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Kansas
Department of Health & Environment

Robert Moser, MD, Secretary

Sam Brownback, Governor

August 18, 2014

Source ID No. 1690035

Mr. James Thomas
Exide Technologies
413 E. Berg Rd.
Salina KS 67401

Re: Air Emissions Source Construction Permit

Dear Mr. Thomas:

Enclosed is the Air Emission Source Construction Permit to implement federally enforceable limitations and conditions applicable to Exide Technologies within the 2008 Lead National Ambient Air Quality Standard nonattainment area in Salina, Kansas.

Please review the enclosed permit carefully because it obligates Exide to certain requirements. The source identification number listed above should be used in all communication with the Kansas Department of Health and Environment (KDHE) about this permitted facility.

As provided for in K.S.A. 65-3008b(e), an owner or operator may request a hearing within 15 days after affirmations, modification, or reversal of a permit decision pursuant to subsection (b) of K.S.A. 65-3008a. In the Request for Hearing, the owner or operator shall specify the provision of this act or rule and regulation allegedly violated, the facts constituting the alleged violation and secretary's intended action. Such request must be submitted to: Director, Office of Administrative Hearings, 1020 S. Kansas Avenue, Topeka, Kansas 66612-1327. Failure to submit a timely request shall result in a waiver of the right to hearing.

Notify Stan Marshall, KDHE North Central District, at (785) 827-9639 within 30 days after the issuance of this permit so that an evaluation may be conducted.

Please contact Melissa Weide at (785) 291-3272 or Marian Massoth (785) 296-0616 if you have any questions about this permit.

Sincerely,

Melissa D. Weide

Melissa Weide
Environmental Scientist, Planning Section

Marian Massoth, P.E.
Air Permits Section Chief

Enclosure
c: Stan Marshall, NCDO
Jennifer Nichols, NCDO
Russ Brichacek

C-12206

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AIR EMISSION SOURCE CONSTRUCTION PERMIT

Source ID No.: 1690035

Effective Date: 8/18/2014

Source Name: Exide Technologies

SIC Code: 3691, Storage Batteries

NAICS Code: 335911, Battery Manufacturing

Source Location: 413 E. Berg Rd.
Salina, KS

Mailing Address: 413 E. Berg Rd.
Salina, KS 67401

Contact Person: James T. Thomas
Plant Manager
Exide Technologies
Office: +1 785-825-6276
Fax: +1 785-825-6538
E-mail: jim.thomas@exide.com

I. Authority

KDHE, as the permitting authority, is issuing this permit pursuant to K.S.A. 65-3008 and K.A.R. 28-19-300 *et seq.* and as authorized by K.S.A. 65-3005. All documents related to applications for permits or approvals shall be submitted to the Permits Section in the Bureau of Air.

KDHE is the compliance and enforcement authority, and all documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Compliance and Enforcement Section in the Bureau of Air.

II. General Information

The purpose of this document is to implement federally enforceable limitations and conditions applicable to Exide Technologies within the 2008 Lead NAAQS nonattainment area in Salina, Kansas. This comprehensive

construction permit authorizes Exide modifications and improvement activities at the Salina plant to reduce lead emissions and support attainment of the 2008 Lead NAAQS.

The conditions of this permit supplement all air construction and operation permits and approvals previously issued to this source. Unless otherwise specified, these conditions are in addition to all other applicable permit or approval conditions and regulations.

This permit is based on information provided by the owner or operator of the subject air emission sources. Each emission unit or stationary source is required to be operated in compliance with all applicable requirements of the Kansas Air Quality Act and the federal Clean Air Act.

III. Facility Description

Exide Technologies operates a lead acid battery and lead oxide manufacturing facility in Salina, Kansas (Saline County). The Exide property is approximately 46 acres in size and is located about six kilometers south of downtown Salina. This facility operates under a Class II Operating Permit issued on January 15, 2004, and is a non-major source of hazardous air pollutant (HAP) emissions.

The production operations at this facility consist of 7 pasting lines, 5 ball mills and 10 oxide mills with emissions controlled by 15 process baghouses, 16 battery assembly lines, and 41 lead reclaim pots with 29 of those lead reclaim pots emissions controlled by 5 baghouses. Pressure differential is monitored across each fabric filter control device for these sources.

General process and control equipment description:

> In grid casting, lead alloy ingots are charged to a melting pot, from which the molten lead flows into molds that form the battery grids. Paste is made in a batch process. A mixture of lead oxide powder, water, and sulfuric acid produces a positive paste, and the same ingredients in a slightly different proportion with the addition of an expander make the negative paste. Pasting machines then force the pastes into the interstices of the grids, which are then made into plates. The pasted plates are then cured through alternating cycles of steaming and drying. From the ovens, the cured plates are loaded into the assembly process where they are automatically stacked in an alternating positive/negative order. Emissions from the battery manufacturing process are controlled by baghouses.

IV. Project Summary

Exide is completing various improvement projects to reduce lead emissions. Projects include: oxide mill replacements; baghouse replacements; new stacks and stack height increases; and fugitive emissions controls (production facility and roadways). Performance results from these improvement projects were used for the air dispersion modeling to demonstrate compliance with the 2008 Lead NAAQS of 0.15 $\mu g/m^3$ on a rolling 3-month average basis.

V. Significant Applicable Air Pollution Control Regulations

The facility is subject to the Kansas Administrative Regulations Chapter 28 Article 19 relating to air pollution control.

The state and federal regulations that may have associated requirements include, but are not limited to:

K.A.R. 28-19-650 Emissions Opacity Limits.

K.A.R. 28-19-20 Particulate Matter Emission Limitations.

40 C.F.R. Part 60, Subpart KK, Standards of Performance for Lead-Acid Battery Manufacturing Processing Plants, which is adopted by reference in K.A.R. 28-19-720 New Source Performance Standards.

40 C.F.R. Part 60, Subpart A, General Provisions.

40 C.F.R. Part 63, Subpart PPPPPP, National Emission Standards for Hazardous Air Pollutants for Lead Acid Battery Manufacturing Area Sources, which is adopted by reference in K.A.R. 28-19-750 Hazardous Air Pollutants; Maximum Achievable Control Technology.

40 C.F.R. Part 63, Subpart A, General Provisions.

VI. Permit Conditions

The following conditions apply to all emissions sources in section VII of this permit:

A. Emission control practices shall be implemented and air pollution control equipment shall be operated continuously while operating the associated emission unit or units. [K.A.R. 28-19-501(d)(1)]

B. A written air pollution control equipment maintenance plan shall be maintained on-site to assure proper operation of the air pollution control equipment. [K.A.R. 28-19-501(d)(2)]

C. The owner or operator shall maintain records showing the date of all routine or other maintenance or repairs of the control equipment, the action taken on such date, and any corrective action or preventive measures taken. [K.A.R. 28-19-501(d)(3)]

D. Source and stack parameters, including but not limited to stack heights, stack diameters, exhaust temperatures, emission rates, and exit velocities, shall be consistent with data provided for the dispersion modeling analysis. Actual operational conditions shall be consistent with data provided for the dispersion modeling analysis. If significant changes are proposed, or modeling parameters are not representative of site conditions, the owner or operator shall re-model, document compliance with the 2008 Lead NAAQS and any other applicable NAAQS, and submit documentation of compliance to KDHE prior to making the changes. Mitigation shall be required if modeling indicates a potential NAAQS exceedance.

E. The owner or operator shall comply with the emissions limits listed in Tables 2, 4, and 7.

F. The owner or operator shall conduct performance testing to demonstrate compliance with the emissions limits in Tables 2, 4, and 7 in Section VII of this permit. For each test, the owner or operator shall submit a performance test protocol, which includes a description of the test and applicable test methods, to the KDHE Air Compliance and Enforcement Section at least 30 days prior to testing. A written report of the performance test results shall be submitted to KDHE within 30 days following each test. Performance testing shall be conducted as follows:

1. Stack testing for the Oxide Mill (OM) was conducted in 2013 and shall be conducted every fifth year thereafter.

2. Stack testing for Baghouse #1 (BH1) shall be conducted in 2014, after installation and commissioning, and then every fifth year thereafter.

3. Stack testing for Baghouse #3 (BH3) shall be conducted in 2014 and every fifth year thereafter.

4. Stack testing for Baghouse #2 (BH2) shall be conducted in 2015 and every fifth year thereafter.

5. Stack testing for Baghouse #4 (BH4) shall be conducted in 2016 and every fifth year thereafter.

6. Stack testing for Baghouse #5 (BH5) and for each Ball Mill Baghouse (BH11 through BH15) shall be conducted in 2017 and every fifth year thereafter.

7. For any stack test result that exceeds the respective emissions limit (as provided in Tables 2, 4, and 7 in Section VII of this permit), a retest shall be required within 60 days of the test date for which the limit was exceeded.

8. For any calendar year, January through December, in which the annual number of pounds of lead processed by the facility increased by fifteen (15) percent or more above the annual rate during the year of the last stack test, the owner or operator shall conduct stack testing within the first three months of the following calendar year for Baghouses 1 through 5 (BH1-BH5), Oxide Mill (OM: OM1-OM10), and Ball Mill Baghouses 11 through 15 (BH11-BH15).

The performance test schedule is illustrated in Table 1 below.

Table 1. Schedule for Required Performance Testing.

	Source ID										
Year	BH1	BH2	BH3	BH4	BH5	OM	BH11	BH12	BH13	BH14	BH15
2013						✓					
2014	✓		✓								
2015		✓									
2016				✓							
2017					✓		✓	✓	✓	✓	✓
2018						✓					
2019	✓		✓								
2020		✓									
2021				✓							
2022					✓		✓	✓	✓	✓	✓

VII. Activities and Plant-wide Enforceable Conditions for the Attainment and Maintenance of the 2008 Lead NAAQS

Exide's NAAQS compliance projects are summarized in Attachment 1.

A. Facility Baghouses

Facility Baghouse Replacement

This project includes replacing existing environmental (facility) baghouses with new high-efficiency Pulse-Jet Dust Collector systems. Table 2 lists each facility baghouse and provides the completion date for each baghouse replacement. Table 2 also identifies the applicable point source emissions limits, as developed and modeled for demonstrating ambient impacts less than the 2008 Lead NAAQS and for meeting the applicable federal New Source Performance Standard (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP).

Table 2. Facility Baghouses with Respective Enforceable Emissions Limits.

Source ID	Source Description	Facility Emissions Controlled	Replacement Status	Lead Emission Limit, grams/second (g/s)	Lead Emissions Limit, pounds/hour (lb/hr)
BH3	Baghouse #3	COS / Assembly U-Lines 1, 4, 12, 17; 18 Stacker; and break room air shower	Completed September 2009	5.63 E-03	4.47 E-02
BH2	Baghouse #2	COS / Assembly U-Lines 2, 3, 5, 10, and 11; and COS / Assembly department roof drop near offices	Completed November 2010	1.73 E-03	1.37 E-02
BH4	Baghouse #4	Pasting Lines 1-6; Oxide Mill roof drop; Ball Mill roof drop; Carborandum room; Storage Bins bin vent; and Central Vacuums 3 and 4	Completed July 2011	1.85 E-02	1.47 E-01
BH5	Baghouse #5	COS / Assembly Lines 15 and 16; Grid Casting; RLS Barcaster; Cominco Re-melt Pot; Pasting Line 7; Pasting Mixers; Flash Dry Ovens; Metals department; and one roof drop	Completed May 2012	1.63 E-03	1.29 E-02
BH1	Baghouse #1	Cast On Strip (COS) / Assembly U-Lines 6, 7, 8, and 9; 18 Repair Table; and Central Vacuums 1 and 2	Installation Completed February 19, 2014	3.71 E-03	2.94 E-02

Baghouse #1 Replacement:

Exide's Notice of Construction or Modification for the replacement of Baghouse #1 was received by KDHE on May 28, 2013. Ref# C-11313.

The following equipment or equivalent is approved for the replacement of Baghouse #1:

One (1) 390-bag GE Energy baghouse, using Spunbonded Polyester filters.

Exide shall replace Baghouse #1 and shall increase the stack height to 80 feet as modeled for the attainment of the 2008 Lead NAAQS in the State Implementation Plan Attainment Demonstration for the Salina Nonattainment Area.

Performance Testing Requirements for Baghouse #1 Replacement:

The control equipment is being replaced and, therefore, a performance test is required to demonstrate compliance with the emissions limit in Table 2 for the exhaust from the final outlet, Baghouse #1 stack, to the atmosphere. The stack emissions subject to the NSPS require performance testing in accordance with 40 C.F.R. 60.8(a). Performance testing is required to be completed within 60 days after achieving the maximum production rate, but no later than 180 days after the initial startup of the new Baghouse #1.

The owner or operator shall conduct the performance test in accordance with the test methods described in 40 C.F.R. 60.374 or any other test method approved by KDHE to demonstrate compliance with the permitted emissions limitation in Table 2.

The owner or operator shall submit a performance test protocol which includes a description of the test and applicable test methods to the KDHE Air Compliance and Enforcement Section at least 30 days prior to testing.

A written report of the performance test results shall be submitted to KDHE within 30 days following the test.

Notifications Required for Baghouse #1 Replacement:

The following notifications are to be submitted, in accordance with 40 C.F.R. 60.7(a), to the KDHE Air Compliance and Enforcement Section in Topeka, KS.

1. The actual date of the initial start-up of Baghouse #1, postmarked within 15 days after that date;

2. Maximum production rate achieved; and

3. Scheduled date for performance testing and protocol 30 days prior to testing.

The owner or operator shall notify the Air Program Field Staff at the North Central District Office in Salina at (785) 827-9639 when installation of Baghouse #1 is complete so that an evaluation can be conducted.

Facility Baghouses (BH1-BH5) Monitoring Requirements:

The following requirements apply to any emission source subject to 40 C.F.R. Part 63, Subpart PPPPPP, with emissions controlled by a fabric filter.

1. The owner or operator shall perform semiannual inspections and maintenance of each fabric filter as specified in 40 C.F.R. 63.11423(b)(2)(i); and

2. The owner or operator shall meet the monitoring requirements of 40 C.F.R. 63.11423(b)(2)(ii).

B. Oxide Mill

Oxide Mill Replacements

This project replaces existing oxide reactors with new Eagle/Linklater M1500 Oxide Reactors with automated controls for the oxide operations. This includes replacement of the process Oxide Mills (OM1 through OM10), associated process baghouses, and the addition of HEPA filters to the emissions controls for an overall efficiency of 99.97%. Table 3 lists the Oxide Mills, OM1 through OM10, and the respective replacement completion dates.

Table 3. Oxide Mill Replacements.

Source ID	Source Description	Replacement Completed
OM1 & OM2	Oxide Mills #1 & #2	September 2006
OM3 & OM4	Oxide Mills #3 & #4	July 2009
OM5 & OM6	Oxide Mills #5 & #6	October 2010
OM7	Oxide Mill #7	January 2011
OM8	Oxide Mill #8	February 2011
OM9 & OM10	Oxide Mills #9 & #10	March 2011

Oxide Mill Stack Modifications

The following table (Table 4) describes Oxide Mill stack modifications as modeled for attainment of the 2008 Lead NAAQS in the State Implementation Plan Attainment Demonstration for the Salina Nonattainment Area. Exide shall manifold ten Oxide Mill (OM1-OM10) stacks to one new combined Oxide Mill (OM) stack, and the OM stack height shall be 65 feet from ground level. Table 4 also identifies the applicable lead emissions limit for the combined emissions from the new single Oxide Mill (OM) stack.

Table 4. Oxide Mill Stack Modification Requirements and Enforceable Emissions Limit.

Source ID	Source Description	Approved Stack Height	Status	Lead Emissions Limit, grams/second (g/s)	Lead Emissions Limit, pounds/hour (lb/hr)
OM: Oxide Mill (OM-OM10), Oxide Mill Stacks	Manifold ten OM stacks to one new combined OM stack.	65 feet from ground level	Completed October 1, 2013. Stack test completed November 22, 2013.	8.47 E-03	6.72 E-02

Performance Testing Requirements:

The stack emissions subject to the NSPS require performance testing in accordance with 40 C.F.R. 60.8(a). Performance tests for the Oxide Mill combined stack were conducted on November 22, 2013.

Oxide Mill Corrective / Preventive Action

The action identified in Table 5 below is designed to eliminate the potential for a leak from the oxide mill building to the outside environment in the event of a release resulting from a malfunction of the lead oxide conveyance system within the building. This action fulfills Exide's commitment to KDHE for corrective action measures in response to a minor lead oxide release event in October 2010.

Table 5. Action Taken to Prevent Lead Oxide Escape from Oxide Mill.

Activity	Description	Status
Relocate Oxide Mill Diverter Valves	Implement a new oxide delivery layout with an auxiliary set of valves installed in a parallel system. Exide shall enclose sections of the oxide mill building where the highest potential exists for the escape of lead oxide.	Completed July 2012

Inspection and Repair Requirements:

Exide shall inspect the Oxide Mill building structure/enclosure at least once every other month. Exide shall repair any gaps, breaks, separations, leak points or other possible routes for emissions of lead to the atmosphere within 30 days of identification. If a repair cannot be completed within 30 days, then the repair shall be completed within the shortest amount of time practically achievable and the reason(s) for the delay shall be recorded. Inspection and repair information shall be recorded and records kept on site for a minimum of two years. Records shall be made available to KDHE upon request.

C. Ball Mill

Ball Mill Stack Modifications

The following table (Table 6) identifies the Ball Mill stack modifications project as modeled for attainment of the 2008 Lead NAAQS in the State Implementation Plan Attainment Demonstration for the Salina Nonattainment Area.

Table 6. Ball Mill Stack Modifications.

Project	Action	Status
Baghouses 11-15 (BH1 –BH15), Ball Mill Stacks	Stack heights shall be increased by 37 feet.	Completed July 19, 2013. Stack test completed November 22, 2013.

Table 7 lists each Ball Mill Baghouse, the stack heights approved by KDHE, and the lead emissions limit that applies, as modeled for the attainment of the 2008 Lead NAAQS in the State Implementation Plan Attainment Demonstration for the Salina Nonattainment Area.

Table 7. Stack Height Requirements and Enforceable Emissions Limits for Ball Mill Baghouses.

Source ID	Source Description	Approved Stack Height, meters (m)	Approved Stack Height, feet (ft)	Lead Emission Limit, grams/second (g/s)	Lead Emission Limit, pounds/hour (lb/hr)
BH11	Ball Mill 11 Baghouse	24.512	80.420	8.82 E-04	7.00E-03
BH12	Ball Mill 12 Baghouse	24.559	80.574	8.82 E-04	7.00E-03
BH13	Ball Mill 13 Baghouse	24.533	80.489	8.82 E-04	7.00E-03
BH14	Ball Mill 14 Baghouse	24.512	80.420	8.82 E-04	7.00E-03
BH15	Ball Mill 15 Baghouse	24.788	81.325	8.82 E-04	7.00E-03

Performance Testing Requirements:

The stack emissions subject to the NSPS require performance testing in accordance with 40 C.F.R. 60.8(a). Performance tests for the Ball Mill stacks were conducted on November 22, 2013.

Ball Mill Baghouses (BH11-BH15) Monitoring Requirements:

The following requirements apply to any emission source subject to 40 C.F.R. Part 63, Subpart PPPPPP, with emissions controlled by a fabric filter.

1. The owner or operator shall perform semiannual inspections and maintenance of each fabric filter as specified in 40 C.F.R. 63.11423(b)(2)(i); and

2. The owner or operator shall meet the monitoring requirements of 40 C.F.R. 63.11423(b)(2)(ii).

Ball Mill Fugitive Emissions Reduction

The improvement activities in Table 8 below are designed to reduce fugitive dust impact on KDHE ambient air monitors.

Table 8. Ball Mill Improvement Activities to Reduce Fugitive Dust.

Activity	Description	Status
Plant Process Fugitive Control (Ball Mill)	Establish negative pressure Ball Mill building ventilation and maintain local exhaust ventilation at process points.	Completed September 2011
Upgrade Ball Mill Ventilation	Improve ventilation in Ball Mill room by bringing fresh air in and evacuating some of the heat without risk of oxide fugitives escaping the room.	Completed November 2011

Ball Mill Process Fugitive Emissions Control Requirements:

Ball Mill process emissions shall be contained in a negative pressure total enclosure with maintained local exhaust ventilation at process points, reducing the Ball Mill process fugitive emissions by 99 percent from 338 pounds of lead per year to 3.38 pounds of lead per year. Total enclosure means that

the building is completely enclosed with a floor, walls, and a roof to prevent exposure to the elements and to assure containment of lead bearing material with limited openings to allow access and egress for people and vehicles. The total enclosure must provide an effective barrier against fugitive dust emissions with the direction of air flow being inward through any openings and with the enclosure being maintained under constant negative pressure. Ball Mill process fugitive emissions of lead shall be less than or equal to 4.86×10^{-5} grams per second (3.86×10^{-4} pounds per hour; 3.38 pounds per year), as modeled for the attainment of the 2008 Lead NAAQS. Negative pressure shall be maintained in the total enclosure at all times. The Ball Mill total enclosure standards are identified below under Inspection and Repair Requirements.

Inspection and Repair Requirements:

1. The total enclosure must be free of significant cracks, gaps, corrosion, or other deterioration that could cause lead bearing material to be released from the primary barrier.

2. Measures must be in place to prevent the tracking of lead bearing material out of the enclosure by personnel or equipment.

3. The total enclosure must be ventilated to ensure negative pressure values of at least 0.013 mm of mercury (0.007 inches of water).

4. An inward flow of air must be maintained through all natural draft openings.

5. The total enclosure must be inspected at least once per month. Any gaps, breaks, separations, leak points, or other possible routes for emissions of lead to the atmosphere must be repaired within 30 days of identification unless an approval for an extension is obtained from KDHE before the repair period is exceeded. Inspection and repair records shall be kept on site for a minimum of two years and shall be made available to KDHE upon request.

D. Plant Roadways

The following table (Table 9) describes a plant roadways improvement activity that is designed to reduce fugitive dust impact on KDHE ambient air monitors.

Table 9. Roadways Improvement Activity to Reduce Fugitive Dust.

Activity	Description	Status
Paving Plant Roadways	Pave all internal roadways and parking lots subject to vehicular traffic on the northwest section. Total area to be paved is 15,220 square yards.	This paving project shall be completed by July 31, 2014.

Paving Plant Roadways:

Exide's Notice of Construction or Modification for the Paving Plant Roadways project was received by KDHE on May 28, 2013. Ref# C-11314. This project is aimed at reducing the silt load and lead content to the levels similar to the dust loading and lead content on other paved roadways on the property and reducing the fugitive dust impact on KDHE ambient air monitors, as modeled for the attainment of the 2008 Lead NAAQS.

Requirements for Paving Plant Roadways and for Fugitive Emission Reduction:

All internal roadways and parking lots subject to vehicular traffic on the northwest section of the fenced plant site, a total area of 15,200 square yards, shall be paved to achieve the necessary results per the State Implementation Plan attainment demonstration modeling, which demonstrates a roadways fugitive lead emission reduction of 0.04 tons (80 pounds) per year, from 0.056 tons of lead per year to 0.016 tons of lead per year. This paving project shall be completed by July 31, 2014. A map of the area to be paved is included as Attachment 2.

Notifications Required for the Paving Project:

Exide shall notify the KDHE Bureau of Remediation in Topeka, KS, at least 30 days prior to paving the roadways and parking lots on the northwest section of the site.

Exide shall notify the KDHE Air Compliance and Enforcement Section in Topeka, KS, of the actual date of the paving project completion, postmarked within 15 days after that date.

Sampling Required After Paving Project Completion:

Within six months following completion of the paving project, the following shall be completed.

Exide shall conduct a silt content analysis, using sampling locations identical to those for which results were used in the attainment demonstration modeling.

Exide shall submit to KDHE the sampling results and a demonstration of the effect on roadway fugitive emissions, with a roadway fugitive lead emissions limitation of 0.016 tons per year.

Reporting Excess Emissions

All emission limits and standards (applicable regulations in Section V and Tables 2, 4, and 7 in Section VII) apply at all times, including during startup and shutdown periods. K.A.R. 28-19-11, Exceptions Due to Breakdowns or Scheduled Maintenance, is not an applicable regulation. In lieu of K.A.R. 28-19-11, the following requirements apply.

A. *Notification Required for Excess Emissions Due to Maintenance, Startup, and Shutdown:*

Exide shall notify the KDHE Bureau of Air at least ten days prior to any maintenance, startup, or shutdown activity that is expected to cause an excess release of emissions. If notification cannot be given ten days prior, notification shall be given as soon as practicable prior to the maintenance, startup, or shutdown activity that is expected to cause excess emissions. If prior notification is not given for any maintenance, startup, or shutdown activity that resulted in an excess release of emissions, notification shall be given within two business days of the release. In all cases, the notification shall be a written report and shall include, but not be limited to, the following:

1. Name and location of the affected source or emissions unit.

2. Name and telephone number of the person responsible for the affected source or emissions unit.

3. Identity of the equipment involved in the maintenance, startup, or shutdown activity.

4. Time and duration of the period of excess emissions.

5. Type of activity and the reason for the maintenance, startup or shutdown.

6. Estimate of the magnitude of the excess emissions and the operating data and computations used in estimating the magnitude.

7. Measures taken to mitigate the extent and duration of the excess emissions.

8. Measures taken to correct the situation that caused the excess emissions and measures taken or planned to prevent recurrence.

B. *Notification Required for Excess Emissions Due to Malfunction:*

Exide must notify KDHE by telephone, facsimile, or electronic mail transmission within two working days following the discovery of any failure of air pollution control equipment, process equipment, or of the failure of any process to operate in a normal manner, resulting in excess emissions. A written notification shall be submitted within ten days of the event and shall include the following:

1. A description of the malfunctioning equipment or abnormal operation.

2. The date of the initial malfunction and the period of time of excess emissions due to the malfunction.

3. The cause of the malfunction and the methods utilized to mitigate emissions and restore normal operations.

4. An estimate of the magnitude of the excess emissions and the data and computations used in estimating the magnitude.

Compliance with this malfunction notification shall not automatically absolve the owner or operator of liability for the excess emissions resulting from such event.

C. *The following criteria will be considered by KDHE in evaluating whether or not excess emissions due to malfunction warrant KDHE enforcement action:*

1. Whether the excess emissions were caused by a sudden, unavoidable, breakdown of technology beyond the control of the owner or operator;

2. Whether the excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned for, and could not have been avoided by better operation and maintenance practices;

3. Whether, to the extent practicable, the air pollution control equipment or processes were maintained and operated in a manner consistent with good practices for minimizing emissions;

4. Whether repairs were made in an expeditious fashion when the operator knew or should have known that excess emissions were occurring. Off-shift labor and overtime must have been utilized, to the extent practicable, to ensure that such repairs were made as expeditiously as practicable;

5. Whether the amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;

6. Whether all possible steps were taken to minimize the impact of the excess emissions on ambient air quality;

7. Whether all monitoring systems were kept in operation if at all possible;

8. Whether the owner or operator's actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs, or other relevant evidence;

9. Whether the excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

10. Whether the owner or operator properly and promptly notified the appropriate regulatory authority.

D. *Summary reports of excess emissions shall be submitted semi-annually to the KDHE Air Compliance and Enforcement Section and shall include the following information:*

1. The magnitude of excess emissions, including the computations and conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.

2. Specific identification of each period of excess emissions that occurs during startups, shutdowns, maintenance, and malfunctions of the facility. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.

3. The date and time identifying each period during which a continuous monitoring system or monitoring device was inoperative (except for zero and span checks) and the nature of the system or device repairs or adjustments.

E. *Records of excess emissions shall be kept on site for a minimum of two years and made available to KDHE upon request.*

VIII. Emissions Inventory Reporting

Annual Emissions Inventory Required:

Exide shall, on or before April 1 of each year, submit to KDHE an annual emissions inventory. If April 1 falls on a Saturday, Sunday, or legal holiday, then the submission shall be due on or before the next business day after April 1. The information required shall be submitted on the KDHE Emissions Inventory Class I forms.[1] Criteria pollutant emissions that must be reported include oxides of nitrogen (NO_X), particulate matter with diameter of 10 micrometers or less (PM_{10}), particulate matter with diameter of 2.5 micrometers or less ($PM_{2.5}$), volatile organic compounds (VOCs), sulfur dioxide (SO_2), carbon monoxide (CO), and ammonia (NH_3) emissions. The hazardous air pollutants (HAPs) listed in K.A.R. 28-19-201(a) must be reported, including lead (Pb) and lead compounds.

[1] Emission inventory forms are available on KDHE's website, http://www.kdheks.gov/emission/forms.html.

IX. Reasonable Further Progress (RFP) Requirements for Attainment of the 2008 Lead NAAQS

Reasonable further progress for Exide, as the primary contributor to lead emissions in the Salina nonattainment area, will be monitored and evaluated by KDHE and will be based on the following:

A. Achieving a highest 3-month rolling average KDHE ambient air monitor value less than or equal to 0.15 $\mu g/m^3$ for any 3-month period beginning after July 31, 2014 (i.e., beginning with the 3-month rolling average for Aug-Oct 2014).

B. On-schedule completion of projects, which include those listed below in Table 10.

Table 10. Projects Required to be Completed for Reasonable Further Progress.

Project	Action	Completion Date
Baghouses 11-15 Stacks (BH11-BH15)	Increase Ball Mill stack heights by 37 feet as demonstrated in attainment modeling.	Completed July 19, 2013 Stack test November 22, 2013
Oxide Mill Stacks (OM1-OM10)	Manifold to new stack, 65 feet from ground level per attainment demonstration.	Completed October 1, 2013 Stack test November 22, 2013
Baghouse 1 (BH1)	Replace baghouse and increase height to 80 feet per attainment demonstration modeling.	Installation Completed February 19, 2014. Stack test March 20, 2014
Paving Plant Roadways	Pave all internal roadways and parking lots subject to vehicular traffic on the northwest section per attainment demonstration modeling. Total area to be paved is 15,220 square yards. (See map - Attachment 1)	Shall be completed by July 31, 2014.

Section 172(c)(9) of the federal Clean Air Act requires the implementation of specific measures if the nonattainment area fails to maintain reasonable further progress. *Upon failure to achieve and maintain reasonable further progress (RFP), root cause analysis and corrective/preventive action provisions shall be implemented in accordance with Table 11, Section XII.*

X. Contingency Measures

Within 60 days after the effective date of this permit, Exide shall develop, and submit to KDHE for approval, compliance plans that shall be implemented in accordance with section XII of this permit and include the following:

A. An analysis of site conditions and operations that potentially may impact, directly or indirectly, KDHE ambient air monitors. The analysis shall include, but not be limited to: a description of the site's root cause analysis and corrective/preventive action process as it relates to attaining and maintaining the 0.15 $\mu g/m^3$ standard; potential improvements to work practices or procedures; possible modifications to operating conditions or controls; ideas for optimization of plant logistics; possible improvements to startup/shutdown procedures and preventive maintenance; and any other improvements that may become evident based on identified potential sources of lead emissions. Each measure identified in the analysis shall be assigned an implementation timeline and may be ranked with respect to ease of implementation, cost, and effectiveness.

B. A fugitive dust control plan for the site that shall include an implementation timeline for each measure. The plan may include, but not be limited to, the following: new enclosures, total enclosures with negative pressure (not already existing) and/or improvements to existing negative pressure enclosures; regular, periodic inspections of plant buildings, material handling and storage areas, plant roadways, groundcover conditions, etc.; accidental release measures – preventive and corrective; roadway treatment – paving, cleaning; vehicular traffic – logistics, control; work practices for minimizing fugitive dust emissions during maintenance activities; and countermeasures during periods of adverse meteorological conditions and/or agricultural conditions and practices on grounds surrounding the plant that may affect fugitive dust impact on KDHE ambient air monitors.

C. Identification and prioritization of measures, as developed per paragraphs A. and B. of this section, that shall be implemented immediately upon notification by KDHE of the first Lead NAAQS violation. Also included shall be a contingent list of measures (e.g., projects, procedures, etc.), as developed per paragraphs A. and B. of this section, that shall be implemented upon notification by KDHE of any subsequent Lead NAAQS violations. The contingent list of measures may be modified upon approval by KDHE of more effective measures identified by the root cause analysis conducted by Exide in accordance with Table 11 in Section XII of this permit.

XI. Contingency Measures Implementation

Section 172(c)(9) of the federal Clean Air Act requires the implementation of specific measures if the nonattainment area fails to maintain reasonable further progress (see Section X) or to attain the NAAQS by the applicable attainment date.

Contingency measures shall be triggered upon the following determination made by KDHE:

KDHE ambient air monitoring shows that the nonattainment area fails to meet the 0.15 $\mu g/m^3$ based on a 3-month rolling average for any 3-month period beginning after July 31, 2014 (i.e., beginning with the 3-month rolling average for Aug-Oct 2014).

Table 11. Contingency Measures to be Implemented and Allotted Time Frames for Completion.

Measures	Completion Time
• *For each NAAQS violation on the KDHE ambient air monitor* (i.e., 3-month rolling average greater than 0.15 $\mu g/m^3$) *or for failure to maintain reasonable further progress*, Exide shall develop and submit to KDHE a root cause analysis, which shall include but not be limited to: the investigation of production/operations performance, including startup, shutdown, malfunction and maintenance periods and the resulting data and discussion; meteorological data for the site and surrounding area; Exide's fence line site monitoring data; and any other conditions or events that may be relevant to lead emissions and/or that may influence or impact KDHE ambient air monitor results. Exide shall develop and submit to KDHE documentation of corrective actions taken for each occurrence for which there is found to be a controllable or preventable contributing factor or root cause.	30 days after KDHE notifies Exide of Lead NAAQS violation
• In addition to the above-mentioned root cause analysis and corrective/preventive action process, Exide shall implement selected and approved contingency measures as outlined in the compliance plans developed by Exide per Section XI	To be implemented in accordance with KDHE-approved schedule as part of compliance plans developed per Section XI

(Contingency Measures) of this permit. Exide shall submit to KDHE documentation of implemented measures, including identification of measures and timeline for implementation and effect.	Contingency Measures
• Exide shall compile analyses and results from the contingency measures described above in addition to performing the following: o Exide shall implement further compliance plan measures for controls on sources and areas of lead emissions on site that were identified pursuant to Section XI of this permit or as a result of Exide's root cause analysis and corrective/preventive action process or other analyses. Exide shall submit to KDHE documentation of implemented measures, including identification of measures and timeline for implementation and effect. o Exide shall implement measures from the fugitive dust control plan for the site as developed by Exide per Section XI of this permit. Exide shall submit to KDHE documentation of implemented measures, including identification of measures and timeline for implementation and effect.	To be implemented in accordance with KDHE-approved schedule as part of compliance plans developed per Section XI Contingency Measures
• Exide shall conduct stack testing on an increased frequency as determined by KDHE. The scope and frequency of the increased stack tests will be based on an evaluation by KDHE of the information submitted in the root cause analysis triggered by a violation of the lead standard. The supplemental stack tests required by KDHE will be limited to those stacks that the root cause analysis shows have the potential to contribute to the increase in monitored lead concentrations. KDHE will reduce the required frequency to the frequencies outlined in Table 1 of this permit once the additional stack tests demonstrate that the stacks in question do not show a significant increase above their baseline stack test rates.	Upon notification by KDHE to Exide
• Exide shall re-model with proposed changes to emission rates and/or work practices, improvements to the remainder of roadways and parking lots within plant boundaries, and any proposed changes to other parameters or conditions (which may include throughput). Exide shall submit to KDHE for approval a revised demonstration for the timely attainment and maintenance of the 2008 Lead NAAQS, which shall include the implemented changes and a timeline for implementation and effect.	60 days after KDHE notifies Exide

XII. General Provisions

A. Pursuant to K.A.R. 28-19-300, a construction permit or approval must be issued by KDHE prior to commencing any construction or modification of equipment or processes.

B. Upon presentation of credentials and other documents as may be required by law, representatives of KDHE (including authorized contractors of KDHE) shall be allowed to:

1. Enter upon the premises where a regulated facility or activity is located or conducted or where records must be kept under conditions of this document;

2. Have access to and copy, at reasonable times, any records that must be kept under conditions of this document;

3. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment) practices or operations regulated or required under this document; and

4. Sample or monitor, at reasonable times, for the purposes of assuring compliance with this document or as otherwise authorized by the Secretary of KDHE, any substances or parameters at any location.

C. The emission units or stationary sources that are the subject of this document shall be operated in compliance with all applicable requirements of the Kansas Air Quality Act and the federal Clean Air Act.

D. This document is subject to periodic review and amendment as deemed necessary to fulfill the intent and purpose of the Kansas Air Quality Statutes and Regulations and rules promulgated in accordance therewith.

E. This document does not relieve the facility of the obligation to obtain any other approvals, permits, licenses or documents of sanction that may be required by other federal, state or local government agencies.

F. Issuance of this document does not relieve the owner or operator of any requirement to obtain an air quality operating permit under any applicable provision of K.A.R. 28-19-500.

Permit Writer

Melissa D Weide

Melissa D. Weide
Environmental Scientist, Planning Section

8-18-2014

Date Signed

Authorized By

M. Massoth

Marian Massoth, P.E.
Section Chief, Air Permitting

8/18/2014

Date Signed

c: Stan Marshall, NCDO
C - 12206

Attachment 1

Exide NAAQS Compliance Projects Documentation

EXIDE TECHNOLOGIES

Date October 16. 2013 KDHE Onsite Visit Salina, KS

Statuses of all projects completed or in process are listed below. Each project includes the date(s) each project is finished or anticipated completed date. All of the baghouse dates are the actual start up dates and stack test dates. The diverter valves and ball mill dates are the dates the CER's were closed out.

Oxide Mill #7 – Completed on 01/30/11 (stack test date 03/17/11)
Oxide Mill #8 – Completed on 02/03/11 (stack test date 05/05/11)

Project Summary Listed Below for Oxide Mills

This capital project is designed to install two new Eagle/Linklater M1500 Oxide Reactors with automated controls for the oxide operations in Salina, KS. This project is phase four of five with the replacement of existing oxide mills 7 & 8. With the completion of phases one and two (oxide mills 1-4), we have seen a significant process improvement for lead in air. This is an EHS-category project required to improve our air quality in our oxide manufacturing process to help reduce our lead in air to the Lowest Feasible Limits (LFL).

Oxide Mill #9 – Completed on 03/24/11 (stack test date 05/06/11)
Oxide Mill #10 – Completed on 03/24/11 (stack test date 05/05-06/11)

Project Summary Listed Below

This capital project is designed to install two new Eagle/Linklater M1500 Oxide Reactors with automated controls for the oxide operations in Salina, KS. This project is phase five of five with the replacement of existing oxide mills 9 & 10. The automatic controls & mechanical upgrades on reactors allows uniform control of both throughput & oxide particle classification (particle size). With the completion of all five phases, we have seen a significant process improvement for lead in air. This is an EHS-category project required to improve our air quality in our oxide manufacturing process to help reduce our lead in air to the Lowest Feasible Limits (LFL).

Environmental baghouse #4 – Completed on 07/04/11 (stack test date 08/10/11)

Project Summary Listed Below

This capital project is designed to replace our existing environmental baghouse #4 with a 120,000 ACFM Pulse-Jet Dust Collector system to ventilate six Pasting line stackers and four Oxide Mills in Salina, KS. This is an EHS-category project required to maintain air quality compliance required by recently released "National Emissions Standards for Hazardous Air Pollutants (NESHAP)" standard for the Lead Acid Battery Manufacturing industry and achieve compliance to the NAAQS level of .15 ug/m^3 effective January 1, 2010. The Salina facility contracted Bjerkan & Co. air ventilation engineers to determine the best baghouse configuration and capacity requirements to adequately support the 4 Oxide Mills & 6 pasting line stackers. They recommended installing a 120,000 ACFM Pulse-Jet style Dust Collector system. Installing a new baghouse will reduce overall lead emissions that were modeled lead emissions in an effort to

achieve compliance with the National Ambient Air Quality Standard (NAAQS) This is an EHS-category project required to maintain air quality compliance in light of the recently released "National Emissions Standards for Hazardous Air Pollutants (NESHAP)" standard for the Lead Acid Battery Manufacturing industry and achieve compliance to the NAAQS level of .15 ug/m^3 effective January 1, 2010.

Environmental baghouse #5 – Completed on 05/25/12 (stack test date 06/27/12)

Project Summary Listed Below

This capital project is designed to replace our existing environmental baghouse #5 with a 120,000 ACFM Pulse-Jet Dust Collector system to ventilate the Metals, Past Mixing and 2 Assembly lines in Salina, KS. This is an EHS- category project required to maintain air quality compliance required by recently released "National Emissions Standards for Hazardous Air Pollutants (NESHAP)" standard for the Lead Acid Battery Manufacturing industry and achieve compliance to the NAAQS level of .15 ug/m3 effective January 1, 2010.

The Salina facility contracted Bjerkan & Co. air ventilation engineers to determine the best Baghouse configuration and capacity requirements to adequately support the Metals, Past Mixing and 2 Assembly lines. They recommended installing a 120,000 ACFM Pulse-Jet style Dust Collector system. Installing a new baghouse will reduce overall lead emissions that were modeled lead emissions in an effort to achieve compliance with the National Ambient Air Quality Standard (NAAQS) This is an EHS-category project required to maintain air quality compliance in light of the recently released "National Emissions Standards for Hazardous Air Pollutants (NESHAP)" standard for the Lead Acid Battery Manufacturing industry and achieve compliance to the NAAQS level of .15 ug/m^3 effective January 1, 2010.

Relocation of oxide mill diverter valves – Completed on 07/18/12

Project Summary Listed Below

This project is necessary to help the Salina Facility achieve the standards set forth in the "National Emissions Standards for Hazardous Air Pollutants (NESHAP)" standard for the Lead Acid Battery Manufacturing industry, achieve compliance to the NAAQS level of .15 ug/m3 effective January 1, 2010 and was committed to the Kansas Department of Health and Environment in response to an escape issue that was experienced.
With the completion of this project the Salina Facility will have a new Oxide delivery layout with an auxiliary set of valves installed in a parallel system along with making the building air tight in the areas where the highest potential of Oxide fugitives escaping the Plant exist. This is one of 3 projects the Salina Facility has submitted to KDHE (Kansas Department of Health and Environment) as corrective action in order to help us stay in compliance with NAAQS level of .15 ug/m3 (the projects include the Ball Mill Ventilation and Bahouse #5 Replacement projects which are both approved.

Upgrade ball mill ventilation – Completed on 11/18/11

Project Summary Listed Below for Ball-Mill

The purpose of this Capital project is to help remove excessive heat that builds up in our Ball Mill manufacturing room. Currently the Ball Mill is under ventilated thus allowing the heat generated by the production and equipment in the mill to raise the ambient temperature to a level intolerable by personnel, equipment and controls. The Ball Mill room has several exterior doors that could be opened to allow fresh cooler air into the mill however we are not able to open them due to the

possibility of lead Oxide escaping into the atmosphere. This project will allow us to bring fresh air in our Ball Mill room and evacuate some of the heat without any concerns of Oxide fugitives escaping the room. This project will also allow us to create a safer working environment for our employees.

October 03, 2013 Response

Statuses of all projects completed or in process are listed below. Each project includes the date(s) each project is finished or anticipated completed date.

Project Title	**Action**	**Anticipated or Completed Date(s)**
Baghouse (BH1)	Replace baghouse and increase height to 80 feet per Salina's attainment demonstrated SIP plan	07/01/2013 – 02/15/2014
Baghouse (BH11- BH15), ball mill stacks	Increase stack heights by 37 feet demonstrated per Salina's attainment demonstrated SIP plan	07/08/2013 – 07/19/2013
Oxide Mill (OM1- OM10), oxide mill stacks	Manifold to new stack, 65 feet from ground level demonstrated per Salina's attainment demonstrated SIP plan	07/08/2013 – 10/01/2013
In-plant roadways	Pave all internal roadways and parking lots subject to vehicular traffic on the North West section per Salina's attainment demonstrated SIP plan. (Total area to be paved 15220 SQ. Yards).	07/01/2013 – 03/31/2014
Plant process fugitive control	Establish negative pressure building ventilation and maintain local exhaust ventilation at process points	09/21/2011 COMPLETED

Roadways:

Traffic on-site follows two primary routes which have been designated the Delivery Route and the Shipping Route. Most delivery vehicles check in at the security building at the southwest corner of the property and proceed clockwise around the facility to drop off or pick up their delivery. This route is designated Delivery Route (see Figure 2-1c). Trucks picking up batteries check in with security then proceed along Berg Road which is the southern boundary of the facility to the Eastern Distribution Center (DC) then return along a similar route along Berg Road. This route is designated Shipping Route in the model and is depicted on Figure 2-1d. Vehicular fugitive emissions were modeled as ground level adjacent volume sources. Volume source input parameters were calculated using the USEPA's recommended approach in Table 3-1 of USEPA 2004a and according to the guidance provided in the USEPA's Haul Road

Workgroup Final Report (USEPA, 2012b). Road fugitive volume sources were calculated using a vehicle height of 3 meters above grade level and a vehicle width of 3 meters. Sections passing along Berg Road along the southern boundary of the site were modeled using a twolane approach with a road width of 6 meters. The model used a total of 144 volume sources on the Delivery Route and 82 volume sources on the Shipping Route. Delivery Route sources were included in source groups DELRD1, DELRD2, and volume sources on the Shipping Route were included in model source groups called SHPRD1, SHPRD2, SHPRD3, and SHPRD4.

Several groups have been assigned to each route to separate two-lane from one-lane segments. Traffic fugitive emissions were quantified using the Paved Roads section of Chapter 13.2.1 from AP-42 (USEPA 2011). The equations in AP-42 require site specific data including the fleet average vehicle weight and a silt loading value for Paved Roads. Site-specific silt and lead content sampling were completed for the Salina facility in 2012. A representative sample of silt and lead content from an area free from off-pavement dust tracking was used for these parameters.

In order to achieve attainment, it is expected that lead-in-roadway silt loading will need to decrease. It is further expected that paving all unpaved road sections would be an appropriate method of achieving the reduced silt load. The measures are aimed at reducing the silt load and lead content to the levels similar to the dust loading and lead content currently measured on the South WDC roadway (see Fig 2-1c). This area is considered representative of paved roadways with adequate silt control strategies in place. To capture the impact of the proposed changes, all roadways in this modeling exercise were modeled as paved (using AP-42 emission factors for Paved Roads) and assuming the silt load and the lead content of the samples collected from South WDC. The currently projected implementation timing for this proposed change is provided in the Table listed above.

The fleet average weight and vehicle activity (path length, and number of passes / year) were used to estimate annual emissions of TSP, and then the percentage of particulate measured to be lead was used to estimate the annual lead emissions from each roadway segment. The total annual lead emissions were distributed evenly throughout the day, and amongst each of the volumes representing the line source associated with each segment of roadway. Details of the calculations are provided as attachment 1 in Salina's Air Quality Dispersion Modeling Report for SIP Attainment Demonstration listed below.

Air Quality Dispersion Modeling Report for SIP Attainment Demonstration

Salina SIP
Demonstration Full Re

Salina Paved Parking Map 7000-2013-PLP

7000-2013-PLP.pdf

EXIDE TECHNOLOGIES

January 24, 2011

Mr. Tom Gross
Kansas Department of Health and Environment
Air Monitoring and Permitting Cheif
Bureau of Air and Radiation
1000 SW Jackson, Suite 310
Topeka, KS 66612

Re: Outlined NAAQS Compliance Projects
Exide Technologies - Salina Battery Plant

Dear Mr. Gross:

As requested during our December 14, 2010 conference call regarding ambient air quality, enclosed please find a list of projects Exide Technologies has been working on with regard to reducing lead emissions and ambient lead in air levels around its Salina KS facility. The list is broken down in projects completed to date, projects in the process of being completed, and the remaining projects planned for completion.

If you have questions on this information, please contact me at (785) 823-4029 or Matthew.Spencer@na.exide.com.

Regards,

Matthew Spencer
EHS Manager

Enclosure

cc: M. Bowman, KDHE
J. Pfeiffer, Exide - Salina
F. Ganster, Exide - Reading
R. Kemp, ENVIRON

Exide Technologies
413 East Berg Road
Salina, KS 67401
Telephone (785) 823-4029
Facsimile (785) 823-4048

Exide Technologies
Salina, KS
2008 NAAQS for Lead

Items completed:

1. 5 year project commenced April 2006 to replace the 10 Oxide Mills. This project included replacement of the process oxide mills, associated baghouses, and the addition of HEPA filters to the emissions controls for each source. Current status:
   - Oxide Mills 1 & 2 – completed Sept. 2006
   - Oxide Mills 3 & 4 – completed July 2009
   - Oxide Mills 5 & 6 – completed Oct. 2010

2. Exide Technologies has replaced 2 (two) of the existing environmental baghouses (Baghouse #2 and #3) with high efficiency Pulse-Jet Dust Collector systems.
   - Baghouse #3 was replaced – Sept. 2009
     - Stack test results show a 46% improvement in emissions from previous stack test results.
   - Baghouse #2 was replaced – Nov. 2010
     - Stack test results show a 95% improvement in emissions from previous stack test results.

Projects in progress:

1. Continue Oxide mill replacements. Oxide Mills 7 & 8 replacement commenced Jan. 2011.
2. Replace Environmental baghouse #4 – project started Jan. 2011

Planned projects:

1. Complete Oxide mills replacement (9 & 10)
2. Replace Environmental baghouse #5
3. Relocate oxide mill diverter valves to lower level in ventilated enclosed building
4. Upgrade Ball Mill Ventilation

Melissa Weide

From:	BOLEA, Joseph (Bristol) <joseph.bolea@exide.com>
Sent:	Thursday, October 24, 2013 9:58 AM
To:	Miles Stotts; Melissa Weide
Cc:	THOMAS, Jim (Salina); BIDLEMAN, John (Milton), DREILING, Cory W (Salina); GANSTER, Fred (Reading Equipment Center)
Subject:	Salina KDHE SIP Project Requested Information
Attachments:	Exide Salina KDHE SIP Project Update 10-16-13.pdf; EVWI 9.560 Negative Air Pressure Monitoring.doc; Exide Hi-Vol monitor locations.ppt; Exide Salina Traffic Emissions Unpaved 17.10.13.xlsx; Facility baghouse 1-5 full inspection.pdf; Facility baghouse 1 and 5 PM.PDF; Facility baghouse 2,3,4 lube and inspect.pdf; Salina Environ Roadway Project 10-17-13.docx

Miles,

I attached some of the requested documentation this should help cover some of the corrective actions needed as we both move forward. When you have a chance I would like to discuss a few items from our onsite visit that we had in Salina. I would like some feedback on the project timeline around the completion of our internal roadway project. I know we discussed our anticipated completed date of March 31, 2014. I wanted to make sure we took the weather into consideration as well.

If you have any questions; please feel free to give me a call.

Thanks,

Joseph A. Bolea
Director EHS Americas Operations
Exide Technologies
Office: +1 423-989-6377
Mobile: +1 423-341-4357
Fax: +1 423-793-5606
E-mail: joseph.bolea@exide.com
Web address: www.exide.com

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Melissa Weide

From: BOLEA, Joseph (Bristol) <joseph.bolea@exide.com>
Sent: Thursday, October 03, 2013 6:50 AM
To: Melissa Weide; Miles Stotts; Pat Bottenberg; Tom Gross
Cc: THOMAS, Jim (Salina); BIDLEMAN, John (Milton); GANSTER, Fred (Reading Equipment Center); DREILING, Cory W (Salina)
Subject: RE: Request for Emission Reduction Projects Update for Attainment SIP
Attachments: Exide Salina KDHE SIP Project Update 10-2-2013.doc

Melissa,

I attached a breakdown on the status of all projects completed or in process. Each project includes the date(s) each project is finished or anticipated completed date.

If you have any questions , please feel free to give me call.

Thanks,

Joseph A. Bolea
Director EHS Americas Operations
Exide Technologies
Office: +1 423-989-6377
Mobile: +1 423-341-4357
Fax: +1 423-793-5606
E-mail: joseph.bolea@exide.com
Web address: www.exide.com

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From: Melissa Weide [mailto:MWeide@kdheks.gov]
Sent: Thursday, September 26, 2013 3:35 PM
To: BOLEA, Joseph (Bristol)
Cc: Miles Stotts; Pat Bottenberg; Tom Gross
Subject: Request for Emission Reduction Projects Update for Attainment SIP

Good afternoon, Joe.

Miles, Pat, and I are working on the document for the Kansas State Implementation Plan for the Attainment of the 2008 Lead NAAQS. For the attainment demonstration, we need to include an up-to-date list of the emission reduction projects for the Salina Exide facility.

The attached document was included in the 2011 technical support document for recommendation of nonattainment boundaries. Would you please provide a similar document with status updates and details about recently added projects, such as those for which Matt submitted notifications of construction or modification? The more details we have on project status and timelines, including any estimated timelines for future/planned projects, the better we can represent a control strategy and a compliance timetable for the attainment of the lead NAAQS.

It would be helpful to have this documentation by or before Thursday, October 3, 2013. Should you have any questions, please feel free to contact me via the phone number or email address listed below. You may also contact Miles Stotts at 785-296-1615 or mstotts@kdheks.gov.

Thank you for your assistance. We look forward to meeting with you in the near future.

Best regards,
Melissa

Melissa D. Weide
Environmental Scientist
KDHE Bureau of Air
1000 SW Jackson, Suite 310
Topeka, KS 66612
785.291.3272

mweide@kdheks.gov

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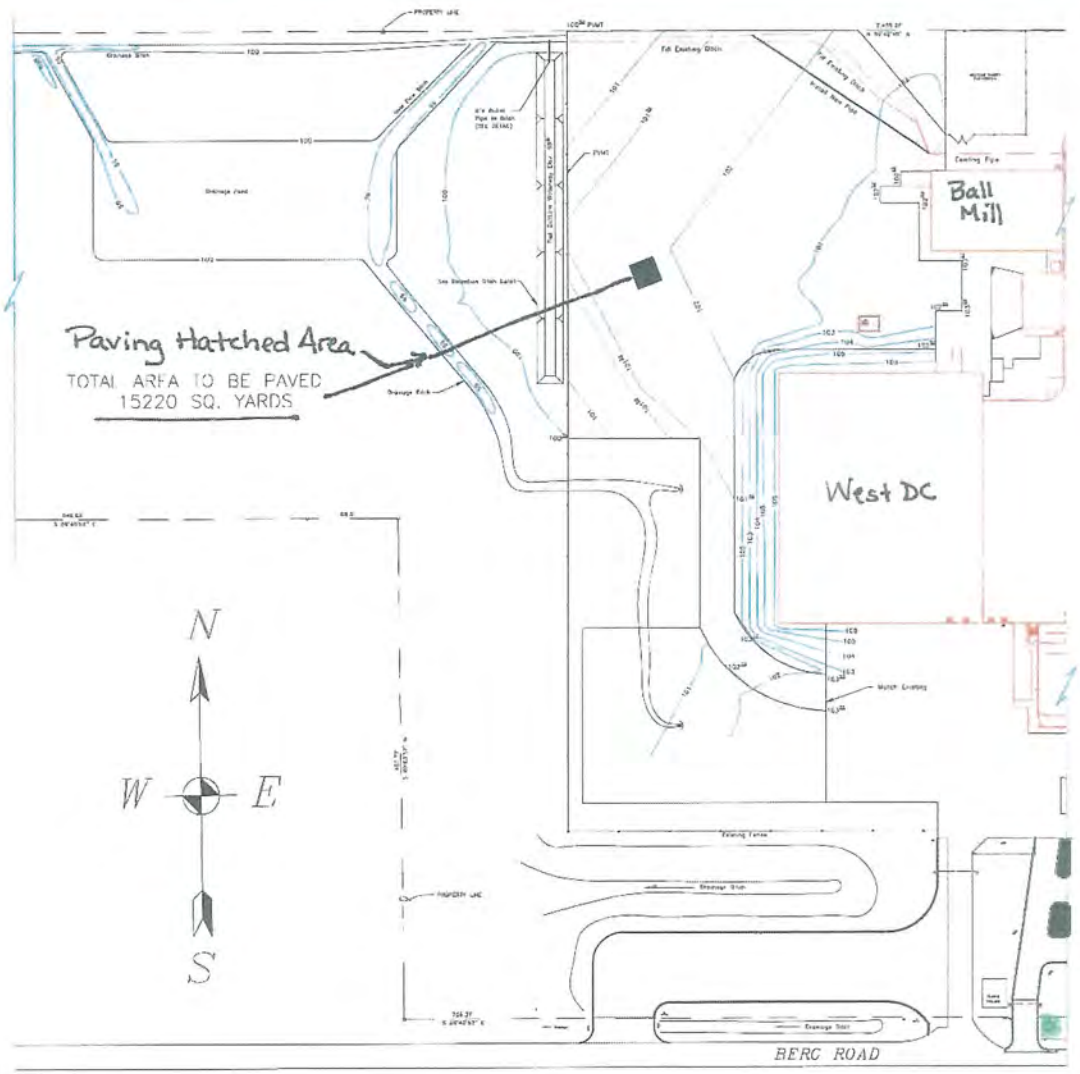
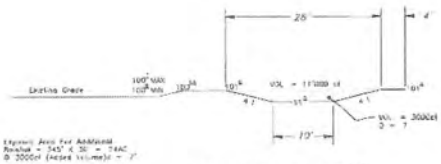
Attachment 2

Roadways Paving Project



DETENTION WATERWAY LAYOUT



DETENTION DITCH
SCALE 1" = 10'

SCALE 1"=50'

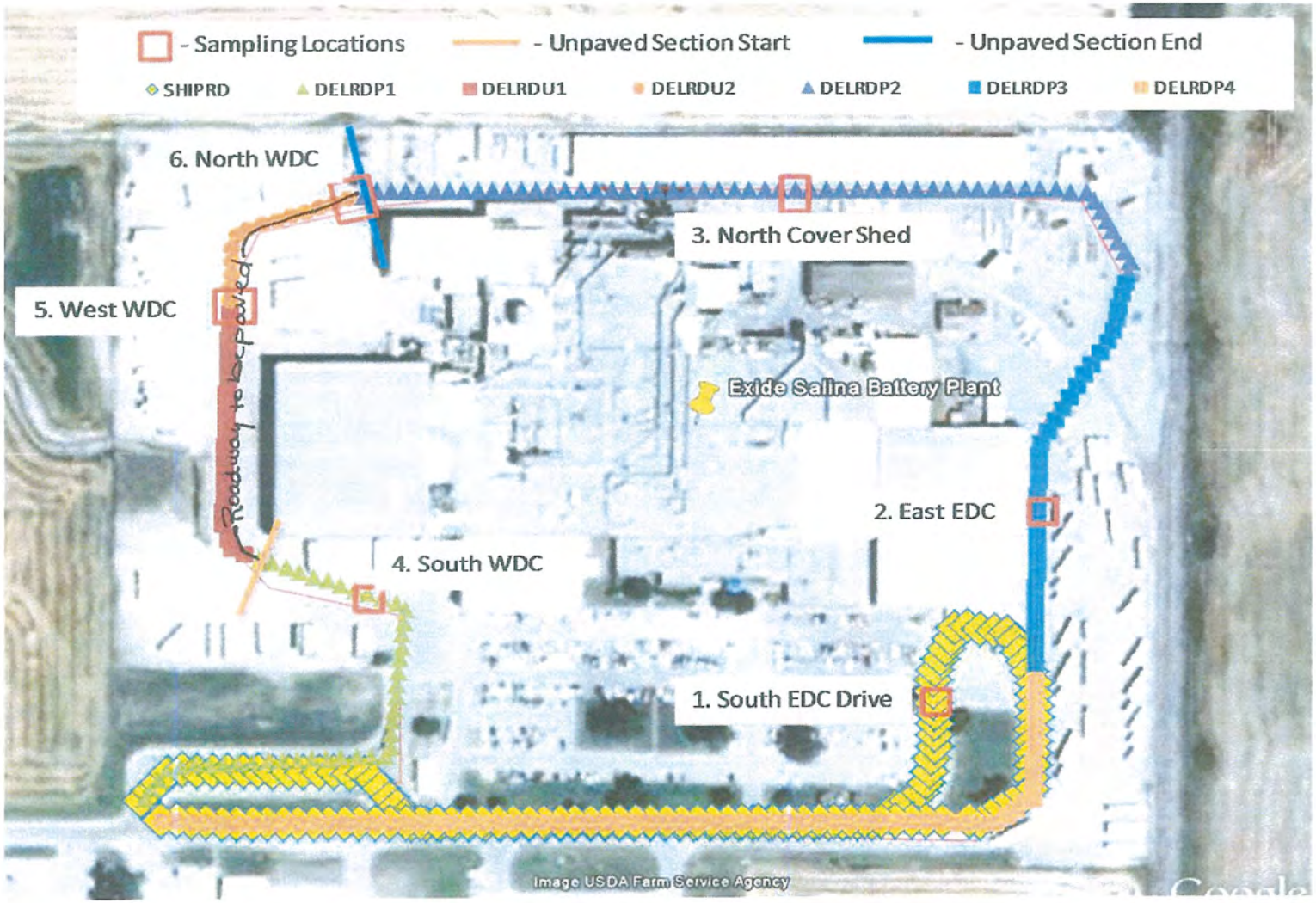
REV	DATE	DESCRIPTION	APR. BY	COR NO#	STAMP AREA

This is property of Exide Corporation. It shall not be duplicated in any manner and it shall not be submitted to outside parties for examination without prior written consent of Exide Corporation. It shall be used only in connection with work under the proposals and purchase orders submitted by Exide Corporation.

EXIDE CORPORATION
SALINA, KS

PARKING LOT PROJECT
PROPOSAL

2000-2013-PLP


- Sampling Locations
- Unpaved Section Start
- Unpaved Section End
SHIPRD
DELRDP1
DELRDU1
DELRDU2
DELRDP2
DELRDP3
DELRDP4
6. North WDC
3. North Cover Shed
5. West WDC
Roadway to be paved
Exide Salina Battery Plant
2. East EDC
4. South WDC
1. South EDC Drive
Image USDA Farm Service Agency

The pre-paving estimate of emissions from the Salina roadways is as follows:

	Emissions			
	(tons TSP / yr)	(lb Lead /yr)	(lb Lead / hr)	(g Lead / sec)
Total Delivery Route	31.8	103	1.17E-02	1.48E-03
Total Shipping Route	15.2	8.51	9.71E-04	2.18E-04
Facility Wide Total	**47.0**	**111**	**1.27E-02**	**1.70E-03**

Please see attached spreadsheet with calculations.

This 0.0127 lb/hr Pb from the roads before the paving project works out to 0.056 tons/year.

We assumed that in the future all would be paved. So that would be an improvement. We also assumed that all the paved sections would have better dust loading, equal to the best measured segment, because you would no longer be tracking dust from the unpaved area onto the paved areas. When all was said and done, the sum of the future projected road emissions (added up from Attachment 1 of the August 2013 demonstration modeling report) is 4.63E-4 g/sec = 3.67E-3 lb/hr = 0.016 tons/year Pb.

The reduction in emissions attributable to the paving project is therefore 0.056 – 0.016 = 0.04 tons/year Pb.

Exide Salina Traffic
Emissions Unpaved 1

Fugitive Traffic Emission Estimates

A small portion of the facility on the northwest side is unpaved (~720 feet). The rest of the roadways are paved.

AP-42 Chapter 13.2.1 has been used to estimate emissions from Paved Poads. AP-42 13.2.2 has been used to estimate emissions from Unpaved Roads.

Paved Roads

AP-42 Section 13.2.1

$$E = (k(sL)^{0.91} \times (W^{1.02})) \times (1 - N / 4P)$$

where:

E = emission factor (lb/VMT)

k = particle size multiplier (lb/VMT)

sL = road surface silt loading (g/m^2)

W = average weight of vehicles traveling the road (tons)

N = number of precipitation days (>0.01in) over the averaging period

P = number of days in the averaging period

VMT = vehicle miles traveled

Unpaved Roads

AP-42 Section 13.2.2

$$E = (k(s/12)^{a} \times (W/3)^{b}) \times [(365-P) / 365]$$

where:

k = particle size multiplier

s = surface material silt content (%)

W = average weight (tons) of vehicles

a = constant from Table 13.2.2-2

b = constant from Table 13.2.2-2

P = number of days in a year with at least 0.254 mm (0.01 in) of precipitation

Constant	Value	Units
lb to g	453.5924	
ft^2 to m^2	0.09290304	
mg/kg	0.000001	
lb to tons	0.0005	
m to yards	1.09361	
ft to miles	0.000189394	
seconds per year	31536000	
seconds / minute	60	
minutes / hour	60	
hours/year	8760	
milligram / gram	1000	
Meters / foot	0.3048	
k (PM30) (paved)	0.011	lb/VMT
N	80	rainy days/yr
P	365	days/yr
sL exponent	0.91	
W exponent	1.02	
a	0.7	
b	0.45	
k (PM30) (unpaved)	4.9	
W (DELIVERIES)	26.3	tons/truck
W (SHIPPING)	28	tons/truck

Site Parameters

Name	Sector	Silt % [a,b,c]	Weight (g) [d,e]	Weight (lb)	Area (m^2)	Area (sqft) [f]	sL (g/m^2)	Lead (mg/kg) [g]	Lead fraction	% of Route Length per Segment
South EDC Drive	1	16.2%	184	0.41	1.86	20	16.0	280	0.028%	35%
East EDC	2	16.2%	184	0.41	1.86	20	16.0	1600	0.16%	16%
North Cover Shed	3	16.2%	336	0.74	1.86	20	29.3	5200	0.52%	28%
South WDC	4	14.3%	184	0.41	1.86	20	14.2	550	0.055%	21%
West Pasting	5	26.7%	127	0.28	0.37	4	N/A	350	0.035%	40%
North WDC	6	31.1%	742	1.64	0.37	4	N/A	600	0.060%	60%

[a] Silt content analysis provided via email from Matthew Spencer on Jan. 24, 2012. Analysis conducted Jan. 20 2012 by Penniman & Browne, Inc.

[b] There was not enough material from a 20 square foot area collected at sample locations South EDC and East EDC to complete silt analysis.

[c] The sample North Cover Shed was the highest paved road silt content measured and has been used to estimate silt percentage for South EDC Drive and East EDC

[d] Weights provided via email from Matthew Spencer on Feb. 7, 2012

[e] The sample South Cover Shed was the lowest paved road mass collected and has been used as the estimated the upper bound of weight for South EDC Drive and East EDC

[f] Areas provided via email from Mathew Spencer on Feb. 3, 2012

[g] Lead content provided via email from Matthew Spencer on Jan. 24, 2012. Analysis conducted Jan. 13, 2012 by Microbac Laboratories Inc. of Baltimore MD

Traffic Pattern Explanation

Traffic on-site generally enters from the southwest and checks in at the security station. All deliveries except finished product pick-ups generally proceed clockwise around property to their designated location then continue clockwise and leave along Berg Road south of the facility (this is designated as DELIVERIES).

Trucks picking up finished batteries and duff batteries check in at security, proceed along Berg Road south of the plant to the southeastern part of the building then return to Berg Road to leave (this is designated SHIPPING).

DELIVERIES Route

Incoming Lead Pigs/Ingots and Rolled Lead Strip. Incoming Plastic Cases / Covers

17 Trucks Lead Pigs/Ingots Per Day + 2 Trucks of Rolled Lead Strip + 6 Plastic Trucks per Day
W = 26 tons (average of loaded 36 tons and unloaded 16 tons)

VMT_{Paved} =

3905 feet around plant =	0.740 miles around plant	25 trucks	365 days	6749 miles
5280 feet per mile		day	year	year

$VMT_{Unpaved}$ =

720 feet around plant =	0.136 miles around plant	25 trucks	365 days	1244 miles
5280 feet per mile		day	year	year

Incoming Paper Separators, Lead Oxide, and Duff Batteries (Contain Lead but Not Formed) and Outgoing Scrap Waste (to Smelters)

5 Paper Separator Trucks per week + 18 Duff Battery Trucks per Week + 5 Scrap Waste (to Smelter) Trucks per Week + 8 Lead Oxide Trucks per Week
W = 28 tons (average of loaded 40 tons and unloaded 16 tons)

VMT_{Paved} =

3905 feet around plant =	0.740 miles around plant	36 trucks	52 weeks	1385 miles
5280 feet per mile		week	year	year

$VMT_{Unpaved}$ =

720 feet around plant =	0.136 miles around plant	36 trucks	52 weeks	255 miles
5280 feet per mile		week	year	year

Trucks	Trips / Day	Unloaded Weight	Loaded Weight	Average Weight
Lead Pigs	17	16	36	26
Ingots	2	16	36	26
Plastic	6	16	36	26
Paper Separator	0.71	16	40	28
Duff Battery	2.57	16	40	28
Scrap Waste	0.71	16	40	28
Lead Oxide	1.14	16	40	28
Total	30.14	Fleet Average Weight =		26.3

The DELiveries RoaD Paved (DELRDP#) segements have been labelled 1 - 4 with emissions estimated based on sector sample characteristics

Segment	Sector Used	sL (g/m^2)	Lead fraction	% of Route Length per Segment	E (lb/VMT) PM30	VMT (miles/yr)	Emissions			
							(tons TSP / yr)	(lb Lead / yr)	(lb Lead /hr)	(g Lead / sec)
DELRDP1	4	14.2	0.055%	21%	3.26	1708	2.79	3.06	3.50E-04	4.41E-05
DELRDP2	3	29.3	0.52%	28%	6.32	2277	7.20	74.8	8.54E-03	1.08E-03
DELRDP3	2	16.0	0.16%	16%	3.65	1301	2.38	7.61	8.68E-04	1.09E-04

DELRDP4	1	16.0	0.028%	35%	3.65	2847	5.20	2.91	3.32E-04	4.19E-05
DELRDU1	5	N/A	0.035%	40%	17.8	600	5.34	3.74	4.27E-04	5.38E-05
DELRDU2	6	N/A	0.060%	60%	19.8	900	8.91	10.7	1.22E-03	1.54E-04
Total Delivery Route							31.8	103	1.17E-02	1.48E-03

SHIPPING Route

Outgoing Finished and Duff Batteries (Shipping Route, SHIPRD on Figure)

30 Finished Battery Trucks Per Day + 10 Duff Battery Trucks Per Day
W = 28 tons (average of loaded 40 tons and unloaded 16 tons)

VMT =

2825 feet around plant =	0.535 miles around plant	40 trucks	365 days	7812 miles
5280 feet per mile		day	year	year

All driving is on paved surfaces

Segment	Sector Used	sL (g/m^2)	Lead fraction	% of Route Length per	E (lb/VMT)	VMT (miles/yr)	Emissions (tons TSP / yr)	(lb Lead /yr)	(lb Lead / hr)	(g Lead / sec)
SHIPRD	1	16.0	0.028%	100%	3.89	7812	15.2	8.51	9.71E-04	2.18E-04

Facility Wide Emissions

Segment	Emissions			
	(tons TSP / yr)	(lb Lead /yr)	(lb Lead / hr)	(g Lead / sec)
Total Delivery Route	31.8	103	1.17E-02	1.48E-03
Total Shipping Route	15.2	8.51	9.71E-04	2.18E-04
Facility Wide Total	**47.0**	**111**	**1.27E-02**	**1.70E-03**

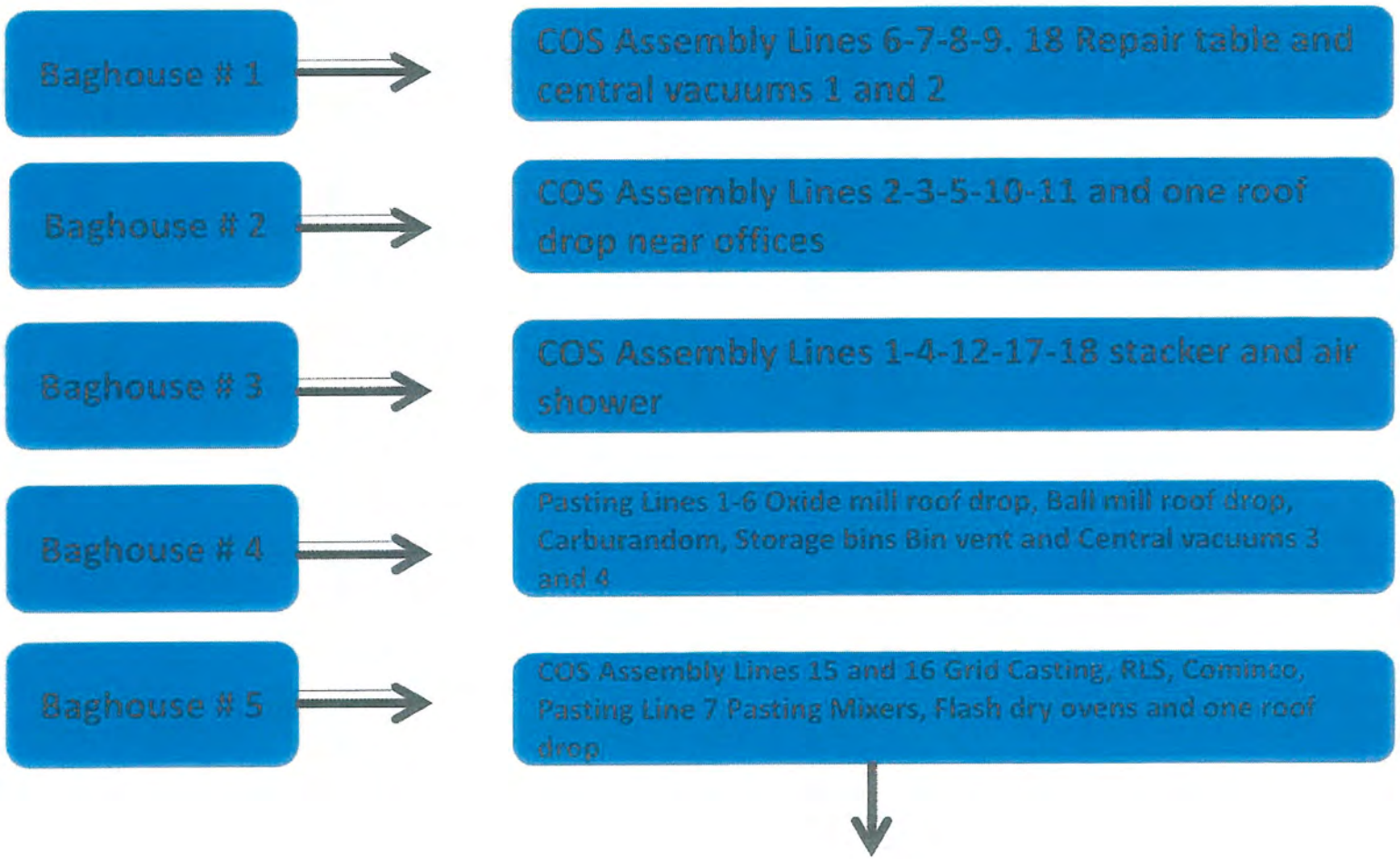
Attachment 3

Additional Process and Site Information

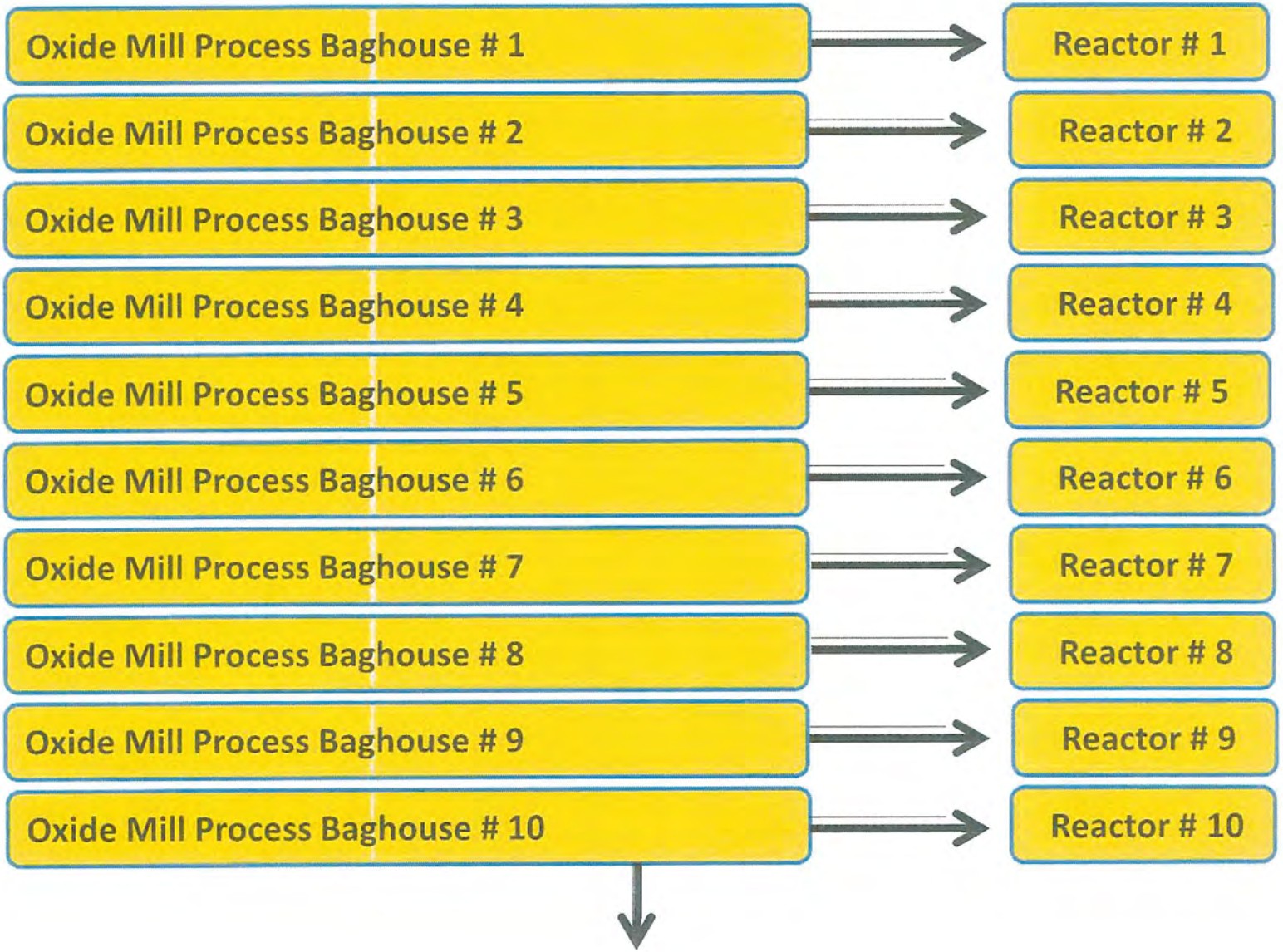
Exide Technologies
Salina Kansas Facility Environmental Process

November 6, 2013

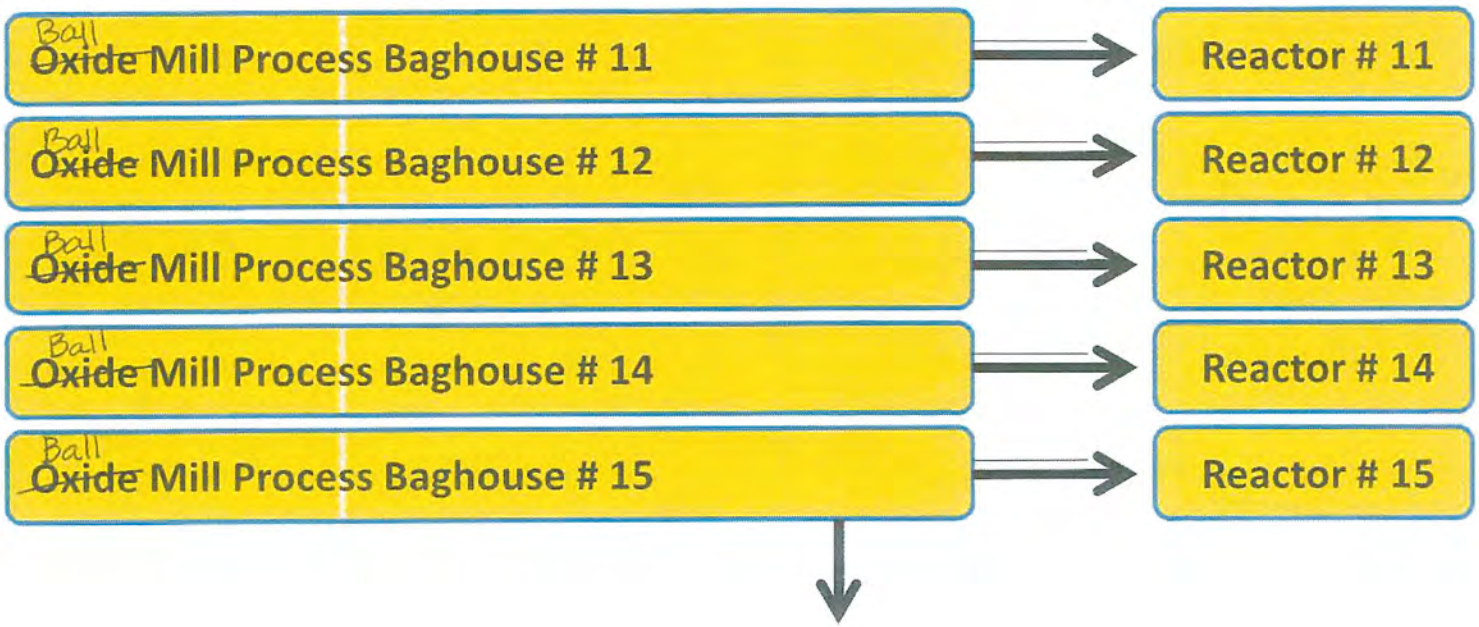
Salina Facility Exhaust Systems Assembly and Pasting



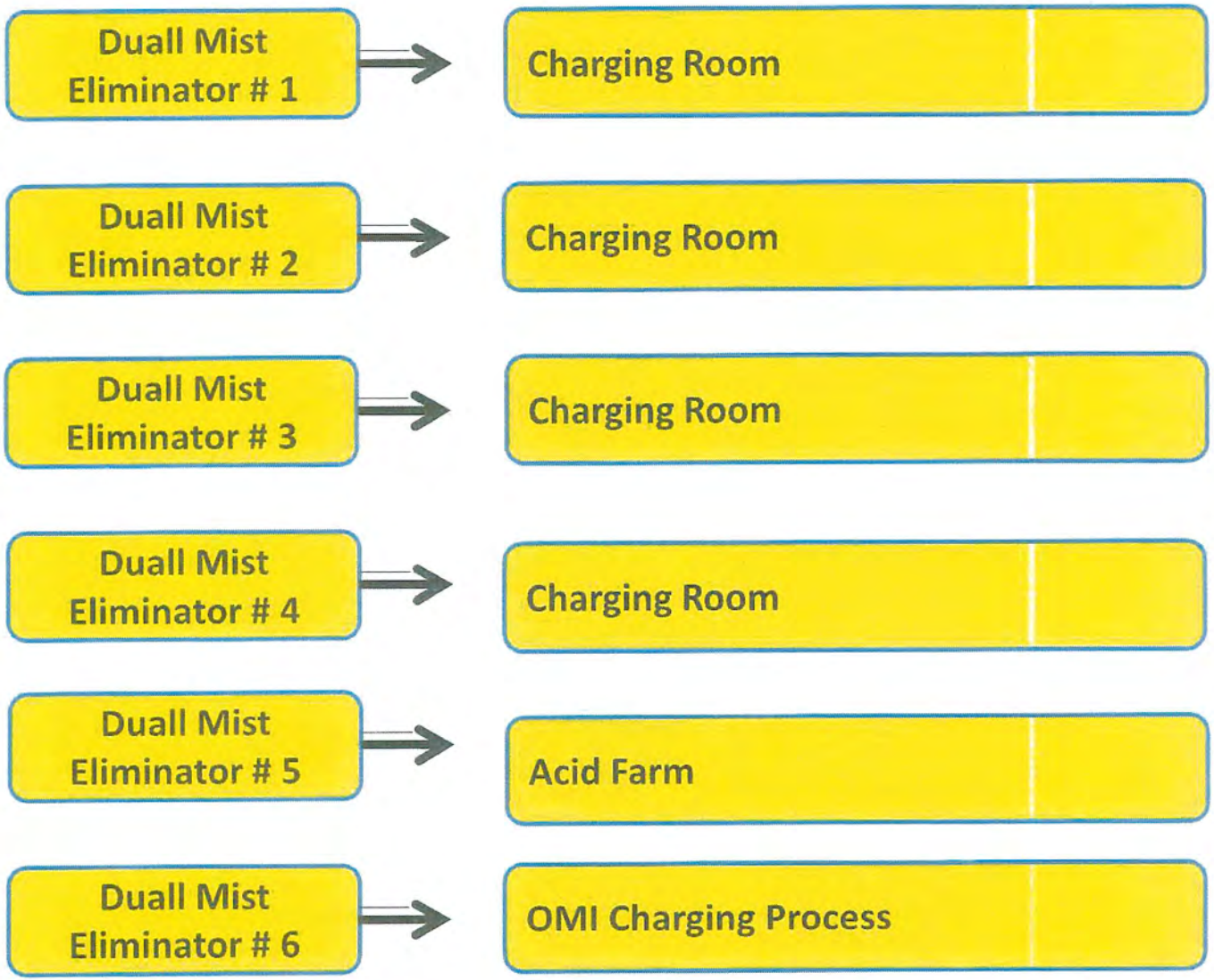
Salina Facility Exhaust Systems Oxide Mill 1 - 10

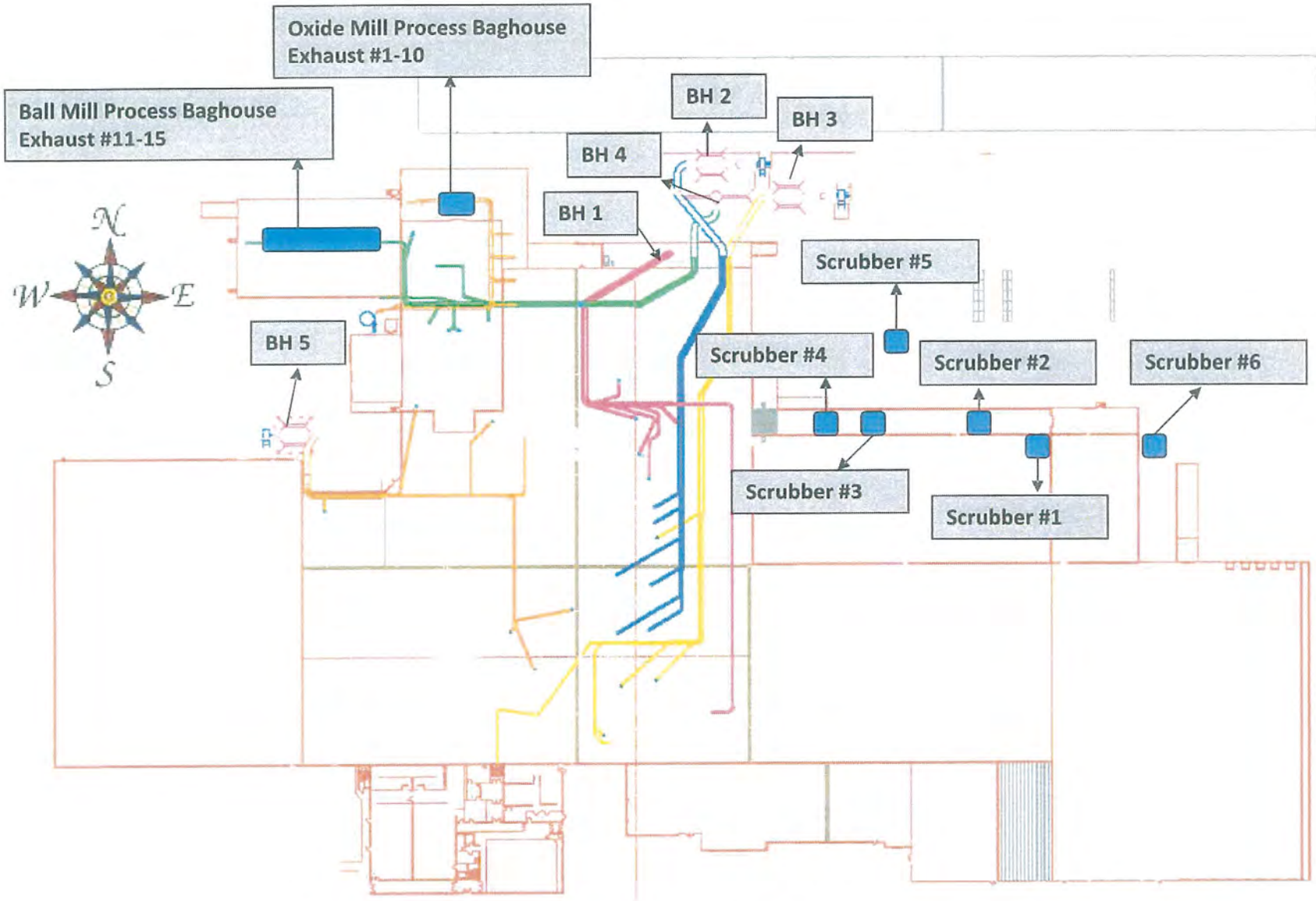


Salina Facility Exhaust Systems ~~Oxide Mill~~ Ball Mill 11 - 15

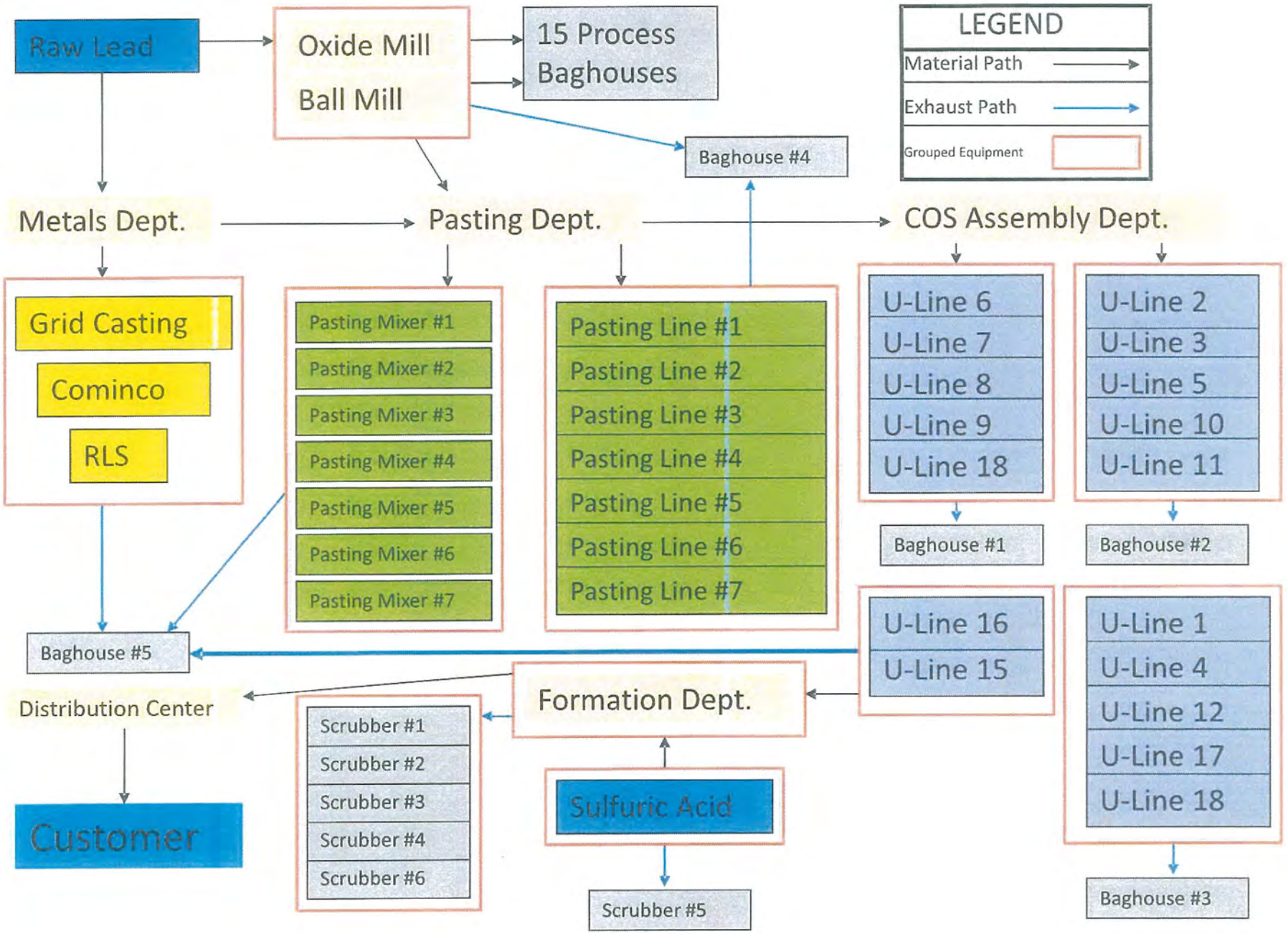


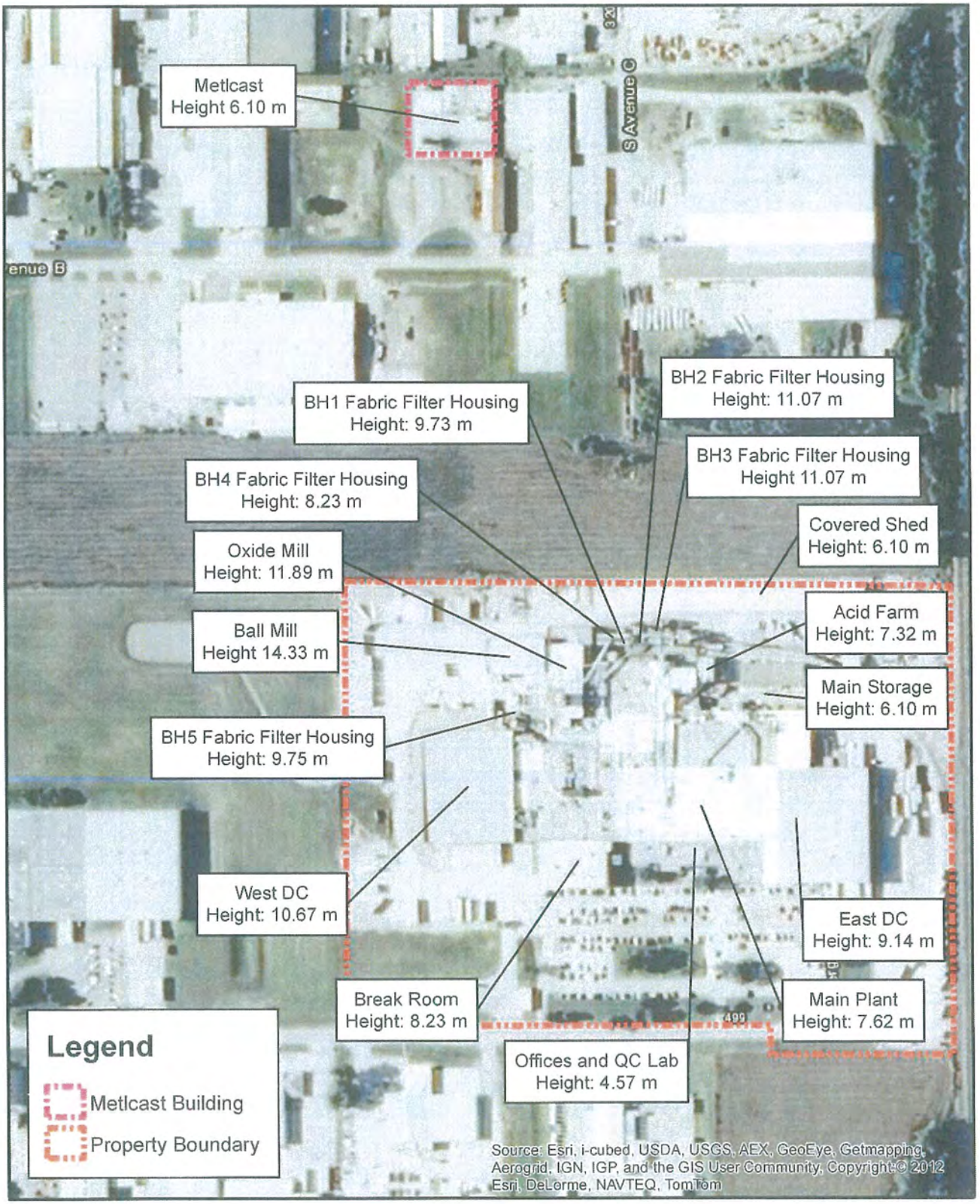
Salina Facility Exhaust Systems Duall Mist Eliminator 1 - 6





Salina Facility Exhaust Process Layout


Raw Lead
Oxide Mill
Ball Mill
15 Process Baghouses
Baghouse #4
LEGEND
Material Path
Exhaust Path
Grouped Equipment
Metals Dept.
Pasting Dept.
COS Assembly Dept.
Grid Casting
Cominco
RLS
Pasting Mixer #1
Pasting Mixer #2
Pasting Mixer #3
Pasting Mixer #4
Pasting Mixer #5
Pasting Mixer #6
Pasting Mixer #7
Pasting Line #1
Pasting Line #2
Pasting Line #3
Pasting Line #4
Pasting Line #5
Pasting Line #6
Pasting Line #7
U-Line 6
U-Line 7
U-Line 8
U-Line 9
U-Line 18
U-Line 2
U-Line 3
U-Line 5
U-Line 10
U-Line 11
Baghouse #1
Baghouse #2
Baghouse #5
U-Line 16
U-Line 15
U-Line 1
U-Line 4
U-Line 12
U-Line 17
U-Line 18
Distribution Center
Formation Dept.
Scrubber #1
Scrubber #2
Scrubber #3
Scrubber #4
Scrubber #6
Sulfuric Acid
Scrubber #5
Customer
Baghouse #3



ENVIRON
www.environcorp.com

Drawn By: WML
Date: 6/19/2013

Location of Buildings and Property Line
Exide Technologies
Salina, Kansas Battery Plant

N
W E
S
0 55 110 Meters

Figure 2-1e

ENVIRON
www.environcorp.com

Drawn By: WML
Date: 6/19/2013

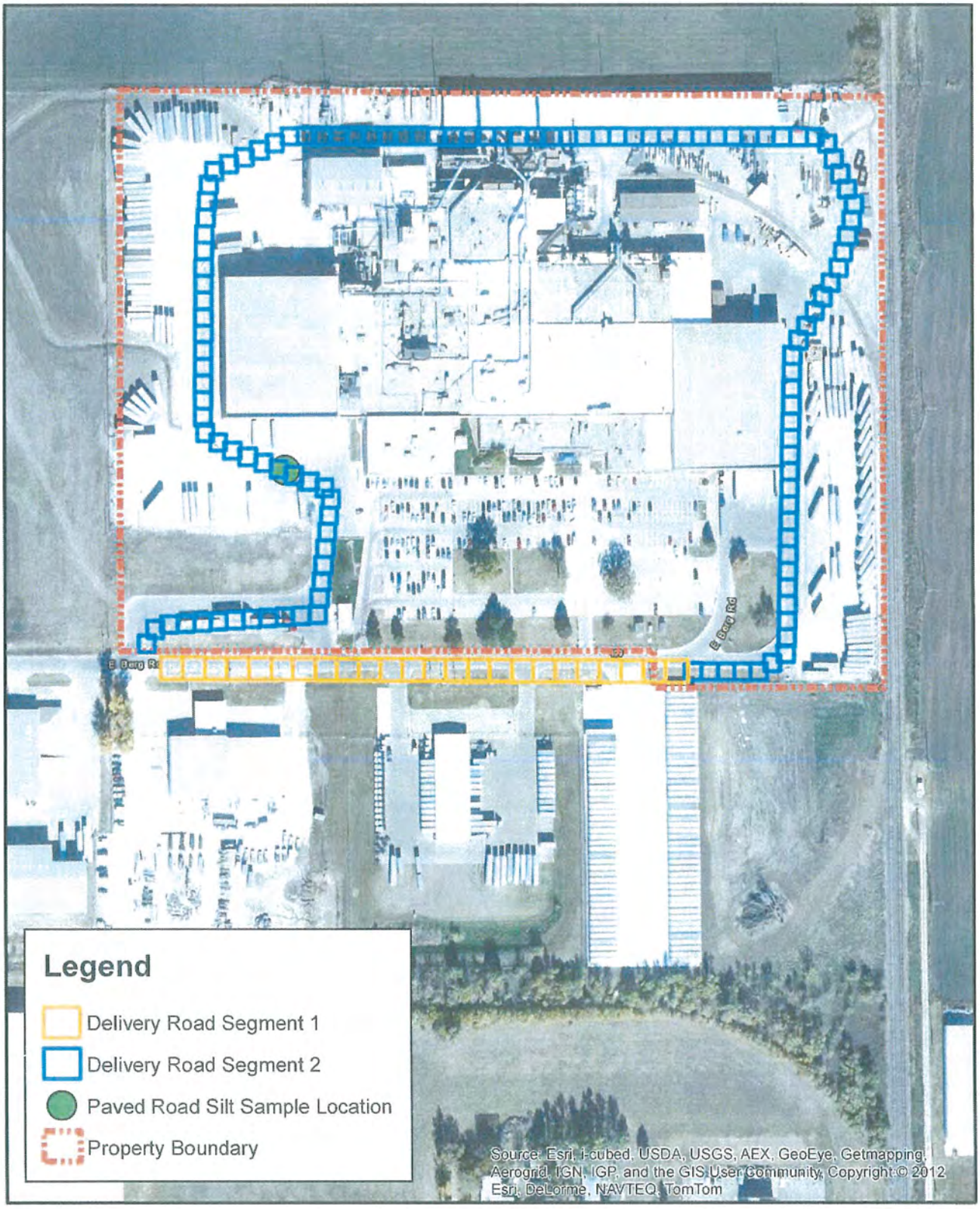
Location of Point Sources

Exide Technologies
Salina, Kansas Battery Plant

N
W E
S

0 40 80 Meters

Figure 2-1a



ENVIRON
www.environcorp.com

Drawn By: WML

Date: 2/20/2013

Location of Volume Sources: Delivery Route

Exide Technologies
Salina, Kansas Battery Plant

N
W E
S

0 40 80 Meters

Figure 2-1c

ENVIRON
www.environcorp.com

Drawn By: WML
Date: 2/20/2013

Location of Volume Sources: Shipping Route

Exide Technologies
Salina, Kansas Battery Plant

N
W E
S

0 40 80
Meters

Figure 2-1d

Bureau of Air
Curtis State Office Building
1000 SW Jackson, Suite 310
Topeka, KS 66612

Phone: 785-296-6421
Fax: 785-291-3953
mbowman@kdheks.gov
www.kdheks.gov/bar

Kansas

Robert Moser, MD, Secretary | Department of Health & Environment | Sam Brownback, Governor

August 23, 2013

Source ID No. 1690035

Mr. Matthew Spencer
EHS Manager
Exide Technologies
413 East Berg Road
Salina, KS 67401

SUBJECT: Notifications of Construction or Modification

Dear Mr. Spencer:

The Kansas Department of Health and Environment (KDHE) has reviewed Exide Technology's three (3) Notifications of Construction or Modification dated May 24, 2013. These modifications do not require pre-construction permits or approvals under K.A.R. 28-19-300.

The first Notification describes Exide's intent to add concrete to facility truck parking areas. This project is designed to reduce fugitive dust impact on ambient monitors.

The second Notification describes Exide's intent to replace baghouse number one (1). Number one baghouse is the control device for Cast On Strip (COS) / Assembly U-Lines 6, 7, 8, 9, U-Line 18-Repair Table and Central Vacuums 1-2-3-5.

The third Notification describes Exide's intent to add extensions to existing source stacks. Exide plans to manifold the exhausts for ten existing oxide mills together to a new combined stack with its foundation at ground level.

Conditions of all previous air permits and all relevant applicable regulations remain in effect. The regulations which may have associated performance testing requirements include, but are not limited to:

1. K.A.R. 28-19-720 New Source Performance Standards, which adopts 40 CFR Part 60, Subpart KK, Standards of Performance for Lead-Acid Battery Manufacturing Processing Plants;

2. 40 CFR 63 Subpart PPPPPP, National Emission Standards for Hazardous Air Pollutants for Lead Acid Battery Manufacturing Area Sources;

3. K.A.R. 28-19-650 Emissions opacity limits; and

4. K.A.R 28-19-20 Particulate matter emission limitations.

Although the affected Subpart KK equipment is not being modified, the changes described in the second and third Notifications are stack and control equipment modifications and therefore require performance tests per 40 CFR 60.8(a) to demonstrate compliance with 40 CFR 60.372 and 40 CFR 63.11423. Performance testing is to be completed within 60 days after achieving maximum production rate, but no later than 180 days after the initial startup.

The following notifications are to be submitted in accordance with 40 CFR 60.7(a):

1. The actual date of the initial start-up, postmarked within 15 days after that date;

2. Maximum production rate achieved;

3. Scheduled date for performance testing and protocol 30 days prior to testing; and

4. Notify the Air Program Field Staff at the North Central District Office in Salina at (785) 827-9639 when installation is complete so that an evaluation can be conducted.

Each of these proposed changes was relied on for dispersion modeling to demonstrate compliance with the National Ambient Air Quality Standard for lead of 0.15 $\mu g/m^3$ on a rolling 3-month average basis. Additional requirements which may include, but are not limited to emission rates, stack parameters, and best management practices will be addressed in a comprehensive permit at a later date and will include federally enforceable requirements.

Include source ID number 1690035 in all communications with the KDHE regarding this facility.

If you have any questions regarding this permit, please contact me at (785) 296-6421.

Sincerely,

Mindy Bowman

Mindy G. Bowman, P.E.
Professional Environmental Engineer
Air Permitting Section

MGB:csm
c: Javier Ahumada
Stan Marshall, NCDO
C-11313, 11314, 11315

Exide Technologies
413 East Berg Road
Salina, KS 67401
Telephone (785) 823-4029
Facsimile (785) 823-4080
Email matthew.spencer@exide.com

NCRT

RECEIVED
MAY 28 2013
BUREAU OF AIR

1690035
C-11313
Rask

May 24, 2013

Ms. Marion Massoth
Kansas Department of Health and Environment
Bureau of Air
Air Construction Permit Section
1000 SW Jackson, Suite 310
Topeka, KS 66612-1366

RE: Source ID No. 1690035
Notification of Construction or Modification— Facility Baghouse

CERTIFIED MAIL: 7012 2210 0001 9179 0776

Dear Ms. Massoth:

Exide Technologies (Exide) submits the enclosed Notification of Construction or Modification to inform you of our intent to replace our facility baghouse number one (1).

Number one bag house is the control device for COS / Assembly U-LINES 6, 7, 8, 9, U-Line 18-REPAIR TABLE AND CENTRAL VACUUMS- 1-2-3-5. It is showing signs of wear and needs to be replaced. This Bag House is going to be replaced with a new baghouse. Enclosed is the *Notification of Construction or Modification* and *the Fabric Filter/ Baghouse* form.

Please contact me at my office (785-823-4029) should you have any questions.

Sincerely,

Matthew Spencer
EHS Manager
Exide Technologies

Enclosures:

Cc:
James T. Thomas, Exide Technologies
Joseph Bolea, Exide Technologies
John Bidlemen, Exide Technologies
Fred Ganster, Exide Technologies
Christine Graessle, Exide Technologies
Miles Stotts, KDHE Bureau of Air

DRAINAGE GATE
THIS AREA SLOPES TO THE NORTH
RAMP
FOOTINGS TO BE REMOVED
REF ELEVATION VIEW
BAGHOUSE CONTROL BUILDING
#4
THIS AREA AT GRADE ELEVATION
20" HIGH PAD
8" HIGH PAD

Kansas Department of Health and Environment
Bureau of Air and Radiation
Phone (785) 296-1570 Fax (785) 291-3953

Notification of Construction or Modification

(K.A.R. 28-19-300 Construction permits and approvals; applicability)

Check one: ☐ Applying for a Permit under K.A.R. 28-19-300(a) ☒ Applying for an Approval under K.A.R. 28-19-300(b)*

1) Source ID Number: 1690035

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MAY 2 8 2013
BUREAU OF AIR

2) Mailing Information:
Company Name: Exide Technologies
Address: 413 E. Berg Rd.
City, State, Zip: Salina, KS 67401

3) Source Location:
Street Address: 413 E. Berg Rd.
City, County, State, Zip: Salina, Saline, KS 67401
Section, Township, Range: Section 1, T15S, R3W
Latitude & Longitude Coordinates: NA

4) NAICSC/SIC Code (Primary): 3691, Storage Batteries

5) Primary Product Produced at the Source: Storage Batteries

6) Would this modification require a change in the current operating permit for your facility? ☐ Yes ☒ No
If no, please explain: Number one bag house is the control device for COS / Assembly U-LINES 6, 7, 8, 9, U-Line 18-REPAIR TABLE AND CENTRAL VACUUMS- 1-2-3-5. It is showing signs of wear and needs to be replaced. This Bag House is going to be replaced with a new baghouse.

7) Is a permit fee being submitted? ☐ Yes ☒ No

If yes, please include the facility's federal employee identification number (FEIN #)

8) Person to Contact at the Site: Matthew Spencer Phone: (785) 823-4029
Title: EHS Manager

9) Person to Contact Concerning Permit: Matthew Spencer Phone: (785) 823-4029
Title: EHS Manager

Email: matthew.spencer @exide.com Fax: (785) 823-4048

Please read before signing:

Reporting forms provided may not adequately describe some processes. Modify the forms if necessary. Include a written description of the activity being proposed, a description of where the air emissions are generated and exhausted and how they are controlled. A simple diagram showing the proposed activity addressed in this notification which produces air pollutants at the facility (process flow diagrams, plot plan, etc.) with emission points labeled must be submitted with reporting forms. Information that, if made public, would divulge methods or processes entitled to protection as trade secrets may be held confidential. See the reverse side of this page for the procedure to request information be held confidential. A copy of the Kansas Air Quality Statutes and Regulations will be provided upon request.

Name and Title : James T. Thomas, Plant Manager

Address: 413 E. Berg, Rd Salina, KS

Signature: _____ Date: 5/20/13 Phone: (785) 823 4029

March 15, 2006
Revision 6

Kansas Department of Health and Environment
Division of Environment
Bureau of Air and Radiation

FABRIC FILTER/BAGHOUSE

1) Source ID Number: 1690035

2) Company/Source Name: Exide Technologies

3) Fabric Filter/Baghouse identification number or designation: Bag House #1

4) What emission unit(s) or source(s)of emissions is(are) vented to the fabric filter/baghouse?
   a. COS Assembly lines U line 15 and 16
   b. RLS, Cominco, Gid Casting, Metals Department
   c. Pasting Line #7 Off loader end
   d. Rotoclones #1 and #2

5) Description of particulate collected: lead

6) Manufacturer: GE Energy
   Date of Manufacture: 5/1/2013
   Model No.: NA
   Rated Control Efficiency: 98.5 @ 15 grains %
   Capture Efficiency 99 @ 15 grains %
   Date of Installation: 8/1/2013
7) Bag Fabric Type: Pleated Spunbonded Polyester
8) Number of Bags: 390
9) Air to Cloth Ratio: 3 to 1 Volume of gas (in actual cubic feet per minute) flowing through the dust collector's inlet duct divided by the total square feet of cloth area in the bag filters.
   Cloth Weight: 8oz.
   Kind of Cloth: Pleated Spunbond Polyester
10) Temperature of gas filtered 125 °F

11) Gas Flow80,000cfm at 70t°F

12) If blower used, complete the following.
   Rotor Dia.: 5.1ft
   Speed: 1800rpm
   Power: 250BHP

FABRIC FILTER/BAGHOUSE

(cont.)

13) Have the filter bags in this filter/baghouse been replaced? No
If yes, are the replacement bags the same as, or the equivalent of, the bags supplied by the filter manufacturer as original equipment? _____

14) Bag Cleaning Method (e.g. shake, pressure jet, etc.) pulse Jet

15) Nominal Pressure Drop: 5 inches of H_2O

16) Is there a device provided to measure pressure drop across the fabric filter/baghouse? Yes
If yes, specify device: Magnehelic

17) Emission discharge to atmosphere 80 ft. above grade through stack or duct 80 inch diameter at 70°F temperature, with 80,000cfm flow rate and 66.7fps velocity.

Exide Technologies
EHS Dept.
413 E. Berg Rd.
Salina, KS 67401

CERTIFIED MAIL™

7012 2210 0001 5179 0776

KDHE
Bureau of Air
Air Construction Permit Section
1000 SW Jackson, Suite 310
Topeka, KS 66612-1368

66612$1366 C059

Exide Technologies
413 East Berg Road
Salina, KS 67401
Telephone (785) 823-4029
Facsimile (785) 823-4080
Email matthew.spencer@exide.com

NEDO

RECEIVED
MAY 28 2013
BUREAU OF AIR

May 24, 2013

1690035
C-11314
Rosha

Ms. Marion Massoth
Kansas Department of Health and Environment
Bureau of Air
Air Construction Permit Section
1000 SW Jackson, Suite 310
Topeka, KS 66612-1366

RE: Source ID No. 1690035
Notification of Construction or Modification— Parking Lot

CERTIFIED MAIL: 7012 2210 0001 9179 0707

Dear Ms. Massoth:

Exide Technologies (Exide) submits the enclosed Notification of Construction or Modification to inform you of our intent to add concrete to facility truck parking areas.

This project is designed to reduce fugitive dust impact on KDHE ambient air monitors. This project will allow us to maintain air quality compliance required by released "National Emissions Standards for Hazardous Air Pollutants (NESHAP)" standard for the Lead Acid Battery Manufacturing industry and achieve compliance to the NAAQS level of .15 ug/m3 effective January 1, 2010.

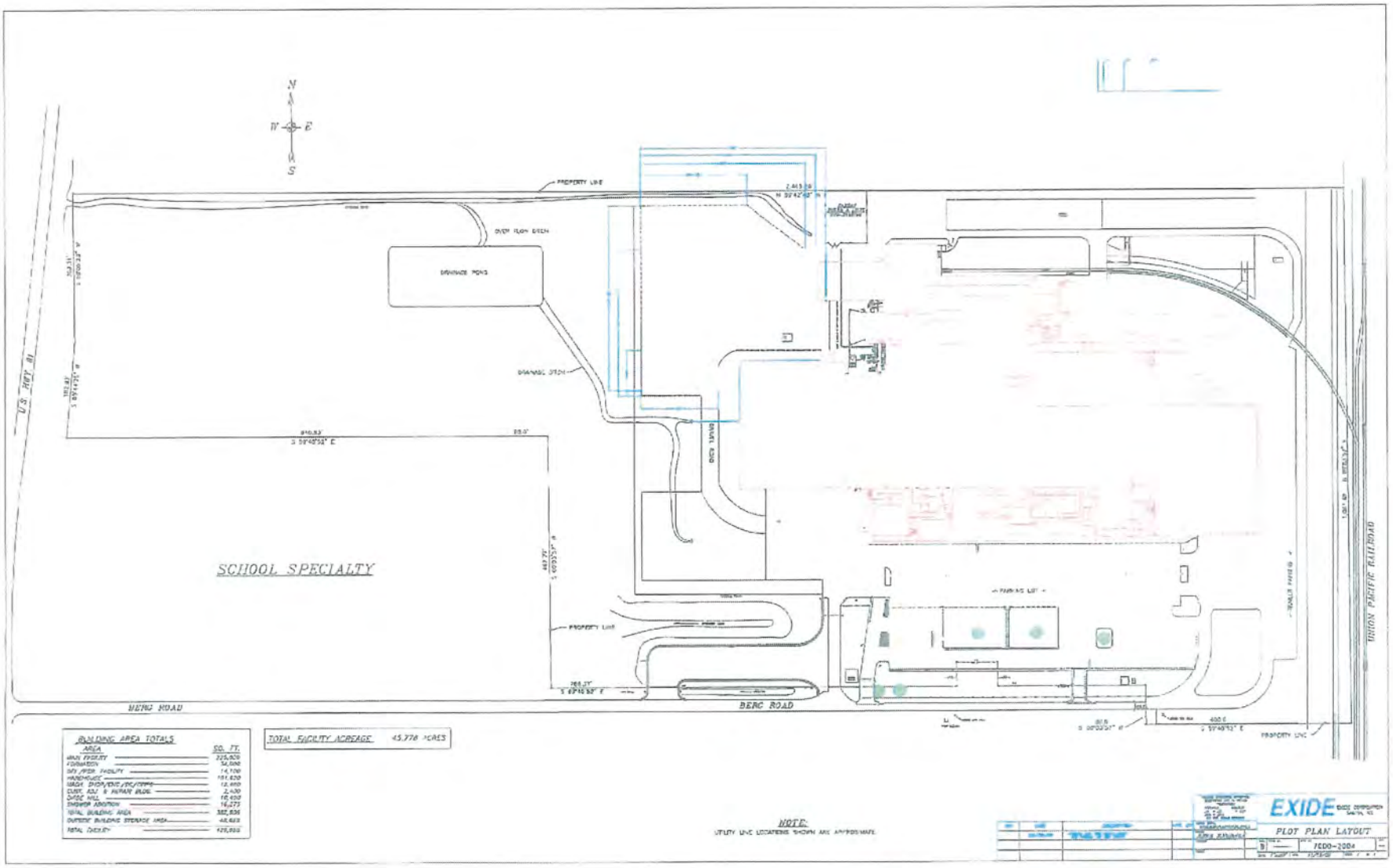
In order to achieve attainment, it is expected that lead-in-roadway silt loading will need to decrease. It is further expected that paving these unpaved road sections would be an appropriate method of achieving the reduced silt load. The proposed measures will be aimed at reducing the silt load and lead content to the levels similar to the dust loading and lead content currently measured on other roadways on the property. Please contact me at my office (785-823-4029) should you have any questions.

Sincerely,

Matthew Spencer
EHS Manager
Exide Technologies

Enclosures:

Cc:
James T. Thomas, Exide Technologies
Joseph Bolea, Exide Technologies
John Bidlemen, Exide Technologies
Fred Ganster, Exide Technologies
Christine Graessle, Exide Technologies
Miles Stotts, KDHE Bureau of Air


N
W
E
S
PROPERTY LINE
OVER FLOW DITCH
DRAINAGE PONS
DRAINAGE DITCH
SCHOOL SPECIALTY
U.S. HWY 81
BERG ROAD
UNION PACIFIC RAILROAD
PARKING LOT
PROPERTY LINE
BUILDING AREA TOTALS
AREA
SQ. FT.
TOTAL FACILITY ACREAGE 45.778 ACRES
NOTE:
UTILITY LINE LOCATIONS SHOWN ARE APPROXIMATE.
EXIDE
PLOT PLAN LAYOUT
7EDO-2004

Kansas Department of Health and Environment
Bureau of Air and Radiation
Phone (785) 296-1570 Fax (785) 291-3953

Notification of Construction or Modification

(K.A.R. 28-19-300 Construction permits and approvals; applicability)

Check one: ☐ Applying for a Permit under K.A.R. 28-19-300(a) ☒ Applying for an Approval under K.A.R. 28-19-300(b)*

C-11314
Rush

RECEIVED
MAY 28 2010
BUREAU OF AIR

1) Source ID Number: 1690035

2) Mailing Information:
Company Name: Exide Technologies
Address: 413 E. Berg Rd.
City, State, Zip: Salina, KS 67401

3) Source Location:
Street Address: 413 E. Berg Rd.
City, County, State, Zip: Salina, Saline, KS 67401
Section, Township, Range: Section 1, T15S, R3W
Latitude & Longitude Coordinates: NA

4) NAICSC/SIC Code (Primary): 3691, Storage Batteries

5) Primary Product Produced at the Source: Storage Batteries

6) Would this modification require a change in the current operating permit for your facility? ☐ Yes ☒ No
If no, please explain: This project is designed to reduce fugitive dust impact on KDHE ambient air monitors. This project will allow us to maintain air quality compliance required by recently released "National Emissions Standards for Hazardous Air Pollutants (NESHAP)" standard for the Lead Acid Battery Manufacturing industry and achieve compliance to the NAAQS level of .15 ug/m3 effective January 1, 2010.

In order to achieve attainment, it is expected that lead-in-roadway silt loading will need to decrease. It is further expected that paving all unpaved road sections would be an appropriate method of achieving the reduced silt load. The proposed measures will be aimed at reducing the silt load and lead content to the levels similar to the dust loading and lead content currently measured on the South WDC roadway . This area is considered representative of paved roadways with adequate silt control strategies in place. .

7) Is a permit fee being submitted? ☐ Yes ☒ No

If yes, please include the facility's federal employee identification number (FEIN #)

8) Person to Contact at the Site: Matthew Spencer — Phone: (785) 823-4029
Title: EHS Manager

9) Person to Contact Concerning Permit: Matthew Spencer — Phone: (785) 823-4029
Title: EHS Manager

Email: matthew.spencer @exide.com — Fax: (785) 823-4048

Please read before signing:

Reporting forms provided may not adequately describe some processes. Modify the forms if necessary. Include a written description of the activity being proposed, a description of where the air emissions are generated and exhausted and how they are controlled. A simple diagram showing the proposed activity addressed in this notification which produces air pollutants at the facility (process flow diagrams, plot plan, etc.) with emission points labeled must be submitted with reporting forms. Information that, if made public, would divulge methods or processes entitled to protection as trade secrets may be held confidential. See the reverse side of this page for the procedure to request information be held confidential. A copy of the Kansas Air Quality Statutes and Regulations will be provided upon request.

Name and Title : James T. Thomas, Plant Manager

Address: 413 E. Berg. Rd. Salina, KS

Signature: _____ Date: [illegible] Phone: ([illegible])

* If you do not know whether to apply for a permit or an approval, follow approval application procedures

Procedures For Requesting Information To Be Held Confidential

An applicant may request that information submitted to the Department, other than emission data or information in any air quality permit or approval, be treated as confidential if the information would divulge methods or processes entitled to protection as trade secrets.

A request to designate information within the Department's air quality files as confidential must include:

(1) An uncensored copy of the document clearly marked as confidential;

(2) A copy of the document, or copies if more than one is required to be filed with the Department, with the confidential information masked;

(3) Specification of the type of information to be held as confidential (i.e., product formulations, process rates);

(4) Specification and justification of the reason the information is qualified by statute to be treated as confidential (competitive advantage, company developed secret formulation, trade secret); and

(5) A reference at each place in the document or documents where information is masked referring to the specification of the type of information masked and the specification and justification the information is qualified by statute to be treated as confidential.

ONLY THE CONFIDENTIAL INFORMATION ON ANY DOCUMENT MAY BE MASKED. ALL INFORMATION ON ANY DOCUMENT WHICH IS NOT CONFIDENTIAL MUST REMAIN LEGIBLE.

The information will be treated as confidential until the secretary has acted upon the request and the owner or operator has had the opportunity to exhaust any available remedies if the secretary determines the information is not confidential.

Complete this and all reporting forms and submit to:

Kansas Department of Health and Environment
Bureau of Air and Radiation
1000 SW Jackson, Suite 310
Topeka, KS 66612-1366
(785) 296-1570

Sources located in Wyandotte County should obtain forms from, and submit forms to:

Unified Government of Wyandotte County
Department of Air Quality

619 Ann Avenue
Kansas City, KS 66101
(913) 573-6700

Exide Technologies
EHS Dept.
413 E. Berg Rd.
Salina, KS 67401

CERTIFIED MAIL™

7012 2210 0001 9179 0707

Ms. Marion Massoth
KDHE
Bureau of Air
Air Construction Permit Section
1000 SW Jackson, Suite 310
Topeka, KS 66612-1366

66612@1366 C059

Exide Technologies
413 East Berg Road
Salina, KS 67401
Telephone (785) 823-4029
Facsimile (785) 823-4080
Email matthew.spencer@exide.com

NSR

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BUREAU OF AIR

May 24, 2013

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C-11315
RasM

Ms. Marion Massoth
Kansas Department of Health and Environment
Bureau of Air
Air Construction Permit Section
1000 SW Jackson, Suite 310
Topeka, KS 66612-1366

RE: Source ID No. 1690035
Notification of Construction or Modification— Stack Extensions

CERTIFIED MAIL: 7012 2210 0001 9179 0752

Dear Ms. Massoth:

Exide Technologies (Exide) submits the enclosed Notification of Construction or Modification to inform you of our intent to add extensions to existing source stacks.

The ten existing oxide mill stacks each sit directly atop equipment and do not have foundations on the ground. Thus, the added weight from any added stack height would have to be borne by the equipment they are mounted upon. It has been determined that the equipment cannot bear this additional weight. Thus, increasing the height of these stacks individually is not structurally feasible and Exide instead plans to manifold the exhausts together to a new combined stack with its foundation at ground level. The purpose of this stack combination is not to increase plume rise. The desired increase in plume height is accomplished by the stack height increase itself. The combination of stacks into one is simply for structural purposes to allow a ground-based foundation. In addition, this entire project is accompanied by reductions in allowable lead emissions from the facility. Enclosed is the *Notification of Construction or Modification* form.

Please contact me at my office (785-823-4029) should you have any questions.

Sincerely,

Matthew Spencer
EHS Manager
Exide Technologies

Enclosures:

Cc:
James T. Thomas, Exide Technologies
Joseph Bolea, Exide Technologies
John Bidlemen, Exide Technologies
Fred Ganster, Exide Technologies
Christine Graessle, Exide Technologies
Miles Stotts, KDHE Bureau of Air

Kansas Department of Health and Environment
Bureau of Air and Radiation
Phone (785) 296-1570 Fax (785) 291-3953

Notification of Construction or Modification

(K.A.R. 28-19-300 Construction permits and approvals; applicability)

Check one: ☐ Applying for a Permit under K.A.R. 28-19-300(a) ☒ Applying for an Approval under K.A.R. 28-19-300(b)*

1) Source ID Number: 1690035

C-11315
Rush

RECEIVED
MAY 28 2013
BUREAU OF AIR

2) Mailing Information:
Company Name: Exide Technologies
Address: 413 E. Berg Rd.
City, State, Zip: Salina, KS 67401

3) Source Location:
Street Address: 413 E. Berg Rd.
City, County, State, Zip: Salina, Saline, KS 67401
Section, Township, Range: Section 1, T15S, R3W
Latitude & Longitude Coordinates: NA

4) NAICSC/SIC Code (Primary): 3691, Storage Batteries

5) Primary Product Produced at the Source: Storage Batteries

6) Would this modification require a change in the current operating permit for your facility? ☐ Yes ☒ No

If no, please explain: The ten existing oxide mill stacks each sit directly atop equipment and do not have foundations on the ground. Thus, the added weight from any added stack height would have to be borne by the equipment they are mounted upon. It has been determined that the equipment cannot bear this additional weight. Thus, increasing the height of these stacks individually is not structurally feasible and Exide instead plans to manifold the exhausts together to a new combined stack with its foundation at ground level. The purpose of this stack combination is not to increase plume rise. The desired increase in plume height is accomplished by the stack height increase itself. The combination of stacks into one is simply for structural purposes to allow a ground-based foundation. In addition, this entire project is accompanied by reductions in allowable lead emissions from the facility. For each of these reasons, this stack combination is not prohibited by K.A.R. 28-19-18.

7) Is a permit fee being submitted? ☐ Yes ☒ No

If yes, please include the facility's federal employee identification number (FEIN #)

8) Person to Contact at the Site: Matthew Spencer — Phone: (785) 823-4029
Title: EHS Manager

9) Person to Contact Concerning Permit: Matthew Spencer — Phone: (785) 823-4029
Title: EHS Manager

Email: matthew.spencer @exide.com — Fax: (785) 823-4048

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Address: 413 E. Berg. Rd. Salina. KS

Signature: _____ Date: _____ Phone: _____

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Air Construction Permit Section
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Topeka, KS 66612-1366

66612$1366 C059