The construction phases would be completed in the order described above because of logistics and cannot overlap. The excavation of the existing flooring is necessary before the new foundation and equipment is installed. The demolition areas may need to be filled with soil to balance the area before the new foundation and footings are poured for the new equipment. The structure construction phase can only be started after the foundations and footings are set. For example, the flooring would need to be demolished before being repaved. The paving will need to be cured before the equipment is installed.

Construction emission estimates included construction equipment used during the phase (e.g., paver during paving) and on-road vehicles transporting workers, vendors, and material removal and delivery (see APPENDIX B). Daily construction criteria pollutant emissions from the proposed project are presented in Table 2-8. The 2014 Final EA for Rule 1420.1 assumed as a worst-case scenario that the storm water retention pond would need to be removed to install a wet ESP. Hence, all the proposed project elements were considered in the daily construction emissions. Because the construction phases do not overlap, the daily emissions are not additive.

Construction emissions are presented in Table 2-8 below for all phases of construction of a 2-cell WESP which includes demolition/excavation, fill phase, paving, and structure construction and all phases of construction for a scrubber which includes demolition/excavation, paving and structure construction. The daily emissions from demolition/excavation, paving and structure construction emissions from either installation of a 2-cell WESP or scrubber are the same for both control approaches. The peak daily emissions vary for each pollutant depending on the construction phase. Peak daily emissions are the highest for CO and NOx for the demolition/excavation phase and are the highest for PM10, PM2.5, VOC and SOx for the fill phase of construction. The significance determination for the construction is based on the peak daily emissions during any construction phase, and as previously discussed construction phases do not overlap. Therefore, all of the construction impacts from the project are not significant for criteria pollutant emissions.

Table 2-8 PAR 1420.1 Daily Construction Emissions in SCAQMD[1]

Construction Phase	CO, lb/day	NOx, lb/day	PM10, lb/day	PM2.5, lb/day	VOC, lb/day	SOx, lb/day
Demolition/Excavation[2]	**24**	**50**	3.2	2.2	4.4	0.04
Fill Phase[3]	28	73	**7.5**	**3.4**	**6.4**	**0.1**
Paving[2]	19	29	1.8	1.6	1.1	0.02
Structure Construction Phase[2]	16	36	1.6	1.4	3.7	0.1
Significance Threshold, lb/day	550	100	150	55	75	150
Exceed Significance?	No	No	No	No	No	No

[1] It is likely that Exide would likely select either a 2-cell WESP or wet scrubber, so construction emissions are not additive for the two control options. Construction phases do not overlap. Significance determination is based on peak daily emissions of CO and NOx for the demolition phase and PM10, PM2.5, VOC, and SOx for the fill phase of construction.

[2] Demolition/excavation, paving and structure construction phase for both installation of a 2-cell WESP and a scrubber.

[3] Fill phase occurs for installation of a 2-cell WESP.

Hauling contaminated demolished material/soil found during demolition of the existing storm water retention pound or for installing a concrete pad would be the only construction phase that may generate criteria pollutant emissions outside of the District. Haul trucks transporting contaminated soil would travel up the I-5 through the San Joaquin Valley Air Pollution Control District's (SJVAPD's) jurisdiction. The number of trips by haul trucks from PAR 1420.1 related construction in SJVAPD's jurisdiction would be substantially less than the 1,506 trips per day threshold from industrial projects that would require quantifying emissions in accordance with the SJVAPD's Small Project Analysis Level Guidance Document (http://www.valleyair.org/transportation/CEQA%20Rules/ SPALTables61912.pdf). Therefore, it is determined that construction related criteria pollutant emissions in the SJVAPD's jurisdiction would be less than significant for adverse construction air quality impacts in accordance with the standards and significance thresholds of that area.

A wheel washer is a prefabricated device designed to spray high pressure water onto the wheels of vehicles. The water pumps are electrical and the water is re-circulated. The equipment is delivered and installed on site without the need for additional construction. The same scenario goes for the vestibules. The vestibules are prefabricated devices and do not require construction equipment for installation. The only installation equipment needed to install the wheel washer and vestibules would be electric power tools. Minor emissions from welding may be generated by installing the wheel washer and vestibules. Emissions from welding are expected to be infrequent and less than significant. The housekeeping and maintenance activities also do not need construction. Hence, the wheel washer, installation of vestibules, and housekeeping activities will not result in construction emissions impacts.

Localized Significance Thresholds for Construction

The localized significance threshold (LST) methodology was developed to be used as a tool to assist lead agencies to analyze localized impacts associated with proposed projects. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. LST lookup tables for one, two and five acre proposed projects emitting CO, NOx, PM2.5, and PM10 were prepared for easy reference according to source receptor area.

The Exide facility is located in Source Receptor Area (SRA) 1 – Central Los Angeles. The proposed construction area is approximately one acre in area, except for the stack and associated stack support structure, and ducting; these will be enclosed within existing structures on-site. The furnace building is on the eastern side of the Exide facility along Indiana Street. The receptor distance between the building edge and the facility across the street is less than 25 meters. As discussed earlier, the end of one phase of construction cannot overlap with the beginning of the next phase. On-site construction emissions and the one-acre LST significant thresholds for SRA 1 are presented in Table 2-9. Detailed construction emissions assumptions and calculations are presented in Appendix B. Since the emissions are below the one-acre LST significant thresholds for SRA 1, the proposed project is not expected generate construction criteria pollutant emissions that significantly impact sensitive receptors.

The Draft SEA inadvertently listed the total daily construction on-site and off-site emissions in Table 2-9, instead of the onsite construction emissions. However, the correct numbers were included in Appendix B of the Draft SEA and are now accurately listed in Table 2-9.

Table 2-9 Proposed Project Daily On-site Construction Emissions LST

Description	CO, lb/day	NOx, lb/day	PM10, lb/day	PM2.5, lb/day
Demolition/Excavation Phase	~~24~~ 20	~~50~~ 32	~~3.2~~ **3.8**	~~2.2~~ **2.0**
Fill Phase	~~28~~ **21**	~~73~~ **40**	~~7.5~~ 3.7	~~3.4~~ **2.0**
Paving Phase	~~19~~ 16	~~29~~ 24	~~1.8~~ 1.7	~~1.6~~ 1.5
Structure Construction Phase	~~16~~ 14	~~36~~ 24	~~1.6~~ 1.3	~~1.4~~ 1.2
Localized Significance Threshold at ~~100~~ 25 meters	680	74	5.0	3.0
Exceed Significance?	NO	NO	NO	NO

The end of one phase of construction cannot overlap with the beginning of the next phase.

Operational Impacts

The operation of the control equipment will reduce toxic exposure and will assist in meeting the lower proposed limits. As shown in Table 2-10, the lower point source limit is already being met by both facilities.

Table 2-10 Lead Point Source Test Results

	Facility	
	Quemetco[6]	Exide[7]
Lead Point Source Emission Rate (lb/hr)	0.000341	0.02106
PAR 1420.1 New Point Source Limit (lb/hr)	0.023	0.023
Compliance with New Limit?	Yes	Yes

[6] Quemetco Source Test Results, 2/2014

[7] Exide Source Test Results, 2010 and 2012

For implementation of additional measures during maintenance activities and enhanced housekeeping provisions where measures are implemented more frequently or with greater efficacy, additional employees may be needed. SCAQMD staff has estimated that during maintenance activities, four additional employees would be needed quarterly at both facilities, for a total of eight maintenance-related employees. For enhanced housekeeping provisions, three crews of eight, or 24 employees, would be needed at Exide. Total maximum additional employment would be 32 and it is assumed that an additional 32 vehicle trips could occur from enhanced maintenance and housekeeping provisions.

Exide

New APC Operation

The modified air handling systems and either new APC device (wet scrubber or new 2-cell WESP) may be needed to comply with the ambient lead concentration limit under PAR 1420.1, but are not expected to generate criteria pollutants. The modified air handling systems and air pollution control equipment is expected to be powered by electricity, so no new combustion emissions would be generated. Modifications to the air handling system and operation of a new APC device would reduce lead emissions. The affected facility currently sends operational hazardous waste to the Allied Waste La Paz County Landfill in Arizona. No additional haul trips are expected because the captured lead gets recycled in their process.

Housekeeping Operations

None of the housekeeping operations are expected to directly increase criteria, toxic or greenhouse gas emissions. Secondary criteria emissions may increase from the additional vehicle sweeping and employee vehicle emissions as shown in Table 2-11. Exide is expected to double their diesel vehicle sweeping. Diesel use was estimated for the three extra sweeping events per day that would be required at the affected facility that currently only swept three times per day. Diesel use was estimated assuming that sweepers would be nine feet wide, sweep over the entire outside area around the production site (i.e., not around administrative buildings) three times a day with two feet of overlap on the return path as the sweepers travel back and forth. Assuming a ten mile per gallon of diesel fuel efficiency approximately 2.1 gallons of diesel would be consumed on a peak day. Since the additional sweeping is only expected to require 65 gallons more fuel per year, no additional diesel fuel delivery is expected, so there would be no additional diesel fuel use from diesel fuel delivery.

The criteria emissions from operation would be less than the SCAQMD's mass daily operational significance thresholds; therefore, PAR 1420.1 is not expected to result in significant adverse operational criteria pollutant emission impacts.

Table 2-11 SCAQMD Operational Criteria Pollutant Emissions

Description	CO	NOx	PM10	PM2.5	VOC	SOx
	(lb/day)					
Heavy Duty Sweeper	0.5	2.3	0.068	0.048	0.10	0.0046
32 Employee Vehicle Trips for Enhanced Maintenance and Housekeeping	5.28	0.437	.13	0.06	0.58	0.01
Total Operational Emissions	**5.8**	**2.7**	**0.2**	**0.1**	**0.7**	**0.02**
Significance Threshold	550	55	150	55	75	150
Exceed Significance?	No	No	No	No	No	No

Indirect Criteria Pollutant Emissions from Electricity Consumption

Indirect criteria pollutant and GHG emissions are expected from the generation of electricity to operate new equipment that occurs off-site at electricity generating facilities (EGFs). Emissions from electricity generating facilities are already evaluated in the CEQA documents for those projects when they are built or modified. The analysis in the Draft SEA (Section VI. Energy b), c) and d)) demonstrates that there is sufficient capacity from power providers for the increased electricity consumption from PAR 1420.1. Since both affected facilities are in the Regional Clean Air Incentives Market (RECLAIM) Program that regulates NOx and SOx emissions from EGFs. Under the RECLAIM program, EGFs were provided annual allocations of NOx and SOx emissions that decline annually. For this reason, emissions that may be created from EGFs providing electricity specifically for the proposed project would not increase regional NOx and SOx emissions, since the overall NOx and SOx emissions generated by EGFs would need to remain within the existing regional annual NOx and SOx allocations under the RECLAIM program. Lastly, because the NOx and SOx emissions are limited by the annual RECLAIM allocations, the other criteria pollutants that may be generated from combustion activities associated with electricity generation (e.g., CO, VOC, PM10, and PM2.5) are also limited by stoichiometry. Since both affected facilities would be required to offset any potential NOx emission increases under the RECLAIM program, any increase in NOx emission as a result of PAR 1420.1 will be mitigated to less than significant.

III. c) ***Cumulatively Considerable Impacts***

Based on the foregoing analysis, criteria pollutant project-specific air quality impacts from implementing PAR 1420.1 would not exceed air quality significance thresholds (Table 2-2), cumulative impacts are not expected to be significant for air quality. SCAQMD cumulatively significance thresholds are the same as project-specific significance thresholds. Therefore, potential adverse impacts from implementing PAR 1420.1 would not be "cumulatively considerable" as defined by CEQA Guidelines §15064(h)(1) for air quality impacts. Per CEQA Guidelines §15064(h)(4), the mere existing of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulative considerable.

The SCAQMD guidance on addressing cumulative impacts for air quality is as follows: "As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or

EIR." "Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."[8]

This approach was upheld by the Court in *Citizens for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal. App. 4th 327, 334. The Court determined that where it can be found that a project did not exceed the South Coast Air Quality Management District's established air quality significance thresholds, the City of Chula Vista properly concluded that the project would not cause a significant environmental effect, nor result in a cumulatively considerable increase in these pollutants. The court found this determination to be consistent with CEQA Guidelines §15064.7, stating, "The lead agency may rely on a threshold of significance standard to determine whether a project will cause a significant environmental effect." The court found that, "Although the project will contribute additional air pollutants to an existing nonattainment area, these increases are below the significance criteria…" "Thus, we conclude that no fair argument exists that the Project will cause a significant unavoidable cumulative contribution to an air quality impact." As in *Chula Vista*, here the District has demonstrated, when using accurate and appropriate data and assumptions, that the project will not exceed the established South Coast Air Quality Management District significance thresholds. See also, *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal. App. 4th 899. Here again the court upheld the South Coast Air Quality Management District's approach to utilizing the established air quality significance thresholds to determine whether the impacts of a project would be cumulatively considerable. Thus, it may be concluded that the Project will not cause a significant unavoidable cumulative contribution to an air quality impact.

Based on the foregoing analysis, project-specific air quality impacts from implementing the proposed project would not exceed air quality significance thresholds (Table 2-1); therefore, based on the above discussion, cumulative impacts are not expected to be significant for air quality. Therefore, potential adverse impacts from the proposed project would not be "cumulatively considerable" as defined by CEQA Guidelines §15064(h)(1) for air quality impacts. Per CEQA Guidelines §15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulative considerable.

III. d) *Toxic Air Contaminants (TAC)*

Exide's Construction

Construction is only expected at Exide. Construction TAC emissions may be generated from two sources: diesel exhaust emissions (i.e. heavy-duty trucks and construction equipment) and from the disturbance of contaminated soil.

Diesel exhaust particulate is considered a carcinogenic and chronic TAC. Construction is estimated to last less than two years during which time diesel exhaust from the construction equipment and its corresponding adverse health impacts will affect the surrounding local

[8] SCAQMD Cumulative Impacts Working Group White Paper on Potential Control Strategies to Address Cumulative Impacts From Air Pollution, August 2003, Appendix D, Cumulative Impact Analysis Requirements Pursuant to CEQA, at D-3, http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper-appendix.pdf?sfvrsn=4.

community. However, the Exide facility is subject to a stringent Construction Activity Mitigation Plan that requires active monitoring and abatement of work activities. The Plan requires construction activities within the building to be conducted under negative pressure so exhaust is not emitted externally. In addition, required wet methods will reduce the generation of dust from all aspects of the construction phase and the extensive measures will also assist in restricting the exposure to diesel exhaust from the off-road equipment. Using the latest fleet mix of off-road equipment will reduce criteria pollutant and toxic emissions as newer equipment are subject to more stringent CARB regulations. Finally, carcinogenic health risk to sensitive receptors is calculated based on a 70-year exposure and to off-site workers for a 40-year exposure period and the construction period will be less than two years reducing the risk in magnitudes.

Exide's facility has previously been identified with soil contamination from metals (primarily arsenic and lead). Trichloroethylene (TCE), tetrachloroethylene (PCE) and other volatile organic compounds (VOCs) contamination were also identified in some soil areas. A soil vapor extraction (SVE) system was installed to remediate TCE, PCE and VOCs from the soil. With the exception of potentially replacing the storm water retention pond with storm water storage tanks to provide room for the new APC, no other excavation is expected. If soil contamination were found during construction, it would likely be during the demolition phase. If contaminated soil were found during construction, construction would be stopped and additional testing would be done to determine the type and extent of contamination. Exide currently has a legal obligation to follow proper procedures to handle and dispose their contaminated soil. See their 2014 SCAQMD Mitigation Monitoring Plan[9] for more details.
The existing Rule 1420.1 contains requirements for maintenance activity in subsection (i), which includes (c)(17)(e) resurfacing, repair, or removal of ground, pavement, concrete or asphalt. The maintenance requirements in subsection state:

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

[9] http://www.aqmd.gov/docs/default-source/ceqa/documents/permit-projects/2014/exide-mmp_final.pdf?sfvrsn=2

(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.

Therefore, based on the requirements of existing of Rule 1420.1 for maintenance activities, which would not be altered by the propose project, adverse lead or arsenic emission impacts from contaminated soil during construction are not expected.

If soil is contaminated with VOC (including TACs that are VOC), the facility owners/operators would be required to prepare a SCAQMD Rule 1166 VOC Contaminated Soil Mitigation Plan. The mitigation plan would require that VOC emissions from the contaminated soil be minimized. Because demolition is expected to last less than a month and a SCAQMD Rule 1166 VOC Contaminated Soil Mitigation Plan would be required to be followed if VOC contaminated soil is found, significant adverse impacts from VOC TAC emissions associated with contaminated soil are also not expected.

Therefore, based on the previous discussion, PAR 1420.1 is not expected to generate significant adverse TAC impacts from construction.

Operations

Secondary Health Risk Impacts from PAR 1420.1

Exide's operation of their modified air handling systems and the new APC device may be needed to comply with PAR 1420.1 are not expected to generate any TAC emissions. Because they are operated using electricity and any emissions remaining after control will be less than the emissions from that source before the additional control (baseline emissions).

Based on the above discussion PAR 1420.1 is not expected be significant for exposing sensitive receptors to substantial concentrations.

III. e) ***Odor Impacts***

Construction is expected to occur on-site at Exide. Also, the affected facility is an industrial facility where heavy-duty diesel equipment (sweepers) and trucks already operate. Therefore, the addition of several pieces of construction equipment and haul trucks are not expected to generate diesel exhaust odor greater than what is already present.

Operation of the modified air handling system and new APC are not expected to generate any new odors. Neither a scrubber or a new WESP would include a new combustion system and both would be designed to reduce TAC emissions from large lead battery recycling operations, which may potentially further reduce odors.

The existing storm water retention pond is not covered, so storing storm water in storage tanks that are covered may reduce any odors from fugitive dust compared to when the storm water evaporates from the existing storm water retention pond.

Exide is an industrial facility where heavy-duty diesel equipment (sweepers) and trucks already operate.

Therefore, PAR 1420.1 is not expected to generate significant adverse odor impacts.

III. g) and h) ***Greenhouse Gas Impacts***

Global warming is the observed increase in average temperature of the earth's surface and atmosphere. The primary cause of global warming is an increase of greenhouse gas (GHG) emissions in the atmosphere. The six major types of GHG emissions are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), sulfur hexafluoride (SF6), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). The GHG emissions absorb longwave radiant energy emitted by the earth, which warms the atmosphere. The GHGs also emit longwave radiation both upward to space and back down toward the surface of the earth. The downward part of this longwave radiation emitted by the atmosphere is known as the "greenhouse effect."

The current scientific consensus is that the majority of the observed warming over the last 50 years can be attributable to increased concentration of GHG emissions in the atmosphere due to human activities. Events and activities, such as the industrial revolution and the increased consumption of fossil fuels (e.g., combustion of gasoline, diesel, coal, etc.), have heavily contributed to the increase in atmospheric levels of GHG emissions. As reported by the California Energy Commission (CEC), California contributes 1.4 percent of the global and 6.2 percent of the national GHG emissions (CEC, 2004). Further, approximately 80 percent of GHG emissions in California are from fossil fuel combustion (e.g., gasoline, diesel, coal, etc.).

GHGs are typically reported as CO2 equivalent emissions (CO2e). CO2e is the amount of CO2 that would have the same global warming potential (relative measure of how much heat a greenhouse gas traps in the atmosphere) as a given mixture and amount of greenhouse gas. CO2e is estimated by the summation of mass of each GHG multiplied by its global warming potential (global warming potentials: CO2 = 1, CH4 = 21, N2O = 310, etc.).[10]

Quemetco

Quemetco is expected not to have any GHG impacts from their enhanced maintenance activities.

Exide

Construction

Based on the same assumptions made for the criteria pollutant estimates, approximately 800 metric tons of CO2e would be generated from all construction activity including: demolition, fill, paving and construction of air handling and air pollution control systems, storm water storage tanks, and construction vehicles. Amortized over 30 years as prescribed by the SCAQMD Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans[11] adopted by the SCAQMD Governing Board in December 2008, approximately 27 metric tons of CO2e emissions per year (see Appendix B for calculations) would be generated from construction activities over the life of the project.

Operation

The operation of the air handling system, new APC, enhanced measures during maintenance activities and housekeeping, installation of vestibules and wheel washer are not expected to

[10] California Air Resource Board Conversion Table: http://www.arb.ca.gov/cc/facts/conversiontable.pdf

[11] SCAQMD Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds

generate greenhouse gases as the equipment control emissions with no secondary emissions impacts. The operation of storm water storage tanks in place of the existing storm water retention ponds is not expected to generate any additional greenhouse gases beyond what was generated by the existing ponds. However, the operation of the street sweeper, water tank truck, and worker vehicles equal to 0.57 metric tons of CO2e per year.

Total GHG Emissions

PAR 1420.1 may result in the generation of 27 amortized metric tons of CO2e construction emissions per year and 0.57 metric tons of CO2e operational emissions per year. The addition of 0.57 metric tons of CO2e emissions is less than the SCAQMD significance threshold of 10,000 metric tons per year for CO2e from industrial projects.

Therefore, PAR 1420.1 is not expected to generate GHG emission, either directly or indirectly, that may have a significant impact on the environment no conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG gases.

Conclusion

Based upon these considerations, the proposed project would not generate significant adverse construction or operational air quality impacts and, therefore, no further analysis is required or necessary and no mitigation measures are necessary or required.

IV. BIOLOGICAL RESOURCES.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☑
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☑
c) Have a substantial adverse effect on federally protected wetlands as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☑
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☑
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☑
f) Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☑

Significance Criteria

Impacts on biological resources will be considered significant if any of the following criteria apply:

- The project results in a loss of plant communities or animal habitat considered to be rare, threatened or endangered by federal, state or local agencies.
- The project interferes substantially with the movement of any resident or migratory wildlife species.
- The project adversely affects aquatic communities through construction or operation of the project.

Discussion

IV. a), b), c), d), e) & f) In general, the affected facilities and the surrounding industrial areas currently do not support riparian habitat, federally protected wetlands, or migratory corridors because they are long developed and established foundations used for industrial purposes. Additionally, special status plants, animals, or natural communities identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service are not expected to be found in close proximity to the affected facility. Therefore, the proposed project would have no direct or indirect impacts that could adversely affect plant or animal species or the habitats on which they rely in the SCAQMD's jurisdiction.

Compliance with PAR 1420.1 is expected to reduce lead emissions from operations at the affected facility, which would improve, not worsen, present conditions of plant and animal life, since these TAC emissions would be captured destroyed or disposed of properly before they impact plant and animal life. PAR 1420.1 does not require acquisition of additional land or further conversions of riparian habitats or sensitive natural communities where endangered or sensitive species may be found.

The proposed project is not envisioned to conflict with local policies or ordinances protecting biological resources or local, regional, or state conservation plans because it is only expected to affect existing large lead-acid battery recycling facilities located in an industrial area. PAR 1420.1 is designed to lead emissions which would also reduce emissions both inside and outside the boundaries of the affected facilities and, therefore, more closely in line with protecting biological resources. Land use and other planning considerations are determined by local governments and no land use or planning requirements would be altered by the proposed project. Additionally, the proposed project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other relevant habitat conservation plan, and would not create divisions in any existing communities because all activities associated with complying with PAR 1420.1 would occur at existing established industrial facilities.

The SCAQMD, as the Lead Agency for the proposed project, has found that, when considering the record as a whole, there is no evidence that the proposed project will have potential for any new adverse effects on wildlife resources or the habitat upon which wildlife depends because all activities needed to comply with PAR 1420.1 would take place at long developed and established facilities. Accordingly, based upon the preceding information, the SCAQMD has, on the basis of substantial evidence, rebutted the presumption of adverse effect contained in §753.5 (d), Title 14 of the California Code of Regulations. Further, in accordance with this conclusion, the

SCAQMD believes that this proposed project qualifies for the no effect determination pursuant to Fish and Game Code §711.4 (c).

Based upon these considerations, significant adverse biological resources impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

V. CULTURAL RESOURCES.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☑
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	☐	☐	☑
c) Directly or indirectly destroy a unique paleontological resource, site, or feature?	☐	☐	☐	☑
d) Disturb any human remains, including those interred outside formal cemeteries?	☐	☐	☐	☑

Significance Criteria

Impacts to cultural resources will be considered significant if:

- The project results in the disturbance of a significant prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group.
- Unique paleontological resources are present that could be disturbed by construction of the proposed project.
- The project would disturb human remains.

DISCUSSION

V. a), b), c), & d) Any air pollution control equipment and supporting equipment would be placed within the boundary of an existing established large lead-acid battery recycling facility. The existing large lead-acid battery recycling facilities are located in areas zoned as industrial, which have already been greatly disturbed. No construction is expected at Quemetco. Exide may consider a new scrubber or a new wet ESP for the feed dryer stack.

At Exide, the new APC may be installed near Exide's property boundary. To make space for a new APC, an existing storm water retention pond may need to be removed and replaced with new storm water storage tanks. Since the air pollution control equipment would be built on existing foundations or the pond area (which was disturbed previously to install the existing storm water retention pond), PAR 1420.1 is not expected to require physical changes to the environment that could disturb paleontological or archaeological resources. Therefore, the proposed project has no potential to cause a substantial adverse change to a historical or archaeological resource, directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or disturb any human remains, including those interred outside formal cemeteries. Finally, because the proposed project would involve construction activities in previously disturbed areas on-site at industrial facilities and are not expected to require substantial earthmoving, it is unlikely that the county coroner or that the Native American Heritage Commission would need to be contacted. The proposed project is, therefore, not anticipated to result in any activities or promote any programs that could have a significant adverse impact on cultural resources in the district.

Based on the above discussion, the proposed project is not expected to create any significant adverse effect to a historical resource as defined in §15064.5; cause a new significance impact to an archaeological resource as defined in §15064.5; directly or indirectly destroy a unique paleontological resource, site, or feature; or disturb any human including those interred outside formal cemeteries.

Based upon these considerations, significant adverse cultural resources impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

VI. ENERGY.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Conflict with adopted energy conservation plans?	☐	☐	☐	☑
b) Result in the need for new or substantially altered power or natural gas utility systems?	☐	☐	☑	☐
c) Create any significant effects on local or regional energy supplies and on requirements for additional energy?	☐	☐	☑	☐
d) Create any significant effects on peak and base period demands for electricity and other forms of energy?	☐	☐	☑	☐
e) Comply with existing energy standards?	☐	☐	☐	☑

Significance Criteria

Impacts to energy and mineral resources will be considered significant if any of the following criteria are met:

- The project conflicts with adopted energy conservation plans or standards.
- The project results in substantial depletion of existing energy resource supplies.
- An increase in demand for utilities impacts the current capacities of the electric and natural gas utilities.
- The project uses non-renewable resources in a wasteful and/or inefficient manner.

DISCUSSION

VI. a) & e) PAR 1420.1 does not require any action which would result in any conflict with an adopted energy conservation plan or violation of any energy conservation standard. PAR 1420.1 is not expected to conflict with adopted energy conservation plans because existing facilities would be expected to continue implementing any existing energy conservation plans.

PAR 1420.1 is not expected to cause new development. The local jurisdiction or energy utility sets standards (including energy conservation) and zoning guidelines regarding new development and will approve or deny applications for building new equipment at the affected facility. During the local land use permit process, the project proponent may be required by the local jurisdiction or energy utility to undertake a site-specific CEQA analysis to determine the impacts, if any, associated with the siting and construction of new development.

As a result, PAR 1420.1 would not conflict with energy conservation plans, use non-renewable resources in a wasteful manner, or result in the need for new or substantially altered power or natural gas systems.

VI. b), c) & d.

Quemetco

No energy impacts are expected at Quemetco's facility.

Exide

Exide may increase their electricity consumption associated with the new air monitors, new vestibules/air curtains, modified air handling systems and new APC equipment. Diesel fuel would be consumed by construction equipment. Gasoline fuel would be consumed by the construction workers vehicles and source testing vehicles. The following sections evaluate the various forms of energy sources affected by the proposed project.

The three new air monitors are expected to be electric powered. An air monitor typically requires 16 amps of service (6 amps for the monitor and 10 amps for vacuum pumps), which would be approximately two kilowatts (kW)[12]. The addition of three air monitors would require 6 kW, which is not expected to be significant.

For the building's total enclosures enhancements, as estimation of 70 hp (total) worth of air curtains and 8 vestibules. They would be in use 10% of the time (when people or vehicles enter/exit). Operating continuously throughout the year, the kW usage would be 65,350 kW annually.

The Wheel washer is electrical. It is estimated to use: 14.4kW * 0.008 hr/truck * 100 truck/day = 12 kW/day = 4,380 kW/year.

Exide may need an air pollution control system to comply with PAR 1420.1. The new two-cell WESP would need approximately 10,000 standard cubic feet per minute (scfm) of air flow. The new blower's electrical usage is estimated to be 1788 kW-hr. The WESP is assumed to use 6,7200 kilowatts per hour (kWh). The scrubber would use an estimated 14 kWh. Hence, the worst of the two cases would be the WESP system. (See Table 2-12 for a side by side comparison.)

Table 2-12 APC Electricity Usage Comparison

	Two-cell WESP	**Scrubber**
Electricity requirement	280 kW.	42 kW
Daily electricity use:	6,720 kW-hr (6.7 MW-hr)	1,008 kW-hr (1.0 MW-hr)
Annual electricity use:	2,453 MW-yr	368 MW-yr

The California Energy Commission (CEC) staff reports that Los Angeles Department of Water and Power (LADWP) consumed 25,921 gigawatts (GW) in 2008 with a peak consumption of 5,717 megawatts per hour (MWh) in 2008. The power required to run the WESP system at Exide would be 0.000033 % of the 2008 consumption and 0.2 % of the peak consumption. Therefore, SCAQMD staff concludes that the amount of electricity required to meet the incremental energy demand associated with PAR 1420.1 would be sufficient and would not

[12] Power = (A x V)/1000 = (16 amps x 110 voltage)/1000 =1.76 kW x 24 hr = 42.24 kW-hr per monitor.

result in a significant adverse electricity energy impact. (See Tables 2-13 and Table 2-14 for details.)

Table 2-13: PAR 1420.1 Additional Electricity Consumption

Energy	Consumption (kW-h)
WESP	6720
Blower (100 bhp)	1788
Vestibules and Air Curtains (8 sets, running 10%)	7.5
Air Monitors (3 monitors, 24 hrs/day)	127
Wheel Washer	0.5
Total	**8,643**

Table 2-14 Electricity Use from PAR 1420.1 Compliance

Area	Electricity Use, kW/hr	Electricity Use, MW/year	Area Consumption, GW-H	Area Consumption	Area Peak Consumption MW-hr	Area Peak Consumption
LADWP	8,643	75,713	25,921	3.3E-05 %	5,717	0.2 %

It is uncertain whether pumps associated with moving storm water in and out of the storm water storage tanks would be larger than those that currently move storm water in and out of the existing storm water retention pond. At this time, it is assumed that electricity used by the pumps associated with the storm water storage tanks would be similar to the electricity used by the pumps associated with the storm water retention pond, since the amount of stormwater is not expected to change due to the proposed project. Thus, no new electricity demand is anticipated as a result of the replacement of the storm water retention pond with storage tanks.

Natural Gas Impacts

No new natural gas impacts are expected.

Diesel Impacts

Construction Diesel Use

Approximately 152 gallons of diesel fuel on a peak day would be expected to be consumed by construction equipment and delivery trucks. According to the 2012 AQMP, 235 million gallons of diesel is consumed per day in Los Angeles County. Since 152 gallons of diesel per day is far less than one percent (0.00007 percent) of the diesel available, the proposed project is not considered to have a significant adverse diesel fuel use impact from construction.

Operational Diesel Use

Sweeper Diesel Use

Exide is expected to double their diesel vehicle sweeping. Diesel use was estimated for the three extra sweeping events that would be required at the affected facility that currently only swept three per day. Diesel use was estimated assuming that sweepers would be nine feet wide, sweep over the entire outside area around the production site (i.e., not around administrative buildings)

three times a day with two feet of overlap on the return path as the sweepers travel back and forth. Assuming a ten mile per gallon of diesel fuel efficiency approximately 2.1 gallons of diesel would be consumed on a peak day.

Since the additional sweeping is only expected to require 65 gallons more fuel per year, no additional diesel fuel delivery is expected, so there would be no additional diesel fuel use from diesel fuel delivery.

G**asoline Usage**

Construction Gasoline Use

Ten construction worker trips are expected on a peak day on a given day. Based on a 20 mile round trip, and a 10 mile per gallon fuel efficiency, approximately 40 gallons of gasoline would be used on a peak day. The 2012 AQMP states that 235 million gallons of gasoline are consumed per day in Los Angeles County. An additional 40 gallons of gasoline consumed on a peak day (0.00002 percent of the daily consumption) is not expected to have a significant adverse impact on gasoline supplies.

Operational Gasoline Use

Additional worker trips may be associated with additional enhanced maintenance activities and housekeeping provisions. The proposed project is not expected to change the number of source testing days. Additional source testing would require an additional gasoline-fueled vehicle trip to the facility on the day of sources testing. It was assumed that 32 workers would be required to do the enhanced housekeeping measures (32 additional gasoline-fueled vehicle trips).

Table 2-15 Worker Gasoline Usage

Vehicle	No. of One-Way, Trips/Day	One-Way Trip Length, miles	Fuel Economy, mpg	Fuel Used, gal/day
Automobile	32	20	10	128

Based on a 20 mile round trip, and a 10 mile per gallon fuel efficiency, approximately128 gallons of gasoline would be used by the additional workers' vehicle trips (see Table 2-15 for details). The 2012 AQMP states that 235 million gallons of gasoline are consumed per day in Los Angeles County. An additional 128 gallons of gasoline (32 worker trips) consumed on a peak day (0.00005 percent of the daily consumption) is not expected to have a significant adverse impact on gasoline supplies during operation.

Based upon these considerations, significant adverse energy impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

VII. GEOLOGY AND SOILS.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☑
• Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☐	☑
• Strong seismic ground shaking?	☐	☐	☐	☑
• Seismic–related ground failure, including liquefaction?	☐	☐	☐	☑
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☑
c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☑
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☑
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☑

Significance Criteria

Impacts on the geological environment will be considered significant if any of the following criteria apply:

- Topographic alterations would result in significant changes, disruptions, displacement, excavation, compaction or over covering of large amounts of soil.
- Unique geological resources (paleontological resources or unique outcrops) are present that could be disturbed by the construction of the proposed project.

- Exposure of people or structures to major geologic hazards such as earthquake surface rupture, ground shaking, liquefaction or landslides.
- Secondary seismic effects could occur which could damage facility structures, e.g., liquefaction.
- Other geological hazards exist which could adversely affect the facility, e.g., landslides, mudslides.

DISCUSSION

VII. a) No construction is expected at Quemetco. Exide may consider the construction of a new APC and its auxiliary equipment that could potentially disturb soils.

Exide may choose to install a new scrubber or install a wet ESP to control lead emissions.

To make space for a new control device, the existing storm water retention pond may need to be removed and then replaced with storm water storage tanks, which would also be installed within the affected facility. Therefore, all construction activities would occur on-site at these existing facilities. Changes to operations would include operation and maintenance of the new control technology and support equipment as well as the operation and maintenance of the storm water storage tanks if they are installed.

Because Southern California is an area of known seismic activity, existing facilities are expected to conform to the Uniform Building Code and all other applicable state and local building codes. As part of the issuance of building permits, local jurisdictions are responsible for assuring that the Uniform Building Code is adhered to and can conduct inspections to ensure compliance. The Uniform Building Code is considered to be a standard safeguard against major structural failures and loss of life. The basic formulas used for the Uniform Building Code seismic design require determination of the seismic zone and site coefficient, which represents the foundation condition at the site.

Exide has a small portion of the facility that is located in an area where there has been historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicated a potential for permanent groundwater displacements in the event of an earthquake.[13] The liquefaction zone bisects the property from the most western end of the property by the Union Pacific and Santa Fe Road to the north down to the southwest corner of the storm water retention pond, which may need to be replaced with storm water storage tanks to provide space for air pollution equipment. The Uniform Building Code requirements also consider liquefaction potential and establish stringent requirements for building foundations in areas potentially subject to liquefaction. PAR 1420.1 does not require a specific means of control technology or specify placement of the control technology; however, due to the special needs of the wet ESP, it is anticipated that the pound area would be most reasonable. The owners/operators of the affected facility that may need air pollution control equipment to comply with PAR 1420.1 would need to follow the Uniform Building Code requirements about building structures in areas potentially subject to liquefaction, if any air pollution control equipment or replacement equipment such as storage tanks is placed over the areas identified as subject to liquefaction. The liquefaction conditions, however, is an existing condition and there has not been a historical

[13] The Exide Corporation Hazard Waste Facility Permit Draft Environmental Impact Report, SCH No. 93051013 June 2006

problem at the existing facility. In addition, changes due to PAR 1420.1 will not directly cause or worsen the existing liquefaction possibility.

Since all structures and control technology would be built according to the Uniform Building Code, the proposed project would not expose people or structures to risks of loss, injury, or death involving: rupture of an earthquake fault, seismic ground shaking, ground failure or landslides. Since the affected facility already exists, PAR 1420.1 is not expected to increase exposure to existing earthquake risk.

VII. b) Construction related to PAR 1420.1 may require earthmoving to prepare foundations for a scrubber or wet ESP. PAR 1420.1 requires the encapsulation of all facility grounds to prevent lead contamination (i.e., paving or asphalting of all surfaces). Therefore, all disturbed surfaces are expected to be re-compacted and re-paved after construction is finished. All construction is expected to follow the Uniform Building Code. Therefore, no significant soil erosion or significant loss of topsoil, significant unstable earth conditions or significant changes in geologic substructures are expected to occur at the affected facility as a result of implementing the proposed project.

VII. c) Since the proposed project would affect an existing facility whose soil has already been disturbed, it is expected that the soil types present at the affected facility would not be further susceptible to expansion or liquefaction other than is already existing. Furthermore, subsidence and liquefaction is not anticipated to be a problem since any excavation, grading, or filling activities are expected to follow the Uniform Building Code. Additionally, the affected areas are not envisioned to be prone to landslides, instability, or have unique geologic features since the affected existing facility is located in industrial areas in a flat area.

VII. d) & e) Since PAR 1420.1 would affect soils at an existing established facility located in a highly developed industrial zone, it is expected that people or property would not be exposed to expansive soils or soils incapable of supporting water disposal. The affected facility has an existing wastewater treatment system that would continue to be used, and these systems are expected to have the capacity to support this proposed project. Sewer systems are available to handle wastewater produced and treated by the affected facility. Therefore, PAR 1420.1 would not require the installation of new septic tanks or alternative wastewater disposal systems at the affected facility. As a result, PAR 1420.1 would not require operators to utilize septic systems or alternative wastewater disposal systems. Thus, the proposed project would not adversely affect soils normally associated with a septic system or alternative wastewater disposal system.

Based upon these considerations, significant adverse geology and soil impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

VIII. HAZARDS AND HAZARDOUS MATERIALS.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials?	☐	☐	☑	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset conditions involving the release of hazardous materials into the environment?	☐	☐	☑	☐
c) Emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☑	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would create a significant hazard to the public or the environment?	☐	☐	☑	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport or a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☑	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☑	☐
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☑
h) Significantly increased fire hazard in areas with flammable materials?	☐	☐	☑	☐

Significance Criteria

Impacts associated with hazards will be considered significant if any of the following occur:

- Non-compliance with any applicable design code or regulation.
- Non-conformance to National Fire Protection Association standards.
- Non-conformance to regulations or generally accepted industry practices related to operating policy and procedures concerning the design, construction, security, leak detection, spill containment or fire protection.
- Exposure to hazardous chemicals in concentrations equal to or greater than the Emergency Response Planning Guideline (ERPG) 2 levels.

DISCUSSION

VIII. a) & b) PAR 1420.1 may increase the amount of lead captured. However, the facilities plan on utilizing the captured lead in their slurry. The additional captured lead emissions through additional housekeeping, air pollution control, building improvement would reduce the lead that is currently emitted into the air. Thus, the capture of these lead emissions would reduce lead exposure to the public and the environment.

Increased maintenance of baghouses will ensure that they operate properly and decrease the likelihood of tears or holes forming which would require replacement. Therefore, no increased disposal of baghouse filters is expected.

Spent lead is already transported for treatment offsite and out of the Basin. The additional lead captured by new air pollution control systems would be returned to the recycling process, which is the same process as the lead captured by the existing scrubber system. So no new significant hazards are expected to the public or environment through its routine transport, use and disposal.

The additional lead that may be controlled by a new air pollution control system would be captured in water cycled through the system. Lead in water is not considered volatile. All wastewater systems would require secondary containment in the case of an upset to prevent the release of the lead containing water. Therefore, a replacement scrubber or new wet ESP system is not expected to create a significant hazard to the public or environment through reasonably foreseeable upset conditions involving the release of hazardous materials into the environment

Therefore, PAR 1420.1 is not expected to create a significant hazard to the public or environment through reasonably foreseeable upset conditions involving the release of hazardous materials into the environment.

VIII. c) No schools are located within a quarter mile of Quemetco and Exide. Therefore, PAR 1420.1 would not result in hazardous emissions, handling of hazardous or acutely hazardous materials, substances or wastes within one-quarter mile of an existing or proposed school.

VIII. d) Government Code §65962.5 refers to hazardous waste handling practices at facilities subject to the Resources Conservation and Recovery Act (RCRA). Both PAR 1420.1 affected facilities are on the Cortese List as presented in the ENVIROSTOR[14] database.

[14] http://www.envirostor.dtsc.ca.gov

Quemetco
Since no construction is expected at Quemetco, no additional hazards from soil disturbances are expected.

Exide
Exide may need to construct a new APC device to comply with PAR 1420.1. During the demolition and excavation phase, it is possible that the concrete and soil to be removed to lay the new foundations may also be contaminated. Exide currently has a legal obligation to follow proper procedures to handle and dispose their hazardous wastes. See their 2014 SCAQMD Mitigation Monitoring Plan[15] for more details.

In addition, hazardous waste is expected to be disposed properly offsite so the proposed project would not increase a hazard at the affected site or the public and environment offsite. Hazardous wastes from Exide are required to be managed in accordance with applicable federal, state, and local rules and regulations. Accordingly, significant hazards impacts from the disposal/recycling of hazardous materials are not expected from the implementation of PAR 1420.1.

VIII. e) Exide is not near any airports or private airstrips. Quemetco is within six miles of the El Monte Airport. PAR 1420.1 would result in the reduction of lead emissions. Secondary TAC emissions from the proposed project were addressed in the Air Quality section of this Draft SEA and found to be less than significant. Therefore, no new hazards are expected to be introduced at the affected facility that could create safety hazards at local airports or private airstrips. Therefore, PAR 1420.1 is not expected to result in a safety hazard for people residing or working in the project area even within the vicinity of an airport.

VIII. f) Emergency response plans are typically prepared in coordination with the local city or county emergency plans to ensure the safety of the public (surrounding local communities), and the facility employees as well. The proposed project would not impair implementation of, or physically interfere with any adopted emergency response plan or emergency evacuation plan. The existing affected facility already has an emergency response plan in place. The addition of air pollution control equipment and possible replacement of the storm water retention pond with storage tanks is not expected to require modification of the existing emergency response plan at the affected facility. Thus, PAR 1420.1 is not expected to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

VIII. g) The proposed project affects facilities located in highly developed areas and are not adjacent to wildland, so potential for a wildland fire from the proposed project does not exist.

VIII. h) The Uniform Fire Code and Uniform Building Code set standards intended to minimize risks from flammable or otherwise hazardous materials. Local jurisdictions are required to adopt the uniform codes or comparable regulations. Local fire agencies require permits for the use or storage of hazardous materials and permit modifications for proposed increases in their use. Permit conditions depend on the type and quantity of the hazardous materials at the facility. Permit conditions may include, but are not limited to, specifications for sprinkler systems, electrical systems, ventilation, and containment. The fire departments make annual business

[15] http://www.aqmd.gov/docs/default-source/ceqa/documents/permit-projects/2014/exide-mmp_final.pdf?sfvrsn=2

inspections to ensure compliance with permit conditions and other appropriate regulations. Further, businesses are required to report increases in the storage or use of flammable and otherwise hazardous materials to local fire departments. Local fire departments ensure that adequate permit conditions are in place to protect against potential risk of upset. The proposed project would not change the existing requirements and permit conditions.

The modifications to existing ducting, installation of new scrubber or new wet ESP at Exide would not involve increased fire risk because it would not involve flammable materials. The water in the new scrubber or wet ESP reduces the risk of fire from furnace emissions.

The proposed project would also not increase the existing risk of fire hazards in areas with flammable brush, grass, or trees. No substantial or native vegetation typically exists on or near the affected facilities (specifically because such areas could allow the accumulation of fugitive lead dust), the existing rule requires the encapsulating (paving or asphalting) of all facility grounds. So the proposed project is not expected to expose people or structures to wild fires. Therefore, no significant increase in fire hazards is expected at the affected facilities associated with the proposed project.

Based upon these considerations, significant adverse hazards and hazardous materials impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

IX. HYDROLOGY AND WATER QUALITY.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards, waste discharge requirements, exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, or otherwise substantially degrade water quality?	☐	☐	☑	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☑	☐
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion or siltation on- or off-site or flooding on- or off-site?	☐	☐	☑	☐
d) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☑	☐
e) Place housing or other structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, which would impede or redirect flood flows?	☐	☐	☐	☑
f) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding	☐	☐	☐	☑

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
as a result of the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow?				
g) Require or result in the construction of new water or wastewater treatment facilities or new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☑
h) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☑	☐
i) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☑	☐

Significance Criteria

Potential impacts on water resources will be considered significant if any of the following criteria apply:

Water Demand:

- The existing water supply does not have the capacity to meet the increased demands of the project, or the project would use more than 262,820 gallons per day of potable water.
- The project increases demand for total water by more than five million gallons per day.

Water Quality:

- The project will cause degradation or depletion of ground water resources substantially affecting current or future uses.
- The project will cause the degradation of surface water substantially affecting current or future uses.
- The project will result in a violation of National Pollutant Discharge Elimination System (NPDES) permit requirements.
- The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the project.
- The project results in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
- The project results in alterations to the course or flow of floodwaters.

DISCUSSION

The two existing affected facilities have on-site wastewater treatment operations. The wastewater treatment systems are comprised of settling and equalization tanks. Lead collected in the wastewater treatment systems is re-used in their lead recycling operations (also known as slurry). The wastewater systems at both facilities treat process water and storm water before it is discharged to the publicly owned treatment works (POTWs). The discharged water must comply with existing lead water quality standards.

No construction is expected at Quemetco. However, there are water impacts from additional maintenance activities, housekeeping measures, wheel washing, and operation of a new APC. The following sections discuss the water impacts in detail.

IX. a) PAR 1420.1 would not alter any existing wastewater treatment requirements of the Los Angeles County Sanitation District (LACSD) and Regional Water Quality Control Board or otherwise substantially degrade water quality that the requirements are meant to protect. Although the amount of water used by Exide for the new APC equipment may increase and the storm water may need to be stored in storage tanks, all of the storm water and wastewater from the facility would still be required to be treated by the onsite wastewater treatment.

Wastewater from a new APC device would be kept within an enclosed system and treated in the on-site wastewater treatment system. The additional lead captured by the new APC device would be removed from the resultant wastewater and reused in their operations.

Currently, storm water is held in a storm water retention pond. If Exide chooses to install a WESP, the storm water pond would need to be removed in order to make sufficient space for the WESP (there is sufficient space for a scrubber within their building). The pond would be replaced with new storm water storage tanks. No change in the amount of storm water or concentration of pollutants is expected from storing storm water in storage tanks. Pollutants are removed from the storm water by the existing on-site wastewater treatment system.

Discharge concentrations are currently and would continue to be limited by the Industrial Wastewater Discharge Permit.[16] Exide's Hazardous Waste Facility Permit states that any wastewater that does not meet the discharge concentrations set by the LACSD would have to be cycled through the treatment plant until the discharge criteria is met or discharged as hazardous waste.[17] Since wastewater from the facility is treated in an on-site wastewater treatment facility, heavily regulated, and enforced, no change in the water quality of the discharge is expected.

IX. b) PAR 1420.1 would not require the use of groundwater. The facilities use potable water that is treated in their respective on-site wastewater treatment, reused, and then directed to the sanitary sewer. Therefore, it would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge.

IX. c) & d) At Quemetco, no physical changes are expected to alter the existing drainage pattern, storm water collection or wastewater treatment of their facility.

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[16] According to Los Angeles County Sanitation District- (June 28, 2013).

[17] Exide Technologies, Hazardous Waste Facility Permit, Attachment "A", 2006, www.dtsc.ca.gov/HazardousWaste/Projects/upload/Exide_dPermit.pdf

Exide may replace their storm water pond with new storage tanks to provide room for a new APC. The new storage tanks would be designed to collect the storm water that is currently directed to the retention pond. Since the amount of storm water would not change and the existing system already directs the storm water to a single location at the facility (i.e., retention pond), which would now be redirect to storage tanks, the proposed project is not expected to have significant adverse effects on any existing drainage patterns, or increase the rate or amount of surface runoff water that would exceed the capacity of existing or planned storm water drainage systems at Exide.

Therefore, PAR 1420.1 is a project that is not expected to have significant adverse effects on any existing drainage patterns, or cause an increase rate or amount of surface runoff water that would exceed the capacity of the facilities' existing or planned storm water drainage systems.

IX. e) & f) PAR 1420.1 does not include or require any new or additional construction activities to build additional housing that could be located in 100-year flood hazard areas. Similarly, the sources affected by the proposed project are located at existing commercial or industrial facilities. Hence, PAR 1420.1 is not expected to result in placing housing in 100-year flood hazard areas that could create new flood hazards. Therefore, PAR 1420.1 is not expected to generate significance impacts regarding placing housing in a 100-year flood zone.

For the same reasons as those identified in the preceding paragraph, PAR 1420.1 is not expected to create significant adverse risk impacts from flooding as a result of failure of a levee or dam or inundation by seiches, tsunamis, or mudflows because the proposed project does not require levee or dam construction, and the affected facilities are located on flat land far from the ocean.

IX. g) The proposed project is not expected to generate significant water use or wastewater generation (see IX. h). The battery recycling activity is not expected to change from current operating levels. PAR 1420.1 will not significantly affect the facilities' water and wastewater generation. Therefore, no additional water or waste water treatment facilities are expected nor any planned expansion of the facilities' existing on-site wastewater treatment system.

Exide

Construction related to the replacement of the storm water retention pond with storage tanks may occur to provide space for the new WESP, but that would occur as a result of complying with the lead emission reduction. Exide is able to use their recycled water for the APC and is capable of handling the new wastewater generation. Therefore, there would not be any need for a new water or wastewater treatment facility.

Based on the analysis in this environmental checklist, PAR 1420.1 is not expected to result in the construction of new water or waste water treatment facilities, new storm water drainage facilities, expansion of existing facilities, or construction of which could cause significant environmental effects. Therefore, no further analysis or mitigation measures are required or necessary.

IX. h)
Construction Impacts

Quemetco
No construction would be required at Quemetco.

Exide
Water is expected to be used for dust suppression during construction of the WESP and the removal of the storm water retention pond. The disturbed area is expected to be approximately one acre in size. One acre is 43,560 square feet. Assuming one gallon per square foot and watering three times daily, approximately 130,681 gallons of water per day would be used. The use of 130,681 gallons of water per day is less than the SCAQMD's significance threshold of 262,820 gallons per day of potable water and total water demand of more than five million gallons per day. Thus, sufficient water supplies are expected to be available to serve the project from existing entitlements and resources without the need for new or expanded entitlements. Therefore, PAR 1420.1 is not expected to be significant for water demand during construction.

Operational Impacts

Quemetco and Exide will need a maintenance team to minimize their fugitive dust from quarterly maintenance activities, such as concrete/asphalt cutting, drilling, or soil grading. The maintenance team will use water hoses to water down the dust from these activities. Staff estimates these quarterly activities will result in 200 gal/day for both facilities.

Exide
Exide may need to install a new wet scrubber or a new WESP to comply with PAR 1420.1 ambient concentration limits. The scrubber would have an influent and effluent flow rate of 25 to 30 gallons per minute (gpm), which equals to 43,200 gallons of water per day (gal/day). For a new WESP system, its water demand would use 2.9 gpm (70.1 gal/day). However, the worst case would be 43,200 gal/day of additional water from the scrubber.

Exide is also expected to use additional water for the wheel washer station and housekeeping related activities. The wheel washer is expected to would use 24 gallons of water per vehicle and a maximum of 100 vehicles per day. The total daily water consumption from the wheel washer station would be 2,400 gal/day. Currently, Exide fills their one water tank truck approximately 15 times per day, which has a capacity of 3,000 gallons. This equates to 45,000 gal/day of water per day during housekeeping operations[18]. Staff estimates that the housekeeping water usages for PAR 1420.1 compliance will double; therefore the increase would be by an additional 45,000 gal/day (total consumption 90,000 gal/day).

[18] Housekeeping operations include street sweeping, watering, and washing the facility.

Table 2-16: PAR 1420.1 Additional Water Consumption

Water Application	Additional Water Usage (gal/day)
Enhanced Maintenance Activities	200
New Wet Scrubber	43,200
Wheel Washer Station	2,400
Enhanced Housekeeping Measures	45,000
Total	**90,800**
Significance Threshold	262,820
Exceed Significance Threshold?	**No**

Therefore, the total additional use would be 90,800 gal/day of water, which is less than the significance threshold of 262,820 gal/day of potable water and total water demand of more than five million gallons per day (see Table 2-16: PAR 1420.1 Additional Water). Therefore, sufficient water supplies are expected to be available to serve the project from existing entitlements and resources without the need for new or expanded entitlements. Therefore, PAR 1420.1 is not expected to be significant for operational water demand.

Please note that the water used during the construction phase of the project and operational phase of the project are not additive as these activities are taking place at different times and do not overlap. Thus, the impacts to water are based on a worst case daily water demand from either the construction or the operational phases of the project.

IX. i) Staff estimates the additional water usage from the affected facilities' quarterly maintenance activities are expected to be 800 gal/year (200 gal x 4 activities). Both facilities are capable of handling the waste water from these activities. See below for a thorough discussion.

Quemetco

No significant impacts are expected for Quemetco's sewer system.

Permitted and actual wastewater use was provided by the telephone conversation with the Los Angeles Sanitation District on January 3, 2014. The average daily wastewater discharge rate allowed by Quemetco's Industrial Wastewater Discharge Permit is 283,000 gal/day. The peak wastewater discharge rate allowed by Quemetco's Industrial Wastewater Discharge Permit is 320 gpm. Between 2011 and 2013, Quemetco has reported their daily average wastewater discharge rates to be between 222,928 gal/day and 264,093 gal/day, respectively. Their reported peak wastewater discharge rates have been between 250 gpm and 318 gpm during 2011 and 2013, respectively.

Quemetco is expected to use an additional 400 gal/yr of water for their quarterly maintenance activities. Their maintenance team will use a water hose to dampen the dust from cuttings/drillings, washing, or soil grading. These types of activities occur once a day per quarter. Staff estimates a maximum water rate from a standard water hose would be 2.5 gpm. The water from these maintenance activities would flow to their drainage system to be collected, and then treated in their wastewater treatment system. As a result, their peak wastewater discharge rate

would increase, with a total rate of 320.5 gpm (318 gpm+ 2.5 gpm), which is slightly greater than their 320 gpm peak wastewater discharge limit. According to the LACSD, a facility is allowed to discharge up to 25 % over their permitted limit before a change is required to their permit, which would be 400 gpm. Since the peak wastewater discharge rate of 320.5 gpm is less than 400 gpm, the peak wastewater discharge rate is not considered significant.

Their daily average wastewater discharge rate is estimated to increase to 264,193 gal/day (100 gal/day + 264,093 gal/day), which is less than their daily average wastewater discharge limit allowed by Quemetco's Industrial Wastewater Discharge Permit of 283,000 gallons per day. Since the additional volume of water generated by maintenance activities is within the permitted limits of Quemetco's Industrial Wastewater Discharge Permit, PAR 1420.1 is not expected to adversely affect Quemetco's wastewater discharge. Since the permit wastewater discharge rates are in volume per minute and volume per day. The additional sump clean out would result in the same impacts on one additional day per year.

Exide

No significant impacts are expected for Exide's sewer system.

Exide may need to install a new wet scrubber or a new WESP to comply with PAR 1420.1. The scrubber would have an influent and effluent flow rate of 25 to 30 gallons per minute (gpm), which equals to 43,200 gallons of water per day (gal/day). For a new WESP system, as estimated water use would be 2.9 gpm (70.1 gal/day). For the worst case scenario, the scrubber would use the most water and the wastewater discharge rate would be 43,200 gal/day.

Exide has an Industrial Wastewater Discharge Permit with a maximum 310,000 gal/day limit. The daily wastewater peak discharge rate for the fiscal year 2011/2012 was 132,630 gal/day based on the annual surcharge statement submitted by the company. Their permitted maximum peak discharge limit is 300 gpm. They had a peak discharge rate[19] of 236 gpm.

An increase of 30 gpm of discharged wastewater would increase their total peak discharge rate to 266 gpm of wastewater (30 gpm + 236 gpm), which would be less than the maximum permitted wastewater discharge rate of 300 gpm for the existing wastewater system. The additional 43,200 gal/day of discharged wastewater would result in an average facility wastewater discharge rate of 175,830 gal/day, which would be less than the permit maximum wastewater discharge rate of 310,000 gal/day, so no change to current permit is required.

If the proposed project does trigger a wastewater discharge rate that exceeds the 310,000 gal/day limit, the LACSD deems that a secondary peak permit could be required to allow the discharge during non-peak hours. Significance thresholds for industrial wastewater discharge is determined by its impact to the affected sewer system. The LACSD provided that there is not any hydraulic overloading of the sewer system downstream of the Exide. However, wastewater flow can also affect relief or repair work, but no relief or repair work in the near future was identified by the LACSD. Based on the existing sewer system used by Exide, the LACSD believes that an additional 30 gpm can be accommodated by the existing sewer system.

[19] A peak discharge rate is based on the average of the ten highest 30-minute peak flow periods.

Therefore, based on the above analysis, there would be adequate capacity to serve the proposed project's projected demand addition to the provider's existing commitments.

Based upon these considerations, significant adverse hydrology and water quality impacts are not anticipated and, therefore, no further analysis is required or necessary.

X. LAND USE AND PLANNING.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☑
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☑

Significance Criteria

Land use and planning impacts will be considered significant if the project conflicts with the land use and zoning designations established by local jurisdictions.

DISCUSSION

X. a) No construction and no operation changes are expected at Quemetco. Because of PAR 1420.1, Exide may consider the construction of a new APC device and its auxiliary equipment. All construction activities would occur on-site. To make space for a new air pollution control, an existing storm water retention pond may need to be removed and replaced with new storm water storage tanks, which would also be installed within the boundaries of the affected facility. Any changes to Exide's operations would also occur on-site. Therefore, the proposed project would not create divisions in any existing communities.

X. b) Land use and other planning considerations are determined by local governments. Construction and operation of a new air pollution control device would occur within the boundaries of an existing large lead recycling facility, which is in an area that is zoned for industrial use. The new PAR 1420.1 requirements are not designed to impede or conflict with existing land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, but to assist in avoiding or mitigating lead emissions impacts from large lead recycling facilities. Operations at both affected facilities would still be expected to comply, and not interfere, with any applicable land use plans, zoning ordinances.

Based upon these considerations, significant adverse land use and planning impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

XI. MINERAL RESOURCES.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☑
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☑

Significance Criteria

Project-related impacts on mineral resources will be considered significant if any of the following conditions are met:

- The project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- The proposed project results in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

DISCUSSION

XI. a) & b) There are no provisions in PAR 1420.1 that would result in the loss of availability of a known mineral resource of value to the region and the residents of the state such as aggregate, coal, clay, shale, et cetera, or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Exide's new APC equipment and new storm water storage tanks would not remove any mineral resources of value to the region and the residents of the state.

Based upon these considerations, significant adverse mineral resources are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

XII. NOISE.

Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of permanent noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☑	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☑	☐
c) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☑	☐
d) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport or private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑

Significance Criteria

Impacts on noise will be considered significant if:

- Construction noise levels exceed the local noise ordinances or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three decibels (dBA) at the site boundary. Construction noise levels will be considered significant if they exceed federal Occupational Safety and Health Administration (OSHA) noise standards for workers.
- The proposed project operational noise levels exceed any of the local noise ordinances at the site boundary or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three dBA at the site boundary.

Discussion

XI. a) & c) Noise is usually defined as sound that is undesirable because it interferes with speech communication and hearing, is intense enough to damage hearing, or is otherwise annoying (unwanted noise). Sound levels are measured on a logarithmic scale in decibels (dB). The universal measure for environmental sound is the "A" weighted sound level (dBA), which is the sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. "A" scale weighting is a set of mathematical factors applied by the measuring instrument to shape the frequency content of the sound in a manner similar to the way the human ear responds to sounds.

Federal, state and local agencies regulate environmental and occupational, as well as, other aspects of noise. Federal and state agencies generally set noise standards for mobile sources, while regulation of stationary sources is left to local agencies. Local regulation of noise involves implementation of General Plan policies and Noise Ordinance standards, which are general principles, intended to guide and influence development plans. Noise Ordinances set forth specific standards and procedures for addressing particular noise sources and activities. The Occupational Safety and Health Administration (OSHA) sets and enforces noise standards for worker safety.

Exide

Existing operational noise generated from lead acid battery recycling in the City of Vernon would be subject to the City of Vernon Noise Element of the General Plan and/or the City of Vernon Municipal Code. Table 2-17 City of Vernon Noise Requirements summarizes these requirements.

Table 2-17 City of Vernon Noise Requirements

Requirement	Construction Limit (dBA)
Noise Element of the General Plan of the City of Vernon	60-70 dBA CNEL or less - considered "normally compatible" for residential land use. 70-80 dBA CNEL - considered "normally compatible" for industrial use".
City of Vernon Municipal Code Chapter 26, §26.4.1-6	Requires that noise levels generated by construction equipment within a residential zone not exceed 75 dBA.

The proposed project affects an existing facility in the City of Vernon and actions taken to comply with PAR 1420.1 would not generate excessive noise levels outside the boundaries of the affected facility, or expose people residing or working in the project area to excessive noise levels. The proposed project requires no additional process equipment to the existing facilities that would cause noise level to exceed ambient levels. Air pollution control equipment, such as, a scrubber or a WESP, as well as, wastewater storage tanks are not typically noise generating equipment.

Construction-Related Noise

Table 2-18 presents construction noise levels from typical construction equipment. The affected facility operations currently include diesel truck traffic to deliver recycled batteries and ship recycled lead product. Based on Table 2-18, paver noise levels are around 85 dBA at 50 feet. Construction would increase the noise levels to around 85 dBA at 50 feet from the center of construction activity. The facility may need to install air pollution control equipment and the closest residences are about 1,400 meters north of the facility. Using the standard of an estimated six dBA reduction for every doubling in distance, the noise levels at the closest residence would be indistinguishable from background. At a distance of 1,400 meters (4,593 feet), the noise impacts are negligible. For example, at the highest level in Table 2-18 (85 dBA), the sound would be reduced to below the municipal code of (75 dBA) at 200 feet away and General Plan level (70 dBA) at 400 feet away. In general, given ambient noise levels near the affected facility, noise attenuation (the lowering of noise levels over distances), and compliance

with local noise ordinances, potential construction noise impacts are not expected to be significant.

Table 2-18 Construction Noise Sources

Equipment	Typical Range (decibel)	Analysis Value (decibel)
Cranes	75-89	83
Front Loader	73-86	82
Generator Sets	71-83	81
Pavers	85-88	85
Scraper, Graders	80-93	80
Truck	82-92	82

Typical ranges are from the City of Los Angeles, 1998. Levels are in dBA at 50-foot reference distance.
Analysis values are intended to reflect noise levels from equipment in good condition, which appropriate mufflers, air intake silencers, etc. In addition, these values assume averaging of sound level over all directions from the listed piece of equipment.

Operational Noise

Noise is a by-product of the existing lead-acid battery recycling operations. Employees and equipment at the existing affected facility currently perform activities which create noise, such as, raw material processing (battery breaking/crushing, charger preparation, rotary drying, sweating), smelting (furnaces), refining and casting, and truck loading/unloading. Control technology, such as, scrubbers or WESPs are not expected to generate noise greater than the existing lead-acid battery recycling operations. Noise ordinances and noise general plan requirements typically govern activities at existing facilities. Contributors to ambient noise levels at typical facilities include onsite equipment and mobile sources. Also, local noise levels are usually governed by noise elements within a local jurisdiction's General Plan, and/or local noise ordinances. Because of the attenuation rate of noise based on distance from the source, it is unlikely that noise levels exceeding local noise ordinances would occur beyond a facility's boundaries. The existing wet ESP at one PAR 1420.1 affected facility cannot be heard offsite over the existing noise generated, so a new wet ESP at the other PAR 1420.1 affected facility is not expected to generate noise above existing background noise as well. The same goes for an installation of a scrubber. Exide already has an operating scrubber and cannot be over heard above their existing background noise. Therefore, PAR 1420.1 is not expected to generate new significant adverse operational noise.

XI. b)

Construction-Related Vibration

The Federal Transit Administration (FTA) has published standard vibration levels and peak particle velocities for construction equipment operations (FTA, 2006). The approximate velocity level and peak particle velocities for large construction equipment are listed in Table 2-9. Groundborne vibration is quantified in terms of decibels, since that scale compresses the range of numbers required to describe the oscillations. The FTA uses vibration decibels (abbreviated as VdB) to measure and assess vibration amplitude. Vibration is referenced to one micro-inch/sec (converted to 25.4 micro-mm/sec in the metric system) and presented in units of VdB. Based on the activities and equipment which would be used during control technology construction phases,

the construction equipment source levels are estimated to range between 58 VdB and 100 VdB at a distance of 25 feet. When analyzing ground-borne vibration, the FTA recommends using an estimated six VdB reduction for every doubling of distance.[20] Using the FTA methodology, the groundborne vibration levels at the closest worker receptor (300 meters or 984 feet) would be negligible (see Table 2-19). The predicted vibration during construction activities can be compared to the FTA ground-borne vibration impact level of 72 VdB for residences and buildings where people normally sleep. Levels of vibration below the FTA ground-borne vibration impact level are considered less than significant by the FTA. Therefore, because the vibration from construction activities affecting workers and residences is less than the FTA vibration impact level, no significant vibration impacts are expected during the construction period.

Table 2-19 Construction Vibration Sources

Equipment	Approximate Peak Particle Velocity at 25 Feet (inch/second)	Approximate Velocity Level at 25 Feet (VdB)
Bulldozer, Large	0.089	87
Bulldozer, Small	0.003	58
Jackhammer	0.035	79
Loaded Truck	0.076	86

Typical ranges are from the City of Los Angeles, 1998. Levels are in dBA at 50-foot reference distance.
Analysis values are intended to reflect noise levels from equipment in good condition, which appropriate mufflers, air intake silencers, etc. In addition, these values assume averaging of sound level over all directions from the listed piece of equipment.

Operational Vibration

Vibration is also a by-product of the existing lead-acid battery recycling operations. Employees and equipment at the existing affected facility currently perform activities which create vibration, such as, raw material processing (battery breaking/crushing, charger preparation, rotary drying, sweating), smelting (furnaces), refining and casting, and truck loading/unloading. Control technology, such as, scrubbers or WESPs; however, are not expected to generate vibration, as equipment is secured and bolted to the foundation. Therefore, the PAR 1420.1 is not expected to generate new significant adverse operational vibration.

XI. d) The affected facility is not near any airports or private airstrips. The closest airport or airstrip is the Hawthorne Municipal Airport, which is 9.6 miles from the affected facility. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels within two miles of a public use airport or private airstrip.

Based upon these considerations, significant adverse noise impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

[20] Office of Planning and Environment Federal Transit Administration, Transit Noise and Vibration Impact Assessment , FTA-VA-90-1003-06, 2006.

XIII. POPULATION AND HOUSING.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)?	☐	☐	☐	☑
b) Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☑	☐

Significance Criteria

Impacts of the proposed project on population and housing will be considered significant if the following criteria are exceeded:

- The demand for temporary or permanent housing exceeds the existing supply.
- The proposed project produces additional population, housing or employment inconsistent with adopted plans either in terms of overall amount or location.

DISCUSSION

XIII. a) Quemetco may need 4 new employees to mitigate the fugitive dust from their maintenance activities.

As for Exide, they will need 28 new permanent employees to do their mitigate their fugitive dust from maintenance activities and implement housekeeping measures. Exide may also need emporary construction workers to install the new APC. All construction and operation would occur on-site. The proposed project is not anticipated to generate any significant effects, either direct or indirect, on the district's population or population distribution. Human population within the jurisdiction of the SCAQMD is anticipated to grow regardless of implementing PAR 1420.1. It is expected that new permanent workers and any construction workers would use workers from the local labor pool in Southern California. Any new equipment is expected to be operated by qualified existing employees at the affected facility. As such, PAR 1420.1 would not result in changes in population densities or induce significant growth in population.

XIII. b) Because the proposed project affects construction and operation of control equipment at one existing lead-acid battery recycling facility, PAR 1420.1 is not expected to result in the creation of any industry that would affect population growth, directly or indirectly, induce the construction of single- or multiple-family units, or require the displacement of people elsewhere.

Based upon these considerations, significant adverse population and housing impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

XIV. PUBLIC SERVICES.

Would the proposal result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:	**Potentially Significant Impact**	**Less Than Significant With Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Fire protection?	☐	☐	☐	☑
b) Police protection?	☐	☐	☐	☑
c) Schools?	☐	☐	☐	☑
d) Other public facilities?	☐	☐	☐	☑

Significance Criteria

Impacts on public services will be considered significant if the project results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives.

Discussion

XIV. a) & b) PAR 1420.1 would not involve the use of new flammable or combustible materials. As a result, no new fire hazards or increased use of hazardous materials would be introduced at the affected facilities that would require additional emergency responders such as police or fire departments or additional demand from these resources. Thus, no new demands for fire or police protection are expected from PAR 1420.1.

XIV. c) As noted in the "Population and Housing" discussion, implementation of the proposed project would not have a significant impact on inducing growth. Exide's new employees and construction workers would come from the local labor pool in southern California. As a result, PAR 1420.1 would have no direct or indirect effects on population growth in the district. Therefore, there would be no increase in local population and thus no impacts are expected to local schools as a result of PAR 1420.1.

XIV. d) Because the proposed project involves requirements that are similar to existing operations already in place at an existing facility and the facilities are already heavily regulated, PAR 1420.1 is not expected to require the need for additional government services. The required air permits for the new APC equipment to comply with PAR 1420.1 are expected to be issued by SCAQMD existing staff. Enforcement of PAR 1420.1 is expected to be performed by the existing SCAQMD inspectors for these facilities. Further, the proposed project would not result in the need for new or physically altered government facilities in order to maintain acceptable

service ratios, response times, or other performance objectives. There will be no increase in population and, therefore, no need for physically altered government facilities.

Based upon these considerations, significant adverse public services impacts are not anticipated and, therefore, no further analysis is required or necessary.

XV. RECREATION.

		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☑
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment or recreational services?	☐	☐	☐	☑

Significance Criteria

Impacts to recreation will be considered significant if:

- The project results in an increased demand for neighborhood or regional parks or other recreational facilities.
- The project adversely affects existing recreational opportunities.

DISCUSSION

XV. a) & b) As previously discussed under "Land Use," there are no provisions in PAR 1420.1 that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments; no land use or planning requirements would be altered by the proposed project. Further, implementation of PAR 1420.1 would not increase the use of existing neighborhood and regional parks or other recreational facilities or include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment because the proposed project is not expected to induce population growth.

Based upon the above considerations, significant adverse recreation impacts are not anticipated and, therefore, no further analysis is required or necessary.

XVI. SOLID/HAZARDOUS WASTE.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☑	☐
b) Comply with federal, state, and local statutes and regulations related to solid and hazardous waste?	☐	☐	☑	☐

Significance Criteria

The proposed project impacts on solid/hazardous waste will be considered significant if the following occurs:

- The generation and disposal of hazardous and non-hazardous waste exceeds the capacity of designated landfills.

DISCUSSION

XVI.a) Landfills are permitted by the local enforcement agencies with concurrence from the California Department of Resources Recycling and Recovery (CalRecycle). Local agencies establish the maximum amount of solid waste which can be received by a landfill each day and the operational life of a landfill. PAR 1420.1 would generate additional waste from the disposal of contaminated concrete and soils that is discussed in further detail in the following paragraphs.

Construction

Quemetco

No construction is expected at Quemetco to comply with PAR 1420.1.

Exide

In order to comply with PAR 1420.1 ambient concentration limit, Exide may need to construct a new APC. If Exide chooses this compliance method, Exide would then need to demolish some of their existing surfaces and grade their site for new foundations. Solid waste would be expected from the construction of the APC equipment. Approximately, 8,150 cubic yards of material (two acres of area approximately two yards deep) would result from the demolished storm water retention pond, if a WESP is installed. Construction material is not expected to be contaminated, since the surfaces are required to be cleaned daily according to the existing Rule 1420.1.

Based on the 2012 AQMP, there is approximately 116,796 tons per day of landfill space available in the district. A calculation of the demolished material is expected to be 8,150 cubic yards (1,013 ton/day)[21]. This is 0.8 % of the available daily landfill capacity. Therefore, the construction's solid waste is not expected to be a significant adverse impact. In addition, most of the demolition material from the storm water retention pond is expected to be concrete, which

[21] (8,150 yd^3 x 150 lb/ft^3 x 27 ft^3/yd^3 x ton/2,000 lb)/16.3 days = 1,013 ton/day

can be recycled. Therefore, the amount of material disposed would be much less than 1,013 tons per day.

Exide has contaminated soils of metals (primarily arsenic and lead) throughout the facility. If contaminated soils were found during construction, Exide has a legal requirement to follow proper soil handling procedures (see Section VIII. HAZARDS AND HAZARDOUS MATERIALS. for more details).

APC Operation

Additional lead would be recovered from the new APC wastewater stream, which is called slurry. The slurry would return to the lead-acid battery recovery process to be recycled; therefore, most of the lead from the wastewater treatment system would not be disposed at solid waste landfills.

Increased maintenance of baghouses will ensure that they operate properly and decrease the likelihood of tears or holes forming which would require replacement. Therefore, no increased disposal of baghouse filters is expected.

Therefore, the increase in hazardous waste disposal from PAR 1420.1 is expected to be less than significant for operational hazardous waste disposal.

XVI.b) The affected facilities' operators currently dispose spent lead from their respective wastewater treatment systems. It is assumed that facility operators at the affected facility comply with all applicable local, state, or federal waste disposal regulations.

Implementing PAR 1420.1 is not expected to interfere with any affected facility's ability to comply with applicable local, state, or federal waste disposal regulations. Since no solid/hazardous waste impacts were identified, no mitigation measures are required or necessary.

Based upon these considerations, significant adverse solid/hazardous waste impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

XVII. TRANSPORTATION/TRAFFIC.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☑
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☑
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☑
d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☐	☑
e) Result in inadequate emergency access?	☐	☐	☐	☑
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☑

Significance Criteria

Impacts on transportation/traffic will be considered significant if any of the following criteria apply:

- Peak period levels on major arterials are disrupted to a point where level of service (LOS) is reduced to D, E or F for more than one month.
- An intersection's volume to capacity ratio increase by 0.02 (two percent) or more when the LOS is already D, E or F.
- A major roadway is closed to all through traffic, and no alternate route is available.
- The project conflicts with applicable policies, plans or programs establishing measures of effectiveness, thereby decreasing the performance or safety of any mode of transportation.
- There is an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.
- The demand for parking facilities is substantially increased.
- Water borne, rail car or air traffic is substantially altered.
- Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.
- The need for more than 350 employees
- An increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round trips per day
- Increase customer traffic by more than 700 visits per day.

DISCUSSION

XVII. a) & b) As noted in the "Discussion" sections of the other environmental topics, compliance with PAR 1420.1 is expected to require construction activities for control equipment. It has been estimated to need 17 haul trucks and seven construction worker trips on a peak construction day (during the fill phases). Construction onsite is not expected to affect on-site traffic or parking. The additional 17 construction trips are less than the significance threshold of 350 round trips, therefore construction activities are not expected to cause a significance adverse impact to traffic or transportation.

Exide is expected to double their vehicle sweeping and water tank mileage; however, this is not expected to affect traffic or on-site parking. All operational requirements are expected to occur on-site. PAR 1420.1 would result in the addition of 32 automobile worker trips from both facilities each day. The addition of 32 automobile daily trips are not expected to result in transportation/traffic impacts.

XVII. c) The affected facility is not near any airports or private airstrips. The closest airport or airstrip is the Hawthorne Municipal Airport, which is 9.6 miles from the affected facility. Any actions that would be taken to comply with the proposed project are not expected to influence or affect air traffic patterns or navigable air space, since no new structures or equipment are expected to enter air space used by aircraft. Thus, PAR 1420.1 would not result in a change in air traffic patterns including an increase in traffic levels or a change in location that results in substantial safety risks.

XVII. d) & e) The proposed project does not involve construction of any roadways or other transportation design features, so there would be no change to current roadway designs that could increase traffic hazards. The siting of the affected facility is consistent with surrounding land uses and traffic/circulation in the surrounding areas of the affected facility. Thus, the proposed project is not expected to substantially increase traffic hazards or create incompatible

uses at or adjacent to the affected facility. Emergency access at the affected facility is not expected to be impacted by the proposed project. Further, each affected facility is expected to continue to maintain their existing emergency access. Since PAR 1420.1 involves short-term construction activities and operational of control equipment is not expected to increase vehicle trips, the proposed project is not expected to alter the existing long-term circulation patterns. The proposed project is not expected to require a modification to circulation, thus, no long-term impacts on the traffic circulation system are expected to occur.

XVII. f) The affected facilities would still be expected to comply with, and not interfere with adopted policies, plans, or programs supporting alternative transportation (e.g. bicycles or buses). Since all PAR 1420.1 compliance activities would occur on-site, PAR 1420.1 would not hinder compliance with any applicable alternative transportation plans or policies.

Based upon these considerations, significant adverse transportation/traffic impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.

		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☑
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	☐	☐	☑	☐
c)	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☑	☐

DISCUSSION

XVIII. a) As discussed in the "Biological Resources" section, PAR 1420.1 is not expected to significantly adversely affect plant or animal species or the habitat on which they rely because any construction and operational activities associated with affected sources are expected to occur entirely within the boundaries of existing developed facilities in areas that have been greatly disturbed and that currently do not support any species of concern or the habitat on which they rely. PAR 1420.1 is not expected to reduce or eliminate any plant or animal species or destroy prehistoric records of the past.

XVIII. b) Based on the foregoing analyses, PAR 1420.1 would not result in significant adverse project-specific environmental impacts. Potential adverse impacts from implementing PAR 1420.1 would not be "cumulatively considerable" as defined by CEQA Guidelines §15064(h)(1) for any environmental topic because there are no, or only minor incremental project-specific impacts that were concluded to be less than significant. Per CEQA Guidelines §15064(h)(4), the mere existing of significant cumulative impacts caused by other projects alone shall not

constitute substantial evidence that the proposed project's incremental effects are cumulative considerable. SCAQMD cumulative significant thresholds are the same as project-specific significance thresholds. Therefore, there is no potential for significant adverse cumulative or cumulatively considerable impacts to be generated by the proposed project for any environmental topic.

XVIII. c) Based on the foregoing analyses, PAR 1420.1 are not expected to cause adverse effects on human beings for any environmental topic. As previously discussed in environmental topics I through XVIII, the proposed project has no potential to cause significant adverse environmental effects. Therefore, no further analysis or mitigation measures are required or necessary.

APPENDICES

APPENDIX A

PROPOSED AMENDED RULE 1420.1

(Adopted November 5, 2010)(Amended January 10, 2014)
(Amended March 7, 2014)
(PAR 1420.1v January 2015)

PROPOSED AMENDED RULE 1420.1.

EMISSION STANDARDS FOR LEAD AND OTHER TOXIC AIR CONTAMINANTS 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 and maintenance of the National Ambient Air Quality Standard for Lead. The purpose of this rule is to also protect public health by reducing arsenic, benzene, and 1,3-butadiene exposure and emissions from these facilities.

(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 Rules 1407 and 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 an emission control device, such as a baghouse, into a solid mass.

(2) AMBIENT AIR for purposes of this rule means outdoor air.

(3) ARSENIC means the oxides and other compounds of the element arsenic included in particulate matter, vapors, and aerosols.

(4) BATTERY BREAKING AREA means the plant location at which lead-acid batteries are broken, crushed, or disassembled and separated into components.

(5) BENZENE means an organic compound with chemical formula C_6H_6 and

Chemical Abstract Service number 71-43-2.

(6) 1,3-BUTADIENE means an organic compound with chemical formula C_4H_6 and Chemical Abstract Service number 106-99-0.

(7) 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.

(8) 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.

(9) 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.).

(10) 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 filed with the District.

(11) EMISSION CONTROL DEVICE means any equipment installed in the ventilation system of a point source or emission collection system for the purposes of collecting and reducing emissions of arsenic, benzene, lead, 1,3-butadiene, or any other toxic air contaminant.

(12) FUGITIVE LEAD-DUST means any solid particulate matter containing lead that is in contact with ambient air and has the potential to become airborne.

(13) 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.

(14) 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.

(15) LEAD means elemental lead, alloys containing elemental lead, or lead compounds, calculated as elemental lead.

(16) LEEWARD WALL means the furthest exterior wall of a total enclosure that is opposite the windward wall.

(17) MAINTENANCE ACTIVITY means any of the following activities conducted outside of a total enclosure that generates or has the potential to generate 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;

(e) resurfacing, grading, repair, or removal of ground, pavement, concrete, or asphalt; or

(f) soil disturbances including but not limited to soil sampling, soil remediation, or activities where soil is moved, removed, and/or stored.

(18) 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.

(19) 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).

(20) 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.

(21) POINT SOURCE means any process, equipment, or total enclosure used in a large lead-acid battery recycling facility, including, but not limited to, agglomerating furnaces, dryers, smelting furnaces and refining kettles, whose emissions pass through a stack or vent designed to direct or control

the exhaust flow prior to release into the ambient air.

(22) 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.

(23) 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.

(24) 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.

(25) 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 is 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.

(26) SMELTING means the chemical reduction of lead compounds to elemental lead or lead alloys through processing in high temperatures greater than 980° C.

(27) SMELTING FURNACE means any furnace where smelting takes place including, but not limited to, blast furnaces, reverberatory furnaces, rotary furnaces, and electric furnaces.

(28) STATIC DIFFERENTIAL FURNACE PRESSURE means the difference between the absolute internal pressure of the smelting furnace (P_f, in inches water column) and the absolute atmospheric pressure in the immediate vicinity outside the smelting furnace (P_a, in inches water column) and is calculated as follows: $P_f - P_a$.

(29) 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-off), 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.

(30) TOXIC AIR CONTAMINANT is an air pollutant which may cause or contribute to an increase in mortality or serious illness, or which may pose a present or potential hazard to human health.

(31) 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) Ambient Air Concentration of Lead

Prior to Emissions shall not be discharged into the atmosphere which contribute to ambient air concentrations of lead that exceed the following:

Effective Date	Ambient Air Concentration of Lead, micrograms per cubic meter ($\mu g/m^3$), averaged over 30 consecutive days
Prior to January 1, 2016	0.150 $\mu g/m^3$
On and after January 1, 2016	0.110 $\mu g/m^3$
On and after January 1, 2017	0.100 $\mu g/m^3$

The ambient air concentrations of lead shall be determined by monitors pursuant to subdivision (j) or at any District-installed monitor.

(2)

(2) Maintain and operate total enclosures pursuant to subdivision (e) and lead point source emission control devices pursuant to paragraphs (f)(1) and (f)(6) through (f)(8).

(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

(C)

(3) On and after July 1, 2011 sSubmit a Compliance Plan if emissions are discharged into the atmosphere which contribute to ambient air concentrations of lead or arsenic that exceed the ambient concentrations in paragraph (g)(1).

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

(A) Within 30 days of January 10, 2014, submit a Compliance Plan Schedule to the Executive Officer for review and approval to ensure that the facility will comply with the January 1, 2015 total facility mass emissions limits for arsenic, benzene, and 1,3-butadiene point sources specified in paragraph (f)(2). The Compliance Plan Schedule shall be subject to plan fees specified in Rule 306 and include:

(i) a list of all control measures to be implemented that includes a description of the control technology, the equipment that will be affected, the affected pollutants, the anticipated reductions, and the dates the measures will be implemented; and

(ii) a schedule that identifies dates for completion of engineering design(s), equipment procurement, construction, demolition (if any), equipment installation, and testing for each control measure described pursuant to clause (d)(4)(A)(i) .

(B) Submit complete permit applications for all equipment specified in the Compliance Plan Schedule that requires a District permit within 90 days of January 10, 2014.

(C) Complete all construction within 180 days of receiving Permit to Construct approvals from the Executive Officer.

(D) The owner or operator of a large lead-acid battery recycling facility shall not be subject to requirements of subparagraphs (d)(4)(A) through (d)(4)(C) if the most recent District-approved source tests, conducted no earlier than January 1, 2011, show that the facility is meeting all of the emission limits specified in paragraph (f)(2).

(5) Ambient Air Concentration of Arsenic

On and after February 1, 2014, the owner or operator of a large lead-acid battery recycling facility shall not allow emissions to be discharged into the atmosphere which contribute to an ambient air concentration of arsenic that exceeds 10.0 nanograms per cubic meter (ng/m^3) averaged over a 24-hour time period as determined by monitors pursuant to subdivision (j) or by any District-installed monitor. An exceedance of 10.0 ng/m^3 averaged over a 24-hour period shall be based on the average of the analysis of two sample results on the same filter. A second analysis is required if the first sample exceeds 10.0 ng/m^3.

(6) If the ambient air concentration of arsenic is determined to exceed 10.0 ng/m^3 averaged over a 24-hour time period as calculated pursuant to paragraph (d)(5), then the owner or operator shall notify the Executive Officer in writing within 72 hours of when the facility knew or should have known it exceeded the ambient air arsenic concentration of 10.0 ng/m^3 averaged over a 24-hour time period.

(A) Notify the Executive Officer in writing within 72 hours of when the facility knew or should have known it exceeded the ambient air arsenic concentration of 10.0

(B) Comply with the monitoring and sampling requirements in paragraph (j)(10)

(7) The owner or operator of a large lead-acid battery recycling facility shall fund and participate in a multi-metal continuous emissions monitoring system (CEMS) demonstration program to continuously monitor lead, arsenic, and other metals emitted from a stack within its facility for a period specified by the District. Participation and funding of the multi-metals CEMS demonstration program shall require the owner or operator to:

(A) Submit payment to the District for District personnel or its contractor to assemble, install, maintain, train, test, analyze, and decommission a multi-metals CEMS demonstration program not to exceed the following amounts and schedule:

(i) $63,500 by April 1, 2014; and an additional

(ii) $143,225 by September 1, 2014

(B) Provide continuous facility access to District personnel and its contractors to deliver, assemble, install, monitor, maintain, test, analyze, and decommission a multi-metals CEMS;

(C) Provide the necessary location and infrastructure for the multi-metals CEMS including:

(i) siting location with sufficient spacing, clearance, and structural support;

(ii) electric power circuits;

(iii) compressed air;

(iv) sampling port(s);

(v) access to wireless modem connection for data retrieval;

(vi) any necessary moving or lifting equipment and personnel to operate such equipment in order to install the system; and

(vii) day to day instrument and equipment operation.

(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 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 which may contain lead to a lead emission control device and the entire gas stream which may contain arsenic to an arsenic emission control device, respectively, 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 H_2O) 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 H_2O) with a minimum increment of measurement of plus or minus 0.001 mm Hg (0.0005 inches H_2O).

(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 $\geq$ 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) Point Source Emissions Controls

The owner or operator of a large lead-acid battery recycling facility shall vent emissions from each lead, arsenic, benzene, and 1,3-butadiene point source to a lead, arsenic, benzene, and 1,3-butadiene emission control device, respectively, that meets the requirements of this subdivision and is approved in writing by the Executive Officer.

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

(A) Prior to January 1, 2016, meet a total facility mass lead emissions from all lead point sources not to exceed 0.045 pounds of lead per hour. On and after January 1, 2016, meet a total facility mass lead emissions from all lead point sources not to exceed 0.023 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 approved source tests conducted on behalf of the facility or the District; and

(B) Install a secondary lead emission control device that controls lead emissions from the exhaust of the primary lead emission control device used for a dryer. The secondary lead emission control device shall be fitted with dry filter media, and the secondary lead control device shall only be used to vent the primary lead emission 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)(2) and approved by the Executive Officer.

(2) The mass emissions from all arsenic, benzene, and 1,3-butadiene point

sources at a large lead-acid battery recycling facility shall meet the following hourly emissions thresholds for the dates specified:

(A) No later than 60 days after January 10, 2014, the total facility emission rate for a large lead-acid battery recycling facility from all point sources shall not exceed 0.00285 pound of arsenic per hour.

(B) No later than January 1, 2015, the total facility emission rate for a large lead-acid battery recycling facility from all point sources shall not exceed 0.00114 pound of arsenic per hour.

(C) No later than January 1, 2015, the total emission rate for a large lead-acid battery recycling facility from all point sources excluding point sources from emission control devices on total enclosures shall not exceed the following:

(i) 0.0514 pound of benzene per hour; and

(ii) 0.00342 pound of 1,3-butadiene per hour.

(D) The point source mass emission rates shall be determined based on the average of triplicate samples, using the most recent District-approved source tests conducted by the facility or the District, pursuant to subdivision (k).

(E) For purposes of this rule, only point sources that have a source test result of greater than 1 part per billion shall be included in determining the total facility mass emission rates for benzene and 1,3-butadiene.

(3) No later than 90 days after January 10, 2014, the The owner or operator of a large lead-acid battery recycling facility shall, for each smelting furnace, install, calibrate, operate and maintain a monitoring device that has been approved by the Executive Officer pursuant to paragraph (f)(4). The monitoring device shall measure and record the static differential furnace pressure in inches water column. Each smelting furnace shall be operated such that static differential furnace pressure, in inches of water column averaged over 30 minutes, is maintained at a value -0.02 or more negative. A reverberatory furnace may be operated at an alternative static differential furnace pressure if the owner or operator can demonstrate that it can achieve emission reductions that are equivalent to or better than those achieved when operating at a pressure of -0.02 or more negative. Demonstration shall be based on source test protocols and source tests conducted pursuant to the requirements of subdivision (k) and approved by the Executive Officer. The

alternative static differential furnace pressure shall not exceed 0.4 inches water column and must be approved by the Executive Officer in the Continuous Furnace Pressure Monitoring Plan of paragraph (f)(4). For the purposes of this requirement, the owner or operator shall ensure that the monitoring device:

(A) Continuously measures the instantaneous static differential furnace pressure;

(B) Has a resolution of at least 0.01 inches water column;

(C) Has an increment of measurement of 0.01 inches water column;

(D) Has a range from -10 inches to +10 inches water column for the measuring device;

(E) Is equipped with ports to allow for periodic calibration in accordance with manufacturer's specifications;

(F) Is calibrated according to manufacturer's specifications at a frequency of not less than twice every calendar year;

(G) Is equipped with a continuous data acquisition system (DAS). The DAS shall record the data output from the monitoring device at a frequency of not less than once every sixty (60) seconds;

(H) Generates a data file from the computer system interfaced with each DAS each calendar day. The data file shall be saved in electronic ASCII character format, Microsoft Excel (xls or xlsx) format, PDF format, or other format as approved by the Executive Officer. The file shall contain a table of chronological date and time and the corresponding data output value from the monitoring device in inches of water column. The operator shall prepare a separate data file each day showing the 30-minute average pressure readings recorded by this device each calendar day; and

(I) Is maintained in accordance with manufacturer's specifications.

(4) No later than 30 days after January 10, 2014, the The owner or operator of a large lead-acid battery recycling facility shall submit to the Executive Officer for approval an application for a Continuous Furnace Pressure Monitoring (CFPM) Plan for the monitoring device required in paragraph (f)(3). The CFPM Plan shall contain the information identified in Appendix 3 of this rule and is subject to the fees specified in Rule 306.

(5) The Executive Officer shall notify the owner or operator in writing whether the CFPM 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 (f)(4). If the CFPM Plan is disapproved, the owner or operator shall resubmit the CFPM Plan, subject to plan fees specified in Rule 306, within 30 calendar days after notification of disapproval of the CFPM Plan. The resubmitted CFPM Plan shall include any information necessary to address deficiencies identified in the disapproval letter. It is a violation of the rule for a facility not to have an approved CFPM Plan after the second denial. If the resubmitted CFPM Plan is denied, the operator or owner may appeal the denial by the Executive Officer to the Hearing Board pursuant to Rule 216 – Appeals and Rule 221 - Plans.

(6) For any emission 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.

(7) For any emission 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.

(8) Each emission collection system and emission control device subject to this subdivision shall, at minimum, be inspected, maintained, and operated in accordance with the manufacturer's specifications.

(9) The owner or operator of a large lead-acid battery recycling facility shall comply with the curtailment requirements in subdivision (o) if the total facility mass lead emissions from all lead point sources exceeds the limits specified in subparagraph (f)(1)(A), and/or the total facility emission rate from all arsenic point sources exceeds the limits specified in subparagraph (f)(2)(A) or (f)(2)(B).

(g) Compliance Plan

(1) On and after July 1, 2011, tThe 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 or arsenic that exceed the following:

Air Contaminant	Effective Date	Ambient Air Concentration
Lead	Prior to January 1, 2016	0.120 $\mu g/m^3$, averaged over

		30 consecutive days
	On and after January 1, 2016	0.110 µg/m^3, averaged over 30 consecutive days
	On and after January 1, 2017	0.100 µg/m^3, averaged over 30 consecutive days
Arsenic	On and after February 1, 2014	8 ng/m^3, averaged over a 24 hour time period as determined under paragraph (g)(8)

averaged over any 30 consecutive days, or an ambient air concentration of arsenic that The ambient air concentrations of lead and arsenic shall be determined by monitors pursuant to subdivision (j) or at any District-installed monitor.

(2) The owner of operator of a large lead-acid battery recycling facility shall notify the Executive Officer in writing within 72 hours of when the facility knew or should have known it exceeded an ambient air concentration of lead or arsenic pursuant to paragraph (g)(1).. Notification shall only be required the first time the ambient air concentration of lead or arsenic exceeds the concentration limits in paragraph (g)(1) for each monitor;

(3) r operator of a large lead-acid battery recycling facility shall submit, within 30 calendar days of exceeding an ambient air concentration of lead or arsenic pursuant to paragraph (g)(1), 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 and/or arsenic emission reduction measures to achieve the ambient air concentration of lead of 0.110 µg/m^3averaged over any 30 consecutive days, or the ambient air concentration of arsenic of 10.0 ng/m^3 averaged over a 24-hour time period, as required under paragraph ((d)(5), including, but not limited to, requirements for the following:

(i) Housekeeping, inspection, and maintenance activities;

(ii) Additional total enclosures;

(iii) Modifications to lead and arsenic emission control devices;

(iv) Installation of multi-stage lead and arsenic emission control

devices;

(v) Process changes including reduced throughput limits;

(vi) Conditional curtailments including, at a minimum, information specifying the curtailed processes, process amounts, and length of curtailment; and

(vii) Identification of lead and/or arsenic reduction measures to be implemented relative to increasing ranges of exceedance levels of the ambient air concentration limits.

(B) The locations within the facility and method(s) of implementation for each lead and/or arsenic reduction measure of subparagraph (g)(2)(A); and

(C) An implementation schedule for each lead and/or arsenic emission reduction measure of subparagraph (g)(2)(A) to be implemented if lead and/or arsenic emissions discharged from the facility contribute to ambient air concentrations of lead that exceed the requirements in paragraph (d)(1) , or ambient air concentrations of arsenic that exceed 10.0 ng/m^3 averaged over a 24-hour time period, measured at any monitor pursuant to subdivision (j) or at any District-installed monitor. The schedule shall also include a list of the lead and/or arsenic reduction measures of subparagraph (g)(2)(A) that can be implemented immediately, prior to plan approval.

(4) 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), and whether the plan is likely to lead to avoiding future exceedances of the ambient air concentration levels set forth in paragraph (g)(1). 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. It is a violation of the rule for a facility not to have an approved Compliance Plan after the second denial. 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.

(5) exceed the requirements in paragraph (d)(1) or an ambient air concentration of arsenic of 10.0 ng/m^3 averaged over a 24-hour time period as determined in paragraph (d)(5), measured at any monitor pursuant to subdivision (j) or at any District-installed monitor.

(6) The owner or operator may make a request to the Executive Officer to modify or update an approved Compliance Plan.

(7) The owner or operator shall update the Compliance Plan 12 months from January 10, 2014 and annually thereafter, in order to update measures that have been implemented and to identify any new measures that can be implemented.

(8) An exceedance of an ambient air concentration of arsenic of 8.0 ng/m^3 averaged over a 24-hour period shall be based on the average of the analysis of two sample results on the same filter. A second analysis is required if the first sample exceeds 8.0 ng/m^3.

(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 emission 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 $\leq$ 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.

(10) Except when inside a total enclosure, all lead or arsenic containing trash and debris shall be placed in covered containers that remain covered at all times except when trash or debris is actively transferred. Trash and debris containers shall be free of liquid or dust leaks.

(11) Post signs at all entrances and truck loading and unloading areas indicating a plant-wide speed limit of 5 miles per hour.

(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);

(D) Shall be stopped immediately when instantaneous wind speeds are $\geq$ 20 mph. Maintenance work may be continued if it is necessary to prevent the release of lead emissions;

(E) All concrete or asphalt cutting or drilling performed outside of a total enclosure shall be performed under 100% wet conditions; and

(F) Grading of soil shall only be performed on soils sufficiently wet to prevent fugitive dust.

(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 and/or arsenic concentrations, at or beyond the property line, as determined by Executive Officer-approved air dispersion modeling calculations and emission estimates from all lead and arsenic point sources and fugitive lead-dust and arsenic-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 and/or arsenic 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 and/or arsenic concentrations.

(2) Collect ambient lead and arsenic samples as follows:

(A) daily as 24-hour, midnight-to-midnight, samples at all sites .

(B) Arsenic samples shall be collected daily as 24-hour, midnight-to-midnight, samples collected at all sites.

(C) If a 24-hour, midnight-to-midnight sample was not collected due to a monitor malfunction or other occurrence beyond the control of the facility, the owner or operator shall:

(i) Report with a notification made to 1-800-CUT-SMOG within 2 hours of knowing that the 24-hour, midnight-to-midnight sample was not collected providing the facility name, name of the monitor, the date of the occurrence, and the reason that the 24-hour midnight-to-midnight sample was not collected; and

(ii) The operator shall submit a 24-hour, midnight-to-midnight sample for the following day such that the owner or operator of a large lead-acid battery recycling facility shall not miss a 24-hour, midnight-to-midnight sample for more than one day over a consecutive 30 day period.

(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 and arsenic 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 for lead and/or arsenic 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 for lead 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. Sample analysis for arsenic shall be conducted using U.S. EPA Compendium Method IO-3.5 - *Determination of Metals in Ambient Particulate Matter Using Inductively Coupled Plasma/Mass Spectrometry (ICP/MS); EPA Compendium Method IO-3.5; In IO Compendium of Methods for the Determination of Inorganic Compounds in Ambient Air*. Alternatively, sample analysis for arsenic may be conducted using the District's *Standard Operating Procedure for The Determination of Metals in Ambient Particulate Matter by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)*.

(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 pursuant to paragraph (d)(1),the owner or operator shall comply with the curtailment provisions of subdivision (o).

(A)

(B) The 60 consecutive-day period shall be restarted for any subsequent exceedance.

(C) Comply with the curtailment requirements of subdivision (p).

(10) On and after February 1, 2014, if If a large lead-acid battery recycling facility exceeds an ambient air concentration of arsenic of 10.0 ng/m^3 pursuant to paragraph(d)(5), the owner or operator shall comply with the curtailment requirements of subdivision (o).

(A)

(B) Restart the 60-day consecutive period for any subsequent exceedance.

(C) Comply with the curtailment requirements of subdivision (p).

(11) The owner or operator of a large lead-acid battery recycling facility shall retain lead and arsenic samples collected pursuant to this subdivision for one year. The samples shall be stored in an individually sealed container and labeled with the applicable monitor and date. The samples shall be provided to the Executive Officer within one business day upon request.

(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 mass emissions 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 0.0012 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) Beginning January 10, 2014, the The owner or operator of a large lead-acid battery recycling facility shall conduct a source test for all arsenic point sources, and all benzene and 1,3-butadiene point sources, excluding emission control devices on total enclosures, at least annually to demonstrate compliance with the mass emissions standards specified in subdivision (f). If the results of the most recent source test demonstrating compliance with the arsenic, benzene, and 1,3-butadiene mass emissions standards of subdivision (f) are below the emission rates specified in subparagraphs (k)(2)(A) through (k)(2)(C), the next source test for those point sources shall be performed no later than 24 months after the date of the most recent source

test.

(A) 0.000860 pound of arsenic per hour;

(B) 0.0386 pound of benzene per hour; and

(C) 0.00257 pound of 1,3-butadiene per hour.

(3) The owner or operator of a large lead-acid battery recycling facility with an existing 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.

(4) Prior to conducting a source test pursuant to paragraph (k)(1), (k)(2), (k)(3), or (k)(13), the owner or operator of a large lead-acid battery recycling facility 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 arsenic, benzene, lead, or 1,3-butadiene mass emission standard;

(B) Preliminary target pollutant analytical data;

(C) Planned sampling parameters; and

(D) Information on equipment, logistics, personnel, and other resources necessary for an efficient and coordinated test.

(5) 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), (k)(2), (k)(3), or (k)(13).

(6) 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 subdivision (f). Notifications shall be made to 1-800-CUT-SMOG and followed up in writing with the results of the source tests within seven (7) days of notification.

(7) Source tests shall be conducted while operating at a minimum of 80% of equipment permitted 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*

(E) EPA Method TO-15 – *Determination of Volatile Organic Compounds (VOCs) in Air Collected in Specially-Prepared Canisters and Analyzed By Gas Chromatography/Mass Spectrometry (GC/MS)*

(F) CARB Method 410A – *Determination of Benzene from Stationary Sources (Low Concentration Gas Chromatographic Technique)*

(G) CARB Method 422.102 – *Determination of Volatile Organic Compounds (VOCs) in Emissions from Stationary Sources*

(8) The average of triplicate samples, obtained according to approved test methods specified in paragraph (k)(7), shall be used to determine compliance or to report source test results required under paragraph (k)(13).

(9) 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, in addition to the Air Resources Board or the U.S. EPA, as applicable.

(10) 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.

(11) 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.

(12) An existing source test conducted on and after January 1, 2009 for lead emission 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)(7), (k)(9), or (k)(10).

(13) Beginning January 10, 2014, the owner or operator of a large lead-acid battery recycling facility shall conduct two source tests for benzene and 1,3-butadiene emissions from all emission control devices on total enclosures as follows:

(A) First source test conducted no later than March 1, 2014.

(B) Second source test conducted no later than September 1, 2014.

(C) Source tests on all emission control devices on total enclosures must be completed within a time period of 72 hours or less.

(14) Testing conducted by the facility, by the District, or by a contractor acting on behalf of the District or the facility to determine compliance with this rule shall be performed according to the most recent District-approved test protocol for the same purpose or compounds.

(15) Reports from source testing conducted pursuant to subdivision (k) shall be submitted to the District in 90 days or less after completion of testing.

(l) New Facilities

The owner or operator of a large lead-acid battery recycling facility beginning construction or operations on and 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 and arsenic monitoring, meteorological monitoring, and other data specified by subdivision (j);

(C) Records of housekeeping activities completed as required by subdivision (h), maintenance activities of subdivision (i), and emission control device inspection and maintenance requirements of paragraph (f)(8), including the name of the person performing the activity, and the dates and times on which specific activities were completed; and

(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 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 rolling averages for each day within the reporting period.

(B) Beginning no later than March 15, 2014, the 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 arsenic and wind monitoring for each preceding month, or more frequently if determined necessary by the Executive Officer and the

owner or operator is notified in writing of the required frequency.

(C) Any exceedances of ambient air concentrations specified in paragraphs (d)(1), and (d)(5) 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.

(D) On and after July 1, 2015, the owner or operator of a large lead-acid battery recycling facility shall report in writing to the Executive Officer within 72 hours of when the facility knew or should have known that the ambient air concentration of lead was greater than 0.300 $\mu g/m^3$ for any 24-hour sample the following information:

(i) Date of the occurrence;

(ii) Name of the monitor;

(iii) Ambient lead concentration at the monitor for the 24 hour sample;

(iv) Potential cause or causes of the occurrence; and

(v) Potential remedies to prevent the reoccurrence.

(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 emission control device has occurred, regardless of potential emissions. 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. The notification shall include the following information:

(i) Date and time the unplanned shutdown of the emission control device(s) occurred;

(ii) Description of the shutdown emission control device and the processes and/or equipment vented by the emission control device;

(iii) Description of when the processes and/or equipment vented by the emission control device were shutdown, including

expected shutdown time;

(iv) Reason why the emission control device was shutdown;

(v) Total duration of the unplanned shutdown, if known; and

(vi) Facility contact name and phone number for further information regarding the unplanned shutdown.

(B) Beginning May 1, 2014, if If an unplanned shutdown of any emission control device occurs, and the reason for the unplanned shutdown cannot be determined within the one-hour reporting period under subparagraph (n)(2)(A), the owner or operator shall investigate the reason for the unplanned shutdown and notify the Executive Officer of the reason for the unplanned shutdown within 5 business days of the event. If the reason for the unplanned shutdown is still not known within 5 business days of the event, the owner or operator shall notify the Executive Officer within 5 business days of the event and:

(i) Use an independent third party approved by the Executive Officer to conduct an investigation at the facility to determine the reason for the unplanned shutdown of any emission control device subject to this rule, which includes but is not limited to:

(I) Physically inspecting the control equipment and surrounding portions of the facility which may provide information to understand the reason for the unplanned shutdown of emission control equipment; and

(II) Reviewing equipment maintenance and operation records, logs, and other documentation which may provide information to understand the reason for the unplanned shutdown of emission control equipment;

(ii) Use an independent third party approved by the Executive Officer to inspect all equipment repaired or replaced in response to the unplanned shutdown of emission control equipment, to ensure affected control equipment can operate properly; and

(iii) Within 30 calendar days of the reported unplanned shutdown, provide a written report to the Executive Officer and the

Director of the California Department of Toxic Substances Control. The owner or operator shall notify the Executive Officer if an approved independent third party is not available for use, or the list of approved independent third parties has not yet been developed by the Executive Officer, and shall submit the written report 30 days from when an approved third party is available. The written report shall include the following information:

(I) Date of the unplanned shutdown of emission control equipment;

(II) Reason for the unplanned shutdown of emission control equipment;

(III) List of all equipment repaired or replaced in response to the unplanned shutdown and corrective actions taken to prevent recurrence of the unplanned shutdown of emission control equipment; and

(IV) Written verification that the affected emission control equipment is operational. If the affected equipment is not operational, provide an approximate date the subject equipment is expected to be operational.

(iv) The owner or operator shall be responsible for reimbursement to the District for any and all expenses incurred by the independent third-party investigator in the investigation, inspection, and generation of a written report to determine the cause of an unplanned shutdown of any emission control equipment subject to this rule, as required by subparagraph (n)(2)(B). The owner or operator shall reimburse the District within 30 days of notification from the Executive Officer that payment is due.

(v) The reimbursement specified in clause (n)(2)(B)(iv) shall not exceed $12,000 per third-party investigation.

(C) 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 emission control device subject to this rule that results in arsenic, benzene, 1,3-butadiene, or lead emissions. The notification shall specify the subject equipment and the start and end

date of the turnaround or shutdown period.

(D Notify the Executive Officer at least ten calendar days prior to the beginning of maintenance activity, as defined in paragraph (c)(17), that is conducted routinely on a monthly or less frequent basis. The notification and report required under subparagraph (n)(2)(F) 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.

(E) 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.

(F) Provide the notification to the Executive Officer required under subparagraphs (n)(2)(A), (n)(2)(C), and (n)(2)(D) 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.

(G) Provide notification to the public required under subparagraphs (n)(2)(A), (n)(2)(C), and (n)(2)(E) 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.

(H) 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.

(I) 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 at all entrances and at intervals of 330 feet or less along the property line of the site or along the perimeter of the facility;

(ii) Measures at least 30 inches wide by 30 inches tall;

(iii) Displays lettering at least 2 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; and

(v) In addition to the phone number, the sign shall also display the following information:

Caution

Lead-Acid Battery Recycling Facility

Call before digging

(J) Notify the Executive Officer at least ten calendar days prior to a planned breach or within one hour after an unplanned breach to a total enclosure such that it no longer meets the definition of a total enclosure pursuant to paragraph (c)(29). The notification shall include the following information:

(i) Date and time of planned or unplanned breach to the total enclosure;

(ii) Explanation of breach to the total enclosure;

(iii) Total duration or if not known, estimated duration of breach to the total enclosure; and

(iv) Facility contact name and phone number for further information.

(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) Lead Emission Rate Feasibility Study~~

(o) Curtailment Requirements

(1) On and after February 1, 2014, the The owner or operator of a large lead-acid battery recycling facility shall implement the following mandatory daily process curtailments if emissions are discharged into the atmosphere which

contribute to monitored ambient air concentrations of lead, as determined pursuant to paragraph (d)(1), and/or ambient air concentrations of arsenic, as determined pursuant to paragraph (d)(5), that exceed the thresholds listed below in Table 1:

Table 1 – Process Curtailments Based on Ambient Air Concentrations of Lead and/or Arsenic

Air Contaminant	Monitored Ambient Air Concentration	Reduction in Feedstock Charged to Reverberatory Furnace
Lead	Prior to January 1, 2016: >0.150 – 0.230 µg/m^3 On and after January 1, 2016: >0.110 – 0.230 µg/m^3 On and after January 1, 2017: >0.100 – 0.230 µg/m^3	15%
	>0.230 – 0.300 µg/m^3	25%
	>0.300 – 0.375 µg/m^3	50%
	>0.375 µg/m^3	75%
Arsenic	>10.0 – 15.0 ng/m^3	15%
	>15.0 – 20.0 ng/m^3	25%
	>20.0 – 25.0 ng/m^3	50%
	>25.0 ng/m^3	75%

(A) The process curtailments for exceedances of the ambient air concentration of lead thresholds in Table 1 shall remain in effect until the monitoring results at each affected monitoring station are at or below the ambient lead concentration limits specified in paragraph (d)(1) for a period of 30 consecutive days, or the monitoring results at each affected monitoring station are at or below 0.100 µg/m^3 for at least 10 consecutive days and no other monitor exceeds the thresholds specified in subdivision (d); and

(B) The process curtailments for exceedances of the ambient air concentration of arsenic thresholds in Table 1 shall remain in effect until the monitoring results at each affected monitoring station are at or below 10.0 ng/m^3 of arsenic averaged over a 24-hour time period, for a period of at least 30 consecutive days.

(2) The owner or operator of a large lead-acid battery recycling facility shall implement the following mandatory daily process curtailments if the total facility mass emissions from all lead and/or arsenic point sources exceed the thresholds listed below in Table 2:

Table 2 – Process Curtailments Based on Total Facility Mass Lead and/or Arsenic Emissions From All Point Sources

Effective Date	Air Contaminant	Total Facility Mass Emission Rate (lbs/hour)	Reduction in Feedstock Charged to Reverberatory Furnace
On and after January 10, 2014	Lead	Prior to January 1, 2016 >0.045 – 0.0675 On and after January 1, 2016 >0.023 – 0.0675	15%
		>0.0675 – 0.09	25%
		>0.09 – 0.1125	50%
		>0.1125	75%
No later than 60 days after January 10, 2014 to December 31, 2014	Arsenic	>0.00285 – 0.00428	15%
		>0.00428 – 0.00570	25%
		>0.00570 – 0.00713	50%
		>0.00713	75%
On and after January 1, 2015	Arsenic	>0.00114 – 0.00171	15%
		>0.00171 – 0.00228	25%
		>0.00228 – 0.00285	50%
		>0.00285	75%

(A) The process curtailments in Table 2 shall remain in effect until the facility demonstrates compliance using the most recent District-approved source tests conducted by the facility or the District, pursuant to subdivision (k).

(3) Reductions in feedstock charged to the reverberatory furnace required by paragraphs (o)(1) or (o)(2) shall be based on the daily average of materials charged to the reverberatory furnace over the previous 90 days of operation prior to when the facility knew or should have known of the exceedance;

(4) The process curtailments in Table 1 and Table 2 shall begin within 48 hours of the time when the owner or operator receives sampling results indicating an exceedance of any lead and/or arsenic threshold listed in Table 1 or Table

2; and

(5) The owner or operator of a large lead-acid battery recycling facility may temporarily exceed the mandatory process curtailments specified in Table 1 of paragraph (o)(1) and Table 2 of paragraph (o)(2), only for the period of time required to perform source tests to demonstrate compliance with this rule.

(p) Severability

If any provision of this rule is held by judicial order to be invalid, or invalid or inapplicable to any person or circumstance, such order shall not affect the validity of the remainder of this rule, or the validity or applicability of such provision to other persons or circumstances.

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 emission control devices, as required by subdivision (k) of this rule.
8. Engineering drawings, calculations or other methodology to demonstrate compliance with paragraphs (d)(1) 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.

Appendix 3 – Continuous Furnace Pressure Monitoring (CFPM) Plan

The CFPM Plan shall, at a minimum, contain the following information:

1. A description of the type and design of the differential pressure monitoring device(s).
2. The specifications of the resolution, increment of measurement, and range of the differential pressure monitoring device(s).
3. A drawing and description of the exact location where each differential pressure monitoring device is to be located.
4. If differential pressure monitoring device(s) are already installed, all available recorded data of the static differential furnace pressure(s) as requested by the Executive Officer.
5. If applicable, the maximum alternative static differential furnace pressure in inches water column that the owner or operator will operate the reverberatory furnace at, and a demonstration that it can achieve emission reductions that are equivalent to or better than those achieved when operating at a pressure of -0.02 or more negative. The alternative static differential furnace pressure shall not exceed 0.4 inches water column.

APPENDIX B

ASSUMPTIONS AND CALCULATIONS

Table B-1
Demolition Emissions

Storm Water Retention Pond Demolition		8,150	cubic yards
Demolition Schedule	**16**	**days**[a]	

Equipment Type[a,b]	**No. of Equipment**	**hr/day**	**Crew Size**
Concrete/Industrial Saws	1	7.0	9
Excavators	2	7.0	
Tractors/Loaders/Backhoes	2	7.0	
Rubber Tired Dozers	1	4.0	

Construction Equipment Emission Factors

	CO	**NOx**	**PM10**	**PM2.5**	**VOC**	**SOx**	**CO2**	**CH4**	**NO2**
Equipment Type[c]	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
Concrete/Industrial Saws	0.402	0.526	0.041	0.038	0.092	0.001	59	0.008	0.000
Excavators	0.529	0.830	0.043	0.039	0.114	0.001	120	0.010	0.000
Tractors/Loaders/Backhoes	0.374	0.498	0.034	0.031	0.073	0.001	67	0.007	0.000
Rubber Tired Dozers	1.101	2.381	0.099	0.091	0.284	0.002	238	0.026	0.000

Fugitive Dust Material Handling

Aerodynamic Particle Size Multiplier[d]	**Mean Wind Speed**[e]	**Moisture Content**[f]	**Debris Handled**[g]
	mph		ton/day
0.35	10	2.0	1,013

Construction Vehicle (Mobile Source) Emission Factors[h]

	CO	**NOx**	**PM10**	**PM2.5**	**VOC**	**SOx**	**CO2**	**CH4**	**NO2**
	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile
Automobile	4.12E-03	3.41E-04	1.04E-04	4.41E-05	4.50E-04	8.22E-06	0.73	2.01E-05	4.83E-06
Heavy-Duty Truck[d]	3.98E-03	1.81E-02	5.40E-04	3.85E-04	7.84E-04	3.64E-05	3.76	3.64E-05	2.56E-04

Table B-1 (Continued)
Demolition Emissions

Number of Trips and Trip Length

Vehicle	No. of One-Way Trips/Day[i]	One-Way Trip Length[j] (miles)
Automobile	**9**	**20**
Heavy-duty Truck	17	70

Incremental Increase in Combustion Emissions from Construction Equipment

Equation: Emission Factor (lb/hr) x No. of Equipment x Work Day (hr/day) = Construction Emissions (lb/day)

Equipment Type	CO lb/day	NOx lb/day	PM10 lb/day	PM2.5 lb/day	VOC lb/day	SOx lb/day	CO2 lb/day	CH4 lb/day	NO2 lb/day
Concrete/Industrial Saws	2.82	3.68	0.29	0.27	0.64	0.00	409.67	0.06	0.153
Excavator	7.40	11.62	0.60	0.55	1.60	0.02	1673.49	0.14	0.483
Tractors/Loaders/Backhoes	5.24	6.97	0.48	0.44	1.02	0.01	934.38	0.09	0.290
Rubber Tired Dozers	4.40	9.52	0.40	0.36	1.14	0.01	951.25	0.10	0.396
Total	**19.9**	**31.8**	**1.76**	**1.62**	**4.40**	**0.04**	**3968.80**	**0.40**	**1.32**

Incremental Increase in Fugitive Dust Emissions from Construction Equipment

Material Handling[k]: (0.0032 x Aerodynamic Particle Size Multiplier x (wind speed (mph)/5)$^{1.3}$/(moisture content/2)$^{1.4}$ x debris handled (ton/day)) x (1 - control efficiency) = PM10 Emissions (lb/day)

Description	Control Efficiency %	PM10[m] lb/day	PM2.5[m] lb/day
Material Handling (Demolition)[l]	61	1.09	0.23
Material Handling (Debris)	61	1.09	0.23
Total		**2.18**	**0.46**

Table B-1 (Concluded)
Demolition Emissions

Incremental Increase in Combustion Emissions from Onroad Mobile Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) = Mobile Emissions (lb/day)

	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
Vehicle	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
Automobile	1.48	0.12	0.037	0.016	0.162	0.003	262	0.007	0.002
Haul Truck	9.5	43	1.3	0.915	1.9	0.087	8,938	0.087	0.610
Total	**9.5**	**43**	**1.3**	**0.915**	**1.9**	**0.087**	**8,938**	**0.087**	**0.610**

Total Incremental ~~Localized~~ Emissions from Construction Activities

	CO	NOx	PM10	PM2.5	VOC	SOx	CO2e
Sources	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	metric ton/day
Emissions	**29**	**75**	**5.2**	**3.0**	**4.4**	**0.044**	**100**
Significance Threshold[n]	***550***	***100***	***150***	***55***	***75***	***150***	
Exceed Significance?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	

Notes:

a) The storm water retention area is about an acre in area. RS Means, Building Cosntruction Cost Data, 15th Annual Edition, 2002, Western Edition - 33 to 200 cubic yards per day for 7" - 24" rod reinforced concrete. verage would be 116 cubic yards, which was doubled (two excavators).

b) Estimated construction equipment assumed to operate one eight-hour shift per day.

c) Emission factors estimated using OFFROAD2011

d) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggregate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 μm

e) Mean wind speed - maximum of daily average wind speeds reported in 1981 meteorological data.

f) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28

g) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, p 2-28. Density of conrete 150 pound per cubic foot.
(8,150 yd3 x 150 lb/ft3 x 27 ft3/yd3 x ton/2,000 lb)/16.3 days = 1013 ton/day

h) Emission factors estimated using EMFAC2011 for the 2014 fleet year.

i) Assumed 30 cubic yd truck capacity [(1013 ton/day x 2,000 lb/ton x cyd/4,050 lb = 1251 cyd)/30 cyd/truck = 17 one-way truck trips/day, concrete debris density is assumed to be 4,050 lb/cyd]

j) Assumed trucks travel up 1-5 to district board on way to Buttonwillow or Kettleman. Workers are assumed to travel 20 miles to work.

k) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28.

l) EPA suggests using the material handling equation for demolition emission estimates.

m) Includes watering at least three times a day per Rule 403 (61% control efficiency)

n) SCAQMD significance thresholds

Table B-2
Fill Emissions

Filling Storm Water Retention Pond Area

Fill Schedule - 50 days[a]

Equipment Type[a,b]	No. of Equipment	hr/day	Crew Size
Rubber Tired Dozers	2	7.0	7
Tractors/Loaders/Backhoes	2	7.0	

Construction Equipment Emission Factors

Equipment Type[c]	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
Rubber Tired Dozers	1.101	2.381	0.099	0.091	0.284	0.002	238	0.026	0.099
Tractors/Loaders/Backhoes	0.374	0.498	0.034	0.031	0.073	0.001	67	0.007	0.021

Fugitive Dust Bulldozer Parameters

Vehicle Speed (mph)[d]	Vehicle Miles Traveled[e]
3	42

Fugitive Dust Material Handling

Aerodynamic Particle Size Multiplier[f]	Mean Wind Speed[g]	Moisture Content[h]	Dirt Handled[i]	Dirt Handled[j]
	mph		cy	lb/day
0.35	10	7.9	546	1,365,125

Table B-2 (Continued)
Fill Emissions

Construction Vehicle (Mobile Source) Emission Factors[k]

	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile
Automobile	4.12E-03	3.41E-04	1.04E-04	4.41E-05	4.50E-04	8.22E-06	0.73	2.01E-05	4.83E-06
Heavy-Duty Truck	3.98E-03	1.81E-02	5.40E-04	3.85E-04	7.84E-04	3.64E-05	3.76	3.64E-05	2.56E-04

Number of Trips and Trip Length

Vehicle	No. of One-Way Trips/Day	One-Way Trip Length (miles)
Automobile	7	20
Heavy-duty Truck[l]	19	40

Incremental Increase in Combustion Emissions from Construction Equipment

Equation: Emission Factor (lb/hr) x No. of Equipment x Work Day (hr/day) = Construction Emissions (lb/day)

Equipment Type	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
Rubber Tired Dozers	15.41	33.34	1.38	1.27	3.98	0.03	3,329	0.36	1.39
Tractors/Loaders/Backhoes	5.24	6.97	0.48	0.44	1.02	0.01	934	0.09	0.29
Total	**20.7**	**40.3**	**1.9**	**1.7**	**5.0**	**0.0**	**4,264**	**0.4**	**1.7**

Table B-2 (Continued)
Fill Emissions

Incremental Increase in Fugitive Dust Emissions from Construction Operations

Equations:
Grading[m]: PM10 Emissions (lb/day) = 0.60 x 0.051 x mean vehicle speed$^{2.0}$ x VMTx (1 - control efficiency)
Material Handling[n] PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5)$^{1.3}$/(moisture content/2)$^{1.4}$ x dirt handled (lb/day)/2,000 (lb/ton) (1 - control efficiency)

	Control Efficiency	Unmitigated PM10[o]	Unmitigated PM2.5[o]
Description	%	lb/day	lb/day
Earthmoving	61	4.5	0.947
Material Handling	61	0.11	0.023
Total		**4.6**	**0.970**

Incremental Increase in Combustion Emissions from Onroad Mobile Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) = Mobile Emissions (lb/day)

	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
Vehicle	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
Haul Truck	1.1150	5.0699	0.1513	0.1077	0.2196	0.0102	1,051	0.0102	0.0718
Water Truck	6.0528	27.5221	0.8213	0.5846	1.1919	0.0553	5,708	0.0554	0.3897
	7.168	**32.592**	**0.973**	**0.692**	**1.411**	**0.065**	**6,760**	**0.066**	**0.462**

Total Incremental ~~Localized~~ Emissions from Construction Activities

	CO	NOx	PM10	PM2.5	VOC	SOx	CO2
Sources	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	metric ton/year
Emissions	**28**	**73**	**7.5**	**3.4**	**6.4**	**0.111**	**265**
Significance Threshold[p]	***550***	***100***	***150***	***55***	***75***	***150***	
Exceed Significance?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	

Table B-2 (Concluded)
Fill Emissions

Notes:

a) Based on assumption that each bulldozer can move 35 cubic yards of soil per hour and one acre of area with a depth of 20 feet.
b) Estimated construction equipment assumed to operate one eight-hour shift per day.
c) Emission factors estimated using OFFROAD2011
d) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.
e) Two bulldozers traveling three miles per hour for seven hours per day.
f) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggregate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 µm
g) Mean wind speed - maximum of daily average wind speeds reported in 1981 meteorological data.
i) Assuming 546.05 cubic yards of dirt handled (4840 ft2 x 20 ft) x yd3/27 ft3)/ days)
j) Dirt handled, lb/day = (546.05 yd3 x 2,500 lb/yd3)
k) Emission factors estimated using EMFAC2011 for the 2014 fleet year.
l) Assumed 30 cubic yd truck capacity for 546.05 cy of dirt [(546.05 cy x truck/30 cy) = 19 one-way truck trips/day].
m) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading ≤ 10 µm
n) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12
o) Includes watering at least three times a day per Rule 403 (61% control efficiency)
p) SCAQMD CEQA significance thresholds

Table B-3
Paving Emissions

Asphalt Paving of Foundation

Construction Schedule	**12**	**days**[a]

Equipment Type[a]	**No. of Equipment**	**hr/day**	**Crew Size**
Pavers	1	7.0	10
Cement and Mortar Mixers	4	6.0	
Rollers	1	7.0	
Tractors/Loaders/Backhoes	1	7.0	

Construction Equipment Combustion Emission Factors

	CO	**NOx**	**PM10**	**PM2.5**	**VOC**	**SOx**	**CO2**	**CH4**	**NO2**
Equipment Type[b]	lb/hr	lb/hr	lb/hr		lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
Pavers	0.526	0.810	0.056	0.052	0.143	0.001	78	0.013	0.000
Cement and Mortar Mixers	0.042	0.055	0.002	0.002	0.009	0.000	7	0.001	0.000
Rollers	0.401	0.616	0.042	0.039	0.091	0.001	67	0.008	0.000
Tractors/Loaders/Backhoes	0.374	0.498	0.034	0.031	0.073	0.001	67	0.007	0.000

Construction Vehicle (Mobile Source) Emission Factors[c]

	CO	**NOx**	**PM10**	**PM2.5**	**VOC**	**SOx**	**CO2**	**CH4**	**NO2**
	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile
Automobile	4.12E-03	3.41E-04	1.04E-04	4.41E-05	4.50E-04	8.22E-06	0.73	2.01E-05	4.83E-06
Heavy-Duty Truck	3.98E-03	1.81E-02	5.40E-04	3.85E-04	7.84E-04	3.64E-05	3.76	3.64E-05	2.56E-04

Number of Trips and Trip Length

Vehicle	**No. of One-Way Trips/Day**	**One-Way Trip Length (miles)**
Worker	10	20
Delivery Truck[d]	3	40

Table B-3 (Continued)
Paving Emissions

Incremental Increase in Combustion Emissions from Construction Equipment

Equation: Emission Factor (lb/hr) x No. of Equipment x Work Day (hr/day) = Construction Emissions (lb/day)

	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
Equipment Type	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
Pavers	3.68	5.67	0.39	0.36	0.1	0.00	51	0.01	0.00
Cement and Mortar Mixers	9.63	14.78	1.01	0.93	0.6	0.01	469	0.06	0.00
Rollers	0.29	0.39	0.02	0.02	0.0	0.00	0	0.00	0.00
Tractors/Loaders/Backhoes	2.62	3.48	0.24	0.22	0.0	0.00	0	0.00	0.00
Total	**16**	**24**	**1.66**	**1.52**	**0.70**	**0.01**	**520**	**0.06**	**0.00**

Incremental Increase in Combustion Emissions from Onroad Mobile Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) = Mobile Emissions (lb/day)

	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
Vehicle	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
Worker	1.649	0.137	0.0415	0.0177	0.1801	0.0033	291.3421	0.0080	0.0019
Delivery	0.956	4.346	0.1297	0.0923	0.1882	0.0087	901.2773	0.0087	0.0615
Total	**2.604**	**4.482**	**0.1712**	**0.1100**	**0.3683**	**0.0120**	**1192.619**	**0.0168**	**0.0635**

Total Incremental Combustion Emissions from Construction Activities

	CO	NOx	PM10	PM2.5	VOC	SOx	CO2eq
Sources	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	metric ton/year
Emissions	**19**	**29**	**1.8**	**1.6**	**1.1**	**0.0**	**9.4**
Significance Threshold[e]	***550***	***100***	***150***	***55***	***75***	***150***	
Exceed Significance?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	

Table B-3 (Concluded)
Paving Emissions

Notes:

a) Estimated construction equipment assumed to operate one eight-hour shift per day.
b) Emission factors estimated using OFFROAD2011
c) Emission factors estimated using EMFAC2011 for the 2014 fleet year.
d) Assumed three deliver truck trips per day.
e) SCAQMD CEQA significance thresholds

Table B-4
Structure Building Emissions

Construction of APC

Construction Schedule 21 days

Equipment Type[a]	No. of Equipment	hr/day	Crew Size
Cranes	3	4.0	10
Forklifts	2	6.0	
Tractors/Loaders/Backhoes	2	8.0	

Construction Equipment Combustion Emission Factors

Equipment Type[b]	CO lb/hr	NOx lb/hr	PM10 lb/hr	PM2.5	VOC lb/hr	SOx lb/hr	CO2 lb/hr	CH4 lb/hr	NO2 lb/hr
Cranes	0.431	1.028	0.044	0.041	0.120	0.001	121	0.011	0.043
Forklifts	0.221	0.355	0.018	0.016	0.050	0.001	54	0.004	0.015
Tractors/Loaders/Backhoes	0.374	0.498	0.034	0.031	0.073	0.001	67	0.007	0.021

Construction Vehicle (Mobile Source) Emission Factors[c]

	CO lb/mile	NOx lb/mile	PM10 lb/mile	PM2.5 lb/mile	VOC lb/mile	SOx lb/mile	CO2 lb/mile	CH4 lb/mile	NO2 lb/mile
Automobile	4.12E-03	3.41E-04	1.04E-04	4.41E-05	4.50E-04	8.22E-06	0.73	2.01E-05	4.83E-06
Heavy-Duty Truck	3.98E-03	1.81E-02	5.40E-04	3.85E-04	7.84E-04	3.64E-05	3.76	3.64E-05	2.56E-04

Number of Trips and Trip Length

Vehicle	No. of One-Way Trips/Day	One-Way Trip Length (miles)
Worker	10	20
Heavy-duty Truckd	3	40

Table B-4 (Continued)
Structure Building Emissions

Incremental Increase in Combustion Emissions from Construction Equipment

Equation: Emission Factor (lb/hr) x No. of Equipment x Work Day (hr/day) = Construction Emissions (lb/day)

	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
Equipment Type	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
Cranes	5.2	12.3	0.53	0.49	1.4	0.02	1,451	0.13	0.51
Forklifts	2.7	4.3	0.21	0.20	0.60	0.01	652	0.05	0.18
Tractors/Loaders/Backhoes	6.0	8.0	0.54	0.50	1.17	0.01	1,068	0.10	0.33
Total	**13.8**	**24.6**	**1.3**	**1.2**	**3.2**	**0.04**	**3,171**	**0.29**	**1.02**

Incremental Increase in Combustion Emissions from Onroad Mobile Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) = Mobile Emissions (lb/day)

	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
Vehicle	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
Flatbed Trucks	1.59	7.2	0.216	0.154	0.314	1.45E-02	1,502	0.0146	0.1026
Water Trucks	0.96	4.3	0.13	0.092	0.19	9.00E-03	901	0.009	0.062
Total	**2.5**	**11.6**	**0.35**	**0.25**	**0.50**	**2.35E-02**	**2,403**	**0.024**	**0.165**

Total Incremental Combustion Emissions from Construction Activities

	CO	NOx	PM10	PM2.5	VOC	SOx	CO2eq
Sources	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	metric ton/year
Emissions	**16**	**36**	**1.6**	**1.4**	**3.7**	**0.1**	**540**
Significance Threshold[e]	***550***	***100***	***150***	***55***	***75***	***150***	
Exceed Significance?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	

Table B-4 (Concluded)
Structure Building Emissions

Notes:

a) Estimated construction equipment assumed to operate one eight-hour shift per day.
b) Emission factors estimated using OFFROAD2011
c) Emission factors estimated using EMFAC2011 for the 2014 fleet year.
d) Assumed three deliver truck trips per day.
e) SCAQMD CEQA significance thresholds

Table B-5
Operational Emission SCAQMD

Operational

	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile
Automobile	4.12E-03	3.41E-04	1.04E-04	4.41E-05	4.50E-04	8.22E-06	0.73	2.01E-05	4.83E-06
Heavy-Duty Truck[a]	3.98E-03	1.81E-02	5.40E-04	3.85E-04	7.84E-04	3.64E-05	3.76	3.64E-05	2.56E-04

Number of Trips and Trip Length

Vehicle	**No. of One-Way Trips/Day[i]**	**One-Way Trip Length[j] (miles)**
Worker	32	20
Heavy-duty Truck (Sweeper)	3	21

Incremental Increase in Combustion Emissions from Onroad Mobile Vehicles
Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) = Mobile Emissions (lb/day)

Vehicle	**CO** lb/day	**NOx** lb/day	**PM10** lb/day	**PM2.5** lb/day	**VOC** lb/day	**SOx** lb/day	**CO2** lb/day	**CH4** lb/day	**NO2** lb/day
Automobile	5.28	0.437	0.1328	0.0565	0.576	0.01052	932	0.0257	4.83E-06
Heavy-duty Truck (Sweeper)	0.5	2.3	0.068	0.048	0.10	0.0046	473	0.0046	0.032

Total Incremental ~~Localized~~ Emissions from Operational Activities

Sources	**CO** lb/day	**NOx** lb/day	**PM10** lb/day	**PM2.5** lb/day	**VOC** lb/day	**SOx** lb/day	**CO2** metric ton/year
Emissions	**5.8**	**2.7**	**0.2**	**0.1**	**0.7**	**0.02**	**0.64**
Significance Threshold[b]	***550***	***55***	***150***	***55***	***75***	***150***	***10,000***
Exceed Significance?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Notes:

h) Emission factors estimated using EMFAC2011 for the 2014 fleet year.

n) SCAQMD significance thresholds

Table B-6
Vehicle Hauling Operational Emissions

CO, g/hr-veh	NOX, g/hr-veh	PM10, g/hr-veh	PM2.5, g/hr-veh	ROG, g/hr-veh	SOx, g/hr-veh
67.41757	73.66038971	7.16075	6.58789	38.69741	1.9709892

ARB, 2013, http://www.arb.ca.gov/msei/emfac2011_idling_emission_rates.xlsx.

Idling Time, min/trip	CO, lb/day	NOx, lb/day	PM, lb/day	ROG, lb/day	SOx, lb/day
15	0.037	0.0401	0.0039	0.00361	0.0211

Table B-7
Construction Equipment Fuel Use

Demolition

Equipment Type	No. of Equipment	Op Time, hr/day	Fuel Economy, gal/hr	Fuel Used, gal/day
Concrete/Industrial Saws	1	7.0		
Excavators	2	7.0	3.2	44.8
Tractors/Loaders/Backhoes	2	7.0	1.9	26.6
Rubber Tired Dozers	1	4.0	5.2	20.8
				92.2

Fill

Equipment Type	No. of Equipment	Op Time, hr/day	Fuel Economy, gal/hr	Fuel Used, gal/day
Rubber Tired Dozers	2	7.0	5.2	72.8
Tractors/Loaders/Backhoes	2	7.0	1.9	26.6
				99.4

Paving

Equipment Type	No. of Equipment	Op Time, hr/day	Fuel Economy, gal/hr	Fuel Used, gal/day
Cranes	3	4.0	3.52	42.24
Forklifts	2	6.0	0.96	11.52
Tractors/Loaders/Backhoes	2	8.0	1.9	30.4
				84.16

Structure Construction

Equipment Type	No. of Equipment	Op Time, hr/day	Fuel Economy, gal/hr	Fuel Used, gal/day
Pavers	1	7.0	2.8	19.6
Cement and Mortar Mixers	4	6.0		
Rollers	1	7.0	1.6	11.2
Tractors/Loaders/Backhoes	1	7.0	1.9	13.3
				44.1

Table B-8
Vehicle Fuel Use

Demolition

Vehicle	No. of One-Way, Trips/Day	One-Way Trip Length, miles	Fuel Economy, mpg	Fuel Used, gal/day
Automobile	9	20	10	36
Heavy-duty Truck	17	70	40	60

Fill

Vehicle	No. of One-Way, Trips/Day	One-Way Trip Length, miles	Fuel Economy, mpg	Fuel Used, gal/day
Automobile	1	20	10	4
Heavy-duty Truck	19	40	40	38

Paving

Vehicle	No. of One-Way, Trips/Day	One-Way Trip Length, miles	Fuel Economy, mpg	Fuel Used, gal/day
Automobile	3	20	10	12
Heavy-duty Truck	3	40	40	6

Structure Building

Vehicle	No. of One-Way, Trips/Day	One-Way Trip Length, miles	Fuel Economy, mpg	Fuel Used, gal/day
Automobile	3	20	10	12
Heavy-duty Truck	3	40	40	6

Operational

Vehicle	No. of One-Way, Trips/Day	One-Way Trip Length, miles	Fuel Economy, mpg	Fuel Used, gal/day
Automobile	32	20	10	128
Heavy-duty Truck (Sweeper)	3	21	40	3

APPENDIX C

COMMENT LETTER AND RESPONSE TO COMMENTS

Comment Letter # 1
City of Vernon, Dated February 11, 2015

PUBLIC WORKS, WATER & DEVELOPMENT SERVICES
4305 Santa Fe Avenue, Vernon, California 90058
Telephone (323) 583–8811 Fax (323) 826-1435

February 11, 2015

Cynthia Carter (c/o CEQA)
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4182

Re: Draft Subsequent Environmental Assessment proposed Rule 1420.1

Dear Ms. Carter:

The City of Vernon has reviewed the Notice of Completion of a Draft Subsequent Environmental Assessment for the project titled Proposed Amended Rule 1420.1 – Emissions Standard for lead and other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities. The City of Vernon appreciates the ability to review and provide comments on the document. Below are the concerns we have found with the document:

- In Section VI - Energy, the SCAQMD has provided a discussion of parts b), c) & d). This discussion specifically describes the number of gigawatts consumed in the Los Angeles Department of Water and Power (LADWP) service area and makes a determination that the power consumed by Exide by the WESP system would not result in a significant adverse electricity energy impact of the LADWP system. However, the Exide plant's electrical service is not served by LADWP. The plant is served by the City of Vernon Gas and Electric Department. While the City of Vernon does not foresee an impact to its electrical system from the WESP operation, the analysis should be conducted based on the electrical service being provided by the City of Vernon. **1-1**
- In Sections VII - Geology and Soils, and VIII - Hazardous Materials, reference is made to the Uniform Codes, which have not been published in over a decade. Title 24 of the California Code of Regulations sets forth the construction codes that are established by the State of California. Health and Safety Code Section 17958 allows local agencies to further amend these codes. Therefore, it is recommended that the reference to the Uniform Codes in these sections be replaced with the terminology: the California Building Code as amended by the City of Vernon, and the California Fire Code as amended by the City of Vernon. **1-2**

Exclusively Industrial

- In Section XII - Noise, the SCAQMD made reference to the City of Vernon Noise Requirements in Table 2-17. The Table states "Requires that noise levels generated by construction equipment within a residential zone not exceed 75dBA. The City's noise standards are contained in Section 26.4.1-6(b)(2) of the City's Comprehensive Zoning Ordinance. The City does not have specific noise standards for construction. The City has noise standards for those properties within one-tenth of a mile of any residence or school and for all other lots. The Exide facility is not located within one-tenth of a mile of any school or residence. Therefore Table 2-17 erroneously states that the facility is within a residential zone. This statement should be corrected.

1-3

If you have any questions please feel free to contact me.

Sincerely,

Samuel Kevin Wilson, P.E.
Director of Public Works, Water and Development Services

SKW

Response to Comment Letter # 1
City of Vernon, Dated February 11, 2015

Response to Comment 1-1

The commenter summarizes their concerns with Exide's energy service provider in the Draft SEA. The Draft SEA states that Exide is serviced by the Los Angeles Department of Water and Power (LADWP). However, the commenter states that Exide's plant is serviced by the City of Vernon Gas and Electric Department. The SCAQMD acknowledges the oversight. Nevertheless, as noted in the letter by the commentator, the operation of the WESP from power supplied by the City of Vernon would not generate an adverse impact to the electrical systems as shown the table below. The table compares electrical needs as presented in the Draft SEA to the City of Vernon's consumption. Therefore, whether the electrical supplier is LADWP or the City of Vernon, the electrical impact will be less than significant. So, the conclusion of the Draft SEA's of no significant impact to the electric demands does not change. Therefore, there is no need for the analysis to be recirculated.

Area	Proposed Electricity Use		Area Consumption, MW-h/yr	Proposed Percentage of Area Consumption
	kW-h	MW-h/yr		
City of Vernon[22]	8,643	75,713	1,131,494	0.00076

Response to Comment 1-2

The commenter made reference to Section VII -- Geology and Soils, and Section VIII -- Hazardous Materials, requesting to replace the reference to Uniform Codes with "California Building Code as amended by the City of Vernon, and the California Fire Code as amended by the City of Vernon". However, the Geology and Soils reference is taken directly from *Appendix G: Environmental Checklist Form, question d)* of the CEQA Guidelines. SCAQMD has no authority to amend the CEQA Guidelines, which is the responsibility of the California Resources Agency. There is an understanding that the Uniform Codes refers to the California Fire Code as amended by the City of Vernon.

The analysis in Section VIII -- Hazardous Materials refers to the "Uniform Fire Codes and the Uniform Building Code" with the understanding that they refer to the California Uniform Codes as applicable in the region where the project is located. The company is required to comply with the California Uniform Codes regardless of the nomenclature. Thus, there is no change in the conclusion of the Draft SEA and no need for recirculation.

Response to Comment 1-3

The commenter states that the City of Vernon does not have specific noise standards for construction, but does have noise standards for facilities within 1/10 of mile of a school. Since Exide is not within 1/10 of a mile of a school, the City's 60-65 dBA noise standard does not apply. According to the City of Vernon's Zoning Ordinance[23], the City of Vernon has a separate noise standard for "all other lots at anytime at 75 d BA", which would apply to this project. It is not clear in what application (i.e. construction or operation) the City of Vernon's noise standards should be applied, so for this analysis, the more conservative approach was to apply them during both construction and operation. Thus, the SCAQMD applied this 75 dBA standard to construction noise to determine significance. Thus, there is no change to the conclusion in the document and no need for recirculation.

[22] City of Vernon, FY13-14; www.cmua.org (California Municipal Utilities Association)

[23] City of Vernon Zoning Ordinance, http://www.cityofvernon.org/good_governance_reforms/ZoningOrdinanceDiscussionPowerPoint_BDC.pdf; Accessed February 19, 2015