

ATTACHMENT G

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Staff Report

Proposed Rule 1420.1 – Emissions Standard for Lead from Large Lead-Acid Battery Recycling Facilities

~~October~~ November 2010

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BACKGROUND

The South Coast Air Quality Management District (AQMD) is responsible for developing and enforcing air pollution control rules and regulations in the South Coast Air Basin (Basin). By state law, the AQMD is required to adopt an Air Quality Management Plan (AQMP) demonstrating compliance with all federal regulations and standards such as National Ambient Air Quality Standards (NAAQS) for the Basin [H&S Code Section 40460 (a)]. On October 15, 2008, the U.S. Environmental Protection Agency (U.S. EPA) amended both the primary and secondary NAAQS for lead from a level of $1.5 \mu\text{g}/\text{m}^3$ to $0.15 \mu\text{g}/\text{m}^3$ averaged over a rolling 3-month period, along with changes to monitoring and reporting requirements.

The purpose of Proposed Rule 1420.1 (PR 1420.1) is to propose a new rule for large lead-acid battery recycling facilities which are the highest stationary source emitters of lead in the Basin. In addition, PR 1420.1 is designed to address the amended NAAQS for lead to ensure the Basin can achieve the revised standard. Other lead-emitting sources will be addressed in a future amendment to AQMD Rule 1420 – Emission Standards for Lead.

PUBLIC PROCESS

PR 1420.1 was developed through a public process. A PR 1420.1 Working Group was formed to provide an opportunity to discuss the proposed rule in greater detail and provide input to the AQMD staff throughout the rule development process. The working group was comprised of a variety of stakeholders including representatives and consultants from the regulated industry, the DTSC and other agency representatives, environmental and community representatives, and other interested parties. A Public Workshop was also held to present the proposed rule and receive public comment. Throughout the process, comments received have been addressed in the staff report and changes made to the proposed rule where appropriate. Appendix A is a summary of comments from the Public Workshop and written comments received thus far.

LEAD

Lead is a naturally occurring metal found in the earth's crust. The metal is grayish in color and is soft, malleable, and ductile. It is also a limited electrical conductor and highly impervious to corrosion. This unique combination of physical properties has led to its many uses in industries such as construction, piping, roofing, and lead-acid storage battery manufacturing. Due to its value, some business operations are based solely on recovering lead from lead-bearing materials through secondary smelting operations.

Lead is classified as a "criteria pollutant" under the federal Clean Air Act. It is also identified as a carcinogenic toxic air contaminant (TAC) by the Office of Environmental Health Hazard Assessment (OEHHA). Chronic health effects include problems such as 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. 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.

ATTAINMENT STATUS WITH 2008 NAAQS

The 2008 NAAQS for lead requires that each state install and operate a network of ambient air lead monitors in order to determine attainment status with the standard. Two types of monitors are required; those that are population-based referred to as “non-source-oriented,” and those that are facility-based referred to as “source-oriented.” The lead attainment assessment conducted by the state of California was based on data from both sets of monitoring networks. Data values from measurements made at non-source-oriented monitors in the Basin were reviewed for years 2007 through 2009 and showed concentrations well below the new lead NAAQS. For source-oriented monitors, the lead-acid battery recycling industry demonstrated exceedances with the new standard in 2005 at monitors for one facility, and all 3-month averages from February 2008 through January 2010 at monitors for another facility. Based on this data, in October 2009 the California Air Resources Board (CARB) recommended to the U.S. EPA that the South Coast portion of Los Angeles County be designated as non-attainment for the 2008 federal lead standard based. Final designation of attainment status by the U.S. EPA is expected by October 15, 2010 and would require the Basin to be in attainment with the new NAAQS no later than five years thereafter. A State Implementation Plan (SIP), outlining the strategy to demonstrate attainment with the lead NAAQS, must also be submitted by the AQMD within 18 months of the final designation date.

AFFECTED INDUSTRY

PR 1420.1 applies to large lead-acid battery recycling facilities. There are currently two facilities within the AQMD that the proposed rule will apply to: Exide Technologies and Quemetco, Inc. Exide and Quemetco are the only large lead-acid battery recyclers in the state of California and in the western United States, with the next nearest large lead-acid battery recycling facility located in Texas. These facilities receive spent (used) lead-acid batteries and other lead-bearing materials and recycle them, recovering the lead. Lead is recycled because of its value and is primarily used to manufacture new batteries.

Over the past several years, both facilities have been the subject of several legal actions resulting from violations of AQMD rules. Violations have led to modifications of facility compliance plans, permit conditions, and in some cases, additional conditions of orders for abatement. Many of the conditions have included additional housekeeping requirements, process changes, and more stringent monitoring. In addition to air quality regulations, the two facilities are subject to other toxics requirements under the California Department of Toxic Substances Control (DTSC).

Even with the recent modifications at both facilities, monitoring data shows that additional requirements are necessary in order to meet the ambient lead standard of $0.15 \mu\text{g}/\text{m}^3$. PR 1420.1 incorporates many of the provisions currently being implemented at affected facilities with additional safeguards to help ensure that the Basin will achieve the 2008 federal lead standard.

OVERALL APPROACH FOR PROPOSED RULE 1420.1

During the rule development process, the AQMD staff considered the following three approaches for Proposed Rule 1420.1: (1) Compliance Plan; (2) Core Requirements with No Compliance Plan; and (3) Core Requirements with a “Contingency” Compliance Plan. The three approaches were evaluated with consideration of health effects of lead, potential causes of past exceedances, complaints received, and AQMD staff experience. In addition, the AQMD staff considered whether or not each approach would afford the public an opportunity to participate and provide input. The AQMD staff selected the hybrid approach of Core Requirements with a “Contingency” Compliance Plan as it is more proactive than the other two approaches, provides regulatory certainty for the affected facilities by establishing core requirements in the proposed rule, and the “Contingency” Compliance Plan is designed to minimize and/or eliminate potential delays to implement additional measures if the facility exceeds the ambient lead standard.

PROPOSED RULE 1420.1

PR 1420.1 is designed to address lead emissions from the lead-acid battery recycling industry in order to achieve attainment with the $0.15 \mu\text{g}/\text{m}^3$ standard by as early as 2015 based on U.S. EPA timeframes. Currently, emissions of lead from stationary sources, including lead-acid battery recycling facilities, are regulated by AQMD Rule 1420 – Emissions Standard for Lead. Rule 1420 was adopted in August 1992 and controls emissions of lead from stationary sources which use or process lead-containing materials. The rule was adopted to help ensure that facilities would not discharge emissions which would cause ambient air concentrations of lead to exceed the 1978 federal and state ambient air quality standards for lead of $1.5 \mu\text{g}/\text{m}^3$. Rule 1420 ensures that the standard is met through requirements for emission control systems, monitoring, and good housekeeping practices.

Although lead-acid battery recycling facilities are subject to Rule 1420, separate and more stringent requirements relating to operations and processes specific to lead-acid battery recycling facilities are necessary to ensure that the new standard is met. PR 1420.1 will require large lead-acid battery recycling facilities to:

- Meet an ambient air lead concentration of $0.15 \mu\text{g}/\text{m}^3$ averaged over any 30-day period by January 2012;
- Install total enclosures of all areas used for the processing or storage of lead-containing materials associated with lead-acid battery recycling operations;
- Vent total enclosures and all other lead emission points to control devices capable of meeting a facility total emission rate of 0.045 pounds of lead per hour from all lead point sources, and a maximum emission rate of 0.010 pounds of lead per hour for any individual lead point source;
- Install specifically rated filters/bags for lead control devices;
- Install secondary controls on dryers;
- Submit a Compliance Plan containing additional lead emission reduction measures if ambient air lead concentrations exceed $0.12 \mu\text{g}/\text{m}^3$ averaged over any 30-day period on or after July 1, 2011;

- Conduct more stringent housekeeping practices to minimize fugitive lead-dust emissions;
- Conduct annual source testing of all lead point source control devices;
- Conduct ambient air lead monitoring; and
- Conduct recordkeeping and reporting, including public notifications, for specific maintenance activity, turnarounds, and shutdowns.

IMPACT ASSESSMENT

A socioeconomic assessment has been conducted to analyze the costs associated with compliance under PR 1420.1. PR 1420.1 impacted facilities will be required to install additional digital differential pressure monitors for total enclosures. One facility will be required to install secondary lead controls on a dryer. Additional housekeeping practices will also be required. Annual source tests will need to be conducted for all lead point source control devices to meet proposed emission standards. The total annual cost for both facilities to comply with PR 1420.1 is estimated at \$0.41 million for the first year, and \$0.32 million annually thereafter.

Pursuant to California Environmental Quality Act Guidelines §15252 and AQMD Rule 110, the AQMD has prepared an Environmental Assessment for PR 1420.1. The Draft Environmental Assessment was released for a 30-day public review and comment period beginning April 27, 2010 and ending May 26, 2010. No comments were received.

CHAPTER 1: BACKGROUND

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INTRODUCTION

PR 1420.1 addresses exposure to lead emissions from lead-acid battery recycling facilities. The purpose of the proposed rule is to protect public health and help ensure attainment with the amended lead NAAQS. As required by the federal Clean Air Act, the U.S. EPA periodically reviews the standard to determine if changes are warranted. Based on review of health studies, the U.S. EPA has determined that the standard of $1.5 \mu\text{g}/\text{m}^3$ set in 1978 was not sufficient to protect public health and welfare with an adequate margin of safety. The standard has been lowered to $0.15 \mu\text{g}/\text{m}^3$ based on studies that demonstrate health effects at much lower levels of lead exposure than previously believed. The new standard provides increased protection for children and other at-risk populations against an array of health effects, most notably neurological effects in children, including neurocognitive and neurobehavioral effects.

The lead-acid battery recycling industry has been determined by AQMD staff to be the highest stationary source emitters of lead in the Basin. Staff's analysis has also shown this industry to be the only known source category that currently demonstrates ambient air lead concentration measurements that cause non-attainment with the new lead NAAQS. PR 1420.1 is in addition to Rule 1420 – Emissions Standard for Lead which addresses lead emissions from any stationary source that uses or processes lead-containing material. Rule 1420 applies to all non-vehicular lead sources and currently implements the existing lead NAAQS. Although Rule 1420 also applies to lead-acid battery recycling facilities, it does not contain specific and adequate control measures for this source category to minimize lead emission exposure such that ambient air lead concentrations will comply with the new lead NAAQS. Other lead-emitting sources in the Basin will be further analyzed and addressed in a future amendment to Rule 1420.

PUBLIC PROCESS

PR 1420.1 was developed through a public process. A PR 1420.1 Working Group was formed to provide an opportunity to discuss the proposed rule in greater detail and provide input to the AQMD staff throughout the rule development process. The working group was comprised 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 AQMD staff to discuss elements of the proposed rule in more detail. The Working Group met three times during the rule development process, on April 22, 2010, May 18, 2010, and August 24, 2010.

In addition, a Public Workshop was held on April 14, 2010 to present the proposed rule and receive public comment. PR 1420.1 progress reports and updates to the AQMD Governing Board's Stationary Source Committee, Environmental Justice Advisory Group, and Local Government and Small Business Assistance Advisory Group provided additional opportunities for public comment. Based on comments received at the Stationary Source Committee from residents and community representatives from the City of Commerce, Boyle Heights, and Maywood, the AQMD staff held a meeting with representatives of East Yard Communities for Environmental Justice to brief them on the proposed rule and receive additional input. The meeting was held at their offices in the City of Commerce which is near one of the lead-acid

battery recycling facilities. Throughout the process, comments received have been addressed in the staff report and changes made to the proposed rule where appropriate. Appendix A is a summary of comments from the Public Workshop and written comments received thus far.

HEALTH EFFECTS OF LEAD

Human exposure to lead occurs in a variety of ways with common routes being that of inhalation and ingestion. Ingestion of lead-containing paint chips and soil with deposited atmospheric lead is a source of concern for exposure for children. The most widely used indicator of lead exposure in many studies is the amount of lead measured in whole blood because of the direct relationship with blood lead (PbB) levels and health effects. Clinical effects resulting from high-level lead exposure include nervous and reproductive system disorders, neurological and physical developmental effects, cognitive and behavioral changes, and hypertension. Young children are especially susceptible to the effects of environmental lead because they are more vulnerable to certain biological effects of lead including learning disabilities, deficits in IQ, and behavioral problems.¹ Health & Safety Code Section 39669.5, “Special Provisions for Infants and Children,” required CARB to identify up to five TACs that may cause infants and children to be especially susceptible to illness. The “Prioritization of Toxic Air Contaminants Under the Children’s Environmental Health Protection Act” document released in 2001 by the Office of Environmental Health Hazard Assessment (OEHHA) lists lead as one of the original five toxic air contaminants.

Lead is classified as a probable human carcinogen by both the International Agency for Research on Cancer and the U.S. EPA. OEHHA classified lead as a carcinogenic toxic air contaminant and it was added to the AQMD Rule 1401 list of TACs in 1992. AQMD’s “Risk Assessment Procedures for Rules 1401 and 212” Tier 1 screening value for lead indicates that a lifetime exposure (70 years for residential and sensitive receptors, 40 years for worker receptors) to 0.628 pounds of lead a year at 25 meters could potentially cause one additional case of cancer out of a one million population.

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 PbB 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.”²

Based on studies conducted by the Clean Air Scientific Advisory Committee (CASAC), it was concluded that a “population loss of 1-2 IQ points” resulting from exposure to ambient air lead

¹ Environmental Protection Agency, “Lead in Air,” (<http://www.epa.gov/air/lead/health.html>), June 12, 2009.

² Environmental Protection Agency, Office of Research and Development, “Air Quality Criteria Document for Lead, Volumes I-II,” October 2006.

concentrations “is highly significant from a public health perspective.” The U.S. EPA has determined that a primary and secondary standard of $0.15 \mu\text{g}/\text{m}^3$ is requisite to provide an adequate margin of safety that would ensure the protection of public health and the environment regarding the aforementioned population IQ loss and other health effects from lead exposure.³

There have been several health studies conducted in communities around Quemetco, Inc. (Quemetco), located in the City of Industry. In 1994, the Los Angeles County Department of Health Services (DHS) conducted studies on the impact of lead emissions from Quemetco on PbB levels of children living in a nearby community and in 2002, the DHS conducted lead testing for students and community members within one mile of Quemetco. Although the results of the studies revealed that no detectable differences in PbB levels were exhibited in nearby communities when compared to a control community, soil lead levels were found to be higher. It should be noted that the distance between the nearest resident and lead emitting stack at the facility is approximately 700 feet. In 2002, the DHS conducted lead testing for students and community members within one mile of Quemetco. Of 169 children and 75 adults that were tested, one adult exhibited increased PbB levels which were attributed to occupational exposure. The Keck Cancer Surveillance Program of University of Southern California conducted an analysis of 1972-1999 census data and determined that there was no causal link between cancer and residential proximity to Quemetco. Although these studies have not shown significant health impacts due to proximity to a lead-acid battery recycler, increased levels of lead found in soils can potentially cause health problems if ingested.

REGULATORY HISTORY

Lead-acid battery recyclers have been subject to regulation for more than two decades. Below is a chronology of regulatory activity:

- In November 1970, CARB set the state ambient air quality standard for lead at $1.5 \mu\text{g}/\text{m}^3$ averaged over 30 days.
- In October 1978, the U.S. EPA adopted the NAAQS for lead requiring attainment with a lead ambient concentration of $1.5 \mu\text{g}/\text{m}^3$ averaged over a calendar quarter.
- In September 1992, the AQMD 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 January 1993, CARB adopted the Airborne Toxic Control Measure for Emissions of Toxic Metals from Non-Ferrous Metal Melting. The state regulation required control devices for lead and other toxic metal emission points, control efficiency requirements for control devices, fugitive emission control, and recordkeeping.
- In June 1997, the U.S. EPA adopted the National Emissions Standards for Hazardous Air Pollutants (NESHAP) from Secondary Lead Smelting. The federal regulation required

³ Environmental Protection Agency, “National Ambient Air Quality Standards for Lead; Final Rule,” 40 CFR Parts 50, 51, 53, and 58, November 2008.

lead emission concentration limits of lead control devices, control of process fugitive emissions, monitoring, recordkeeping, and reporting.

- On October 15, 2008, the U.S. EPA signed into ~~legislation~~ regulation an amended NAAQS for lead of $0.15 \mu\text{g}/\text{m}^3$.

The following provides additional background information about Rule 1420 and the 2008 NAAQS for lead.

Rule 1420

Rule 1420 was adopted in September 1992 and has not been amended since its adoption. Rule 1420 applies to facilities that process or use lead-containing materials which includes, but is not limited to, primary or secondary lead smelters, foundries, lead-acid battery manufacturers or recyclers, and lead-oxide, brass and bronze producers. Rule 1420 is based on the current state ambient air quality standard of $1.5 \mu\text{g}/\text{m}^3$ averaged over a 30-day period. The rule includes requirements for point source controls, monitoring, sampling, recordkeeping, and reporting. Rule 1420 requires facilities that process more than two tons of lead per year to submit a Compliance Plan that provides information on how the facility will conduct monitoring, air dispersion modeling, and implement requirements to install and implement point source controls.

2008 NAAQS for Lead

Since U.S. EPA established the initial standard of $1.5 \mu\text{g}/\text{m}^3$ in 1978, scientific evidence about lead and health has expanded dramatically. More than 6,000 new studies on lead health effects, environmental effects, and lead in the air have been published since 1990. Evidence from health studies shows that adverse effects occur at much lower levels of lead in the blood than previously thought. As a result, U.S. EPA amended the NAAQS for lead which now reduces the ambient air quality standard from $1.5 \mu\text{g}/\text{m}^3$ to $0.15 \mu\text{g}/\text{m}^3$. The 2008 lead NAAQS requires full attainment by each state no later than five years after final designations for attainment status are made. Demonstration of attainment is based on measurements using a rolling 3-month averaging form to be evaluated over a 3-year period. Measurements are to be determined by U.S. EPA-required monitoring networks within each state which consist of both source-oriented and non-source-oriented monitors. The AQMD has already established the required monitoring network for both source and non-source-oriented lead monitors.

ATTAINMENT STATUS WITH 2008 NAAQS

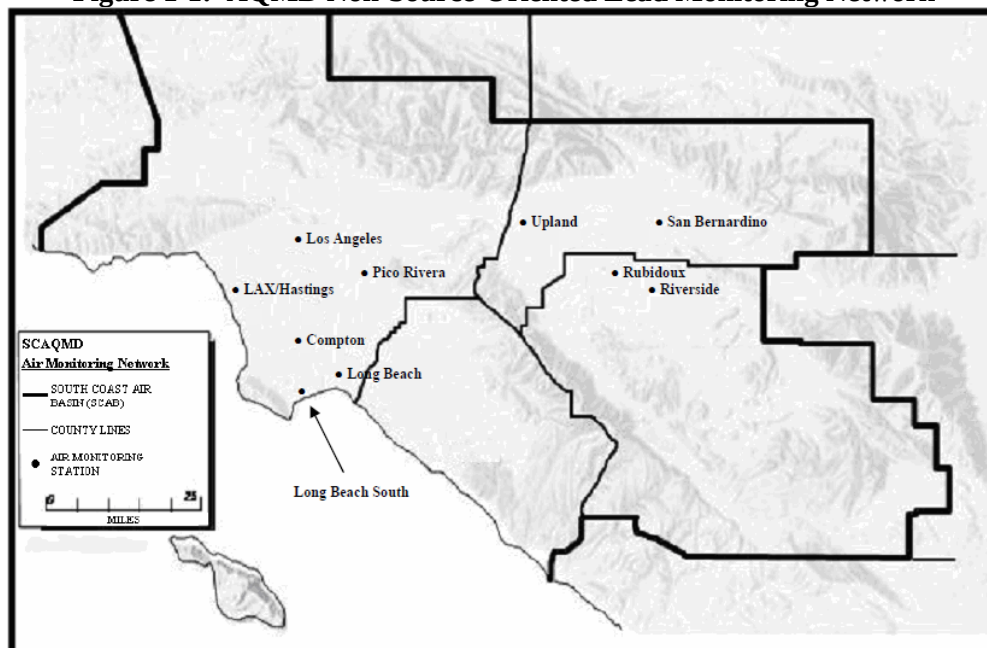
The 2008 NAAQS for lead requires that each state install and operate a network of ambient air lead monitors in order to determine attainment status with the standard. Two types of monitors are required; those that are population-based referred to as “non-source-oriented,” and those that are facility-based referred to as “source-oriented.” The lead attainment assessment conducted by the state of California was based on data from both sets of monitoring networks. CARB recommended to the U.S. EPA that the South Coast portion of Los Angeles County be designated as non-attainment for the 2008 federal lead standard based on data from the ATSF and Rehrig-Pacific Street monitors for Exide Technologies (Exide) as discussed in more detail below. Final designation of attainment status by the U.S. EPA is expected by October 15, 2010 and would require the Basin to be in attainment with the new NAAQS no later than five years thereafter. A State Implementation Plan (SIP), outlining the strategy to demonstrate attainment

with the lead NAAQS, must also be submitted by the AQMD within 18 months of the final designation date. Details pertaining to the monitors and data used for the assessment are explained below.

Non-Source-Oriented Monitors

The AQMD currently operates a non-source-oriented monitoring network of 10 locations throughout the Basin. The spatial distribution of these sites is shown below in Figure 1-1. The AQMD's current lead monitoring network meets the minimum requirements for the U.S. EPA non-source-oriented monitoring network as specified in the new lead NAAQS, therefore data from the existing monitors were used to provide an indication of lead attainment status on a regional scale. Data values from measurements made at non-source-oriented monitors in the Basin were reviewed for years 2007 through 2009 and showed concentrations well below the new lead NAAQS of $0.15 \mu\text{g}/\text{m}^3$ and range from $0.01 \mu\text{g}/\text{m}^3$ to $0.03 \mu\text{g}/\text{m}^3$.

Figure 1-1: AQMD Non-Source-Oriented Lead Monitoring Network



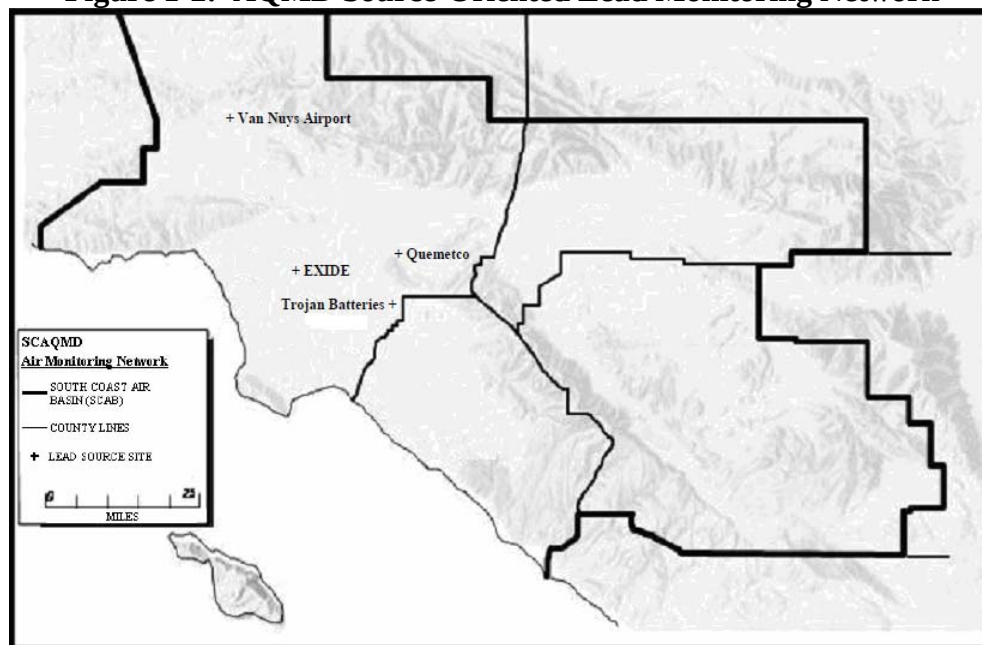
Source-Oriented Monitors

40 CFR Part 58, Appendix D, Paragraph 4.5 requires installation of source-oriented monitors at lead sources that are expected to or have been shown to contribute to violations of the lead NAAQS. The U.S. EPA requires agencies to have, at a minimum, one source-oriented State and Local Air Monitoring Station (SLAMS) site located at each lead source with lead emissions of 1.0 or more tons/year. The monitoring location is to be determined based on the modeled point of maximum impact, taking into consideration population exposure and logistical considerations.

The AQMD currently operates existing source-oriented monitoring networks at the following three facilities: Trojan Battery Company in Santa Fe Springs, Quemetco, Inc. in the City of Industry, and Exide Technologies in Vernon, and one additional network recently installed at Van Nuys Airport to meet the monitoring requirements of the new lead NAAQS. General aviation aircraft use leaded aviation fuel, and have been identified as a source of lead emissions.

Although required to conduct source-oriented monitoring of this source according to U.S. EPA regulations, the AQMD currently does not have jurisdiction for regulating the aviation gas formulation or the aircraft emissions since it is a mobile source. Figure 1-2 below shows the locations of AQMD's current source-oriented monitoring networks and their respective lead sources.

Figure 1-2: AQMD Source-Oriented Lead Monitoring Network



Based on data from AER reporting years 2005 through 2007, lead emissions at Trojan Battery, a battery manufacturer located in Santa Fe Springs, are reported as 0.0145 tons/yr and sampling is conducted at one site. The site operates on a 1-in-6 day sampling schedule and had its highest monthly average of $0.23 \mu\text{g}/\text{m}^3$ in May 2007. Since September 2007, all monthly averages have been below the new lead NAAQS with an average concentration of $0.07 \mu\text{g}/\text{m}^3$.

At Quemetco, Inc., a lead-acid battery recycling facility located in the City of Industry, lead emissions are reported as 0.32 tons/yr and sampling is currently conducted at one site based on AER data for reporting years 2005 through 2007. Monthly averages last exceeded the concentration of $0.15 \mu\text{g}/\text{m}^3$ in 2005 at $0.38 \mu\text{g}/\text{m}^3$. In 2006, monthly averages ranged between 0.02 and $0.10 \mu\text{g}/\text{m}^3$. Sampling did not take place in 2007 and most of 2008 due to loss of access to the AQMD sampling location. Monitoring resumed in October 2008 with monthly measurements through January 2010 below $0.15 \mu\text{g}/\text{m}^3$ and a monthly average of $0.07 \mu\text{g}/\text{m}^3$.

Based on data from AQMD's AER program for lead emissions reported from years 2005 through 2007, Exide is the only non-aviation source currently emitting over 1.0 ton/yr with an annual average of 1.5 tons/yr. Sampling is conducted at two locations with monitors identified as "Rehrig" and "ATSF". All 3-month averages for ambient air lead concentrations from February 2008 through January 2010 from the monitor located at Rehrig exceeded the new lead NAAQS of $0.15 \mu\text{g}/\text{m}^3$. Concentrations from the ATSF monitor exceeded the new lead NAAQS for all 3-

month averaging periods from February 2008 through May 2008, and September 2008 through November 2008.

RULE APPLICABILITY

PR 1420.1 will affect large lead-acid battery recycling facilities that process more than 50,000 tons of lead a year. The provisions of PR 1420.1 are in addition to Rule 1420 and the other lead sources in the district will be addressed through future rulemaking efforts. The decision to address large lead-acid battery recycling facilities was due in part to the AQMD's source-oriented monitors that have historically shown that this industry category has the potential to exceed the new lead ambient air quality standard and their annual mass emissions.

The AQMD staff analyzed multiple data sources, including AQMD's AER program for years 2005 through 2007, permitting data, and compliance data to initially identify the universe of lead-emitting sources. Approximately 600 lead sources were identified and analyzed. Almost all facilities located within the Basin emit less than 0.15 tons of lead per year, an amount far below U.S. EPA's 1.0 ton per year threshold warranting source-oriented monitoring at these facilities. Based on the AQMD's AER program between 2005 and 2007, the industry category with the largest stationary source lead emissions is lead-acid battery recycling.

AFFECTED INDUSTRY

PR 1420.1 applies to large lead-acid battery recycling facilities. There are currently two facilities within the AQMD that the proposed rule will apply to: Exide Technologies and Quemetco, Inc. Exide and Quemetco are the only large lead-acid battery recyclers in the state of California and in the western United States, with the next nearest large lead-acid battery recycling facility located in Texas. These facilities receive spent (used) lead-acid batteries and other lead-bearing materials and recycle them, recovering the lead. Approximately 98 percent of lead acid batteries in the United States are recycled and all components of the batteries are recycled, primarily lead, plastic, and acid. Through the recycling process, approximately 95 percent of the lead in the batteries is recovered. Lead is recycled because of its value and is primarily used to manufacture new batteries.

Exide is located in the city of Vernon on about 24 acres of land. Exide has the highest stationary source lead emissions in the District. Based on AER data for 2005 through 2007, Exide has an average of more than 1.5 tons of lead emission per year, with its highest annual emissions of 1.99 tons of lead per year in 2006-2007 AER reporting year. The facility has an average production of 100,000 to 120,000 tons of lead per year. This is equivalent to recycling approximately 11 million automotive batteries. The facility also recycles lead-bearing plant scrap and other lead-bearing materials.



Figure 1-3
Exide Technologies
Vernon, CA 90058

Quemetco is located in the City of Industry on approximately 14 acres of land. Based on AER data for 2005 through 2007, Quemetco has the second highest average lead emissions of 0.28 tons per year with a high of 0.32 tons per year for the 2006-2007 AER reporting year. Spent automotive batteries account for almost all of the lead processed by Quemetco. The facility processed more than 110,000 tons of lead in 2009. Quemetco processes approximately 10 million automotive batteries per year.



Figure 1-4
Quemetco, Inc.
City of Industry, CA 91746

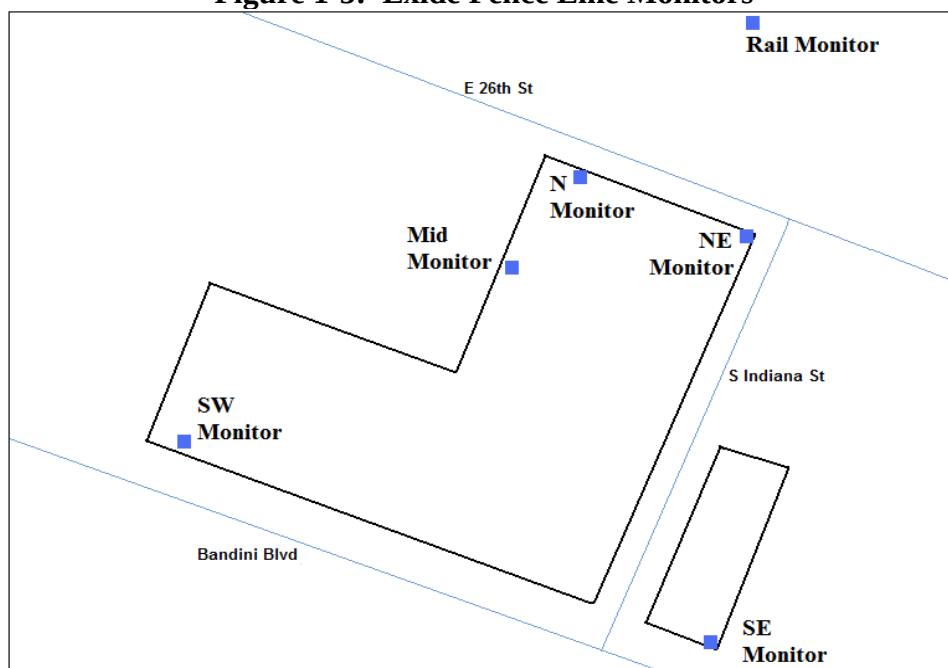
FENCE LINE MONITORS

Under Rule 1420, Exide and Quemetco are required to maintain and operate two fence line monitors to collect samples to demonstrate compliance with the Rule 1420 ambient lead standard of $1.5 \mu\text{g}/\text{m}^3$. Each facility currently operates an ambient air monitoring and sampling network (fence line monitors) pursuant to requirements of Rule 1420. The fence line monitors are installed at locations that are based on the maximum expected ground-level concentrations of lead at or beyond the facility's property line.

Exide Fence Line Monitors

As shown in Figure 1-5 below, Exide currently maintains six fence line monitors. The AQMD maintains and operates two source-oriented monitors near Exide which are not shown in the figure. Exide conducts sampling at least once every three days at six monitors. The SW, SE, and Rail monitors have been in operation for over ten years. Due to exceedances of the ambient air quality standard of Rule 1420, the facility was required to modify its ambient air monitoring plan to add three additional monitors. The N and NE monitors were installed in the beginning of 2009 with the MID monitor installed at the end of 2009.

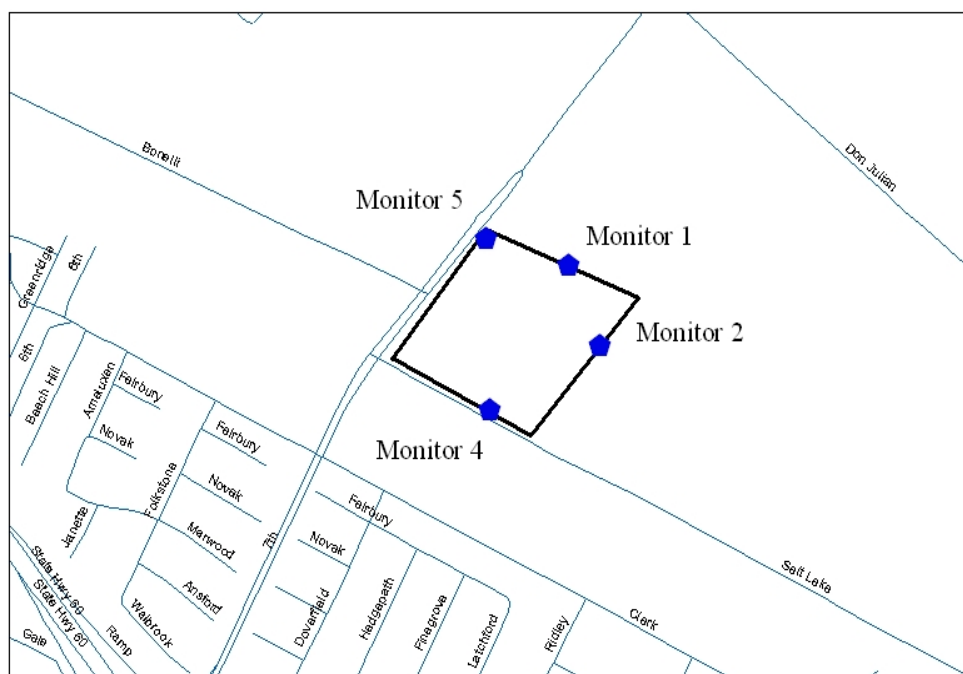
Figure 1-5: Exide Fence Line Monitors



Quemetco Fence Line Monitors

Quemetco collects daily samples at four monitors that have been in operation for over ten years. Monitor 3 was renamed Monitor 5 and moved to the northwest corner of the facility in late 2007 in response to complaints from residents requesting sampling at a location upwind from their neighborhood. Locations of fence line monitors at Quemetco are shown in Figure 1-6 below. The AQMD maintains and operates one source-oriented monitor near Quemetco which is not shown in the figure.

Figure 1-5: Quemetco Fence Line Monitors



COMPLIANCE HISTORY

The following briefly describes the compliance history for each facility with respect to the ambient air lead concentrations, complaints, and other toxic regulations.

Exide

Over the past five years, Exide has been required to increase their fence line monitors and implement changes within their facility to reduce lead emissions. In 2004, the AQMD began receiving complaints from neighbors and the surrounding community which prompted installation of additional monitors. In 2007, the AQMD installed an additional monitor at the Rehrig facility. During 2007-2008, lead concentrations from the Rehrig monitor exceeded the Rule 1420 lead standard of $1.5 \mu\text{g}/\text{m}^3$. This led to extensive revisions to Exide's Rule 1420 Compliance Plan and issuance of an Order for Abatement in 2009. The AQMD staff continues to work with Exide to ensure all measures in the Compliance Plan and Order for Abatement are being implemented. A brief chronology is described below.

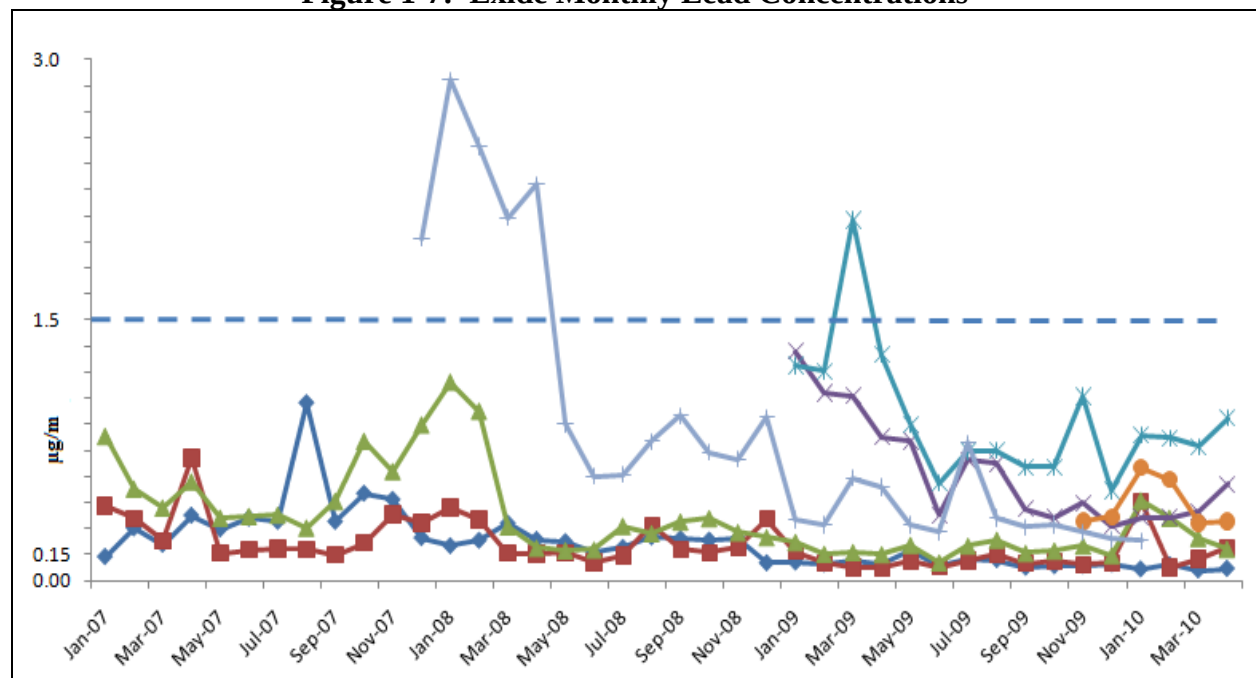
- November 2007: AQMD installs additional monitor at Rehrig facility next to Exide based on complaints alleging Exide as a source of dust, smoke, and odors.
- December 2007 – April 2008: Exide exceeded the ambient air lead concentration requirement of Rule 1420. Monthly averages during this time range from 2.0 to $2.9 \mu\text{g}/\text{m}^3$.
- 2008: AQMD revised Exide's Compliance Plan to include upgrades to lead control devices, additional housekeeping, extensive housekeeping requirements including building roof tops and perimeter sidewalks and public roadways, and expanded ambient air monitoring.

- January 2009: AQMD staff required two more fence line monitors at Exide.
- December 2009: AQMD staff required one more fence line monitor at Exide.
- June 2009: AQMD issued an Order for Abatement which included further, more stringent requirements beyond those specified in Rule 1420 and existing permit and Compliance Plan conditions. Requirements included total enclosures of two lead processing areas, lead control device upgrades, process curtailments if ambient concentrations approached or exceeded the lead standard, and additional housekeeping and monitoring requirements.

Monthly Lead Concentrations at Exide

Average monthly lead concentrations for all fence line monitors at Exide from 2007 to the beginning of 2010 are $0.47 \mu\text{g}/\text{m}^3$ with a high of $2.08 \mu\text{g}/\text{m}^3$. Average monthly concentrations from source-oriented monitors for Exide to date are $0.99 \mu\text{g}/\text{m}^3$ with a high of $2.88 \mu\text{g}/\text{m}^3$. Exide received multiple violations for exceedances with the $1.5 \mu\text{g}/\text{m}^3$ concentration standard of Rule 1420 between December 2007 and June 2008 at a source-oriented monitor, including a violation in March 2009 for an exceedance measured at a fence line monitor. Figure 1-7 below shows Exide monthly lead concentrations at each monitor from 2007 to the beginning of 2010.

Figure 1-7: Exide Monthly Lead Concentrations



Quemetco

From 2000 to 2001, Quemetco was issued violations by the AQMD for exceeding the Rule 1420 ambient air lead concentration standard of $1.5 \mu\text{g}/\text{m}^3$. As a result, Quemetco was required to modify conditions of their Rule 1420 Compliance Plan and reduce charging limits on furnaces used in their lead smelting process.

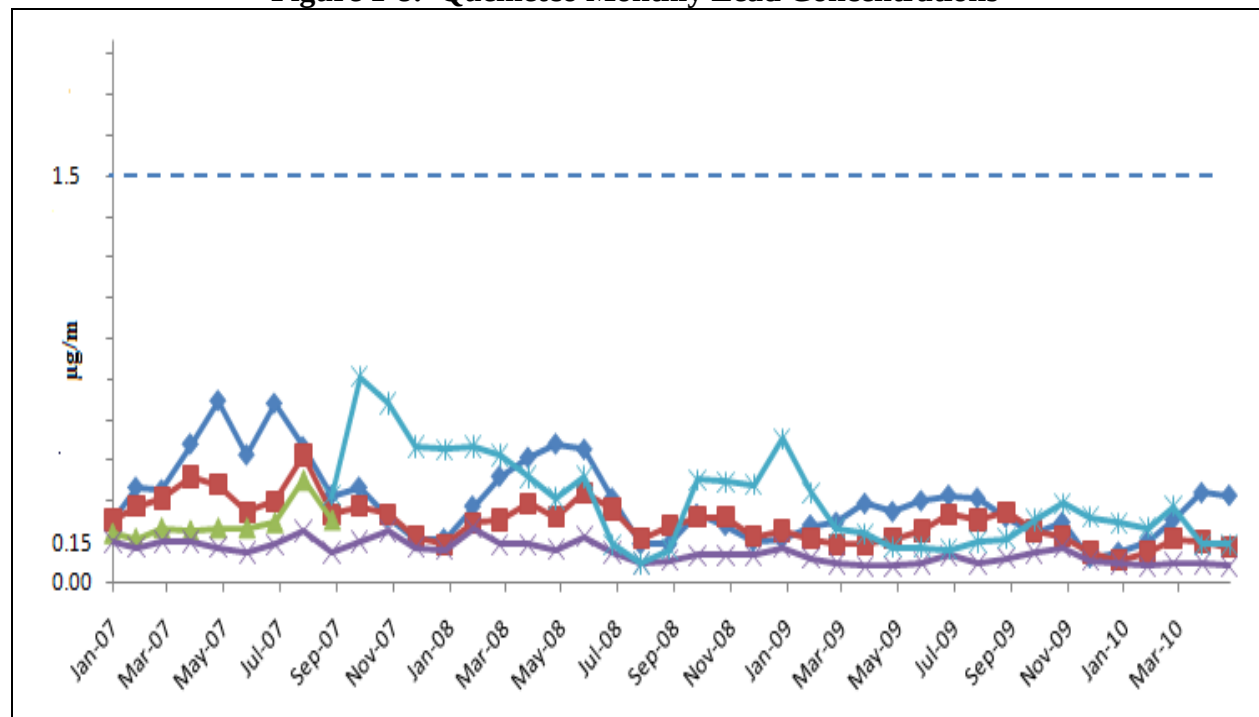
In 2000, Quemetco submitted a health risk assessment (HRA) approved by the District in 2005, showing that the maximum cancer risk for the facility was 22 in one million, primarily from

arsenic and 1,3-butadiene emissions, and that the cancer burden was 1.15. Under Rule 1402, the facility was required to perform public notice and hold a public meeting because the cancer risk exceeded 10 in one million, and was required to reduce risk because the cancer burden exceeded 0.5. In order to reduce the health risk, Quemetco installed a wet electrostatic precipitator (WESP) to control particulate and metal emissions and regenerative thermal oxidation (RTO) to control organic emissions. Following installation of controls and subsequent emissions testing, their approved HRA from February 2010 shows a maximum cancer risk of 4.4 in one million and a cancer burden of 0.023. Average monthly ambient air lead concentration readings at the facility fence line monitors have also been reduced by 40% after control upgrades were made at the facility.

Monthly Lead Concentrations at Quemetco

Average monthly lead concentrations for all fence line monitors at Quemetco from 2007 until the middle of 2008 were $0.29 \mu\text{g}/\text{m}^3$ with a high of $0.76 \mu\text{g}/\text{m}^3$. After installation of the WESP in the third quarter of 2008, average concentrations to date have dropped to an average of $0.18 \mu\text{g}/\text{m}^3$. Although the facility is still above the ambient air lead concentration requirement of the proposed rule, it is expected that completion of the total enclosure for the battery breaking area and additional housekeeping measures to be implemented at the facility will decrease ambient concentrations levels of lead required for compliance. Figure 1-8 below shows fence line average monthly lead concentrations at each monitor for Quemetco between 2007 and 2010.

Figure 1-8: Quemetco Monthly Lead Concentrations



PROCESS DESCRIPTION AND LEAD EMISSION POINTS

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 sold to other entities. Emission points consist of those from lead point sources and fugitive lead-dust emissions. Lead point source emissions are generally discharged as the main exhaust of the battery breaking process, smelting furnaces, and refining kettles and vented through ductwork or a stack. Fugitive lead-dust emissions are from facility roadways subject to wind, vehicular, or foot traffic, materials handling and storage areas, battery breaking areas, and smelting and refining areas. Below is a general description of the process including potential lead emission points:

- I. **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. Lead point source emissions may result during the crushing process of lead-acid batteries. Fugitive lead-dust emissions may result from areas surrounding the crushing process and from the handling and transporting of lead-bearing materials.
 - a. **Receiving and Storage:** Spent lead-acid batteries are usually received on pallets that are either stored or sent directly to conveyors for immediate crushing.
 - b. **Battery Breaking/Crushing:** The spent lead-acid batteries are unloaded from conveyors and loaded into a hammer mill system where they are crushed whole. The crushed material is then placed into a series of tanks filled with water in order to clean materials of the acids. Through gravity separation, the crushed material sinks to the bottom of the tanks and goes through a series of screens to further isolate lead-bearing materials. The materials are then typically stored in open or partially covered piles if not required for immediate charge preparation.
 - c. **Charge Preparation/Rotary Drying/Sweating:** Recovered lead-bearing materials are prepared by blending them 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). 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.
- II. **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 oxides to elemental lead. Smelting is carried out in blast, reverberatory, and rotary kiln furnaces. These furnaces emit high levels of lead point source emission from the lead fumes during the charging and tapping processes. Fugitive lead-dust may result during the handling of the charged materials and surrounding areas.
 - a. **Blast furnaces:** Typically, “hard” lead, or antimonial lead (containing ~10% antimony) is produced in blast furnaces. Scrap metal, re-run slag, scrap iron, coke, recycled dross, flue dust, 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.

- b. **Reverberatory furnaces:** Semi-soft lead (containing ~3-4% antimony) is produced in reverberatory furnaces. 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, oil, or coal.

III. 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 600-1300 degrees F. Both lead point source and fugitive lead-dust emissions result from lead fumes that may be emitted when molten lead is transferred to refining kettles and lead particulates may become airborne off refining kettle surfaces due to updrafts created by thermal rise.

- a. **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.
- b. **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.
- c. **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.

CONTROL STRATEGIES

Several types of controls for lead emissions are currently used at the lead-acid battery recycling facilities in the Basin. Lead emissions at lead-acid battery recycling facilities are generally categorized as point and fugitive lead 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 particulate matter that contain lead, is in contact with the ambient air, and can become airborne. Point source emissions that are vented through a control device, but not captured and contained can become fugitive emissions. The following discusses lead point source controls and fugitive source control strategies.

Lead Point Source Control Strategies

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:

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. Bags of polytetrafluoroethylene membrane-type are currently considered to be the most effective for the control of lead emissions.

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 pre-filter which is “changed out” on a regular basis allowing the bank of filter cartridges to last longer. HEPA and cartridge-type filters are currently the most effective filters used in the lead-acid battery recycling industry.

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 an overall particulate matter capture efficiency certifiable up to 99.97 percent. It is important that baghouses are designed and use parts, bags, and filters according to manufacturer’s recommendations in order to achieve optimal performance and control of emissions. The well designed baghouse can control 99 percent of particulate emissions. The capture efficiency of lead particulates is anticipated to be slightly lower, since metals are found in greater amounts on smaller particles. The lead removal efficiency is at least 98 percent for a baghouse with 99 percent efficiency for particulates. Demonstrated removal efficiencies may be improved with the addition of secondary controls or several baghouses in series. Secondary controls also serve as a back-up or fail safe for the

control of lead emissions in the event that lead control devices upstream are not properly maintained or encounter breakdowns or malfunctions, resulting in leaks or complete failure to filters or bags.

All facilities subject to this rule would be able to use baghouses or filter systems to control particulate lead emissions from most all operations in the lead-acid battery recycling processes. Examples include lead 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 lead particulates 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 District. In these scrubbers, the exhaust stream is passed through a constriction (the venturi) where the scrubbing liquid is sprayed in. The turbulence 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.

High-Efficiency Particulate Arrestors (HEPA)

Used in conjunction with a pre-filter, high-efficiency particulate air 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°F), 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 such as lead particles, the element is changed out and disposed of as hazardous waste. Filters can be combined or applied to controls such as baghouses to reduce lead emissions from lower temperature exhaust streams and fugitive lead-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.

Electrostatic Precipitators/Wet Electrostatic Precipitators

Electrostatic precipitators 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. This technology can achieve 99 percent efficiency for total particulate matter as small as 1 μm . Electrostatic precipitators in lead-acid battery recycling operations are typically used downstream from other lead controls such as baghouses, and treat exhaust streams with smaller lead particulates.

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 areas where lead dust may accumulate due to accidents, process upsets or equipment malfunctions;
- Clean surface impoundments ponds before lead-containing sludge dries and can become a source of fugitive lead-dust;
- Use of enclosures or containment areas during maintenance activities or storage of lead-containing materials; and
- Use of 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.

CHAPTER 2: SUMMARY OF PROPOSED RULE 1420.1

OVERVIEW

OVERALL APPROACH

PROPOSED RULE 1420.1

OVERVIEW

PR 1420.1 will address lead emissions produced by lead-acid battery recycling facilities. In addition to protecting public health, the major impetus for the rule is to establish requirements that will help ensure that the Basin meets attainment status with the 2008 NAAQS for lead. As a result, the rule proposes standards for total facility mass lead emission rates, maximum lead emission rates for lead control devices, secondary lead control devices on dryers, and concentrations for ambient air lead levels resulting from the facility. Fugitive lead emissions are addressed through housekeeping and maintenance activity requirements, and total enclosures of process areas used in the lead-acid battery recycling operation. Additionally, source testing, ambient air concentration monitoring, and recordkeeping requirements have been added to ensure continuous compliance.

OVERALL APPROACH

Rule Approach

During the rule development process, the AQMD staff considered the following three approaches for Proposed Rule 1420.1: (1) Compliance Plan; (2) Core Requirements with No Compliance Plan; and (3) Core Requirements with a “Contingency” Compliance Plan. The three approaches were evaluated with consideration of health effects of lead, past experience with affected facilities considering potential causes of past exceedances, complaints received, and AQMD staff experience. In addition, the AQMD staff considered whether or not each approach would afford the public an opportunity to participate and provide input. The following describes the three approaches and discusses why the third approach for PR 1420.1 was selected.

Compliance Plan Approach

The Compliance Plan approach is based on an approach similar to Rule 1420. The proposed rule facilities would be required to submit and implement a compliance plan and meet a lead ambient air quality standard of $0.15\mu\text{g}/\text{m}^3$. Past experience with Rule 1420 shows that compliance plan approaches are not sufficient to demonstrate compliance with the lead ambient air quality standard. Moreover, with the more stringent lead standard, even greater assurances in the specificity of the control measures are needed. Strictly relying on an individual facility-specific compliance plan provides the facility with less regulatory certainty of the types of control measures that must be included. In addition, there are potential delays to develop, approve and implement a compliance plan. Compliance plans are generally developed between the affected facility and the AQMD staff with limited to no public process in the plan approval. As a result, the AQMD staff did not pursue this approach for the proposed rule.

Core Requirements with No Compliance Plan Approach

The Core Requirements with No Compliance Plan approach would establish core requirements that would be included in the proposed rule for point and fugitive sources, similar to PR 1420.1. Establishing core requirements in the proposed rule provides regulatory certainty for affected facilities of the key required controls for point sources and housekeeping requirements. This approach also allows public input during the development of core requirements. Under this approach, facilities would be required to implement the core requirements and meet an

established lead ambient air quality standard of 0.15 ug/m^3 . If facilities exceeded the lead ambient air quality standard, legal remedies would be implemented. In the event that the standard is exceeded, there can be delays in requiring additional measures to ensure future compliance.

Core Requirements with a “Contingency” Compliance Plan Approach

The third approach is a hybrid approach between the first and second approaches. This approach is similar to the second approach but includes a “Contingency” Compliance Plan that would be submitted if the facility approaches the lead ambient air quality standard, and would only be implemented if the facility exceeded the ambient lead standard of 0.15 ug/m^3 . The AQMD staff believes that the Compliance Plan element is needed to ensure that measures can be identified prior to exceeding the 0.15 ug/m^3 standard and are ready to begin implementation if the 0.15 ug/m^3 standard is exceeded. This approach provides greater assurance that the ambient lead standard will be achieved, and additional measures are in place if needed. The AQMD staff selected this approach as it is more proactive than the other two approaches, provides regulatory certainty for the affected facilities by establishing core requirements in the proposed rule, and is designed to minimize and/or eliminate potential delays to implement additional measures if the facility exceeds the ambient lead standard.

PROPOSED RULE 1420.1

As discussed in more detail below, PR 1420.1 provides a comprehensive approach to addressing lead emissions from large lead-acid battery recyclers with the additional safeguard of a “Contingency” Compliance Plan. The proposed rule establishes core requirements, many of which are currently used at the affected lead facilities and takes into account the value that this industry provides in recycling lead. Core requirements for lead point sources are based on a facility-wide emission rate for the facility’s lead point sources and are more stringent than the efficiency requirement under Rule 1420. Core requirements for fugitive lead sources include a comprehensive list of housekeeping and maintenance activities. The efficacy of controlling fugitive emissions, however, are in part based on the operator, such as how well sweeping activities are conducted, how carefully maintenance activities are implemented to contain fugitive dust emissions, etc. In addition, the proposed rule includes more frequent source testing, expanded monitoring network, and increased sampling and monitoring requirements than Rule 1420. In addition, PR 1420.1 provides additional reporting requirements and public notification of key activities that occur at the facility.

Applicability

PR 1420.1 applies to lead-acid battery recycling facilities in the AQMD that processed more than 50,000 tons of lead a year. In the Basin, this industry currently processes an average of at least 300 tons of lead a day per facility. As discussed in Chapter 1, there are currently two facilities in the district that meet the applicability of the proposed rule. These facilities represent the largest stationary source of lead in emissions in the Basin. In addition, data from AQMD monitors in 2005 for Quemetco and as recent as 2009 for Exide have shown that monthly averages for these facilities have exceeded the new federal lead standard of 0.15 ug/m^3 . In order to first target the largest lead sources, a minimum process limit of 50,000 tons of lead a year was set as the threshold for rule applicability. The amount was derived by assuming an operating

scenario of 5 days a week, 50 weeks a year, at 50 percent of the lowest current facility throughput limit for this industry in the Basin (~400 tons of lead/day) in order to account for years of decreased production. The language of “large” throughout the rule has been used solely to differentiate these facilities from those that are below the applicability threshold of the rule. Smaller lead-acid battery recycling facilities and other stationary lead sources are currently subject to Rule 1420. The AQMD staff will be amending Rule 1420 to address further reductions from these other lead sources.

Definitions

PR 1420.1 includes definitions of the following terms used in the proposed rule. Please refer to subdivision (c) of PR 1420.1 for the definitions:

- Agglomerating Furnace
- Ambient Air
- Battery Breaking Area
- Dryer
- Dryer Transition Piece
- Duct Section
- Emission Collection System
- Fugitive Lead-Dust
- Furnace and Refining/Casting Area
- Lead-acid Battery Recycling Facility
- Lead
- Lead Control Device
- Lead Point Source
- Leeward Wall
- Maintenance Activity
- Materials Storage and Handling Area
- Measurable Precipitation
- Partial Enclosure
- Process
- Renovation
- Sensitive Receptor
- Slag
- Smelting
- Smelting Furnace
- Total Enclosure
- Windward Wall

Requirements

Subdivision (d) of PR 1420.1 establishes key requirements. This subdivision includes requirements for the ambient air quality lead concentration, total enclosures, and lead point source controls.

Ambient Air Lead Concentration

Until January 1, 2012, large lead-acid battery recycling facilities will be required to meet an ambient air lead concentration standard of $1.5 \mu\text{g}/\text{m}^3$ averaged over 30 days pursuant to Rule 1420. Beginning January 1, 2012, large lead-acid battery recycling facilities subject to PR 1420.1 will not be allowed to discharge into the atmosphere emissions which contribute to ambient air concentrations of lead that exceed $0.15 \mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days. Measurements recorded at any rule-required ambient air lead monitor, including those operated by the District that have been installed as source-oriented monitors for the facility, are subject to compliance with the standard. The averaging time for PR 1420.1 is shorter than that of the lead NAAQS with a more frequent sampling requirement of one sample in three days versus the NAAQS which requires one sample in six days.

Total Enclosures

Under PR 1420.1, no later than July 1, 2011, all areas used in the lead-acid battery recycling operation to process or store lead-containing material will be required to be located within a total enclosure vented to a lead control device. The areas may be enclosed individually or in groups. The intent of this requirement is to provide maximum containment and minimize fugitive lead-dust emissions generated in areas where processing, handling and storage of lead-containing materials occur. Areas for total enclosure will include:

- Battery breaking areas;
- Material storage and handling areas, excluding areas where unbroken lead-acid batteries and finished lead products are stored;
- Dryer and dryer areas including transition pieces, charging hoppers, chutes, and skip hoists conveying any lead-containing material;
- Smelting furnace and smelting furnace areas charging any lead-containing material;
- Agglomerating furnace and agglomerating furnace areas; and
- Refining and casting areas.

Facilities will be required to submit complete permit applications for all construction and necessary equipment for total enclosures within 30 days of the date of adoption for PR 1420.1. Construction is required to be completed within 180 days of receiving Permit to Construct approvals from the Executive Officer, or by July 1, 2011, whichever is earlier. In order to account for unexpected delays, facilities may be granted extensions to the compliance deadline date if they can demonstrate that all complete permit applications were timely filed, and that compliance deadlines cannot be met 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.

Areas with a total ground surface area of 10,000 square feet or more require a minimum of three digital differential pressure monitors: one at the leeward wall of the total enclosure, one at the windward wall, and one at an exterior wall that connects the leeward and windward wall at a location defined by the intersection of a perpendicular line between this wall and a straight line between the other two monitors in order to account for shifts in draft direction throughout the enclosure. Each total enclosure is required to be maintained at a negative pressure of at least 0.02 mm of Hg (0.011 inches H_2O) and an in-draft velocity of at least 300 feet per minute at any opening such as vents, windows, passages, doorways, bay doors, and roll-ups. For smaller enclosures, at least one differential pressure monitor, continuously measuring the negative pressure of the total enclosure, is required to be installed on the leeward wall.

Digital differential pressure monitors must be capable of measuring and displaying negative pressure in the range of 0.01 to 0.2 mm Hg (0.005 to 0.11 inches H₂O) with a minimum accuracy of plus or minus 0.001 mm Hg (0.0005 inches H₂O). Digital differential pressure monitoring systems will also need to be equipped with a continuous strip chart recorder or electronic recorder approved by the Executive Officer. If the facility elects to use an electronic recorder, the recorder will need to be capable of writing data on a medium that is secure and tamper-proof. The recorded data needs to be readily accessible upon request by the Executive Officer. A copy of any software that is not readily available to the Executive Officer and required to access the recorded data, including all subsequent revisions, must be provided to the Executive Officer at no cost. If a device is needed to retrieve and provide a copy of such recorded data, the device must be maintained and operated at the facility.

Additionally, to ensure availability of data that may be useful in determining reasons for changes in ambient air lead concentrations during power outages, installation of a backup, uninterruptible power supply will be required on all digital differential pressure monitors. The amount of backup power supplied must be capable of sufficiently powering the monitors until processes and equipment at the facility can be safely brought down if the power outage is for a substantial period.

Lead Point Source Emission Controls

Lead point sources are defined by the proposed rule as any location where lead is emitted into the atmosphere from processes or equipment used in the lead-acid battery recycling operation that pass through a stack or vent designed to direct or control its exhaust flow. All lead emissions from lead point sources are required to be vented to an emissions collection system that ducts the entire gas stream to a lead control device. Proposed requirements for lead point source emission controls will be effective beginning July 1, 2011 in order to give facilities ample time to apply for permits and construct all necessary lead control devices. Requirements for the submittal of complete permit applications, construction, compliance deadlines, and extensions for lead control devices are the same as those specified earlier for total enclosures.

The total facility mass lead emission rate for all lead point sources shall not exceed 0.045 pounds of lead per hour, with a maximum emission rate for any single lead point source not to exceed 0.010 pounds of lead per hour. The total facility and maximum emission rates shall be determined using the most recent source tests conducted by the facility or the District. The facility mass emission rate for all lead point sources requires a greater control efficiency than the 99 percent control efficiency required under Rule 1420. The total facility mass emission rate standard of 0.045 pounds of lead per hour was selected based on modeling emissions from the facilities' existing lead emission point sources. The air dispersion modeling performed was consistent with the modeling in the most recent HRAs for each facility, and used updated stack parameters, meteorological data, and source test results for each point source. Calculations do not include background lead concentrations.

In order to meet the 0.15 µg/m³ standard, considering stack emissions only, modeling resulted in an emission rate threshold of 0.0009 g/s or 0.007 lbs/hr for each stack for Exide and 0.002 g/s or 0.016 lbs/hr for each stack for Quemetco. The modeled emission rates do not ensure that the

standard will be met, but provide a correlation between the stack emission rate and potential ambient lead concentration. Since overall facility emissions are a combination of lead point source emissions and fugitive emissions, to achieve the lead standard of $0.15 \mu\text{g}/\text{m}^3$, the stack emissions must be sufficiently controlled to provide some margin for fugitive emissions. Using the most recent source tests from both facilities, the AQMD staff found that the emission rates from one of the affected facilities were not sufficiently controlled and through air dispersion modeling would exceed the $0.15 \mu\text{g}/\text{m}^3$ lead standard.

Requiring a mass emission rate from all lead point sources of 0.045 pounds per hour ensures point sources are controlled to allow a 30 percent margin for fugitive emissions. It is difficult to determine if a 30 percent margin for fugitive emissions is sufficient because the fugitive emissions are based on how well the facility can implement housekeeping and containment provisions. Under PR 1420.1, if the facility approaches $0.12 \mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days, the facility is required to submit a Compliance Plan that will specify additional control strategies to further control lead point sources and fugitive emissions. If lead point sources are further controlled, this would provide a greater margin to work with for fugitive emissions. If additional housekeeping control strategies are added, this will further reduce fugitive emissions.

The maximum emission rate of 0.010 lb/hr for any individual lead control device was selected to adequately provide a protective limit for exposure to lead emissions and the ambient standard. Additionally, modeling of each individual stack for both facilities was conducted and results showed that a single stack emitting 0.01 lb/hr would not exceed $0.15 \mu\text{g}/\text{m}^3$ standard at the fence line. Both the total facility and maximum individual stack emission rates, if exceeded, serve as a screening tool to indicate whether facilities need to reassess their lead control strategy to address other factors that affect the ambient air quality standard, such as controlling fugitive lead-dust emissions.

Facilities will also be required to install a secondary lead control device that is fitted with dry filter media and controls lead emissions from the exhaust of the primary lead control device used for a dryer. Staff has reviewed historical source test data, modeling results, breakdown reports, and maintenance records for the dryer at one facility and has determined that it requires a secondary lead control device due to its high emissions. If the secondary lead control device for the dryer is fitted with dry filter media, it shall only be used to vent the primary lead control device for the dryer to ensure that breakdowns or malfunctions resulting from events such as filters or bags catching fire are appropriately attributed to and isolated to the dryer, avoiding impacts to the performance or emissions of other control devices. This will also ensure that emissions from other control devices are not affected if the secondary lead control device fails due to the failure of the primary lead control device for the dryer. A facility may use an alternative secondary lead control method that is equally or more effective for the control of lead emissions if a complete permit application is submitted as part of the permit application required under paragraph (d)(3) and approved by the Executive Officer.

Furthermore, all filters and filter bags used in any lead control device are required to be rated by the manufacturer to achieve a minimum of 99.97% capture efficiency for 0.3 micron particles, or made of polytetrafluoroethylene membrane material. Any other material that is equally or more

effective for the control of lead emissions may be used so long as it is approved by the Executive Officer.

Staff reviewed source test results conducted for existing lead control devices at both facilities. Results indicate that existing lead control devices at one facility will meet both the proposed average and maximum emission rate limits. The other facility is anticipated to install a secondary lead control device on an existing baghouse controlling a dryer, and upgrade the filter media for a primary lead control device ventilating a total enclosure in order to comply with the proposed rule emission rate limits.

Compliance Plan

Compliance with PR 1420.1 is primarily based on an ambient concentration of lead at fence line monitors. The proposed rule is designed to control lead point source emissions and fugitive lead-dust emissions to achieve the ambient lead standard. Due to the uncertainties involved in controlling fugitive lead-dust, however, a Compliance Plan is proposed as a contingency if a facility approaches the ambient lead standard after all control strategies are implemented. The Compliance Plan is a “safety net” to ensure that the facility will achieve the 0.15 $\mu\text{g}/\text{m}^3$ lead standard. Beginning July 1, 2011, any facility that exceeds an ambient air lead concentration of 0.12 $\mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days will be required to submit a Compliance Plan that identifies additional lead emission reduction measures to ensure that the ambient air quality concentration of 0.15 $\mu\text{g}/\text{m}^3$ is not exceeded. The purpose of this provision is to address those facilities that still may have difficulty demonstrating compliance with the ambient air lead concentration even after full implementation of PR 1420.1 requirements. The Compliance Plan will identify additional measures to be implemented if the 0.15 $\mu\text{g}/\text{m}^3$ concentration is exceeded. At a minimum, each Compliance Plan submittal shall include:

- A comprehensive list of additional short term and long term lead emission reduction measures to be implemented in the event that ambient concentrations of lead exceed 0.15 $\mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days. Additional lead emission reduction measure must include, but are not limited to:
 - More stringent housekeeping measures, such as installation and maintenance of vehicle wet wash areas additional areas for cleaning, and increased cleaning frequencies;
 - Additional areas for total enclosures that may result in exceedances or are a significant source of lead emissions;
 - Modification to lead control devices,
 - Installation of multi-stage control devices;
 - Process changes including reduced throughput limits; and
 - Conditional curtailments including, at a minimum, information specifying the curtailed processes, process amounts, and length of curtailment;
- Locations within the facility and method(s) of implementation for each lead reduction measure; and
- An implementation schedule for each lead reduction measure if ambient air concentrations of lead exceed 0.15 $\mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days, including a schedule for those that can be implemented immediately prior to plan approval.

Under the proposed rule, facilities are only required to submit a Compliance Plan if the ambient air concentration of lead is above $0.12 \mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days. Facilities will be required to notify the Executive Officer in writing within 72 hours of when the facility knew or should have known of exceeding an ambient air concentration of lead above $0.12 \mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days. Facilities will then be required to submit the Compliance Plan to the Executive Officer for review and approval within 30 calendar days of exceeding the ambient air lead concentration of $0.12 \mu\text{g}/\text{m}^3$. The Executive Officer will notify the facility in writing whether the Compliance Plan is approved or disapproved. Determination of approval status will be based on, at a minimum, submittal of information that satisfies the criteria set forth in paragraph (g)(2) of the proposed rule.

If the Compliance Plan is disapproved, the owner or operator will be required to resubmit the Compliance Plan within 30 calendar days after notification of disapproval. The resubmitted Compliance Plan shall include any information necessary to address deficiencies identified in the disapproval letter. If the resubmitted Compliance Plan is denied, the operator or owner may appeal the denial by the Executive Officer to the Hearing Board under Rule 216 – Appeals and Rule 221 - Plans.

Lead reduction measures identified in the Compliance Plan will be implemented based on the schedule of the approved Compliance Plan. Implementation of measures will begin if ambient concentrations of lead exceed $0.15 \mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days. It should be noted that exceeding the $0.15 \mu\text{g}/\text{m}^3$ standard will only trigger implementation of the Compliance Plan if it occurs before January 1, 2012. Thereafter, an exceedance of the standard will constitute a violation, [as well as triggering implementation of the Compliance Plan](#).

Housekeeping Requirements

The following housekeeping requirements are proposed to minimize fugitive lead-dust emissions. All requirements will be effective within 30 days of rule adoption.

- 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. This shall be done in a manner that does not generate fugitive lead-dust. The following areas shall be cleaned at the specified frequencies, unless located within a total enclosure vented to a lead control device:
 - Monthly cleanings of roof tops on structures ≤ 45 feet in height that house areas that are associated with the storage, handling or processing of lead-containing materials;
 - Quarterly cleanings of roof tops of structures > 45 feet in height that house areas associated with the storage, handling or processing of lead-containing materials;
 - Weekly cleanings of all areas where lead-containing wastes generated from housekeeping activities are stored, disposed of, recovered or recycled; and
 - Initiate immediate cleaning after any maintenance activity or event, including, but not limited to, process upsets or equipment malfunction that causes deposition of lead-containing materials onto any of the above areas.
- Monthly structural integrity inspections of any structures that house, contain, or control lead emission points or fugitive lead-dust emissions.

- Storage or processing of any lead-acid battery that is cracked or leaking upon receipt at the facility.
- Encapsulation (paving, asphaltting, etc.) of all facility grounds for the purpose of providing a surface that accommodates ease of cleaning.
- Removal of weather caps on any stack that is a lead emissions source.
- Storage of all materials capable of generating any amount of fugitive lead-dust in sealed, leak-proof containers, unless located within a total enclosure. Examples of materials include slag, spent filters used in lead control devices, and lead-containing waste generated from housekeeping requirements.
- Transport of all materials capable of generating any amount of fugitive lead-dust emissions within closed conveyor systems or in sealed, leak-proof containers, unless conducted within a total enclosure.
- Surface impoundment pond cleanings.
- Facility grounds cleaning using onsite mobile vacuum sweepers.

Surface Impoundment Cleaning

The proposed rule requires cleanings of surface impoundment ponds or reservoirs. These ponds are typically exposed to the atmosphere and used to hold storm water and spent water used for washing down areas or objects that may contain fugitive-lead dust. These holding areas pose the potential for release of lead to the atmosphere when they are drained or when water evaporates. This provision will require facilities to initiate removal of any lead-containing material, including sludge, from the entire surface area of any surface impoundment pond or reservoir within 124 hours after the water level is equal to or less than one inch at any point 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. Surfaces shall be washed down in a manner that does not generate fugitive lead-dust weekly thereafter until used again for holding water.

Onsite Mobile Vacuum Sweepers

Another proposed requirement intended to reduce fugitive lead-dust emissions is periodic facility sweepings using onsite mobile vacuum sweepers or vacuums equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles. Facilities will be required to vacuum sweep all facility areas subject to vehicle and foot traffic with a vacuum or an onsite mobile vacuum sweeper that is in compliance with District Rule 1186. Vacuum sweeping will be required three times each day, occurring at least once per operating shift with each event not less than four hours apart. Additionally, any accidents, mishaps and/or process upsets occurring in the aforementioned areas that result in the deposition of lead-containing material or dust shall be vacuum swept immediately, no later than one hour after occurrence. Further, sweeping will not be required on any day where the onsite measured rain amount is greater than 0.01 inches in any 24-hour calendar day. Facilities may use locally recorded and reported measured rain amounts.

Maintenance Activity

For purposes of the proposed rule, maintenance activity is defined as any of the following activities conducted outside of a total enclosure that generates fugitive lead-dust:

- Building construction, renovation, or demolition;
- Replacement or repair of refractory, filter bags, or any internal or external part of equipment used to process, handle, or control lead-containing materials;
- Replacement of any duct section used to convey lead-containing exhaust;
- Metal cutting or welding that penetrates the metal structure of any equipment used to process lead-containing material, and its associated components, such that lead dust within the internal structure or its components can become fugitive lead-dust; or
- Resurfacing, repair, or removal of ground, pavement, concrete, or asphalt.

Upon adoption of the rule, the owner or operator of a large lead-acid battery recycling facility will be required to conduct any maintenance activity that is not done in a total enclosure, inside a negative air containment enclosure that is 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. The negative air containment shall enclose all affected areas where the potential for fugitive lead-dust generation exists. If the maintenance activity cannot be conducted in a negative air containment enclosure due to physical constraints, limited accessibility, or safety issues when constructing or operating the enclosure, the facility will be required to conduct the activity under the following conditions:

- In a partial enclosure, barring conditions posing physical constraints, limited accessibility, or safety issues;
- 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 will also be required during the maintenance activity barring safety issues;
- While collecting 24-hour samples in conjunction with sample collections at ambient air at monitors for every day that maintenance activity is occurring notwithstanding paragraph (j)(2). For unplanned maintenance activity, if sampling is not being conducted on the day the incident occurs, sample collection shall begin at midnight at the end of the day on which the incident occurs; and
- Maintenance activity conducted outside a negative enclosure must cease immediately if instantaneous wind speeds are 25 miles per hour or greater. Maintenance work may be continued if it is necessary to prevent the release of lead emissions.

All lead-contaminated equipment and materials used for any maintenance activity requires immediate storage or cleaning after completion of work, 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. Storage and cleaning must be done in a manner that does not generate fugitive lead-dust. Facilities will also be required to notify the public regarding specific types of maintenance activity (see below in *Notifications to the Public*).

Ambient Air Monitoring and Sampling Requirements

Under PR 1420.1, each facility will be required to collect and analyze ambient air lead samples to determine compliance with the ambient air quality lead concentration standard of PR 1420.1. Prior to January 1, 2011, facilities will be required to conduct ambient air monitoring and

sampling pursuant to Rule 1420. No later than January 1, 2011, facilities shall conduct ambient air monitoring and sampling as follows:

- Collect samples from a minimum of four sampling sites approved by the Executive Officer, at locations that are based on maximum expected ground level lead concentrations at or beyond the property line of the facility.
 - Locations are to be determined by air dispersion modeling calculations approved by the Executive Officer and emission estimates from all lead point sources and fugitive lead-dust sources. Other factors to be considered when determining sampling locations include, but are not limited to, population exposure and seasonal meteorology.
 - Sampling sites at the property line may be located just inside the fence line on facility property if logistical constraints preclude placement outside the fence line at the point of maximum expected ground level lead concentrations.
 - One or more of the four sampling sites may be required by the Executive Officer to be at locations that are not based on maximum impact, and that are instead at locations at or beyond the property line that is representative of upwind or background concentrations. A minimum of one of the four sampling sites, however, will be required to be based on maximum impact.
- Collect 24-hour, midnight-to-midnight, samples at all sites for 30 consecutive days from the date of initial sampling, followed by one 24-hour, midnight-to-midnight, sample collected at least once every three calendar days, on a schedule and frequency approved by the Executive Officer;
- Submit collected samples to a laboratory approved under the SCAQMD Laboratory Approval Program for analysis within three calendar days of collection and provide duplicate samples to the District upon request by the Executive Officer; and
- Calculate 30-day average ambient lead concentrations for individual 24 hour samples within 15 calendar days of the end of the calendar month.

Facilities will also be required to continuously monitor wind speed and direction for the ambient air quality monitoring system at all times to supplement data analysis of samples collected. Only personnel approved by the Executive Officer will be allowed to conduct ambient air quality monitoring, and sampling equipment shall be operated and maintained in accordance with U.S. EPA-referenced methods.

Cleaning activities, such as wet washing and misting, that result in damage or biases to samples collected, will not be allowed within 10 meters of any sampling site required by the rule. Additionally, all ambient air quality monitoring systems will be required to be equipped with a backup, uninterruptible power supply for use during a power outage. The backup power supplied must be sufficient to power the monitors until processes and equipment at the facility can be safely brought down.

Facilities will be required to collect samples at least once every three days. Current Rule 1420 requires at least one sample to be collected every six days, however, approvals of Rule 1420 ambient air monitoring plans over the past years have required facilities to sample at frequencies proposed in PR 1420.1. Staff believes that sampling every three days provides sufficient

information to accurately reflect the ambient air concentrations at the facility during normal operations. The AQMD staff agrees that if the facility does see a spike, that more frequent sampling should be implemented as discussed below. Community members commented that sampling once every three days does not account for fluctuations in throughput and feel that a daily sampling would provide for a more comprehensive look regarding ambient air lead concentrations. Based on historical monitoring data, in most cases exceedances have been due to housekeeping or maintenance activities and were not related to throughput fluctuations. As discussed under “Housekeeping Requirements,” PR 1420.1 includes a number of requirements to address these potential emissions spikes.

On and after January 1, 2012, facilities that exceed an ambient air lead concentration of $0.15 \mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days, measured at any fence line monitor required by the rule, will be required to increase ambient air monitoring and sampling to a daily frequency. Daily ambient air monitoring and sampling will be required to begin no later than three calendar days of the time the facility knew or should have known of the exceedance. Daily monitoring and sampling will be required to be conducted for a period of sixty consecutive days at each sampling site that measured an exceedance. Any subsequent exceedance at a monitor that measured an exceedance shall require restarting the 60 consecutive-day period.

Any existing ambient air monitoring network currently in use for Rule 1420 may be used for compliance with PR 1420.1 so long as all rule requirements have been met.

Source Tests

The proposed rule will require annual source tests for all lead control devices in order to demonstrate compliance with the facility total lead mass emission rate standard of 0.045 lb/hr, and the maximum individual stack lead emission rate standard of 0.01 lb/hr. Initial source tests for new and modified lead control devices with an initial start-up date on or after the adoption date of the proposed rule will be required within 60 days of initial start-up. Existing lead control devices in operation before the adoption date of the rule will require a source test no later than six months after adoption of the rule. An existing source test, for existing lead control devices, conducted on or after January 1, 2009 may be used as the initial source test as long as the test:

- Is the most recent conducted since January 1, 2009;
- Demonstrated compliance with the applicable control standard;
- Is representative of the method to control emissions currently in use; and
- Was conducted using applicable and approved test methods.

The rule lists the following applicable test methods:

- SCAQMD Method 12.1;
- CARB Methods 12 and 436; and
- EPA Method 12.

Use of an alternative or equivalent test method will be allowed as long as it is approved in writing by the Executive Officer, CARB, and the U.S. EPA. Facilities will be required to submit a pre-test protocol to the Executive Officer at least 60 calendar days prior to conducting the source test. Notification to the Executive Officer in writing shall also be required one week prior to conducting the source test.

The proposed rule provides an incentive for lead control devices that demonstrate exemplary lead emission rate source test results. If the results of the most recent source test for a single lead point source control device indicate emissions of 0.0025 pounds of lead per hour or less, the next test for that lead control device may be performed within 24 months after the date of the most recent test. The rate of 0.0025 pounds of lead per or hour represents 50% of the average rate required for an individual stack, based on modeling of the PR 1420.1 affected facilities, to meet the 0.045 pounds of lead per hour rate for all facility lead point sources.

New Facilities

Under PR 1420.1, any new facility that begins construction or operations on or after rule adoption shall not be located in an area that is zoned for residential or mixed use. In addition, any new facility shall not be 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. A siting provision for new facilities is proposed to avoid the possibility of high lead exposure for nearby residences and sensitive receptors from any new lead-acid battery recycling facility. This provision was included in PR 1420.1 due to the persistent nature of lead and the potential for lead particle accumulation over time. Individual events of small amounts of lead emitted by the facility may not trigger non-attainment status with the new lead NAAQS, however, chronic, cumulative lead exposure is a concern.

Recordkeeping

PR 1420.1 will require records indicating amounts of lead-containing material processed at the facilities to be maintained by the facility. Examples of records include purchase records, usage records, results of lead content analysis, or other AQMD-approved verification to indicate processing amounts. Records for all rule-required housekeeping, maintenance activity, ambient air lead monitoring, lead control device inspection and maintenance, and unplanned shutdowns of any smelting furnaces must also be maintained. All records shall be maintained for five years and maintained onsite for at least two years.

Reporting

Ambient Air Monitoring

Under the proposed rule, facilities will be required to submit reports for monthly ambient air monitoring results for lead and wind data measured at each sampling location on a monthly basis. Reports must be submitted starting no later than January 1, 2011 and must include the results of individual 24-hour samples and 30-day averages for each day within the reporting period. In addition, any exceedance of the ambient air quality concentration shall be reported to the Executive Officer (1-800-CUT-SMOG) within 24 hours of receipt of completed sample analysis, followed by a written report to the Executive Officer no later than three ~~calendar~~ business days after the notification.

Shutdown and Turnarounds

PR 1420.1 requires notifications to the Executive Officer and the public of planned and unplanned shutdowns. Planned shutdown of any smelting furnace, battery breaker, or lead control device that results in lead emissions shall be reported to the Executive Officer by calling 1-800-CUT-SMOG at least ten days prior to shutdown. Unplanned shutdown of any lead control device shall be notified to the Executive Officer by calling 1-800-CUT-SMOG within 1 hour of

shutdown. The notification shall include the associated processes or equipment vented by the shutdown lead control device. For both shutdowns above, a written notification shall also be made to the Executive Officer no later than three calendar days after the shutdown has occurred. Provisions for public notifications are described below.

Maintenance Activity

Under PR 1420.1 facilities will be required to notify the Executive Officer at least ten days prior to the beginning of any maintenance activity that is conducted routinely on a monthly or less frequent basis. Notification information shall include a description of the activity including dates, times, name of person(s) conducting the activity, and specific locations at the facility where activities will be conducted. A description of lead abatement procedures that will be used to minimize lead emissions is also required. For the purpose of the proposed rule, maintenance activity means any maintenance activity defined in paragraph (c)(15) that is conducted outside a total enclosure and generates fugitive-lead dust as recognized by the Executive Officer. Below is a list of specific types of activities that require a notification if the potential for fugitive-lead dust generation exists:

- Building construction, renovation, or demolition;
- Replacement or repair of refractory, filter bags, or any internal or external part of equipment used to process or handle lead containing materials;
- Replacement of any duct section used to convey lead-containing exhaust;
- Metal cutting or welding that penetrates the metal structure of any equipment used to process lead-containing material; or
- Resurfacing, repair, or removal of ground, pavement, concrete, or asphalt.

Provisions for public notifications of these activities are described below.

Notifications to the Public

Through comments received at working group meetings for this rule, residents in close proximity to PR 1420.1 facilities have expressed their concern for the lack of awareness of various activities conducted at the plant that have the potential to result in increased ambient lead concentrations. Community members have requested that information be made available to them so that they can safely plan outdoor activities.

In response to these concerns, PR 1420.1 requires facilities to provide notifications to the public through a facility contact or pre-recorded notification center that is accessible 24 hours a day, 7 days a week, or by another method approved by the Executive Officer that informs the public when the facility will be conducting the specific activities. The facility will be required to install a sign displaying the phone number for the contact or the pre-recorded notification center that is visible to the public. In addition, the facility is required to send notifications via electronic mail. The AQMD staff will provide a list of people who would receive the electronic mail. Facility representatives have asked if information can be placed on their website. This approach would be acceptable provided the sign includes the website information.

The timing of the notifications is similar to notification requirements that are required for the Executive Officer. PR 1420.1 also specifies the type of information that must be included in the

notification such as the date, time, location, and description of the activity. PR 1420.1 requires that notification to the public be provided for the following activities:

- Roof washings;
- Resurfacing, repair, or removal of ground, pavement, concrete, or asphalt that are located outside of a total enclosure and generate fugitive lead-dust;
- Building construction, renovation, or demolition conducted outside of a total enclosure and generates fugitive lead-dust;
- Planned shutdowns or turnarounds of any smelting furnace, battery breaker, or lead control device that will result in lead emissions; or
- Unplanned shutdowns of any lead control device.

Initial Facility Status Report

Under PR 1420.1, no later than January 1, 2011, existing facilities will be required to submit an Initial Facility Status Report. Minimum information required in the report is specified in Appendix 1 of the proposed rule. Below is a summary of required information:

- General facility information (name, address, contact number);
- Worker and sensitive receptor locations with respect to the facility;
- Facility building parameters;
- Description of the lead processes at the facility;
- For all three calendar years dating back from the adoption of the rule:
 - ✓ Annual amounts of all lead-containing materials processed;
 - ✓ Maximum and average daily and monthly operating schedules;
 - ✓ Maximum and average daily and monthly lead-processing rates for all equipment and processes;
 - ✓ Maximum and average daily and annual lead emissions;
- Engineering drawings, calculations, or other methodology to demonstrate compliance with emission standards; total enclosures; ambient air lead monitoring and concentrations; and source tests;
- Intended source test dates for all lead control devices; and
- The name, title, and signature of the responsible official certifying the report.

Ongoing Facility Status Report

Facilities will be required to update the Executive Officer of facility status and changes through submittal of an Ongoing Facility Status Report under PR 1420.1. Reports will be due every year on or before February 1st and shall include information covering the preceding calendar year. Minimum information required in the report is specified in Appendix 2 of the proposed rule.

Below is a summary of required information:

- ✓ General facility information (name, address, contact number);
- ✓ Quantities of lead-containing materials processed;
- ✓ Maximum and average daily and monthly lead-processing rates from all equipment and processes;
- ✓ Maximum and average daily and annual emissions of lead from all emission points and fugitive lead-dust sources;
- ✓ Description of changes in worker and sensitive receptor locations and distances since the previous reporting period;

- ✓ Description of changes in monitoring, processes, or controls since the previous reporting period; and
- ✓ The name, title, and signature of the responsible official certifying the report.

CHAPTER 3: IMPACT ASSESSMENT

INTRODUCTION

IMPACT ASSESSMENT FOR PROPOSED RULE 1420.1

CALIFORNIA ENVIRONMENTAL QUALITY ACT

SOCIOECONOMIC ASSESSMENT

**DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE
SECTION 40727**

COMPARATIVE ANALYSIS

INTRODUCTION

Various potential sources of lead emissions within the Basin were evaluated in order to plan strategies for attainment with the 2008 NAAQS. Staff has conducted an analysis of lead-emitting sources that may contribute to non-attainment status with the new lead NAAQS. Measurements taken at AQMD's monitoring network for ambient air lead concentrations were also reviewed for years 2007 through 2010, along with an analysis of lead emissions using multiple data sources including AQMD's AER program, permitting data, and compliance data for years 2005 through 2007. Additional information from AQMD's AB2588 air toxics program, including results of historical and current source test reports, were also included in the evaluation. Based on the analysis, the lead-acid battery recycling industry was identified as the largest source of lead emissions in the AQMD and is the industry affected by PR 1420.1.

Historical AQMD compliance data indicates that some exceedances of ambient air quality concentrations for lead have been related to fugitive lead-dust emissions from partially controlled emission points, process upsets, and minimal housekeeping practices at large lead-acid battery recycling facilities. PR 1420.1 requirements for total enclosures of all major lead recovery and storage processes along with enhanced housekeeping practices are expected to achieve reductions in fugitive lead-dust emissions and consequently reduce ambient air lead concentrations resulting from large lead-acid battery recycling facilities.

IMPACT ASSESSMENT FOR PROPOSED RULE 1420.1

A technical analysis of the impacts of requirements for facilities subject to PR 1420.1 was conducted to evaluate potential economic and environmental impacts of PR 1420.1. The impact analysis was based on compliance with requirements proposed to achieve attainment with the 2008 NAAQS for lead.

Implementation of PR 1420.1 will reduce lead point source and fugitive emissions from lead-acid battery recycling facilities. PR 1420.1 will result in a reduction in lead point source emissions through requirements for lead point source emission rates, installation of secondary controls on dryers, and use of specific filters/bags in lead control devices. Based on emission rates from the most recent source tests, implementation of PR 1420.1 will reduce overall facility lead emissions from point sources at Exide. PR 1420.1 is not expected to result in additional reductions to lead point source emissions at Quemetco since the most recent source tests for its lead control devices show they are well below the facility lead emission rate of 0.045 lbs/hour. However, proposed emission rates of the rule will require maintenance at these levels. Reductions of fugitive lead emission are expected at both facilities through PR 1420.1 housekeeping requirements and total enclosures, however, they are difficult to quantify due to the nature of these types of emissions, the types of control strategies that are used, and the manner and frequencies in which housekeeping is conducted. Ultimately facilities will be required to meet a new ambient air quality standard of $0.15 \mu\text{g}/\text{m}^3$, which is tenfold lower than the previous standard.

Implementation of PR 1420.1 would result in a net environmental benefit due to the further reduction of lead exposure and associated health benefits. However, potential cost and environmental impacts may occur in association with the installation of air pollution control devices and implementation of other measures to control lead emissions.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

Pursuant to California Environmental Quality Act (CEQA) Guidelines §15252 and AQMD Rule 110, the AQMD has prepared an Environmental Assessment (EA) for PR 1420.1. The Draft EA was released for a 30-day public review and comment period beginning April 27, 2010 and ending May 26, 2010. No comments were received.

Subsequent to the public circulation of the Draft EA for proposed project, PR 1420.1 was modified as follows:

- Removal of 99 percent control efficiency compliance option for lead control devices
- Addition of total facility lead emission rate and maximum individual lead control device emission rate (pounds per hour)
- Addition to use specific filters/bags in lead control devices
- Addition of secondary lead controls on the dryer
- Removal of vehicle wet wash area requirement
- Public notifications for:
 - Unplanned and planned shutdowns/turnarounds of specific equipment
 - Specific types of maintenance activity

The modifications were analyzed and AQMD staff concluded that recirculation was not necessary per CEQA Guidelines §15073.5, because the modifications were determined not to be a substantial revision (i.e., a new, avoidable significant effect that requires mitigation measure or project revisions to reduce the effect to insignificance or that project effects cannot be reduced to insignificant and new measures or project revisions are required). Recirculation is not required, because mitigation is not required; the modifications were not a response to written or verbal comments on the proposed effects identified in the Draft EA; modifications were not required by CEQA, and do not create new significant environmental effects, and it is not necessary to mitigate an avoidable significant effect; and new information added to the proposed project makes insignificant modifications to the Draft EA.

SOCIOECONOMIC ASSESSMENT

PR 1420.1 will incorporate the latest amendments to the federal NAAQS for Lead, as adopted by the U.S. EPA on October 15, 2008. PR 1420.1 would also propose additional provisions beyond the NAAQS which include total enclosures, detailed housekeeping requirements, increased monitoring, and periodic emissions testing of add-on air pollution control devices. The total annual cost for both facilities to comply with PR 1420.1 is estimated at \$0.41 million for the first year, and \$0.32 million annually thereafter. The socioeconomic assessment ~~will be~~^{was} made available to the public at least 30 days prior to the Public Hearing and will be included as part of the Public Hearing package.

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 AQMD 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

A need exists to adopt Proposed Rule 1420.1 in order to 1) implement the more stringent National Ambient Air Quality Standard for lead set by the U.S. EPA adopted October 15, 2008, 2) impose requirements intended to reduce lead emissions from the source category that has caused non-attainment designation of the Los Angeles County portions of the Basin, and 3) to protect public health by reducing cancer risk and other health effects from exposure to lead emissions pursuant to California Health and Safety Code Sections 39669.5 and 44390 through 44394.

Authority

The AQMD Governing Board has authority to adopt Proposed Rule 1420.1 pursuant to the California Health and Safety Code Sections 39002, 39650 et. seq., 39669.5, 40000, 40001, 40440, 40441, 40702, 40725 through 40728, 41508, 41700, 41706, 44365, and 44390 through 44394.

Clarity

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

Consistency

PR 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

PR 1420.1 will not impose the same requirements as any existing state or federal regulations, other than implementing the NAAQS for lead. The requirements of PR 1420.1 are in addition to Rule 1420. The proposed rule is necessary and proper to execute the powers and duties granted to, and imposed upon, the AQMD.

Reference

By adopting PR 1420.1, the AQMD 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 the 2008 National Ambient Air Quality Standards for Lead.

Problem

Prior to adoption of a rule or regulation that reduces criteria pollutants, H&S Code 40001(c) requires districts to determine that there is a problem that the proposed rule or regulation will alleviate and that the rule or regulation will promote the attainment or maintenance of state or federal ambient air quality standards. It has been determined that ~~lead-acid battery recycling facilities~~the District will have a problem meeting the 2008 NAAQS for lead if further strategies are not implemented to control lead emissions from ~~their~~lead-acid battery recycling facilities. PR 1420.1 will help alleviate this problem and help ensure compliance with the 2008 NAAQS for lead.

Rule Adoption Relative to Cost-effectiveness

Health and Safety Code Section 40922 requires that a cost-effectiveness ranking of available and proposed control measures is to be assessed for plans prepared pursuant to and Health and Safety Code, Part 3, Chapter 10. PR 1420.1 is not a control measure in the 2007 Air Quality Management Plan (AQMP) and thus, was not ranked by cost-effectiveness relative to other AQMP control measures in the 2007 AQMP. Furthermore, pursuant to Health and Safety Code Section 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.

Incremental Cost-effectiveness

Health and Safety Code Section 40920.6 requires an incremental cost effectiveness analysis for Best Available Retrofit Control Technology (BARCT) rules or emission reduction strategies when there is more than one control option which would achieve the emission reduction objective of the proposed amendments, relative to ozone, CO, SO_x, NO_x, and their precursors. Since the proposed rule applies to lead, the incremental cost effectiveness analysis requirement does not apply. Furthermore, PR 1420.1 is not a BARCT rule for the listed pollutants, but rather is intended to bring the AQMD into compliance with the federal NAAQS.

AQMP and Legal Mandates

PR 1420.1 is not a measure in the AQMP. PR 1420.1 is ~~an air-toxic~~ rule that would implement the requirements of the U.S. EPA's NAAQS for lead and would also reduce cancer and other risk.

COMPARATIVE ANALYSIS

Health and Safety Code section 40727.2 requires a comparative analysis of the proposed rule with any rules and regulations applicable to the same source. This comparative analysis does not include the state ambient air quality standard because it is still at 1.5 µg/m³.

Table 3-1: Comparison of PR 1420.1 with District Rule 1420, the 2008 Lead NAAQS, and the NESHAP for Secondary Lead Smelters

Rule Element	PR 1420.1	District Rule 1420	2008 Lead NAAQS	NESHAP from Secondary Lead Smelting
Applicability	Lead-acid battery recycling facilities that have ever processed more than 50,000 lead-tons/year <u>in the past 5 years or in any future year</u>	Facilities that use or process lead-containing materials	All States	Secondary lead smelters
Ambient Air Quality Standard	On and after January 1, 2012, meet 0.15 µg/m ³ averaged over 30 consecutive days	1.5 µg/m ³ averaged over 30 days	0.15 µg/m ³ : - 3-month average - Demonstrated over a 3-year period.	None
Total Enclosures	Total enclosures for main areas where processing, handling and storage of lead-containing materials occur	None ¹	None ²	Total <u>or</u> 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 furnace product taps
Emission Standard and Requirements for Lead Control	- Total facility mass emission rate of 0.045 lbs/hr of lead from all lead	99% control efficiency for particulate matter; 98% control efficiency	None	Concentration of 2.0 mg/dscm

¹ Total enclosures have been required through Compliance Plans and legal actions.

² Effective date for the NAAQS is five years after final attainment designation.

Rule Element	PR 1420.1	District Rule 1420	2008 Lead NAAQS	NESHAP from Secondary Lead Smelting
Devices	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	for lead		
Compliance Plan	Only required if a facility exceeds $0.12 \mu\text{g}/\text{m}^3$; 30 consecutive day avg.; Identifies additional lead control measures beyond the rule; Begin implementation if facility exceeds $0.15 \mu\text{g}/\text{m}^3$; 30 consecutive day avg.	Specifies general facility information ³	None	None
Ambient Air Monitoring Requirements	- Minimum of four monitors at facility locations approved by the	- Minimum of two monitors at facility locations approved by the	For states, a minimum of: - One source-oriented monitor at all	None

³ Additional facility requirements have been added through revised Compliance Plans.

Rule Element	PR 1420.1	District Rule 1420	2008 Lead NAAQS	NESHAP from Secondary Lead Smelting
	Executive Officer - Samples collected at least once every three days - Results reported monthly - Daily sampling if $0.15 \mu\text{g}/\text{m}^3$ is exceeded after January 1, 2012	Executive Officer - Samples collected every six days - Results reported quarterly	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	
Housekeeping Requirements	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 cleanings	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 activities ⁴	None	Periodic wash down of plant roadways (lower frequency than PR 1420.1); wet suppression of battery breaking area storage piles; vehicle wet washing of vehicles exiting the materials handling and storage areas
Reporting Requirements	- Ambient air lead and wind monitoring; - Shutdown, turnaround, and maintenance activity reports; - Public notifications for	Ambient air lead and wind monitoring for any lead-processing facility that is required or elects to do ambient air monitoring	For states: - State Implementation Plan submittal; - Periodic emissions reports from stationary source	- Lead control alarm/failure reports including fugitive dust control measures performed during failures

⁴ Additional housekeeping measures have been required through revised Compliance Plans and legal actions.

Rule Element	PR 1420.1	District Rule 1420	2008 Lead NAAQS	NESHAP from Secondary Lead Smelting
	specific shutdown and maintenance activity; - Initial Facility Status Reports - Ongoing Facility Status Reports		monitors; - Ambient air quality data and associated assurance data	

REFERENCES

REFERENCES

“Air Quality Criteria Document for Lead, Volumes I-II,” Environmental Protection Agency, Office of Research and Development, October 2006.

“Lead in Air,” Environmental Protection Agency, (<http://www.epa.gov/air/lead.html>), June 12, 2009.

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

“National Emission Standards for Hazardous Air Pollutants (Secondary Lead Smelters), Notice of Proposed Rule; Notice of Public Hearing,” 59 Federal Register 110, Environmental Protection Agency, June 1994.

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

“Secondary Lead Smelter eTool,” United States Department of Labor, Occupational Safety and Health Administration, (<http://www.osha.gov/SLTC/etools/leadsmelter/index.html>).

“Secondary Lead Smelting Background Information Document for Promulgated Standards,” Environmental Protection Agency, Office of Air Quality Planning and Standards, June 1995.

“South Coast Air Quality Management District Lead (Pb) Monitoring Network Plan,” South Coast Air Quality Management District, July 2009.

“Staff Report for Proposed Rule 1420: Emissions Standards for Lead,” South Coast Air Quality Management District, August 1992.

APPENDIX A: COMMENTS AND RESPONSES

Comments from the Public Workshop held April 14, 2010 and those received in writing are addressed below.

APPLICABILITY

1. Comment: Requirements under PR 1420.1 should only apply to large lead-acid battery recycling facilities if they discharge emissions that cause ambient concentrations of lead to exceed $0.15 \mu\text{g}/\text{m}^3$ at or beyond the facility property line.

Response: The federal standard was reduced tenfold from a concentration of $1.5 \mu\text{g}/\text{m}^3$ to $0.15 \mu\text{g}/\text{m}^3$. Achieving the new standard will be challenging. Based on experience with the Rule 1420 compliance plan approach, the AQMD staff decided that it is more health protective to establish base requirements in PR 1420.1. PR 1420.1 takes a more proactive approach to establish key requirements in the proposed rule that address point source and fugitive emissions. Many of these requirements are currently being implemented at one or both of the affected facilities. The approach that the commenter is suggesting may result in delays in implementing additional measures at the facility as these would likely be developed individually with the facility through a compliance plan that would need to be developed by the facility and reviewed and approved by the AQMD staff. In addition, the approach under PR 1420.1 provides certainty to the affected facilities of the requirements since they are specified upfront as opposed to later through a compliance plan.

2. Comment: Why was the processing of 50,000 tons of lead per year chosen as the applicability criteria for PR 1420.1? The staff report indicates that the threshold was selected because 50,000 tons per year is approximately 50 percent of the lowest “current facility” throughput limit; however, there is no rationale for why this constitutes a “large” recycling facility.

Response: Lead-acid battery recycling facilities with large throughputs are the largest lead emission sources in the Basin. The facilities currently process an average of at least 300 tons of lead a day each. Ambient air concentrations of lead from these facilities were, in large part, the reason CARB recommended a non-attainment designation for Los Angeles County with the 2008 NAAQS for lead. The description of these facilities as “large” is solely to differentiate them from smaller facilities that are below the applicability threshold of the rule and are not expected to exceed the new NAAQS standard. This rationale is further explained on page 2-2.

3. Comment: The applicability threshold limit should be lowered to include medium-sized facilities.

Response: Other lead sources will be addressed in a future amendment to Rule 1420 – Emissions Standard for Lead. The AQMD staff started with large lead-acid battery recyclers because they represent the largest stationary lead emission sources in the district. A number of the requirements under Proposed Rule 1420.1 are specific to lead-acid battery recycling. There are requirements, however, that will be applicable to other lead sources that will likely be included in amendments to Rule 1420.

4. Comment: The applicability is worded awkwardly and suggests that a facility is only subject to the rule if it has processed more than 50,000 tons of lead a year in any of the five calendar years prior to the date of adoption, AND annually thereafter. Such wording would exempt any new facility coming on line after the date of adoption since it would not satisfy both of the conditions linked by the “and.”

Response: Staff agrees with the commenter and rule language has been revised to say “or” rather than “and.”

5. Comment: Once a facility becomes subject to the rule, is it always subject?

Response: The intent of the rule is to include all large lead-acid battery recycling facilities that in the past five years, have ~~ever~~ processed or will ever process 50,000 tons of lead-containing material per year, to always be subject to the rule. Rule language has been revised to clearly convey this. The AQMD staff believes that this important to ensure that a facility does not circumvent the rule based on the applicability.

6. Comment: Is the term “annually thereafter” to be assessed on a calendar year basis?

Response: The rule states that “calendar years” are to be used when reviewing years prior to the adoption date for determining applicability. For consistency, calendar years will also be used to determine applicability after the adoption date of the rule.

7. Comment: Rather than the prescriptive approach proposed, the approach for PR 1420.1 should simply specify reasonable compliance schedules for achieving the new lead NAAQS, require submittal of compliance plans by companies, and specify monitoring requirements.

Response: This approach would be similar to Rule 1420. Past experience with Rule 1420 shows that a Compliance Plan approach is not sufficient to demonstrate compliance with the lead ambient air quality standard. Reliance of a Compliance Plan to establish lead control measures will result in delays for implementation of lead control measures due to the time taken for development and District approvals. Moreover, with the

new lead standard being tenfold lower than previous, even greater assurances in the specificity of the control measures is needed. Please refer to the response to Comment #1.

8. Comment: The prescriptive approach of PR 1420.1 would undertake management of our facility as well as design our facility's air pollution control systems which is legally impermissible.

Response: For both affected facilities, many of the provisions under PR1420.1, including those for total enclosures and lead point source emission controls, are being implemented through an updated compliance plan, settlement agreement, compliance with Rule 1402, or an order for abatement. As previously discussed in Response to Comment #1 and #7, the affected facilities have demonstrated the need for a rule that includes core requirements.

PR 1420.1 will not undertake management of either facility. The AQMD staff agrees that the best compliance test for the lead air quality standard is the ambient monitors. To achieve the lead standard, lead point sources and fugitive sources must be well controlled. The AQMD staff has studied the lead point sources at each of the affected facilities and their emission rates. Based on source tested data and air dispersion modeling, it is clear that a minimum emission rate standard is needed for lead point sources. Affected facilities have a variety of options of which stacks to control and which control technologies to implement, if needed.

Based on source test data and air dispersion modeling, it is clear that the dryer has the greatest potential to impact fence line emissions. Thus, a requirement has been added to PR 1420.1 to install a secondary lead control device for dryer. Staff has added rule language to paragraph (f)(4) that requires the facility to include additional information in the permit application for equipment required under subdivision (f) – Lead Point Source Emission Controls, regarding an alternative secondary lead control method to compliance if requested by the facility.

The AQMD staff understands that there are physical alterations a facility can make to their stack parameters to change the dispersion of lead emissions from the point sources. Increasing the stack height or buoyancy may dilute the concentration at a fence line monitor, however, the same lead emissions are being dispersed in the atmosphere. Simply changing the air dispersion of emissions without overtly reducing emissions is not in the best interest for air quality and public health. In addition, the Clean Air Act, Section 123, prohibits use of stack height or other "dispersion" techniques in lieu of emission controls.

AMBIENT AIR QUALITY CONCENTRATION AND MONITORING

97. Comment: Paragraph (d)(2) gives the Executive Officer sole authority to judge the evidence that might be provided by a facility to demonstrate that measured ambient air quality concentrations are not the result of that facility's emissions. The last line of the proposed language should be reworded by striking the phrase, "as approved by the Executive Officer."

Response: The rule language has been modified and now reads "The ambient air concentrations of lead shall be determined by monitors pursuant to subdivision (j) or at any District-installed monitor." Subdivision (j) contains all monitoring and sampling requirements and the referenced provision has been removed.

108. Comment: The deadline to achieve the ambient concentration of $0.15 \mu\text{g}/\text{m}^3$ by January 1, 2012 is not consistent with SCAQMD's stated intent to achieve attainment with the federal standard based on U.S. EPA timeframes. The deadline for final designations for initial non-attainment areas for areas with existing monitoring networks is no later than October 2010 with an effective date of January 1, 2011. The earliest final attainment date would then be five years later, or January 1, 2016. We suggest the compliance date for the ambient air concentration standard of the rule should be "no less than two years after the effective date of any final designation of non-attainment area." Such a compliance date would allow the collection of three years of compliant data necessary for attainment demonstration as required by U.S. EPA.

Response: We agree with the commenter's assessment for determining deadlines and timeframes regarding attainment with the NAAQS. However, staff believes that allotting only three years to collect compliant data does not allow any margin for additional attempts to demonstrate attainment in the event of an exceedance of the standard. In addition, staff believes that action to protect public health should be taken as soon as practicable, and that the requirements of the proposed rule to reduce exposure to lead emissions can be implemented by January 1, 2012.

119. Comment: The requirement for ambient air monitoring to begin by January 1, 2011 does not consider how long it might take to arrive at a selection of sampling sites "approved by the Executive Officer" based on "Executive Officer-approved air dispersion modeling." Instead, the proposed rule should allow 120 days after approval of the sampling site(s), with more time allowed if property access issues arise.

Response: Both facilities currently operate an approved ambient air monitoring network required by Rule 1420 with at least four monitors. Both facilities currently meet the air monitoring network requirements under PR 1420.1.

No changes to the current networks are anticipated. Therefore, additional time is not needed.

120.Comment: Determining compliance with the ambient air concentration standard based on concentrations “at or beyond the property line” is inappropriate. The placement of monitors “at or beyond the property line of the facility” given the proposed definition of “property line” could include locations as much as 25 feet inside the facility’s property boundary. Such locations inside the facility do not constitute “ambient air” monitoring according to 40 CFR 58 Appendix E.

and

The definition of AMBIENT AIR as outdoor air is vague and ambiguous. The definition should be considered to be outside air unaffected by the local environment either upwind of an area in question, or a significantly diluted mixed environment downwind of an area in question.

Response: The definition of PROPERTY LINE has been removed from the rule and a definition of AMBIENT AIR has been added. For the purposes of this rule, ambient air will refer to any outdoor air which is similar to the California Air Resources Board definition rather than the federal definition. It should also be noted that the proposed rule and the 2008 NAAQS for lead requires compliance with ambient air lead standards based on facility emissions that *contribute* to exceedances, with facility emissions not having to be the sole cause.

131.Comment: The SCAQMD does not have the authority to impose the proposed definition of AMBIENT AIR which is counter to that established by U.S. EPA in 40 CFR 50.1(e). We do not see where this overly expansive revised definition of ambient air would come into play.

Response: The concern is that ambient air monitors located at or beyond the facility property line used to measure maximum ground level concentrations have historically been placed slightly within the facility property line at the facility’s request due to issues such as vandalism, theft, or property rights. In the past, the AQMD staff has approved the alternative siting requests. As a result, the subject monitors do not technically qualify as measuring “ambient air” under the federal definition, as they do not measure air that is accessed by the public. For these reasons, staff has chosen the broader definition of “ambient air” as defined by CARB which accommodates these “fence line” monitors that are located slightly within the property line.

142.Comment: The sampling frequency associated with the federal standard is every sixth day, and not every three days as proposed in subdivision (j). There is no

rationale for selecting this sampling frequency in the preliminary draft staff report. U.S. EPA thoroughly considered a variety of sampling frequencies in the promulgation of the federal standard and consciously selected every sixth day sampling.

Response: In 1970, CARB set the California Ambient Air Quality Standard for lead at $1.5 \mu\text{g}/\text{m}^3$ for a 30-day average. Subsequently in 1978, U.S. EPA established the National Ambient Air Quality Standard at $1.5 \mu\text{g}/\text{m}^3$ averaged over a calendar quarter, with collection of samples once every six days. Although Rule 1420 only required facilities to sample once every six days, they are currently sampling once every three days and in some cases more frequently. PR 1420.1 maintains the same averaging period as Rule 1420, but proposes to increase the sampling requirement to once every three days. Based on more recent sampling at affected facilities, the AQMD staff believes that sample collections once every three days provides a good representation of lead emissions.

153.Comment: Paragraph (j)(5) is ambiguous and vague in terms of how many wind speed and direction monitors would be required at a given facility. This section should be revised to clarify the meaning of the word “system” such that it is clear that a single meteorological data system to record wind speed is required rather than one at each ambient monitor.

Response: Staff agrees and has modified the rule language to reflect the commenter’s suggestion. Please refer to the proposed rule.

164.Comment: We request that a provision be added to the ambient air monitoring section to explicitly provide a mechanism for the consideration and exclusion of ambient monitoring data influenced by an “exceptional event” so that additional measures and/or enforcement are not unnecessarily triggered. The provision should be modeled after the procedures set forth in 40 CFR 50.14 with the incorporation of the definition of “exceptional event” as presented in 50 CFR 50(j).

Response: “Exceptional event” as referenced in 50 CFR 50(j) applies to data submitted to U.S. EPA to demonstrate attainment with any NAAQS. The purpose is to exclude emissions caused by uncontrollable events not expected to recur at a given location, such as fires, explosions, or accidents so that an area’s attainment status is not affected. [Therefore, no change has been made to the proposed rule.](#)

175.Comment: There is no justification provided for using an averaging form of 30 consecutive days for compliance with the ambient air concentration standard. The federal standard is based on a three-month averaging form. Accordingly, given AQMD’s stated purpose in promulgating PR 1420.1,

compliance with an ambient air concentration standard must be established based on the same averaging form.

Response: The Health and Safety Code allows local governments, such as AQMD, to require more stringent standards than those set forth federally or by the state if deemed necessary. Staff believes a more stringent averaging form provides for earlier detection of high ambient air lead concentrations and ample time that is necessary to implement measures that would reduce lead concentrations before a three-month average exceeding the new standard results.

18. Comment: Compliance with the proposed rule should not be based on data from air samples collected from on-site monitors. Revise subparagraph (j)(1)(C) to read “The Executive Officer may require one or more of the four sampling sites to be at locations that are not based on maximum ground level lead concentrations that are not located within the fence line, and that are instead at locations representative of upwind or background concentrations.”

Response: The intent of monitors under this subparagraph is not to be located well into the facility where the lead recycling process occurs, but to be as close to the fence line as feasible. The AQMD staff does not anticipate that existing monitors located at either of the affected facilities would need to be moved. However, staff understands the commenter’s concern and rule language has been modified to read “The Executive Officer may require one or more of the four sampling sites to be at locations that are not based on maximum ground level lead concentrations and that are instead at locations at or beyond the property line that are representative of upwind or background concentrations.” It should be noted that Rule 1420 had similar language requiring that monitors be located “at or beyond the property line of the facility where maximum ground level lead concentrations are...”

TOTAL ENCLOSURES

196. Comment: The definition of TOTAL ENCLOSURE is from the federal hazardous waste containment building regulations. It requires containment buildings to maintain the primary barrier free of significant cracks, gaps, corrosion or other deterioration that could cause hazardous waste to be released from the primary barrier. Since the total enclosures required in PR 1420.1 are utilized for areas that do not store hazardous waste (such as a battery wrecker or refinery area or a furnace), this definition places an unnecessary requirement on a smelter.

and

References to 40 CFR 264.1101 should be added to the TOTAL ENCLOSURE definition to ensure that these requirements apply to the permitted hazardous waste facilities that are considered large lead acid battery recycling facilities.

Response: The originally proposed definition of TOTAL ENCLOSURE has been changed to limit it to only those requirements that affect air quality and the applicable requirements are spelled out in the definition. In addition, the definition no longer contains references to the Code of Federal Regulations in order to avoid confusion.

2147. Comment: Consider exempting enclosures that are existing or under construction at the time of rule adoption from the strict definition of TOTAL ENCLOSURE for facilities meeting the fenceline standard at some early date.

Response: The AQMD staff believes that total enclosure of the specified areas is necessary to ensure that fugitive lead dust from such operations is properly contained and well controlled. Exempting existing enclosures or those that are under construction would relieve these structures from meeting the requirements for total enclosures. The proposed rule provides sufficient time for affected facilities to build new or upgrade existing enclosures to ensure they meet the total enclosure requirements.

2148. Comment: The requirement for total enclosures of any operation deemed necessary by the Executive Officer extends too much authority without any requirement to demonstrate the necessity for the enclosure.

Response: This language has been omitted from the rule. However, it should be noted that Compliance Plan requirements may contain additional measures for total enclosures of additional areas if they are determined to be a significant source of lead emissions or the cause of an exceedance of the ambient lead standard.

2249. Comment: The requirement for specified areas to be enclosed within total enclosures by January 1, 2011 does not account for the possibility that factors beyond the facility's control including, but not limited to, delays in processing of Permits to Construct applications by the AQMD staff in a timely manner, could prevent a facility from meeting the enclosure deadline despite its best efforts.

and

The requirement for total enclosure installations to be completed within 180 days of receiving Permits to Construct or by July 1, 2011, whichever is EARLIER should be reworded to LATER. Otherwise facilities might

not be given adequate construction time in the event Permits to Construct are issued too close to the July 1, 2011 deadline. Facilities have a reasonable expectation of reciprocal response, acknowledgement, and approval times. It is expected that if the District requests a response within a given timeframe, the facility has the expectation that the District shall similarly respond within the same timeframe.

and

Approvals for extensions should be based on reasonableness rather than discretionary.

Response:

The timing for this requirement, along with the timing for lead control devices, has been changed in response to comments received. The [previous](#) deadline [of January 1, 2011](#) has been extended by six months and now says that enclosures are to be installed and in operation no later than July 1, 2011. In order to account for potential delays for permit approvals, building department permits, and construction, an extension of the compliance date may be approved by the Executive Officer if the facility can demonstrate that it is unable to meet the deadline due to reasons beyond the facility's control. The request must be made prior to the compliance deadline and all complete permit applications must have been submitted in a timely manner according to due dates specified in the rule.

The dates specified under paragraph (d)(3) are based on estimates of how long that it will take to permit, build, and begin operation of equipment to comply with the provisions. It is the AQMD staff's understanding that both facilities have already begun the process to install total enclosures and have primary controls on all of point sources. If the facility is required to install secondary controls as required under subdivision (f), it is the AQMD staff's understanding that this would be the only additional requirement. The AQMD staff believes that the dates and times for compliance provide sufficient time for affected facilities to comply.

230.Comment:

In subparagraph (d)(3)(B), for total enclosures, can construction begin prior to receipt of a Permit to Construct if that is what's necessary to meet the July 1, 2011 deadline?

Response:

Construction can begin on anything that does not require a Permit to Construct [consistent with the AQMD's interim rule interpretation for Rule 201](#), however, if a permit is required, the construction cannot begin until the permit is approved. Subparagraph (d)(3)(C) provides for an extension of the deadline if the facility can demonstrate that complete applications were filed within 30 days of the date of adoption of PR 1420.1 and that it cannot meet the deadline due to reasons beyond its control.

241.Comment: The rule specifies that each total enclosure be “vented to an emission collection system that ducts the entire gas stream to a lead control device...” The term “entire” is unnecessarily absolute and subject to potential misinterpretation. A more appropriate word would be “collected.”

and

The word “collected” is not necessary because total enclosures are required to be maintained under negative air pressure and are free from leaks or cracks.

Response: Staff agrees that the word collected is not necessary and the language reads, “ducts the entire gas stream.”

252.Comment: A requirement for both a negative pressure and an in-draft velocity to be measured at each total enclosure is redundant. Compliance with either criterion would ensure capture of potential fugitive emissions.

Response: The in-draft velocity requirement helps ensure that sufficient negative pressure is maintained at openings that do not have an associated differential pressure monitor. The requirement that periodic in-draft velocity measurements and recordkeeping have been removed, however, maintaining the in-draft velocity at a minimum of 300 feet per minute is required and may be checked at any time to determine compliance.

263.Comment: No rationale or justification is provided for the selection of an in-draft velocity of at least 300 feet per minute.

Response: The in-draft velocity requirement of 300 feet per minute was derived from hood face velocity requirements for process fugitive emissions set forth in the NESHAP for Secondary Lead Smelters (40 CFR Part 63.544 (b)(1)). This requirement is currently being met at one of the PR 1420.1 affected facilities, as it was established as a condition for the facility through an order for abatement.

274.Comment: The “monitoring system” is required to be maintained at a negative pressure of at least 0.02 mm of Hg, when it is actually the “enclosure” that must be maintained at this negative pressure.

Response: Language has been changed as suggested by the commenter.

285.Comment: No justification is given as to why the accuracy of the pressure drop monitor must be to the nearest 0.001 mm Hg.

Response: The proposed rule requires that pressure differential monitors are digital. Readings to the nearest 0.001 mm Hg allows more accurate readings so that compliance with the 0.02 mm Hg standard can be determined.

| **296.Comment:** The manufacturer's calibration requirement for differential pressure typically specifies calibration on an annual basis, not every six months.

Response: The language has been changed to require calibration every 12 months or more often if recommended by the manufacturer.

| **3027. Comment:** Fitting each differential pressure monitoring system with a continuous chart recorder is unnecessary, redundant, wastes paper, and generates a recordkeeping hardship. Once established via periodic logging of pressure monitor data that the enclosure is fitted with ventilation sufficient to maintain negative pressure, the ongoing imposition of that negative pressure is assured as long as the ventilation fans keep running.

and

The requirement for continuous differential pressure monitoring is duplicative, beyond the normal checks and balances theory of regulation. Differential pressure should be a weekly or monthly performance criteria rather than continuous monitoring. Differential building pressure can be inferred from the operation of baghouse flowrate or by in-draft velocity measurements.

Response: An ongoing imposition of a fixed negative pressure based solely on ventilation fans running or baghouse flowrates being maintained as normal does not account for changes in negative pressure due to in-draft changes resulting from opening of doors or windows which can be demonstrated by the chart recorder and recordkeeping. The proposed rule also allows for the use of an electronic recorder as an alternative to the chart recorder eliminating the concern for generating paper waste.

| **3128. Comment:** The District requests copies, provided at the expense of the facility, of any software necessary to review the output of the digital differential pressure monitoring system rather than requesting the output data file in a standard ASCII data format. This may be an issue of ethics and conflict of interest.

Response: The intent of the provision is to only provide software needed to access the recorded data that is not readily available to the Executive Officer. Rule language has been modified to reflect this.

| **329.Comment:** Requiring backup power for differential pressure monitors is an unnecessary measure that will generate no meaningful additional information. If the facility loses electrical power, the fans imposing the

negative pressure on the total enclosure will not operate and the differential pressure will drop to zero requiring no further verification via monitoring.

Response: Staff agrees with the commenter if the assumption was that all power disruptions to a differential pressure monitor were a result of a complete facility power outage. However, backup power on the differential pressure monitor also accounts for instances where continuous power or connectivity problems affect only the differential pressure monitor. During these instances, it is necessary for monitoring to continue so that the negative pressure is measured and recorded.

| **330.Comment:** The proposed definition of WINDWARD WALL is ambiguous and unclear as to what data would inform selection of a “most prevailing” wind direction. The definition also does not sufficiently describe how to select the referenced “most impacted” wall.

Response: The definition of WINDWARD WALL has been changed to mean 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.”

| **341.Comment:** There is no justification given for the need to have three separate pressure drop monitors on buildings that are greater than 10,000 square feet in surface area, nor for the 10,000 square feet criteria. When determining the number of differential pressure monitoring systems for total enclosures, does the 10,000 square feet refer to the floor area of the building, or the entire surface area of the structure itself.

Response: The 10,000 square feet refers to the floor area of the building and rule language has been modified for clarification. The requirement for three monitors is intended to provide assurance that the negative air pressure requirements for total enclosures are being met. This requirement is currently being met at one of the PR 1420.1 affected facilities, as it was established as a condition for the facility through an order for abatement. The requirement allows smaller total enclosures to install only one monitor rather than three.

| **352.Comment:** Flexibility should be provided to allow pressure drop monitoring to be conducted in units of inches of water in lieu of mm Hg on an equivalency basis.

Response: Language has been added to provide both alternative measurements as suggested by the commenter.

LEAD POINT SOURCE EMISSIONS

363.Comment: Control efficiencies for lead control devices venting a total enclosure should be determined by a manufacturer's guarantee of particulate reduction. Demonstrating 99% or higher efficiency through inlet/outlet testing will be very difficult because of the small amount of particulate on either side of the control device and because the test methods are not consistently accurate enough to achieve a plus or minus 1% result. A better approach would be to establish an emission rate or standard similar to the NESHAP for Secondary Lead Smelting.

and

The requirement for lead control devices to meet a control efficiency of 99 percent or more for either lead or particulate matter is inappropriate in general because control device efficiency is an improper standard to select for the fabric filter control technologies typically employed at these facilities. Further, there is no justification for departing from the 98 percent control efficiency for lead as required in Rule 1420 without any discussion or supporting rationale.

Response: The control efficiency requirement for lead control devices has been replaced with a mass emission requirement which better characterizes the emissions from the stacks. The total lead emission rate from all lead point source control devices source tested pursuant to subdivision (k) may not exceed 0.045 pounds of lead per hour and no single device shall exceed 0.010 pounds of lead per hour. To address efficacy of controls, lead point source control devices using dry filter media are required to be fitted with filters rated by the manufacturer to meet 99.97 percent control for 0.3 micron particles and lead control devices using bags are required to use bags made of polytetrafluoroethylene membrane material or any other material that is equally or more effective and approved by the Executive Officer.

374. Comment: Our facility test results for lead emissions from three baghouses controlling process fugitive and fugitive dust emissions range between 0.00339 to 0.00499 lb/hr, and also have difficulty in achieving 99 percent control efficiency under testing. The outlet concentrations for baghouses are all substantially lower than the federal MACT standard level of 2 mg/dscm. For PR 1420.1 to imply that they are not, unless they can achieve some contrived target of 99 percent control efficiency is absurd.

and

U.S. EPA gave direct consideration to a mass emission rate form of that standard when promulgating the NESHAP for Secondary Lead and

specifically rejected it [59 FR 110, June 9, 1994, pg. 29766 and 29767]. An outlet concentration form of the standard is the appropriate form.

and

We support the addition of a provision that allows reduced source testing frequency of lead control devices for exemplary performance. However, we disagree fundamentally with the mass emission rate form of the emission standards of the rule. The alternative compliance form should be a concentration level of 1 mg/dscm (one half the federal NESHAP level). Accordingly, reduced testing frequency should be afforded to any source with exhaust lead concentrations less than 0.5 mg/dscm.

Response: As stated above, the 99 percent control efficiency requirement has been removed from the rule. U.S. EPA explicitly stated in the rule summary document [pg. 2-13] that the goal of the NESHAP for Secondary Lead Smelting was not to achieve compliance with the lead NAAQS. Rather, the intent of the standards was to reduce HAP emissions from secondary lead smelters to the maximum degree achievable through the application of maximum achievable control technology (MACT). U.S. EPA rejected the emission standard format for process sources because they believed it could not account for differences in actual emission rates between different size smelting when trying to determine a MACT level [59 FR 110, June 9, 1994, pg. 29766 and 29767].

The intent of PR 1420.1 is to achieve attainment with the revised NAAQS for lead and not to determine a MACT level for the industry. An emission rate in lbs/hr is appropriate for PR 1420.1 because the total point source emissions and fugitive emissions from the facility affect the fence line concentration and, as evidenced by historical fenceline monitoring data, must be reduced significantly to meet the 2008 NAAQS. Reduced source testing frequency is allowed under subdivision (k) if the results of the most recent source test for a lead point source are 0.0025 pounds per hour or less in keeping with the pounds per hour standards.

385.Comment: It is unclear what AQMD means by having the mass rate emission standard apply to “one lead point source, or more than one lead point source if combined.” Does this mean, for example, that a facility could test two or more lead point sources and combine those test results for comparison with the 0.0020 lb/hr limit, even if those lead point source exhausts are not physically combined into a common stack?

Response: All lead point sources that vent to the atmosphere must comply with the hourly maximum limit, whether they are venting a single process or multiple processes with emissions manifolded together. The 0.0020 lb/hr

emission standard has been changed as discussed in the response to Comment #363.

396. Comment: The requirement for installation of lead control devices by January 1, 2011 does not account for the possibility that factors beyond the facility's control including, but not limited to, delays in processing of applications for Permits to Construct by SCAQMD in a timely manner, could prevent a facility from meeting the compliance date despite its best efforts.

Response: The timing for this requirement, along with the timing for total enclosures, has been changed in response to comments received. The deadline has been extended by six months and now says that lead control devices are to be installed and in operation no later than July 1, 2011. In order to account for delays for permit approvals, building department permits, and construction, an extension of the compliance date may be approved by the Executive Officer if the facility can demonstrate that it is unable to meet the deadline due to reasons beyond the facility's control. The request must be made prior to the compliance deadline and all complete permit applications must have been submitted in a timely manner according to due dates specified in the rule.

4037. Comment: We would like to see an additional requirement capping annual facility-wide point source lead emissions at 25 pounds per year based on the most recent approved source tests and maximum permitted production.

Response: The AQMD staff does not object if a facility elects to self impose an emission cap on their point sources of 25 pounds per year. The AQMD staff is concerned that imposing an emissions cap at 25 pounds per year on all lead-acid battery recyclers may require installation of pollution controls beyond what is needed to achieve the PR 1420.1 lead standard of 0.15 $\mu\text{g}/\text{m}^3$. The measurement for the 25 pounds per year would be based on an annual or possibly biennial source test that is a "snap shot" of point source emissions. The AQMD staff believes that a better and more appropriate use of the source test data is to ensure the control equipment is properly operating and is achieving emission rates sufficient to achieve the ambient air quality standard. The AQMD staff believes that sampling the ambient air more than 120 times per year is a more appropriate test to ensure that facility-wide emissions of point and fugitive emissions do not exceed the PR 1420.1 lead standard of 0.15 $\mu\text{g}/\text{m}^3$.

4138. Comment: It is unclear how the maximum lead emission rate limit of 0.010 lb/hr for any lead point source was derived.

Response: Staff conducted air dispersion modeling of each individual stack for both facilities and results showed that out of approximately twenty lead point sources modeled, a stack emitting more than 0.013 lb/hr would exceed the

federal $0.15 \mu\text{g}/\text{m}^3$ standard at the fence line for a given lead point source at one facility. Consequently, a maximum emission rate of 0.010 lb/hr for any individual lead point source was selected to adequately provide a protective limit for exposure to lead emissions and the ambient standard.

4239. Comment: The AQMD is specifying filter media and bags beyond the usual Best Available Control Technology (BACT). This could be a possible ethics and conflict of interest issue.

Response: The AQMD is not precluded from requiring available controls that are more effective than what is considered as BACT. Further, existing facilities are currently utilizing both forms of filtering media in some or most of their existing lead control devices.

43. Comment: We have determined that issues of ambient air lead concentrations have predominantly been due to fugitive emissions and stacks that are being affected by downwash. The solution is through a redesign of the geometry of the stacks rather than wasting resources on essentially unachievable emission limitations.

and

Neither the federal Clean Air Act nor relevant California or District rules would in any way prohibit the use of stack height increases to resolve adverse building downwash influences.

Response: Changing stack parameters may lower ground level lead concentrations, however, the emission rate does not change. Lead is a persistent toxic compound and establishing the proposed emission rates will reduce the amount of lead that is deposited by lead point sources. Additionally, the proposed emission limitations are currently being achieved by one PR 1420.1 affected facility.

44. Comment: Insufficient and faulty data was used to derive the emission rates. The back-calculated method did not take into account alternative emission stack heights, used Lynwood rather than Central Los Angeles as an incorrect meteorological station, and used different coordinate locations for modeling maximum impact than that of the facility's Rule 1420 monitoring plan.

Response: The AQMD staff used source test data and stack heights and other stack parameters provided to the AQMD staff from the affected facility to derive emission rates. In addition, the AQMD staff followed the same air dispersion modeling methodologies used to estimate health risk under the AB2588 Hot Spots program. The AQMD staff agrees that both the Lynwood site and Central Los Angeles sites are close to Exide. However,

the Central Los Angeles site consists of two years of meteorological data for modeling, whereas the Lynwood site has three years of data (see http://www.aqmd.gov/smog/metdata/AERMOD_Table1.html). Both sites are relatively close to Exide; the Lynwood site was chosen because there was one more year of meteorological data to establish the facility emission limit.

45. Comment: A facility-wide point source emission limit of 0.045 pounds of lead per hour, which equates to 394.2 pounds of lead per year, is not reflective of Best Available Control Technology (BACT) or Best Available Control Technology for Toxics (T-BACT) and is not health protective as achievable. A facility-wide point source emission limit of 0.003 to 0.004 pounds of lead per hour reflects achieved in practice BACT and T-BACT as demonstrated through District-approved source tests. Since lead is subject to a national air quality standard and is a toxic air contaminant, sources of lead emissions are subject to BACT and T-BACT. A facility-wide point source emission limit of 0.045 lbs/hr is not reflective of BACT or T-BACT. A facility-wide point source emission limit of 0.003 to 0.004 lbs/hr reflects achieved in practice BACT and T-BACT, as demonstrated through District-approved source tests.

Response: The AQMD staff agrees that the level of control your facility has achieved is likely to be the basis of BACT and T-BACT. For clarification, BACT applies to individual equipment and is not facility wide. As you are aware, Regulation XIII – New Source Review and Rule 1401 – Toxics New Source review are the rules that establish requirement for new and modified sources for criteria pollutants and toxic air contaminants, respectively. PR 1420.1, however, is not a new source review rule. ~~Proposed Rule 1420.1 is a Best Available Retrofit Control Technology (BARCT) rule for lead. Health and Safety Code Section 40406 defines Best Available Control Technology as “an emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source.”~~ The AQMD staff has evaluated source test data, conducted air dispersion modeling, and monitoring data. If PR1420.1 is implemented as required, the AQMD staff believes that the other facility can achieve the new lead standard of 0.15 µg/m³. Achieving the lead standard is in large part based on the ability of the facility to control fugitive emissions and properly implement all housekeeping and maintenance provisions of the proposed rule. If, however, that facility approaches or exceeds this new lead standard, they will be required to submit a contingency compliance plan that will identify additional point source controls as well as measures to reduce fugitive emissions. If they exceed the new lead standard that compliance plan would need to be implemented. In addition, if through implementation of AB25888 and Rule 1402 – Control of Toxic Air Contaminants from Existing Sources,

additional controls are needed the facility may be required to install additional controls.

46. Comment: The requirement for the total facility lead emission rate of 0.045 lbs/hr from all lead point sources does not allow for the addition of point source controls such as a total enclosure used to reduce fugitive lead-dust emissions.

Response: The total facility lead emission rate of 0.045 lb/hour from all lead point sources does not prohibit use of a total enclosure to further reduce fugitive lead dust emission. The emission rate for all lead sources is the minimum standard that should be achieved. The proposed rule does not prohibit the ~~the~~ facility from implementing additional point source controls or measures to contain or reduce fugitive emissions. If the facility exceeds $0.12 \mu\text{g}/\text{m}^3$, the facility will be required to submit a compliance plan. If the facility exceeds $0.15 \mu\text{g}/\text{m}^3$, the facility will be required to implement the compliance plan. The AQMD staff encourages the affected facilities to continue to identify further point and fugitive controls that can be implemented in event the compliance plan is triggered.

47. Comment: It is entirely possible that our facility could emit lead from stationary sources at a greater emission rate than those proposed and still demonstrate compliance with $0.15 \mu\text{g}/\text{m}^3$.

Response: Staff's review of facility emission rates and monitored ambient air lead concentration data indicate that current emission rates at your facility are higher than those proposed in the rule, and have led to concentrations higher than both the previous and current ambient standard of 1.5 and $0.15 \mu\text{g}/\text{m}^3$, respectively. Based on point source modeling and monitored data, the AQMD staff believes that is unlikely that your facility can achieve compliance with the $0.15 \mu\text{g}/\text{m}^3$ standard with an emission rate greater than 0.045 lb/hr.

48. Comment: A facility's emissions are equal to the contribution from stationary sources and fugitive sources. If the emission rate from fugitive sources is less than the rate assumed by the AQMD, then the 0.045 lbs/hr lead emission rate from all lead point sources would be overly restrictive, more so than would be required if a concentration limit determined compliance.

Response: Staff did not assume an emission rate for fugitives and rather provided a margin for fugitive emissions based on point source modeling. U.S. EPA literature and past monitoring data suggests that fugitive emissions play a large role in violations of ambient air standards. Strict adherence to the housekeeping provisions of the proposed rule will determine whether the facility is able to control fugitive emission to a level that is below the margin.

49. Comment: The requirement for a secondary filtration device on the facility's feed dryer is an arbitrary design edict that may not have any meaningful benefit to ambient air quality. The feed dryer at our facility is greatly affected by building downwash so further filtration may well not be the best overall improvement measure from an ambient air perspective. Further, a common approach for secondarily filtering baghouse-controlled sources is a HEPA filter system. The feed dryer drives off a great deal of moisture and HEPA filters do not work well with heavily moisture-laden emission due to potential plugging.

Response: Staff has reviewed historical source test data, modeling results, breakdown reports, and maintenance records for the dryer at your facility and has determined that it requires a secondary lead control device due to its high emissions. Modeled ambient air lead concentrations resulting from reduced lead emissions from the feed dryer at your facility also showed a benefit in that ambient air lead concentrations were decreased at locations of maximum ground lead level impacts. Historical maintenance records and breakdown reports also show that the primary control device for the facility's feed dryer is susceptible to failures and bag leaks due to hot embers of the process and maintenance issues. The addition of a secondary lead control device would provide for backup control of uncontrolled emissions that result during failures of the primary control. It should be noted that the rule does not solely specify the use of a HEPA filter system as the secondary control.

50. Comment: Paragraph (f)(4) states that HEPA and/or cartridge-type filter media used in lead control devices shall be rated by the manufacturer to achieve a minimum of 99.97% capture efficiency for 0.3 micron particles. The standard is based solely on HEPA filter performance. There is no reason to apply that standard to all cartridge filters. Unlike HEPA filters, cartridge-type fabric filter collects do not rely simply on the filtering media itself, and also receives additional filtration on the built-up filter cake. It is not appropriate, therefore, to lump cartridge-type filter media in with HEPA filters in a common performance requirement.

Response: The intent of this provision is to require the use of the highest efficiency filter media currently available for a lead control device. Although not the same as HEPA filters, cartridge-type filters that are rated by the manufacturer of achieving 99.97% capture efficiency for 0.3 micron particles are available for use. In order to more accurately reflect staff's intent for this provision, rule language has been modified to read "For any lead control device that uses filter media other than a filter bag(s), the filter(s) used shall be rated by the manufacturer to achieve a minimum of 99.97% capture efficiency for 0.3 micron particles."

51. Comment: Exide supports a longer test schedule for individual sources that meet an incentive. However, we believe the incentive emission threshold should be 50% of a concentration-based emission limit established in the proposed rule in order to be consistent with the concept under the federal NESHAP for this industry.

Response: The concept of an incentive that allows less frequent testing if a lead control device demonstrates source test results lower than a proposed emission standard can be applied regardless of the format selected. Staff believes that a mass emission rate standard is the more appropriate format for lead point source emission standards of the proposed rule. See response to Comment #37.

52. Comment: Paragraph (k)(6) requires that source tests shall be conducted while operating at a minimum of 80% of equipment maximum capacity. Equipment may have a permit condition that limits its operating capacity at a level below its maximum rated capacity. The section should be revised to have source tests conducted at a minimum of 80% of permitted maximum capacity.

Response: Language as suggested does not account for situations where an equipment maximum capacity may be lower based on historical operating data, economic situations, or other factors. The source tests are typically run at maximum capacity for the plant's current capability based on those factors. This value may be lower than both what is stated on the permit or by the manufacturer, and the suggested rule language would restrict determination of what the reasonable maximum capacity should be. Maximum capacity, permitted capacity, and capacity based on the plants current capability will be taken into consideration by AQMD staff during review and approval of a pre-test protocol submitted by the facility pursuant to paragraph (k)(3). The current language allows flexibility for both staff and the facility to choose the capacity which is appropriate at the time of testing.

53. Comment: Revise subparagraph (k)(5) to read "The owner or operator...shall notify the Executive Officer within 3 business days" rather than 72 hours. Source test results are dependent upon the notification of the results from a third party, and if the facility were informed of the results late in the day on Friday, they would not have sufficient time to review the report to confirm whether the results did in fact exceed an emission rate standard or were in error.

Response: Staff has modified rule language to reflect the commenter's suggestion.

COMPLIANCE PLAN

5440. Comment: There is no justification for the selection of the $0.12 \mu\text{g}/\text{m}^3$ trigger for a Compliance Plan.

and

Use of a $0.12 \mu\text{g}/\text{m}^3$ trigger will likely cause submittal of a Compliance Plan in situations where an exceedance of the $0.15 \mu\text{g}/\text{m}^3$ standard will never occur.

Response: Proposed Rule 1420.1 takes a proactive approach because of the toxicity and persistent nature of lead. The trigger of $0.12 \mu\text{g}/\text{m}^3$ represents 80% of the $0.15 \mu\text{g}/\text{m}^3$ standard. The AQMD staff selected 80% of the standard as a trigger to submit the compliance plan because it close enough to the standard to warrant concern that the $0.15 \mu\text{g}/\text{m}^3$ lead concentration standard may be exceeded. This approach provides more assurance that if there is an exceedance, measures will be identified and implementation can begin immediately. It should be noted, that implementation of the Compliance Plan is required only if the facility exceeds the $0.15 \mu\text{g}/\text{m}^3$ lead concentration standard.

5541. Comment: The imposition of the Compliance Plan trigger level on the basis of concentrations “at or beyond the property line” is inappropriate given the proposed definition of PROPERTY LINE, as concentrations measured within 25 feet of a facility’s boundary is not “ambient.”

Response: The definition of PROPERTY LINE has been removed and a definition of AMBIENT AIR has been added as discussed in the response to Comment #120.

5642. Comment: Since the requirement for a Compliance Plan is triggered by emissions from the lead-acid battery recycler, the concentration from the upwind monitor for the facility should be deducted from the downwind monitor(s) when determining whether the $0.12 \mu\text{g}/\text{m}^3$ threshold is exceeded.

Response: The ambient air lead concentration of the rule is based on facility emissions that contribute to exceedances, with facility emissions not having to be the sole cause. See response to Comment #120.

5743. Comment: Use of the term “exceedance” for a monthly average between $0.12 \mu\text{g}/\text{m}^3$ and $0.15 \mu\text{g}/\text{m}^3$ is misleading.

Response: The language has been clarified to state that “...emissions which contribute to ambient air concentrations of lead that exceed $0.12 \mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days...” is only a trigger to submit the Compliance Plan. If the facility exceeds $0.15 \mu\text{g}/\text{m}^3$ after July 1, 2011 or before January 1, 2012, it is not a violation of the proposed rule, however,

the facility would at that time be required to begin implementation of the approved Compliance Plan. If the facility exceeds the $0.15 \mu\text{g}/\text{m}^3$ lead concentration standard on or after January 1, 2012, that would constitute a violation of the ambient lead standard and the facility would be required to begin implementation of the approved Compliance Plan.

5844. Comment: A Compliance Plan should not be required where an exceedance of the $0.15 \mu\text{g}/\text{m}^3$ standard has not occurred. If an exceedance occurs, the facility needs to obtain a variance from the District's Hearing Board which will require Increments of Progress, or in other words, a Compliance Plan.

Response: Although submittal of a Compliance Plan will be required when the facility exceeds a concentration of $0.12 \mu\text{g}/\text{m}^3$, the implementation of the plan will only be required if the facility actually exceeds the $0.15 \mu\text{g}/\text{m}^3$ concentration. Staff believes that it is necessary to have a plan prepared in advance so that immediate implementation can occur.

5945. Comment: There is no justification provided for using a 30-day averaging form for multiple elements of the Compliance Plan (i.e., trigger for submittal, implementation of additional lead reduction measures). The federal standard is based on a three-month averaging form. Accordingly, given AQMD's stated purpose in promulgating PR 1420.1, targets for triggering a Compliance Plan must be established based on the same averaging form.

Response: Using the 30-day averaging form is consistent with the ambient lead concentration averaging form of Rule 1420. The response to Comment #175 provides the rationale behind use of the 30-day form.

6046. Comment: The Compliance Plan fee structure in subparagraph (d)(3)(C) potentially exposes a facility to repetitive payment solely at the discretion of the Executive Officer who may continually disapprove a submitted plan, resulting in the collection of additional fees each time.

and

Paragraph (g)(3) seems to imply that a denial of the originally submitted plan cannot be appealed. Please clarify that this is not the case.

Response: The language in the proposed rule has been changed so that disapproval occurs only once. At the disapproval stage, appeal is not necessary or appropriate because the AQMD staff is still working with the applicant. If the resubmitted plan does not adequately address the deficiencies identified in the disapproval, the plan will be denied. The denial may be appealed through the Hearing Board under Rule 216 – Appeals. The

Compliance Plan fees are consistent with fees in set forth in District Rule 306 – Plan Fees.

6147. Comment: The revised language has reduced the deadline for Compliance Plan submittal from 30 days to 10 days. This is totally inappropriate and unworkable as a timeframe for the production and submittal of a meaningful and thoughtful plan. AQMD is mandating (Expedited Review Processing) a fee (tax) schedule above that normally associated, which have not been subject public review or approvals. Fees assessed per schedule in Rule 306, where expedited review scheduling is mandated by timing requirement should be waived.

Response: ~~Staff agrees with the commenter and t~~The submittal time has been changed back to the original language of 30 days. This provides sufficient time for preparation of the plan without the need for expedited processing fees.

HOUSEKEEPING REQUIREMENTS

6248. Comment: The definition of FUGITIVE LEAD-DUST needs to include something describing particle size, de minimis level of lead content, or its capability to become airborne. The current definition could be misconstrued to mean any solid particle regardless of its capability to become airborne is FUGITIVE LEAD DUST;

and

The definition of FUGITIVE LEAD-DUST is vague, misleading, and not consistent with the Federal definition of “any particulate matter, containing lead, which becomes airborne and mixes with ambient air in quantifiable detectable quantities.”

Response: Staff agrees with the commenter and rule language has been revised to clarify that the particle size is capable of becoming airborne. Staff has not, however, included the phrasing that the particulate matter containing lead have to become airborne and mix with ambient air. Defining it as such would allow particulate matter containing lead that has not yet become airborne to not constitute as fugitive lead-dust, and not trigger requirements of the proposed rule to address its prevention and clean-up. Additionally, any size lead particle that has the capability of becoming airborne, regardless of the level of lead content of the particle, should be contained as it would still impact ambient air lead concentrations.

6349. Comment: Rather than effective immediately, facilities should be given time to establish and implement procedures to comply with housekeeping requirements, such as maintenance of a vehicle wet washing area,

following a reasonable period of time, such as 60 days, after the date of rule adoption.

Response: Staff agrees with the commenter and has added that the housekeeping activities become effective no later than 30 days following rule adoption. The requirement to maintain a vehicle wet washing area has been removed.

| **6450. Comment:** The building height differentiation that sets roof washing frequencies should be 45 feet instead of 65 feet. Access to roofs greater than 45 feet requires specialized equipment and techniques.

Response: Staff agrees and the proposed rule language has been modified to reflect the commenter's suggestion.

| **6551. Comment:** There is no discussion in the preliminary draft staff report providing the rationale behind a weekly roof washing frequency, and the effectiveness of weekly versus monthly or semi-annual frequency.

and

We recommend that the frequency of roof washing for building heights above 45 feet be conducted on a semi-annual basis rather than a quarterly basis, and should not be required in months having measurable precipitation. Quarterly washing of these elevated surfaces is a hardship providing limited additional benefit beyond a semi-annual that has not been shown to be insufficient.

Response: For roofs that are greater than 45 feet in height, one facility is conducting washes semi-annually while the other conducts them at least monthly. Staff has reviewed 2010 monitoring data for both facilities and has observed that roofs semi-annually cleaning may result in lead concentration spikes at ambient air lead monitors due to an accumulation of lead dust. Therefore, staff believes that a quarterly washing frequency for the higher roofs is necessary to minimize the amount of lead particles that may be accumulated before it is cleaned up. Both facilities are currently conducting roof washings for roofs that are less than 45 feet in height at least monthly and, based on the historical monitoring data, staff believes monthly washings are appropriate. In addition, the rule allows for days of measurable precipitation to count as a washing for compliance.

| **6652. Comment:** The proposed definition of MEASURABLE PRECIPITATION may require reprogramming of existing CEMS/DAHS systems to include precipitation data handling. The definition should be modified to included locally recorded & reported measured rain amounts (producing surface run-off) in any 24-hour calendar day.

Response: The definition of MEASURABLE PRECIPITATION has only been proposed to provide facilities the option to use days of rain to count as a cleaning/washing. There is no requirement that the facility demonstrate measurable precipitation readings in order to meet this cleaning/washing exemption. Chapter 2 of this report clarifies that MEASURABLE PRECIPITATION can be demonstrated by using locally recorded and reported measured rain amounts.

| **6753. Comment:** Does the housekeeping requirement in subparagraph (h)(1)(C) for cleaning storage areas apply to outdoor storage only?

Response: Pursuant to paragraph (h)(1), cleanings are required in storage areas that are not located within a total enclosure vented to a lead control device.

| **6854. Comment:** The timeframe of “immediate cleaning (within one hour)” of surfaces following maintenance activities or process upsets that cause lead deposition on the subject surfaces is completely unworkable, especially for the elevated surfaces greater than 45 feet in elevation. Such cleanup process would require more than one hour to initiate and complete as it is not possible to marshal the necessary lift equipment or resources within one hour. Also, no consideration is given to the fact that such an upset might occur at night. Access to elevated roofs for cleaning is only safe during daylight hours. Realistic timing is about 72 hours or 3 business days.

Response: Staff agrees and the proposed rule language has been modified to reflect the commenter’s suggestion.

| **6955. Comment:** The inspection, process, handling and storage of incoming batteries are regulated by DTSC. This section is redundant and should be deleted.

Response: Although a similar regulation exists, the purpose for inspection by DTSC relates more to minimizing the release of lead-acid as it hazardous waste. For the purposes of air quality, the provisions are necessary to prevent the generation and release of fugitive lead-dust into the air from damaged lead-acid batteries. Despite this differentiation, rule language has been modified to require action to prevent the generation and release of fugitive lead-dust upon discovery of a cracked or leaking lead-acid battery rather than a general requirement for inspection.

| **7056. Comment:** Does the requirement for inspecting batteries in paragraph (h)(3) require every single battery to be inspected? This is really not practical and incredibly difficult to document. Batteries are not really a source of fugitive emission because they are wet with acid and stored inside a battery casing. The U.S. Department of Transportation regulates the

transport of batteries and is actively inspecting loads of batteries going into secondary lead smelters throughout the country.

Response: The intent of this provision was to prevent fugitive lead dust emissions by inspecting loads of batteries upon arrival and, if cracked or leaking, send the battery to be processed immediately or properly store it in a sealed container or inside a total enclosure. The language has been clarified to state that “upon receipt, any battery that is cracked or leaking shall be immediately sent to the . . .” See response to Comment #6955.

7157. Comment: Is paving required for all facility grounds, including areas where trees and plants are located?

Response: The intent of this requirement is to provide surfaces throughout the facility that facilitate the ease of cleaning or vacuum sweeping, and to avoid the chance for fugitive lead-dust to be entrained in large plots of soils, dirt, or other areas difficult to thoroughly clean. The proposed rule has been modified to allow that “...Facility grounds used for plant life that are less than a total surface area of 100 square feet shall not be subject to encapsulation.”

7258. Comment: The final phrase of the requirement to encapsulate facility grounds that reads “as approved by the Executive Officer,” should be struck from this condition as it is redundant and understood. Additionally, it should be made clear that facilities may be allowed to breach pavement or land cover as needed to accomplish maintenance or construction activities.

Response: The language has been clarify that “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,” and the phrase “as approved by the Executive Officer” has been removed.

7359. Comment: The requirement for surface impoundment ponds could be subject to misinterpretation and should be reworded to read “...after the water level falls below 1 inch above the pond...”

Response: Staff agrees with the commenter and language has been revised to read “...after the water level is $\leq$ 1 inch at any point above the bottom of the pond or reservoir.”

7460. Comment: The retention pond is permitted and operated under the regulatory authority of DTSC. Our facility initiates removales of any sludge or sediment that accumulates in the storm water retention pond within 24 hours of accumulation or in as timely a manner as possible following

accumulation. There is no precedent for weekly wash downs once the pond has been drained and cleaned.

Response: The purpose of the DTSC regulation for the retention pond is different than the requirements of the proposed rule. The retention pond holds water that contains lead through storm water runoff and other washdown activities at the facility and the DTSC monitors the concentrations of lead and other hazardous compounds in the water in order to determine if the retention pond is in compliance with regulations for hazardous waste containment. The AQMD's purpose for the sludge cleanup is to prevent the generation of fugitive lead-dust resulting from the evaporation of the lead-laden water of the pond. The weekly washdowns are necessary as the pond's bottom surface is large and subject to deposition of lead dust similar to the paved areas.

75. Comment: Removal of lead-containing material from our storm water pond is a complex process that cannot be performed within a 24-hour period consistent with sound environmental practice. The provision should be revised to require initiation of lead-containing material removal within 24 hours and that cleanup should be completed as soon as possible.

Response: Staff has modified the rule language to reflect the comment. Based on historical time periods taken by the facility to conduct cleaning of the surface impoundment, the provision has been modified to "Initiate removal of any lead-containing material... within 1 hour after the water level is < 1 inch at any point above the bottom of the pond or reservoir. Removal of lead-containing material shall be completed as soon as possible, and no later than 6 calendar days after the time initiation of the removal was required."

7661. Comment: The DTSC supports the housekeeping requirement for the surface impoundment ponds.

Response: Staff thanks DTSC for the comment and appreciates their input during working group meetings in order to make sure that the requirements for surface impoundments are consistent with those set forth by DTSC.

7762. Comment: Vehicle wet washing should be limited to those vehicles exiting the facility which have traversed the facility areas associated with lead-acid battery recycling. Onsite mobile sweepers and other plant vehicles are washed at wash areas located within containment buildings. Also, the requirement to keep records of all vehicle wet washing is a complete waste of time and effort.

Response: This requirement has been removed from the proposed rule. However, if a facility triggers the requirement for a Compliance Plan, implementation of

a vehicle wet wash area may be required as an additional lead reduction measure if deemed necessary.

7863. Comment: In the 2009 Order for Abatement for Exide, the AQMD insisted on installation and use of a vehicle wet washing area without providing supporting justification for its necessity, control strategy, or effectiveness.

Response: Vehicle wet washing is an effective measure to reduce track out and is required to be used at Exide based on the Order for Abatement. Vehicle wet washing is used at a variety of facilities to minimize track out. Use of vehicle wet washing at Exide will ensure that potential fugitive emissions that settle on the pavement that are not swept, will not be tracked out of the facility. In addition, if a facility triggers the requirement for a Compliance Plan, implementation of a vehicle wet wash area may be required as an additional lead reduction measure if deemed necessary.

7964. Comment: The requirement for sweepings around monitors not to occur on days when sampling is conducted does not take into consideration monitor locations that collect daily samples. The section should also be specific to cleaning and maintenance activities conducted surrounding a monitoring location.

Response: After review, staff determined that the proposed rule language would prevent the cleaning/sweeping of several areas throughout the facility, which was not the intent. The intent was to prevent samples and monitors from being damaged or altered. Therefore, the language has been removed.

MAINTENANCE ACTIVITY

8065. Comment: The proposed definition of TURNAROUND/MAINTENANCE is unnecessarily broad and encompassing, extending far beyond the scope of activities reasonably associated with major maintenance typically involved in plant turnarounds. Additionally, it should only apply to building, construction, renovation, resurfacing, ground removal activities, etc. which are associated with lead processing.

Response: Staff agrees that the definition originally proposed was overly encompassing as it did not provide a causal link to lead emissions. Therefore, the definition of MAINTENANCE ACTIVITY has been revised to include only specific activities that generate fugitive lead-dust and that are conducted outside of a total enclosure.

8166. Comment: The definition of TURNAROUND/MAINTENANCE requirements are tied to requirements for activities to be conducted in a negative air containment enclosure and notification requirements of four week notice

prior to commencement of work. Neither of these requirements is reasonable or feasible given the proposed definition.

and

Proposed notification requirements for turnaround/maintenance activities would place a facility in a state of constantly submitting four-week advance notifications, essentially every day, to cover the unnecessarily broad and encompassing number of activities that would constitute a “turnaround/maintenance activity.” The combination of this notification requirement with the other requirements for turnaround/maintenance activity is infeasible and unworkable.

Response: In response to comments received, these requirements have been revised. The definition of TURNAROUND/MAINTENANCE has been replaced with a definition for MAINTENANCE ACTIVITY which has a narrower scope. The requirement to perform maintenance activities in a total enclosure has been expanded to include other options if total enclosure is not possible due to physical constraints, limited accessibility, or safety concerns. The noticing requirements have been changed to notification by telephone at least ten days prior to planned maintenance activities followed by a written notification.

| **8267. Comment:** Architectural coating is defined as a turnaround/maintenance activity. Does this mean that painting the building would need to be performed in a negative air environment?

and

In the definition of renovations, could the word “alter” be construed to mean painting?

Response: Architectural coating has been removed from the definition and the definition of renovation has been clarified to say that it pertains to activities that generate fugitive lead dust.

| **8368. Comment:** The rule requires complete replacement of certain ductwork sections after a maximum of two “corrosions leaks” or “patch repairs” for which no minimum size or definition is provided. There is no rationale provided for this requirement, and no consideration of the relative environmental benefit to undergoing the process disruption necessary to replace a large ductwork section which may, after patching or repairing a third time, not leak or release emissions to the atmosphere at all.

Response: Staff agrees with the commenter and this requirement has been omitted from the proposed rule and replaced with a requirement to conduct

periodic inspections of ducting to ensure structural integrity. In addition, duct replacement is now specified in the definition as one of the maintenance activities which requires notification and must be done in a negative air environment, or of the other options provided in subdivision (i) if that is not feasible, to reduce the potential for fugitive lead dust emissions.

8469. Comment: Does the requirement in subparagraph (i)(1)(B) for wet suppression include wet suppression during lifting activities, for example when a crane is lifting ductwork or a tank during rebuild? This is both impractical and unsafe. Please consider a safety exemption or specify that lifting is not subject to wet suppression.

Response: Staff agrees and has added a safety provision for wet suppression or vacuuming *during* maintenance activities. However, the requirement remains the same for *prior to* and *upon completion* of the maintenance activity.

85. Comment: In instances where maintenance is in response to upsets or equipment failures, it may well be the best for the environment to proceed with the maintenance (stopping releases) as expeditiously as possible without waiting for either erection of temporary enclosures or mobilization of vacuum equipment, etc.

Response: PR 1420.1 already provides flexibility in how a facility can implement lead abatement procedures during maintenance activity that results in fugitive lead-dust emissions. A hierarchy of what is to be implemented ranging from a full negative-air containment to wet suppression is based on physical constraints, limited accessibility, or safety issues.

8670. Comment: The requirement for specified maintenance activities to occur only on days when instantaneous wind speeds are < 25 mph is arbitrary and impractical. Large maintenance activities must be scheduled and orchestrated well in advance, and to predict ten days in advance what the maximum wind speed will be on a given day is not possible. Additionally, if work has commenced and an instantaneous wind speed spike > 25 mph occurs, the facility would be subject to a violation of PR 1420.1 for an unforeseeable meteorological event.

and

Stopping maintenance activities “immediately when instantaneous wind speeds are > 25 mph” is impractical and may not well be the best prescription for the environment. It may well be that maintenance to an enclosure, for example, is itself necessary because of a high wind storm situation damaging siding. Proceeding with the necessary maintenance,

even in the face of high wind, would be the best action for the environment, provided it can be done safely.

Response: Staff agrees with the commenter and the requirement has been modified to require maintenance activity conducted outside a negative containment enclosure to cease if an instantaneous wind speed spike of > 25 mph occurs. This requirement is necessary to prevent fugitive lead-dust from becoming airborne when maintenance activities are being conducted outside of a total enclosure. Staff has also modified the provision to allow maintenance work to continue during instantaneous wind speed spikes, if the maintenance work is necessary to prevent the release of lead emissions.

87. Comment: It is not possible to conduct a 24-hour ambient air lead sample in conjunction for any maintenance activity that is conducted in response to an unforeseen event.

Response: For unplanned maintenance activity, if sampling is not being conducted on the day the incident occurs, sample collection shall begin at midnight at the end of the day on which the incident occurs.

88. Comment: Equipment used for maintenance activity that is contaminated with lead should not require cleaning immediately upon completion of work if it is located within a partial or total enclosure.

Response: Staff agrees with the commenter and has modified rule language to read “Store or clean...all lead-contaminated equipment and materials immediately after completion of work in a manner that does not generate fugitive lead-dust.”

8971. Comment: The entire reporting provisions are in need of a significant rewrite. This section will likely result in multiple notifications each day for things like feed augers getting stuck, the battery breaker jamming, the burner going off in the furnace, conveyor belts breaking, etc. This is completely impractical and will result in notifications for things that are really routine for mechanical operations. The facilities, public, and the AQMD will be so overwhelmed with notifications that the effect of the notifications for more significant breakdowns will be nullified.

Response: The notification requirements are intended to apply only to those activities that result in lead emissions. The language has been clarified in paragraph (n)(2) to clarify that only unplanned shutdowns of lead control devices are required, notifications to the Executive Officer are only required if the listed activities “result in lead emissions” and notifications to the public for planned construction; renovation; demolition; and resurfacing, repair, or removal of pavement, concrete, or asphalt are only required if the

activities take place outside a total enclosure and generate fugitive-lead dust.

9072. Comment: Section (n)(2) adds requirements for public notification approved by the Executive Officer and places the burden of the public notification on the facility in spite of the fact that: 1) AQMD is requiring the facility to notify AQMD through the 1-800-CUT-SMOG hotline; 2) Public notifications must be approved by the Executive Officer; 3) SCAQMD maintains an internet site where public notifications can be posted, and 4) SCAQMD has access to the Reverse 911 telephone notification.

and

While the facility contact is available 24/7, notifying the public via a prerecorded message AND e-mail notification may not be achievable within the time period proposed. In addition, the rule does not state what content of the prerecorded notice and the outgoing e-mail should require.

Response: In all AQMD rules, public notification requirements are the responsibility of the facility. The facility can satisfy the public notification requirements through a pre-recorded phone message OR a facility contact that the public can call or call into. In addition, the proposed rule allows the facility to suggest other alternative public notification approaches provided they are approved by the Executive Officer. The timeframe for the public notification is the same given for notification to the Executive Officer. Staff has modified rule language to provide what content is required in the notifications required by (n)(2)(A), (n)(2)(B), and (n)(2)(C).

91. Comment: Section (n)(2)(A) appears to be duplicative with the existing notification requirements under Rule 430. It is not clear what additional notification needs are being fulfilled by this proposed subsection. If this section is retained, we suggest that the language include the caveat that notification is based on an unplanned shutdown of a lead control device that results in excess emissions and revised for consistency with Rule 430.

Response: Subparagraph (n)(2)(A) is not a duplication of Rule 430, and is intended to be more inclusive than requirements of Rule 430 as it includes unplanned shutdowns of lead control devices that do not result in excess emissions. It should be noted that subparagraph (n)(2)(A) states that "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."

92. Comment: Facilities often make verbal reports to the SCAQMD to err on the side of caution. Follow-up written reports can then be made to the SCAQMD to

provide additional detail about the incident. These notifications to the public could unnecessarily alarm the public and PR 1420.1 does not provide a mechanism for any follow-up written report.

Response:

The proposed rule is clear that public notifications are only for those events that result in the generation of fugitive-lead dust or excess lead emissions. Community members have expressed their concern and interest in knowing of these types of incidents at PR 1420.1 facilities so they can plan their lifestyle to minimize lead exposure to themselves or other members in their care. The facility can implement their own protocol to improve communication to their neighbors and community. This would likely prove to be information to the community and your facility to establish an open dialogue.

OTHER COMMENTS

9373. Comment: The proposed definition of PERSON should be consistent, such that a PERSON refers to any individual that is differentiated from an ENTITY.

Response: A definition for PERSON has not been included in PR 1420.1 because PERSON is defined in Rule 102 – Definition of Terms.

9474. Comment: What is the purpose of maintaining records indicating quantities and lead content of each lead-containing material processed? We already know that these facilities handle and produce a lot of lead. We believe that this recordkeeping requirement has no value.

Response: Rule language regarding this matter has been changed to require “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.” Records of lead-containing material processed are necessary to help verify compliance with furnace charging limits for existing facility permit conditions, and for determining compliance during incidents such as equipment breakdowns and ambient air lead concentration exceedance investigations.

9575. Comment: Consider the combination of the facilities funding three monitoring stations, maintained and operated by the AQMD, to be used for compliance, with a requirement to develop a compliance plan supported by proposed projects and modeling (based on the District’s monitors) demonstrating how facilities would comply with and maintain the 0.15 $\mu\text{g}/\text{m}^3$ standard.

Response: The AQMD staff believes the compliance plan requirements in the proposed rule provide a necessary safety net. It is necessary to have measures identified that can be implemented immediately in the event of an exceedance of the ambient lead standard. If no exceedance occurs, the facility would not be required to implement measures in the plan. The offer to fund three monitoring stations for determining compliance with PR 1420.1 is generous, however, the AQMD ~~would not be able to locate the monitors at the fence line of the facility which could result in a location which is not at the point of maximum impact of lead emissions from the facility~~ staff believes that the existing monitoring network for both affected facilities is sufficient. There are currently four facility-operated monitors and one AQMD-operated monitor at Quemetco, and six facility-operated monitors and two AQMD-operated monitors at Exide. If new information shows a need, additional monitors can be installed.

9676. Comment: How long does the uninterruptible power supply (UPS) need to be capable of supporting operations? Typically UPS can last a couple of hours which would be enough time to bring the plant down safely in the event of a power interruption. However, an earthquake or similar event that causes power to be out for extended periods of time cannot be covered entirely by UPS.

Response: The rule language has been changed to clarify that the uninterruptible power supply is to be used for power outages, and the staff report reflects that it needs to be operational long enough so that equipment and processes can be safely shutdown.

9777. Comment: Will previously performed and approved source tests and previously approved protocols comply with paragraphs (k)(2) and (k)(3)? Would source tests from 2009 be acceptable for equipment that is next scheduled to be tested in the first half of 2011?

Response: Yes, previously approved protocols are acceptable and paragraph (k)(11) has been revised to allow the 2009 source tests so long as they are the most recent conducted since January 1, 2009, demonstrate compliance with the lead control device standards, are representative of the control methods currently in use, and the test was conducted using approved methods in the proposed rule.

9878. Comment: Please clarify that the provision for new facilities applies to 100% new facilities and not changes/expansions/modifications of existing facilities.

Response: The provision applies to any facility beginning construction or beginning operations on or after the date of adoption of PR 1420.1. Therefore, in addition to totally new facilities, if an existing facility begins new lead battery recycling operations, this provision would apply.

9979. Comment: We are concerned that the AQMD is acting arbitrarily since there are significant proposed revisions to the rule language for the set hearing package since its original release at the March 18, 2010 public workshop. The AQMD is requesting comments to be received for the revisions to rule language within one week. This is an unreasonably short timeframe to provide comments especially due to the fact that the Draft Staff Report explaining the changes and rationale has not yet been provided. We suggest that the commenting period be extended until September 10, 2010 in order for our facility to provide comments and suggestions to revise the proposed rule so that it achieves compliance with the federal rule in a cost effective and technologically feasible and reliable manner.

Response: The request for comments to be received from the working group within one week was set in order to allow time for staff to include and address

any comments and suggestions that could be included in the set hearing package. The close of comments date established for the set hearing package does not preclude stakeholders and the public from providing comments for the overall rule development. Comments received will be addressed up until the public hearing date for this rule proposal. Additionally, the public will be given the opportunity to make comments at the public hearing. The set hearing package for this rule will be released on August 31, 2010 and will include the draft staff report.

100.Comment: Two Several letters were received from employees of a company near one of the PR 1420.1 facilities expressing concerns about lead exposure and lack of notification of violations. The letters expressed support of the proposed rule lowering the ambient air lead concentration standard to 0.15 µg/m³.

Response: Staff thanks the commenters and appreciates their support. Staff would like to note that PR 1420.1 includes requirements for public notifications of shutdowns, turnarounds, and maintenance activities

101.Comment: Communities are concerned that lead monitoring once every three days allows facilities to tailor their production around the monitoring schedule. The rule needs to be rewritten to ensure that the facilities do not stop or reduce their production during sampling days and/or increase production when samples are not taken.

Response: A provision was added to the proposed rule to address the need for additional monitoring if the facility exceeds the new lead standard of 0.15 µg/m³. Paragraph (j)(9) requires sampling to be conducted on a daily basis for sixty consecutive days if the facility exceeds the ambient air lead concentration standard of 0.15 µg/m³ averaged over any 30 consecutive days. Normally, PR 1420.1 requires sampling one day in every three days. Historic sampling results indicate that spikes or excursions are typically not related to process emissions, but rather, to fugitive emissions from housekeeping or maintenance activities. Based on recent sampling at affected facilities, the AQMD staff believes that sample collections once every three days provides a good representation of lead emissions.

102.Comment: The original draft of the rule stated that enclosure may be required of “Any other area used in the lead-acid battery recycling operation to process or store lead-containing materials deemed necessary by the Executive Officer.” We request this provision be reinstated as a valuable tool that can be utilized to further reduce lead emissions.

Response: Based on discussions at the PR 1420.1 Working Group meetings, additional enclosures are now required to be considered in the compliance plan requirements in subparagraph (g)(2)(A) as one of the additional lead

emissions reduction measures which can be implemented by the facility in the event of an exceedance of the 0.15 µg/m³ ambient lead standard averaged over any 30 days. This provision was moved to the compliance plan because enclosures are already required in paragraph (e)(1) for areas of likely lead emissions such as: battery breaking areas; material storage and handling areas excluding areas where unbroken lead-acid batteries and finished lead products are stored; dryer and dryer areas including transition pieces; smelting furnaces and smelting furnace areas charging any lead containing material; agglomerating furnaces and agglomerating furnace areas charging any lead-containing materials; and refining and casting areas. Staff believes these enclosures should be sufficient.

103.Comment: The original draft of the rule stated that “Sweeping activities shall not be performed within 10 meters of any ambient air monitor location specified in subdivision (g) that is undergoing sample collection.” We would like the wording to be restored along with additional language that specifies no fogging, misting, spraying of water or other liquids shall occur within 20 meters of any ambient air monitoring during sample collection. We understand that this has been a problem in the past.

Response: This provision has been changed from the original draft in response to similar comments made at the Working Group meetings. It has been moved to paragraph (j)(8) and now reads “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.”

104.Comment: In light of the many times hazardous waste levels of lead have been detected in the soils surrounding Quemetco, we would like the rule to require that the monitoring be conducted in such a way as to detect lead that is kicked up by wind or train or truck traffic. Quemetco released 7121 pounds of lead from their stacks and fugitive dust emissions between 1995 and 1999. Testing done by Quemetco and DTSC in 2004 revealed gross lead contamination surrounding the facility and that the contamination is more widespread and greater than originally expected. How does the AQMD plan on monitoring the air levels at the precise times when trucks and trains are kicking up dust that contains high lead levels.

Response: The AQMD maintains a U.S.-EPA approved network of source and non-source oriented monitors. Source-oriented monitors are located near lead-emitting facilities and non-source oriented monitors are located at 10 sites throughout the AQMD. Monitoring at the sites is required to be conducted as a 24 hour sample on a midnight to midnight basis. This means that all hours of the day are accounted for, including winds and traffic considerations. Quemetco’s total lead emissions from point sources are currently less than 0.003 pounds per hour, considerably less than

several years ago. This reduction is due to additional controls Quemetco added to reduce air toxic emissions required by the AB 2588 Toxics “Hot Spots” program. Current air monitoring data from Quemetco’s monitors shows that they are close to the new NAAQS and, with completion of their total enclosure for the battery breaking area and adherence to all PR 1420.1 requirements, the facility is expected to be in compliance with the new standard.

105.Comment: The rule requires facilities to pave over or encapsulate contaminated soil in areas other than locations less than 100 square feet used for planters. By not coordinating with the Department of Toxic Substances Control (DTSC), U.S.-EPA, and the Los Angeles Regional Water Quality Board to mandate clean up of the contamination that potentially threatens ground water; this requirement effectively facilitates a cover up and inhibits the implementation of responsible corrective action.

Response: This provision states that the facility shall “Pave, concrete, asphalt, or otherwise encapsulate all facility grounds as approved by the Executive Officer.” The intent of the encapsulation requirement of PR 1420.1 is to prevent fugitive dust from being kicked up, facilitate cleaning of the areas, and minimize track out from the facility. Essentially all areas at both facilities are already in compliance with this requirement. The AQMD staff currently works closely with other regulatory agencies and agrees that the AQMD should cooperate and coordinate with DTSC, U.S.-EPA, and water boards. A DTSC representative participated as a member of the PR 1420.1 Working Group and worked closely with staff throughout the process of developing PR 1420.1 to ensure that requirements would not overlap or conflict with any of their requirements and ongoing efforts to address soil contamination. DTSC also sent a letter of support for the housekeeping requirements for surface impoundment ponds (see comment 76).

106.Comment: The manner in which the current rule is written with the compliance plan and timetable offers no immediate remedy to the community. We request that a provision be added that would require facilities to reduce their throughput and decrease the quantity of material processed when they exceed the $0.15 \mu\text{g}/\text{m}^3$ limit. This would bring them into compliance in a timely manner while they implemented their Compliance Plan and is a similar provision to one included in Quemetco’s previous Title V permit.

Response: If a facility exceeds the $0.15 \mu\text{g}/\text{m}^3$ standard, the facility must begin implementing their compliance plan. The compliance plan includes measures for process changes including reduced throughput limits and conditional curtailments under clauses (g)(2)(A)(v) and (vi).

107.Comment: A proposal to change the facility total point source mass emission rate from 0.045 pounds per hour to 0.003 pounds per hour would constitute a major change to PR 1420.1. Any action by the Governing Board on this proposal at the October 1, 2010 meeting would violate the procedural rulemaking requirements of the California Health & Safety Code by not allowing time for performing additional environmental and socio-economic impact assessment. At a minimum, Health & Safety Code Section 40726 would require additional opportunity for public comment, and revisions to the District staff report and supporting assessments addressing such a major change.

and

The Staff Report, Environmental Assessment and Socioeconomic Impact Assessment do not contain the evaluations necessary to support the 0.003 lbs/hr emission rate. No workshops were held and no opportunity for public comment was allowed on this issue.

Response: Staff's proposal is a total facility lead mass emission rate limit for all lead point sources of 0.045 lb/hr and not the 0.003 lb/hr lead emission rate. If directed by the Board at the November 5, 2010 hearing to consider 0.003 lbs/hr as the emission rate for the proposed rule, AQMD staff will conduct the appropriate analyses and return to the Board at a later date.

108.Comment: Exide is unsure if the WESP control technology installed at the Quemetco facility is technically feasible and compatible with Exide's process. The Exide facility uses a fundamentally different furnace technology than Quemetco to process reverberatory furnace slag, and Exide has no basis to assume this difference is amenable to the WESP control technology. Neither Exide nor the SCAQMD has had sufficient time to review the technical feasibility and economic aspects of meeting a facility emission rate limit of 0.003 lb/hr from all point sources. Whether emissions from our facility would be below this limit with implementation of the WESP is unknown.

Response: Staff understands that the WESP control technology installed at Exide may result in different emission rates than those achieved at Quemetco. AQMD staff agrees that additional time is needed to further evaluate the technical feasibility, potential environmental impacts and economic impacts of such a proposal. Staff's proposal is to retain the total facility lead emission rate of 0.045 lb/hr.

109.Comment: It has been reported that Quemetco spent \$18 million on installation of its emission control system, inclusive of the WESP. Exide's best cost estimate to achieve 0.003 lb/hr would be on the same order on the basis of no site or process-specific analysis. A cost of this magnitude will threaten

the economic viability of the Exide facility. Exide would have to consider the alternative of expanding operations at its other recycling facilities outside of California. Such would result in previously unconsidered significant adverse socioeconomic and environmental consequences including loss of jobs, loss of Basin lead-acid battery recycling capacity, and related air emission increases.

Response: Proposed Rule 1420.1 requires as a core requirement that affected facilities achieve a total stack emission rate of 0.045 lbs/hr. AQMD staff agrees that additional time is needed further evaluate the technical feasibility, potential environmental impacts and economic impacts of lowering the stack emission rate to 0.003 pounds per hour. Staff's proposal is to retain the total facility lead emission rate of 0.045 lbs/hr.

110.Comment: Exide has previously stated that an emission rate is not the proper control methodology for this rule and is not needed to ensure compliance with the ambient standard. If a facility mass emission rate limit is to be considered at all, Exide proposes that the rule require the emission rates if compliance with 0.15 µg/m³ limit cannot be achieved by January 1, 2012. Both the total facility and individual point source emission rate limits would go into effect as components of the Contingency Compliance Plan.

Response: Based on air dispersion modeling using the most recent source tests results and stack parameters, the stack emissions of one affected facility would exceed the 0.15 ambient lead standard. As a result, Proposed Rule 1420.1 establishes a point source emission rate of 0.045 lbs/hour as a core requirement which modeling shows that at the point of maximum impact the ambient concentration about 30 percent below the 0.15 ambient lead standard in Proposed Rule 1420.1. The 30 percent "buffer" is necessary so the facility has an emissions budget for the fugitive emissions. Staff believes that if the emission standards are not required as a core requirement, at least one of the facilities would most likely exceed the standard and requirements for implementation of controls would be delayed if required under the Contingency Compliance Plan. Thus, staff's proposal of the emission rate limits as a core requirement stands.

111.Comment: Health and Safety Code Section 40001(d)(1) through (3) sets forth the appropriate balance between NAAQS compliance and allowing a facility to design the method by which it will comply. As stated in the statute: "A district shall allow the implementation of alternative methods of emission reduction, emission monitoring, or recordkeeping if a facility demonstrates to the satisfaction of the district that those alternative methods will provide equivalent performance." If the District specifies an "emission limit," the District shall allow the facility to include operational and effectiveness measurement elements "that can be included as permit conditions by the District to ensure compliance with, and enforcement of,

the equivalent performance requirements...” The District’s mandated facility mass emissions rate limit here functions both as an emission limit and control method. Though Exide opposes any mass emissions rate limit, at the very least PR 1420.1 must provide for, and allow, Exide an alternative compliance method in accordance with Health and Safety Code Section 40001(d). Though Exide opposes the inclusion of any facility stack mass emissions rate limit as a core rule requirement, at a minimum, Exide requests that language be added in subsection (f)(3) to allow for “an alternative method that is equally or more effective to satisfy the ambient air concentration requirement.”

Response: PR 1420.1 does not specify the method or control approach that a facility must use to meet either the total facility lead emission rate of 0.045 lb/hr or individual point source lead emission rate of 0.010 lb/hr. Furthermore, Health and Safety Code Section 40001(d)(3) states that “if a district rule specifies an emission limit for a facility or system, the district shall not set operational or effectiveness requirements for any specific control equipment operating on a facility or system under that limit.” PR 1420.1 simply requires achieving an emission rate limit and does not set any operational or effectiveness requirements for any specific emission control equipment operating on a facility or system under the proposed emission rate limit.

112.Comment: Proposed Rule 1420.1 attempts to impose an ATCM emissions limit on stack emissions to achieve the NAAQS lead standard. The District cites Health and Safety Code Section 39666 as legal authority for PR 1420.1. If the District relies on Section 39666, then it must satisfy its requirements to allow sources to submit to the District an alternative method or methods that will achieve an equal or greater amount of reduction in emission of that air toxic contaminant and its associated risk. The District shall approve the alternative method if it is demonstrated.

Response: The commenter’s reference to the Health & Safety Code Section 39666(f) states, “Where an airborne toxic control measure requires the use of a specified method or methods to reduce, avoid, or eliminate the emissions of a toxic air contaminant, a source may submit to the district an alternative method or methods that will achieve an equal or greater amount of reduction in emissions of, and risk associated with, that toxic air contaminant...” PR 1420.1 does not implement an ATCM. As a result, the reference to Health and Safety Code Section 39666(d) is removed.

113.Comment: The District has stated in a staff response that PR 1420.1 is a BARCT rule for lead. BARCT is defined as “an emissions limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of

source.” Exide contends that the District’s rulemaking record is presently inadequate to even allow for Governing Board consideration as to whether the 0.045 lb/hr facility mass emissions rate limit is BARCT under Health and Safety Code Section 40920.6. The District must provide a BARCT analysis considering facility-specific economic and environmental impacts.

Response: The staff response has been revised in Response to Comment #45 reflecting that PR 1420.1 is not a BACT rule. The response no longer states that PR 1420.1 is a BARCT rule.

114.Comment: The District’s socioeconomic analysis is insufficient because it does not properly and adequately consider the availability and cost-effectiveness of alternatives to the mass emissions rate limit as required by Health and Safety Code 40440.8, 40703, and 40922. The District avoids a relative cost-effectiveness analysis and does not cite to section 40922, presumably because the District takes the position that section 40922 only applies to rules meant to control ozone, CO, NOx and SOx. While the District generally considered certain compliance costs to reach its \$0.41/\$0.32 million per year estimate, it did not adequately consider the economic impact to Exide, particularly as to the newly-proposed alternative of a 0.003 lbs/hr facility mass emissions rate limit, and the District did not properly consider cost-effective alternatives that would still result in NAAQS compliance.

Response: Regarding requirements for availability and cost-effectiveness analyses required by the Health and Safety Code Sections referenced by the commenter, the District continues to take the position that section 40922 does not pertain to lead. Although Health and Safety Code Sections 40440.8 and 40703 require these analyses, both require the analyses pursuant to section 40922 which again only pertains to ozone, CO, SOx, and NOx. It should also be noted that staff’s proposal remains at the 0.045 lb/hr and 0.010 lb/hr lead emission rate for total facility and individual point sources, respectively. See response to Comment #108.

115.Comment: The District rejected Exide’s proposal to increase stack heights, stating that “the Clean Air Act prohibits using stack heights in lieu of emissions control” (Staff Response to Comment #8). The District is incorrect. Under the federal CAA, a facility can take full credit for improved dispersion provided by any stack height up to 65 meters without any justification required as dictated by good engineering practices. Good engineering practice means “the height necessary to ensure that emissions from the stack do not result in excessive downwash.” “In no event may the Administrator prohibit any increase in any stack height or restrict in any manner the stack height of any source.” Exide is significantly impacted by downwash at its stacks, which are barely taller than the

facility buildings. Increasing the stack height is a legally viable alternative to satisfy the NAAQS.

Response: Increasing the stack height or buoyancy would just be a dilution of fence line monitor concentrations, and that the same amount of lead emissions are being dispersed in the atmosphere. Lead is a persistent contaminant and would continue to accumulate on the ground in areas of dispersion. Simply changing the air dispersion of emissions without overtly reducing emissions is not in the best interest for air quality and public health.

116.Comment: The proposed 0.003 lbs/hr facility mass emissions rate limit alternative threatens the economic viability of Exide to remain operating in Southern California, resulting in significant adverse economic and environmental impacts not previously considered that require subsequent of supplemental socioeconomic and environmental impact assessments. Exide's closure as a result of "substantial changes" to the rule will result in significant adverse economic impacts and direct and indirect significant adverse environmental impacts necessitating the District to prepare subsequent or supplemental socioeconomic environmental impact assessments (14 CCR § 15162).

Response: Staff's proposal is a total facility mass emission rate limit of 0.045 lb/hr and not the 0.003 lb/hr rate. See response to Comment #108.

117.Comment: The statement in response to comment #45 that the 0.003 lbs/hr standard is "likely to be the basis of BACT and T-BACT" is unsupported. Staff should state that this response cannot be considered or acted upon in this rulemaking.

Response: Staff does not define BACT or T-BACT in this rulemaking. There is a specific process for determining if a given technology or emission limit is BACT and only new, modified, or relocated equipment or processes are subject to BACT and T-BACT. PR 1420.1 addresses existing sources of lead emissions. As such, BACT and T-BACT are not addressed under this rulemaking. See response to comment #37 regarding the intent of this rulemaking.