Indiana Department of Environmental Management
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Carol S. Comer
Commissioner

NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Preliminary Findings Regarding a
Signficant Modification to a
Part 70 Operating Permit

Preliminary Findings Regarding a
Signficant Modification to a Part 70 Operating Permit

for Exide Technologies in Delaware County

Significant Source Modification No.: 035-36872-00028
Significant Permit Modification No.: 035-36882-00028

The Indiana Department of Environmental Management (IDEM) has received an application from Exide Technologies, located at 2601 West Pleasant Blvd., Muncie, IN 47302, for a significant modification of its Part 70 Operating Permit issued on August 1, 2012. If approved by IDEM's Office of Air Quality (OAQ), this proposed modification would allow Exide Technologies to make certain changes at its existing source. Exide Technologies has applied for the incorporation of compliance requirements for the existing Rolled Lead Strip (RLS) operation at the source, as required as part of Consent Decree (Civil Action No. 15-433, United States of America and the State of Indiana v. Exide Technologies).

This draft Part 70 permit modification does not contain any new equipment that would emit air pollutants; however, some conditions from previously issued permits/approvals have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes (e.g., changes that add or modify synthetic minor emission limits). This notice fulfills the public notice procedures to which those conditions are subject. IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow for these changes.

A copy of the permit application and IDEM's preliminary findings are available at:

JFK Library - Muncie Branch
1700 McGalliard Rd.
Muncie, IN 47304

A copy of the preliminary findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

How can you participate in this process?

The date that this notice is published in a newspaper marks the beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the **air pollution impact** of this draft permit are received, with a request for a public hearing, IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing,

you would have an opportunity to submit written comments and make verbal comments. At a meeting, you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM's mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number No.: SSM035-36872-00028 and No.: SPM035-36882-00028 in all correspondence.

Comments should be sent to:

Madhurima Moulik
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for extension 3-0868
Or dial directly: (317) 233-0868
Fax: (317) 232-6749 attn: Madhurima Moulik
E-mail: mmoulik@idem.IN.gov

All comments will be considered by IDEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEM does not have legal authority to regulate zoning, odor, or noise. For such issues, please contact your local officials.

For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

What will happen after IDEM makes a decision?

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM's response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM's decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above, at the local library indicated above, and the IDEM public file room on the 12th floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions, please contact Madhurima Moulik of my staff at the above address.

Jason R. Krawczyk, Section Chief
Permits Branch
Office of Air Quality

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Carol S. Comer
Commissioner

DRAFT

Mike Henry
Exide Technologies
2601 West Mt. Pleasant Blvd.
Muncie, IN 47302

Re: 035-36882-00028
Significant Permit Modification to
Part 70 Renewal No.: T035-31230-00028

Dear Mr. Henry:

Exide Technologies was issued Part 70 Operating Permit Renewal No. T035-31230-00028 on August 1, 2012 for a stationary secondary lead smelting operation located at 2601 West Mt. Pleasant Blvd., Muncie, Indiana 47302. An application requesting changes to this permit was received on February 23, 2016. Pursuant to the provisions of 326 IAC 2-7-12, a Significant Permit Modification to this permit is hereby approved as described in the attached Technical Support Document.

Please find attached the entire Part 70 Operating Permit as modified. The permit references the below listed attachment(s). Since these attachments have been provided in previously issued approvals for this source, IDEM OAQ has not included a copy of these attachments with this modification:

Attachment A: 40 CFR 60, Subpart L - Standards of Performance for Secondary Lead Smelters
Attachment B: 40 CFR 63, Subpart X - National Emissions Standard for Hazardous Air Pollutants from Secondary Lead Smelting
Attachment C: 326 IAC 20-13.1 - Hazardous Air Pollutants: Secondary Lead Smelters

Previously issued approvals for this source containing these attachments are available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

Federal rules under Title 40 of United States Code of Federal Regulations may also be found on the U.S. Government Printing Office's Electronic Code of Federal Regulations (eCFR) website, located on the Internet at: http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab_02.tpl.

A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.

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If you have any questions on this matter, please contact Madhurima Moulik, of my staff, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251 at 317-233-0868 or 1-800-451-6027, and ask for extension 3-0868.

Sincerely,

Jason R. Krawczyk, Section Chief
Permits Branch
Office of Air Quality

Attachments: Modified Permit and Technical Support Document
cc: File - Delaware County
Delaware County Health Department
U.S. EPA, Region 5
Compliance and Enforcement Branch

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Part 70 Operating Permit Renewal
DRAFT
OFFICE OF AIR QUALITY

Exide Technologies
2601 West Mt. Pleasant Blvd.
Muncie, Indiana 47302

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T035-31230-00028	
Issued by/Original Signed by: Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: August 1, 2012 Expiration Date: August 1, 2017

Significant Permit Modification No.: 035-33188-00028, issued on February 4, 2014
Significant Permit Modification No.: 035-34525-00028, issued on September 9, 2014
Significant Permit Modification No.: 035-35766-00028, issued on July 28, 2015

Significant Permit Modification No.: 035-36882-00028	
Issued by: Jason R. Krawczyk, Section Chief Permits Branch Office of Air Quality	 Issuance Date: Expiration Date: August 1, 2017

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary secondary lead smelting operation.

Source Address:	2601 West Mt. Pleasant Blvd., Muncie, Indiana 47302
General Source Phone Number:	765-747-9980
SIC Code:	3341 (Secondary Smelting and Refining of Nonferrous Metals)
County Location:	Delaware, the area of the City of Muncie bounded by West 26th Street/Hines Road to the north, Cowan Road to the east, West Fuson Road to the south, and South Hoyt Avenue to the west
Source Location Status:	Nonattainment for Lead standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(14)]

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) natural gas-fired rotary dryer, identified as Unit 3, constructed in 1989 and modified in 2005, with a maximum capacity of 126,000 tons of lead scrap per year and a maximum heat input capacity of 12.5 million British thermal units per hour (MMBtu/hr), controlled by the rotary dryer baghouse.

(b) One (1) lead reverberatory furnace and, identified as Unit 4, constructed in 1989, with a maximum capacity of 24.3 million British thermal units per hour (MMBtu/hr), rated at 100,000 tons of lead per year, controlled by the 11.9 MMBtu/hr natural gas fired afterburner (approved in 2015 for installation), the process baghouse, and by identical, individual, and parallel, North and South sodium carbonate packed tower scrubbers.

(c) One (1) blast furnace (cupola), identified as Unit 5, constructed in 1973 and modified in 1989, rated at 30,000 tons of metal per year, controlled by the 11.9 MMBtu/hr natural gas fired afterburner (approved in 2015 for installation), the process baghouse, and by identical, individual, and parallel, North and South sodium carbonate packed tower scrubbers.

(d) Emission from the reverberatory charge point hoods and blast furnace (cupola) charge point hoods are controlled by the ventilation baghouse.

(e) Two (2) lead pig casting machines, constructed in 1989 and approved in 2014 for modification, identified collectively as Unit 7, each rated at 120,000 tons of lead per year controlled by refinery baghouse No. 1 and refinery baghouse No. 2, with each baghouse exhausting to a separate stack.

Note: The 2014 modification only consists of the approval to add refinery baghouse No. 2.

(f) Eleven (11) natural gas-fired pot furnaces, approved in 2014 for modification, identified as Units 6K1, 6K2 and Units 6K4 through 6K12, all controlled by refinery baghouse No. 1 and refinery baghouse No. 2, with each baghouse exhausting to a separate stack, and including:

(1) Two (2) rated at 120 tons holding capacity and 3.4 million British thermal units per hour (MMBtu/hr), constructed in 1989, identified as Units 6K1 and 6K2,

(2) Three (3) rated at 100 tons holding capacity and 3.0 MMBtu/hr, constructed in 1989, identified as Units 6K9, 6K10, and 6K12,

(3) One (1) rated at 120 tons holding capacity and 3.0 MMBtu/hr, constructed in 1989, identified as Unit 6K11,

(4) One (1) rated at 100 tons holding capacity and 3.0 MMBtu/hr, constructed in 1973, identified as Unit 6K6,

(5) Two (2) rated at 100 tons holding capacity and 3.4 MMBtu/hr, constructed in 1973, identified as Units 6K7 and 6K8,

(6) One (1) rated at 115 tons holding capacity and 3.0 MMBtu/hr, constructed in 1973, identified as Unit 6K5,

(7) One (1) rated at 100 tons holding capacity and 3.0 MMBtu/hr, constructed in 1973 and modified in October 2009, identified as Unit 6K4.

Note: The 2014 modification only consists of the approval to add refinery baghouse No. 2.

(g) One (1) lead-battery crusher/breaker, identified as Unit 1, constructed in 1989, which is rated at 126,000 tons of scrap metal per year, with particulate matter (PM) emissions controlled by a venturi scrubber followed by a voluntarily installed dust collector.

(h) One (1) soda-ash/caustic soda neutralizing wash to neutralize sulfuric acid in the scrap metal before it is smelted, constructed in 1989, with two (2) soda ash silos, identified as Units 2a and 2b, both constructed in 1989, each with a capacity of 210,000 lbs, and one (1) soda ash silo, constructed in 1992, with a capacity of 50,000 lbs. Particulate matter (PM) emissions on all three (3) soda ash silos are controlled by fabric filters.

(i) Material handling, identified as Unit 9, approved in 2014 for modification, controlled by bin room baghouse No. 1 and bin room baghouse No. 2, with each baghouse exhausting to a separate stack.

(1) One (1) slag crusher, constructed in 1994, with emissions controlled by a baghouse, identified as slag crusher baghouse venting to bin room baghouses No.1 and No. 2.

Note: The 2014 modification only consists of the approval to add refinery baghouse No. 2.

(j) One (1) Rolled Lead Strip (RLS) Line, constructed in 1997 and permitted in 2016, with a maximum capacity of 3.5 tons per hour, exhausting to RLS baghouse and HEPA Filters, including the following:

(1) One (1) natural gas-fired seven (7) ton melting pot, identified as MP-1, constructed in 1997, with a capacity of 2.2 million British thermal units per hour; and

(2) One (1) natural gas-fired thirty-five (35) ton melting pot, identified as MP-2, constructed in 1997, with a capacity of 1.2 million British thermal units per hour.

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(k) Roadway surface fugitive emissions.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)][326 IAC 2-1.1-9.5][326 IAC 2-7-4(a)(1)(D)][IC 13-15-3-6(a)]

(a) This permit, T035-31230-00028, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) A "responsible official" is defined at 326 IAC 2-7-1(35).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][326 IAC 1-6-3]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee’s control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(8) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to

be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]

(a) All terms and conditions of permits established prior to T035-31230-00028 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

(3) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit.
[326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)][326 IAC 2-7-12(b)(2)]

(a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003

Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b)(1) and (c)(1). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1) and (c)(1).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(37)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ or U.S. EPA is required.

(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.21 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using ambient air quality modeling pursuant to 326 IAC 1-7-4. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of

326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 Performance Testing [326 IAC 3-6]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

C.10 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)][40 CFR 64][326 IAC 3-8]

(a) For new units:

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

(b) For existing units:
Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality

100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(d) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]

C.12 Risk Management Plan [326 IAC 2-7-5(11)] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.13 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5] [326 IAC 2-7-6]

(l) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in

accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

(II)

(a) CAM *Response to excursions or exceedances.*

(1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(2) Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

(c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a QIP. The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.

(d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).

(e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:

(1) Failed to address the cause of the control device performance problems; or

(2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

(h) *CAM recordkeeping requirements.*

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.15 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(b)(2), starting in 2005 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(33) (“Regulated pollutant, which is used only for purposes of Section 19 of this rule”) from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

C.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:

(AA) All calibration and maintenance records.

(BB) All original strip chart recordings for continuous monitoring instrumentation.

(CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following, where applicable:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.

(BB) The dates analyses were performed.

(CC) The company or entity that performed the analyses.

(DD) The analytical techniques or methods used.

(EE) The results of such analyses.

(FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [40 CFR 64][326 IAC 3-8]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

On and after the date by which the Permittee must use monitoring that meets the requirements of 40 CFR Part 64 and 326 IAC 3-8, the Permittee shall submit CAM reports to the IDEM, OAQ.

A report for monitoring under 40 CFR Part 64 and 326 IAC 3-8 shall include, at a minimum, the information required under paragraph (a) of this condition and the following information, as applicable:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in Section C-Response to Excursions or Exceedances. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

The Permittee may combine the Quarterly Deviation and Compliance Monitoring Report and a report pursuant to 40 CFR 64 and 326 IAC 3-8.

(b) The address for report submittal is:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.18 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description :

(a) One (1) natural gas-fired rotary dryer, identified as Unit 3, constructed in 1989 and modified in 2005, with a maximum capacity of 15,500 tons of lead scrap per year and a maximum heat input capacity of 12.5 million British thermal units per hour (MMBtu/hr), controlled by the rotary dryer baghouse.

(b) One (1) lead reverberatory furnace, identified as Unit 4, constructed in 1989, with a maximum capacity of 24.3 million British thermal units per hour (MMBtu/hr), rated at 100,000 tons of lead per year, controlled by the 11.9 MMBtu/hr natural gas fired afterburner (approved in 2015 for installation), the process baghouse, and by identical, individual, and parallel, North and South sodium carbonate packed tower scrubbers.

(c) One (1) blast furnace (cupola), identified as Unit 5, constructed in 1973 and modified in 1989, rated at 30,000 tons of metal per year, controlled by the 11.9 MMBtu/hr natural gas fired afterburner (approved in 2015 for installation), the process baghouse, and by identical, individual, and parallel, North and South sodium carbonate packed tower scrubbers.

(d) Emissions from the reverberatory charge point hoods and blast furnace (cupola) charge point hoods are controlled by the ventilation baghouse.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 PSD and Emission Offset Minor Limits [326 IAC 2-2][326 IAC 2-3]

In order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable, the Permittee shall comply with the following:

(a) Only a mixture of 70% to 100% by weight slag and 0% to 30% by weight lead bearing materials may be charged in the blast furnace (cupola) (Unit 5).

(b) The PM, PM10, PM2.5 and lead emissions shall not exceed the emission limits listed in the table below:

Emission Units	Control Equipment	PM Limit (lb/hr)	PM10 Limit (lb/hr)	PM2.5 Limit (lb/hr)	Lead Limit (lb/hr)
Rotary dryer (Unit 3)	Rotary dryer baghouse	4.50	4.50	4.50	0.029
Reverberatory furnace (Unit 4), Blast furnace (cupola) (Unit 5), and Afterburner combustion emissions	Afterburner, process baghouse followed by North and South sodium carbonate packed tower scrubbers	4.60	5.00	5.00	0.34
Reverberatory and blast furnace charge points hoods emissions	Ventilation baghouse	2.75	3.00	3.00	0.17

(c) The combined SO_2 emissions from the reverberatory furnace, blast furnace (cupola), and afterburner combustion emissions shall be limited to less than 99 tons per twelve (12) consecutive month period with compliance determined at end of each month.

Compliance with these limits, in combination with Conditions D.2.1 and D.3.1 and the potential to emit PM, PM10, PM2.5, and SO2 from all other emission units at this source, shall limit the source-wide total potential to emit PM, PM10, PM2.5 and SO2 to less than one hundred (100) tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable.

Compliance with these limits, in combination with Conditions D.2.1 and D.3.1 and the potential to emit lead from all other emission units at this source, shall limit the source-wide total potential to emit of lead to less than 5 tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-3 (Emission Offset) not applicable.

D.1.2 Sulfur Dioxide (SO_2) [326 IAC 7-1.1]

Pursuant to 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations), the SO_2 emissions from the blast furnace (cupola) (ID #5) firing of coke fuel shall not exceed six (6) pounds per million British thermal units heat input.

D.1.3 Particulate Emissions [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitation for Manufacturing Processes), the Particulate emissions from the following units shall be limited as follows when operating at the listed process weight rate:

Unit	**Process Weight Rate** (tons/hr)	**Emission Limit** (lb/hr)
Rotary Dryer	14.44	24.5

These limitations were calculated using the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

D.1.4 Federal Consent Decree Requirements - Furnace Exhaust Temperature Monitoring, Records, Standard Operating Procedures, and Installation and Use of an Afterburner

Pursuant to Significant Source Modification No. 035-35751-00028 and the Consent Decree lodged with the United States District Court for the Southern District of Indiana on March 16, 2015 in *United States and the State of Indiana v. Exide Technologies*, No. 15-cv-433 (S.D. Ind.), the Permittee shall comply with the following:

(a) Exide recently installed and began operating a new furnace exhaust temperature monitoring device and completed a performance evaluation for the device and a performance test for total hydrocarbon and dioxin/furan emissions from the Facility's blast furnace and reverberatory furnace. After the Date of Lodging (March 16, 2015), Exide shall maintain and continuously operate its furnace exhaust temperature monitoring device to demonstrate compliance with the Secondary Lead NESHAP, including the continuous temperature monitoring requirements in 40 CFR 63.548(j)(1) and the temperature maintenance standards for emission of hydrocarbons and dioxins/furans in 40 CFR 63.548(j)(4).

(b) Within 120 days after the Date of Lodging, Exide shall submit a written Furnace Temperature Recordkeeping Plan for EPA review and approval. The Plan shall include systems and procedures for recording the configuration of the furnaces and the corresponding minimum compliance temperature for all 3-hour periods, as required by the Secondary Lead NESHAP, including 40 CFR 63.548(j)(4). Exide shall implement the EPA-approved Furnace Temperature Recordkeeping Plan in accordance with the requirements set forth in the approved Plan.

(c) Exide prepared written Standard Operating Procedures designed to minimize emissions of total hydrocarbons for each startup and shutdown scenario anticipated. By no later than 60 days after the Date of Lodging, Exide shall submit a modified Notification of Compliance Status report indicating that the facility is operating in compliance with its Standard Operating Procedures.

(d) By no later than July 31, 2015, Exide shall install and operate an afterburner to increase the furnace exhaust temperature and comply with minimum temperature requirements established pursuant to the Secondary Lead NESHAP for the control of hydrocarbon and dioxin/furan emissions from the Facility's blast furnace and reverberatory furnace.

(e) By no later than December 31, 2015, Exide shall update all applicable written plans and procedures for minimizing emissions in order to reflect installation and use of the afterburner, including the Facility's Operation, Maintenance and Monitoring Plan and its Standard Operation Procedures to minimize emissions of total hydrocarbons for each startup and shutdown scenario anticipated.

(f) Within 90 days after commencing operation of the afterburner, Exide shall conduct a new performance test for total hydrocarbon and dioxin/furan emissions from the Facility's blast furnace and reverberatory furnace to establish a minimum operating temperature at the afterburner for each operating scenario in accordance with 40 CFR 63.7 and 63.548(j)(3). Exide shall submit a performance test protocol to EPA and IDEM at least 35 days before the test. Exide shall notify EPA and IDEM of its intent to test on a specific date at least 15 days before performing the test(s).

(g) Within 45 days after the new performance test for total hydrocarbon and dioxin/furan emissions, Exide shall submit to EPA and IDEM a complete report of the performance test for total hydrocarbon and dioxin/furan emissions.

(h) If an alternate monitoring method for demonstrating ongoing compliance with the emission standards under 40 CFR 63.543(c) is approved which does not require maintenance of minimum temperatures set by 40 CFR 63.548(j), this Consent Decree is not intended to prevent the establishment of requirements implementing the alternate monitoring method for compliance.

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these units and any control devices. Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.1.6 Particulate Matter (PM), Sulfur Dioxide (SO_2) and Lead (Pb) [326 IAC 2-7-6(6)]

(a) In order to ensure compliance with Conditions D.1.1 and D.1.3, the rotary dryer baghouse shall be in operation at all times that the rotary dryer is in operation.

(b) In order to ensure compliance with Conditions D.1.1, the process baghouse shall be in operation at all times that the reverberatory furnace and blast furnace (cupola) are in operation.

(c) In order to ensure compliance with Conditions D.1.1 and D.1.3, either the North or South sodium carbonate packed tower scrubbers shall be in operation at all times that the reverberatory furnace and blast furnace (cupola) are in operation. In the event that both scrubbers cease operation for any reason, both furnaces shall immediately be shut down until at least one scrubber is operational again.

(d) The Permittee shall have a certified SO2 Continuous Emissions Monitoring System (CEMS) for emissions at both the North and South sodium carbonate packed tower scrubbers, calibrated, operated and maintained in compliance with 326 IAC 3-5-2 through 326 IAC 3-5-5.

(e) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.1.7 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with the lead limits in Condition D.1.1, the Permittee shall conduct lead testing from the rotary dryer and the reverberatory furnace and blast furnace (cupola), utilizing methods as approved by the Commissioner in accordance with the following schedule:

(1) every twelve (12) calendar months; or

(2) If an annual compliance test demonstrates that a process vent emitted lead compounds at one-tenth (0.1) milligram of lead per dry standard cubic meter or less during the time of the annual compliance test, the owner or operator of a secondary lead smelter may submit a written request to the Administrator applying for an extension of up to twenty-four (24) calendar months from the previous compliance test to conduct the next compliance test for lead compounds.

(b) In order to demonstrate compliance with Condition D.1.1 and Condition D.1.3, the Permittee shall perform PM, PM10, PM2.5 testing for the rotary dryer, the reverberatory furnace and blast furnace, and the reverberatory and blast furnace charge points utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. PM10 and PM2.5 includes filterable and condensable PM.

(c) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the testing required by this condition.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.8 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

(a) Visible emission notations of the North and South sodium carbonate packed tower scrubber stack exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.9 Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

The Permittee shall monitor and record the total pressure drop across each of the North and South sodium carbonate packed tower scrubbers used in conjunction with the reverberatory furnace and blast furnace (cupola) at least once daily when the associated processes are in operation. When for any one reading, the pressure drop is outside the normal ranges, the Permittee shall take a reasonable response. The normal range for these units is a pressure drop between 5.0 and 25.0 inches of water, unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and shall be calibrated or replaced at least once every six (6) months.

D.1.10 Scrubber Failure Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The north or south sodium carbonate packed scrubber, controlling emissions from the reverberatory furnace and blast furnace (cupola), shall be operated continuously. In the event that both scrubbers cease operation for any reason, both furnaces shall immediately be shut down until at least the North or South scrubber is operational again. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.1.11 SO_2 Monitor Downtime [326 IAC 2-7-6] [326 IAC 2-7-5(1)]

(a) Whenever the SO_2 continuous emission monitoring system (CEMS) is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the Permittee shall monitor and record the slurry feed rate to demonstrate that the operation of the scrubber continues in a manner typical for the sulfur content of the coal fired. Scrubber parametric monitoring readings shall be recorded at least twice per day until the primary CEMS or a backup CEMS is brought online.

(b) Whenever the THC continuous emission monitoring system (CEMS) is malfunctioning or is down for repairs or adjustments for twenty-four (24) hours or more, the Permittee shall monitor and record the firing rate on the reverberatory furnace and charge rate on the blast furnace to demonstrate that effective combustion of hydrocarbons is occurring. Readings shall be recorded at least hourly until the primary CEMS or a backup CEMS is brought online.

D.1.12 Bag Leak Detection System Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

Pursuant to 40 CFR 64, the Permittee shall install and continuously operate a bag leak detection system for all baghouses controlling process vents and process fugitive emissions sources. See Condition F.1.1(a)(8) of this permit or 326 IAC 20-13.1-9 of Attachment C for detailed bag leak detection system monitoring requirements.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19][326 IAC 20-13.1-9]

D.1.13 Record Keeping Requirements

(a) In order to document the compliance status with Condition D.1.1(a), the Permittee shall maintain monthly records of slag and lead bearing materials charged in the blast furnace cupola (Unit 5).

(b) In order to document the compliance status with Condition D.1.8, the Permittee shall maintain a daily record of visible emission notations of the North and South sodium carbonate packed tower scrubber stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).

(c) In order to document the compliance status with Condition D.1.9, the Permittee shall maintain a daily record of the pressure drop across the North and South sodium carbonate packed tower scrubber controlling the reverberatory furnace and blast furnace cupola. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).

(d) In order to document the compliance status with Condition D.1.11, the Permittee shall maintain records of SO_2 parametric emission monitoring during malfunction or downtime of continuous emissions monitoring system (CEMS).

(e) Pursuant to Condition F.1.1(a)(8) and in order to document the compliance status with Condition D.1.12, the owner or operator of a secondary lead smelter shall comply with the following:

(1) Records for bag leak detection systems shall be maintained on site for a period of three (3) years and be available for an additional two (2) years and shall include the following information:

(A) Records of bag leak detection system output.

(B) Identification of the date and time of all bag leak detection system alarms.

(C) The time that procedures to determine the cause of the alarm were initiated.

(D) The cause of the alarm.

(E) An explanation of the corrective actions taken.

(F) The date and time the cause of the alarm was corrected.

(G) Records of total operating time of an affected source during smelting operations for each six (6) month period.

(f) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the record keeping required by this condition.

D.1.14 Reporting Requirements

(a) A quarterly summary of the information to document the compliance status with Conditions D.1.1(a) and (c) shall be submitted no later than thirty (30) calendar days after the end the quarter being reported. Section C - General Reporting Requirements contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official”, as defined by 326 IAC 2-7-1(35).

(b) The Permittee shall submit a report to document the compliance status with Condition D.1.12 not later than thirty (30) days after the end of each preceding six (6) month period ending June 30 and December 31 of each year that includes the following:

(1) A description of the actions taken following each bag leak detection system alarm pursuant to Condition F.1.1(a)(8).

(2) Calculations of the percentage of total operating time, or the total operating time in hours and minutes the alarm on the bag leak detection system was activated during the reporting period.

Section C - General Reporting Requirements contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official”, as defined by 326 IAC 2-7-1(35).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(e) Two (2) lead pig casting machines, constructed in 1989 and approved in 2014 for modification, identified collectively as Unit 7, each rated at 120,000 tons of lead per year controlled by refinery baghouse No. 1 and refinery baghouse No. 2, with each baghouse exhausting to a separate stack.

Note: The 2014 modification only consists of the approval to add refinery baghouse No. 2.

(f) Eleven (11) natural gas-fired pot furnaces, approved in 2014 for modification, identified as Units 6K1, 6K2 and Units 6K4 through 6K12, all controlled by refinery baghouse No. 1 and refinery baghouse No. 2, with each baghouse exhausting to a separate stack, and including:

(1) Two (2) rated at 120 tons holding capacity and 3.4 million British thermal units per hour (MMBtu/hr), constructed in 1989, identified as Units 6K1 and 6K2,

(2) Three (3) rated at 100 tons holding capacity and 3.0 MMBtu/hr, constructed in 1989, identified as Units 6K9, 6K10, and 6K12,

(3) One (1) rated at 120 tons holding capacity and 3.0 MMBtu/hr, constructed in 1989, identified as Unit 6K11,

(4) One (1) rated at 100 tons holding capacity and 3.0 MMBtu/hr, constructed in 1973, identified as Unit 6K6,

(5) Two (2) rated at 100 tons holding capacity and 3.4 MMBtu/hr, constructed in 1973, identified as Units 6K7 and 6K8,

(6) One (1) rated at 115 tons holding capacity and 3.0 MMBtu/hr, constructed in 1973, identified as Unit 6K5,

(7) One (1) rated at 100 tons holding capacity and 3.0 MMBtu/hr, constructed in 1973 and modified in October 2009, identified as Unit 6K4.

Note: The 2014 modification only consists of the approval to add refinery baghouse No. 2.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 PSD and Emission Offset Minor Limits [326 IAC 2-2] [326 IAC 2-3]

In order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable, the Permittee shall comply with the following:

(a) The PM, PM10, PM2.5 and lead emissions are limited as shown in the table as follows:

Emission Units	Control Equipment	PM Limit (lb/hr)	PM10 Limit (lb/hr)	PM2.5 Limit (lb/hr)	Lead Limit (lb/hr)
Pig casting and Pot furnaces (6K1-2) (6K4-12)	Refinery Baghouse No.1 and Refinery Baghouse No. 2*	4.75	5.25	5.25	0.3

*The Permittee shall comply with the limits above only using refinery baghouse No. 1 until the Permittee completes construction of refinery baghouse No. 2. Upon initial startup of refinery baghouse No. 2, the Permittee shall comply with the limits above using refinery baghouses No. 1 and No. 2.

Compliance with these limits in combination with Conditions D.1.1 and D.3.1 and the potential to emit PM, PM10, and PM2.5 from all other emission units at this source, shall limit the source wide total potential to emit PM, PM10, and PM2.5 to less than one hundred (100) tons per year, each, and will render the requirements of 326 IAC 2-2 (PSD) not applicable.

Compliance with these limits in combination with Conditions D.1.1 and D.3.1 and the potential to emit lead from all other emission units at this source, shall limit the source-wide total potential to emit of lead to less than 5 tons per 12 consecutive month period, and shall render the requirements of 326 IAC 2-3 (Emission Offset) not applicable.

D.2.2 Particulate Emissions [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitation for Manufacturing Processes), the Particulate emissions from the following units shall be limited as follows when operating at the listed process weight rate:

Unit	Process Weight Rate (tons/hr)	Emission Limit (lb/hr)
Pig casting	27.4	37.7
Pot Furnaces	13.7	23.7

These limitations were calculated using the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

D.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these units and any control devices. Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.2.4 Particulate Matter (PM) and Lead (Pb) [326 IAC 2-7-6(6)]

(a) In order to ensure compliance with Conditions D.2.1 and D.2.2:

(1) The refinery baghouse (No. 1) shall be in operation at all times that any of the two (2) lead pig casting machines or the eleven (11) pot furnaces are in operation.

(2) Once refinery baghouse No. 2 is installed and operating, both refinery baghouses No. 1 and No. 2 shall be in operation at all times that any of the two (2) lead pig casting machines or the eleven (11) pot furnaces are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) Lead Testing

(1) Refinery Baghouse No. 1 – prior to installation and initial startup of Refinery Baghouse No. 2:
In order to demonstrate compliance with the lead limits in Condition D.2.1, the Permittee shall conduct lead testing from the refinery baghouse No. 1, utilizing methods as approved by the Commissioner in accordance with the following schedule:

(i) every twelve (12) calendar months; or

(ii) If an annual compliance test demonstrates that a process vent emitted lead compounds at one-tenth (0.1) milligram of lead per dry standard cubic meter or less during the time of the annual compliance test, the owner or operator of a secondary lead smelter may submit a written request to the Administrator applying for an extension of up to twenty-four (24) calendar months from the previous compliance test to conduct the next compliance test for lead compounds.

(2) Refinery Baghouse No. 2 – upon initial start up:
In order to demonstrate compliance with Condition D.2.1, the Permittee shall perform lead testing on the refinery baghouses No.1 and No. 2 not later than 180 days after initial startup of refinery baghouse No. 2 utilizing methods as approved by the Commissioner.

(3) Refinery Baghouse No. 1 and Refinery Baghouse No. 2 – thereafter:
In order to demonstrate compliance with lead limits in Condition D.2.1, the Permittee shall conduct lead testing from the refinery baghouses No. 1 and No. 2, utilizing methods as approved by the Commissioner in accordance with the following schedule:

(i) every twelve (12) calendar months; or

(ii) If an annual compliance test demonstrates that a process vent emitted lead compounds at one-tenth (0.1) milligram of lead per dry standard meter or less during the time of the annual compliance test, the owner or operator of a secondary lead smelter may submit a written request to the Administrator applying for an extension of up to twenty-four (24) calendar months from the previous compliance test to conduct the next compliance test for lead compounds.

(b) PM, PM10, and PM2.5 Testing

(1) Refinery Baghouse No. 1 – prior to installation and initial startup of Refinery Baghouse No. 2:
In order to demonstrate compliance with Condition D.2.1 and Condition D.2.2, the Permittee shall perform PM, PM10, and PM2.5 testing on the refinery baghouse No. 1 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. PM10 and PM2.5 include filterable and condensable PM.

(2) Refinery Baghouse No. 2 – upon initial start up:
In order to demonstrate compliance with Condition D.2.1 and Condition D.2.2, the Permittee shall perform PM, PM10, and PM2.5 testing on the refinery baghouses No. 1 and No. 2 not later than 180 days after initial startup of refinery baghouse No. 2 utilizing methods as approved by the Commissioner.

(3) Refinery Baghouse No. 1 and Refinery baghouse No. 2 – thereafter:
In order to demonstrate compliance with Condition D.2.1 and Condition D.2.2, the Permittee shall perform PM, PM10, and PM2.5 testing on the refinery baghouses No. 1 and No. 2 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. PM10 and PM2.5 include filterable and condensable PM.

(c) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the testing required by this condition.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.6 Baghouse Failure Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

For a single compartment fabric filter controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.2.7 Bag Leak Detection System Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

Pursuant to 40 CFR 64, the Permittee shall install and continuously operate a bag leak detection system for all baghouses controlling process vents and process fugitive emissions sources. See Condition F.1.1(a)(8) of this permit or 326 IAC 20-13.1-9 of Attachment C for detailed bag leak detection system monitoring requirements.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19][326 IAC 20-13.1-9]

D.2.8 Record Keeping Requirements

(a) Pursuant to Condition F.1.1(a)(8) and in order to document the compliance status with Condition D.2.7, the owner or operator of a secondary lead smelter shall comply with the following:

(1) Records for bag leak detection systems shall be maintained on site for a period of three (3) years and be available for an additional two (2) years and shall include the following information:

(A) Records of bag leak detection system output.

(B) Identification of the date and time of all bag leak detection system alarms.

(C) The time that procedures to determine the cause of the alarm were initiated.

(D) The cause of the alarm.

(E) An explanation of the corrective actions taken.

(F) The date and time the cause of the alarm was corrected.

(G) Records of total operating time of an affected source during smelting operations for each six (6) month period.

(b) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the record keeping required by this condition.

D.2.9 Reporting Requirements

The Permittee shall submit a report to document the compliance status with Condition D.2.7 not later than thirty (30) days after the end of each preceding six (6) month period ending June 30 and December 31 of each year that includes the following:

(1) A description of the actions taken following each bag leak detection system alarm pursuant to Condition F.1.1(a)(8).

(2) Calculations of the percentage of total operating time, or the total operating time in hours and minutes the alarm on the bag leak detection system was activated during the reporting period.

Section C - General Reporting Requirements contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meet the requirements of 326 IAC 2-7-6(1) by a “responsible official”, as defined by 326 IAC 2-7-1(35).

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description:

(g) One (1) lead-battery crusher/breaker, identified as Unit 1, constructed in 1989, which is rated at 126,000 tons of scrap metal per year, with particulate matter (PM) emissions controlled by a venturi scrubber .

(h) One (1) soda ash/caustic soda neutralizing wash to neutralize sulfuric acid in the scrap metal before it is smelted, constructed in 1989,

(1) with two (2) soda ash silos, identified as Units 2a and 2b, both constructed in 1989, each with a capacity of 210,000 lbs, and

(2) one (1) soda ash silo, identified as Silo 3, constructed in 1992 and modified in October 2009, with a capacity of 100,000 lbs.

Particulate matter (PM) emissions on all three (3) soda ash silos are controlled by fabric filters.

(i) Material handling, identified as Unit 9, approved in 2014 for modification, controlled by bin room baghouse No. 1 and bin room baghouse No. 2, with each baghouse exhausting to a separate stack.

(1) One (1) slag crusher, constructed in 1994, with emissions controlled by a baghouse, identified as slag crusher baghouse venting to bin room baghouses No. 1 and No. 2.

Note: The 2014 modification only consists of the approval to add refinery baghouse No. 2.

(j) One (1) Rolled Lead Strip (RLS) Line, constructed in 1997 and permitted in 2016, with a maximum capacity of 3.5 tons per hour, exhausting to RLS baghouse and HEPA Filters, including the following:

(1) One (1) natural gas-fired seven (7) ton melting pot, identified as MP-1, constructed in 1997, with a capacity of 2.2 million British thermal units per hour; and

(2) One (1) natural gas-fired thirty-five (35) ton melting pot, identified as MP-2, constructed in 1997, with a capacity of 1.2 million British thermal units per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 PSD and Emission Offset Minor Limits [326 IAC 2-2] [326 IAC 2-3]

In order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable and pursuant to Administrative Amendment No. 035-21590-00028, issued on October 20, 2005, revised by Significant Permit Modification No. 035-33188-00028 and Significant Source Modification No. 035-36872-00028, the PM, PM10, PM2.5 and Lead emissions from the venturi scrubber, fabric filters and bin room baghouses shall be limited as shown in the table below:

Emission Units	Control Equipment	PM Limit (lb/hr)	PM10 Limit (lb/hr)	PM2.5 Limit (lb/hr)	Lead Limit (lb/hr)
Battery crusher/breaker (Unit 1)	Venturi Scrubber	2.25	2.25	2.25	0.065
Soda ash wash and 2 silos (Unit 2)	Fabric filters	0.23	0.23	0.23	-
Material Handling/Slag Crusher	Bin Room Baghouses No. 1 and No. 2	2.11	2.11	2.11	0.17

Compliance with these limits in combination with Conditions D.1.1 and D.2.1 and the potential to emit PM, PM10, and PM2.5 from all other emission units at this source, shall limit the source wide total potential to emit PM, PM10, and PM2.5 to less than one hundred (100) tons per year, each, and will render the requirements of 326 IAC 2-2 (PSD) not applicable.

Compliance with these limits in combination with Conditions D.1.1 and D.2.1 and the potential to emit lead from all other emission units at this source, shall limit the source-wide total potential to emit of lead to less than 5 tons per 12 consecutive month period, and shall render the requirements of 326 IAC 2-3 (Emission Offset) not applicable.

D.3.2 Particulate Emissions [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitation for Manufacturing Processes), the Particulate emissions from the following units shall be limited as follows when operating at the listed process weight rate:

Unit	Process Weight Rate (tons/hr)	Emission Limit (lb/hr)
Battery crusher/breaker	14.4	24.5
Silo 2a	0.575	2.83
Silo 2b	0.575	2.83
Silo 3	1.04	4.21
Material Handling	14.4	24.5

These limitations were calculated using the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

D.3.3 Federal Consent Decree Requirements - Rolled Lead Strip ("RLS Line")

Pursuant to Significant Source Modification No. 035-36872-00028 and the Consent Decree lodged with the United States District Court for the Southern District of Indiana on March 16, 2015 in *United States and the State of Indiana v. Exide Technologies*, No. 15-cv-433 (S.D. Ind.), the Permittee shall comply with the following:

(a) Exide shall use the RLS baghouse and HEPA filters at all times that the RLS Line is operating;

(b) Exide shall perform periodic testing annually for lead and every five years for particulate matter to demonstrate compliance with the permitted emission limits for those pollutants and to establish baghouse operating parameters;

(c) Exide shall continuously monitor and record the pressure drop across the RLS baghouse and HEPA filters whenever the RLS Line is being operated (or if the RLS Line is not being operated, then Exide shall include the information in a recorded notation);

(d) Exide shall report any pressure drop deviations to IDEM and Exide shall take immediate corrective action addressing any pressure drop deviation;

(e) Exide shall maintain records of monitoring, maintenance, and repair of the RLS Line air pollution control equipment.

D.3.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these units and any control devices. Section B-Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.3.5 Particulate Matter (PM) and Lead (Pb) [326 IAC 2-7-6(6)]

(a) In order to assure compliance with Conditions D.3.1 and D.3.2, the venturi scrubber shall be in operation at all times that the lead-battery crusher/breaker is in operation.

(b) In order to assure compliance with Conditions D.3.1 and D.3.2, the bin room baghouses (No. 1 and No. 2) shall be in operation at all times that slag crushing is in operation.

(c) In order to assure compliance with Condition D.3.3, the RLS baghouse and HEPA filters shall be in operation at all times that the RLS Line is in operation.

(d) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.3.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) Lead Testing

(1) Venturi Scrubber:
In order to demonstrate compliance with the lead limit in Condition D.3.1, the Permittee shall conduct lead testing from the venturi scrubber utilizing methods as approved by the Commissioner within in accordance with the following schedule:

(i) every twelve (12) calendar months; or

(ii) If an annual compliance test demonstrates that a process vent emitted lead compounds at one-tenth (0.1) milligram of lead per dry standard cubic meter or less during the time of the annual compliance test, the owner or operator of a secondary lead smelter may submit a written request to the Administrator applying for an extension of up to twenty-four (24) calendar months from the previous compliance test to conduct the next compliance test for lead compounds.

(2) Bin Room Baghouse No. 1 - prior to installation and initial startup of Bin Room Baghouse No. 2:
In order to demonstrate compliance with Condition D.3.1, the Permittee shall perform lead testing on the bin room baghouse No. 1 utilizing methods as approved by the Commissioner. This test shall be repeated in accordance with the following schedule:

(i) every twelve (12) calendar months; or

(ii) If an annual compliance test demonstrates that a process vent emitted lead compounds at one-tenth (0.1) milligram of lead per dry standard cubic meter or less during the time of the annual compliance test, the owner or operator of a secondary lead smelter may submit a written request to the Administrator applying for an extension of up to twenty-four (24) calendar months from the previous compliance test to conduct the next compliance test for lead compounds.

(3) Bin Room Baghouse No. 2 – upon initial start up:
In order to demonstrate compliance with Condition D.3.1, the Permittee shall perform lead testing on the bin room baghouses No.1 and No. 2 not later than 180 days after initial startup of bin room baghouse No. 2 utilizing methods as approved by the Commissioner.

(4) Bin Room Baghouse No. 1 and Bin Room Baghouse No. 2 – thereafter:
In order to demonstrate compliance with the lead limits in Condition D.3.1, the Permittee shall conduct lead testing from the bin room baghouses No. 1 and No. 2, utilizing methods as approved by the Commissioner in accordance with the following schedule:

(i) every twelve (12) calendar months; or

(ii) If an annual compliance test demonstrates that a process vent emitted lead compounds at one-tenth (0.1) milligram of lead per dry standard meter or less during the time of the annual compliance test, the owner or operator of a secondary lead smelter may submit a written request to the Administrator applying for an extension of up to twenty-four (24) calendar months from the previous compliance test to conduct the next compliance test for lead compounds.

(b) PM, PM10, and PM2.5 Testing

(1) Venturi Scrubber:
In order to demonstrate compliance with Condition D.3.1 and Condition D.3.2, the Permittee shall perform PM, PM10, and PM2.5 testing on the venturi scrubber utilizing methods as approved by the Commissioner at least once every

five (5) years from the date of the most recent valid compliance demonstration. PM10 and PM2.5 include filterable and condensable PM.

(2) Bin Room Baghouses No. 1 and Bin Room Baghouse No. 2 - upon initial start up of Bin Room Baghouse No. 2 and thereafter:
In order to demonstrate compliance with Condition D.3.1 and Condition D.3.2, the Permittee shall perform PM, PM10, and PM2.5 testing on the bin room baghouses No. 1 and No. 2 not later than 180 days after initial startup of bin room baghouse No. 2 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. PM10 and PM2.5 include filterable and condensable PM.

(c) Pursuant to the Consent Decree lodged with the United States District Court for the Southern District of Indiana on March 16, 2015 in *United States and the State of Indiana v. Exide Technologies*, No. 15-cv-433 (S.D. Ind.) and in order to demonstrate compliance with Condition D.3.3(b), the Permittee shall conduct PM and lead testing for the RLS Line utilizing methods as approved by the Commissioner in accordance with the following schedule:

(1) at least once every twelve (12) calendar months for lead; and

(2) at least once every five (5) years from the date of the most recent valid compliance demonstration for PM.

(d) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the testing required by this condition.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.7 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

(a) Visible emission notations of the venturi scrubber stack exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.3.8 Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

The Permittee shall monitor and record the total static pressure drop across the venturi scrubber used in conjunction with the lead-battery crusher/breaker at least once daily when the processes are in operation. When for any one reading, the pressure drop is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 10.0 and 25.0 inches of water, unless a different upper-bound of lower-bound value for this range is determined during the latest stack test. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and shall be calibrated or replace at least once every six (6) months.

D.3.9 Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall monitor and record the total static pressure drop across the RLS baghouse and HEPA filters used in conjunction with the RLS Line at least once daily when the processes are in operation. When for any one reading, the pressure drop is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 2.0 to 8.0 inches of water, unless a different upper-bound of lower-bound value for this range is determined during the latest stack test. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and shall be calibrated or replaced at least once every six (6) months.

D.3.10 Scrubber Failure Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

For the venturi scrubber, controlling emissions from the battery crusher/breaker, operated continuously, in the event that a scrubber system failure is observed, the failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.3.11 Bag Leak Detection System Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

Pursuant to 40 CFR 64, the Permittee shall install and continuously operate a bag leak detection system for all baghouses (except RLS baghouse) controlling process vents and process fugitive emissions sources. See Condition F.1.1(a)(8) of this permit or 326 IAC 20-13.1-9 of Attachment C for detailed bag leak detection system monitoring requirements.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19][326 IAC 20-13.1-9]

D.3.12 Record Keeping Requirements

(a) In order to document the compliance status with Condition D.3.7, the Permittee shall maintain a daily record of visible emission notations of the venturi scrubber stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).

(b) In order to document the compliance status with Condition D.3.8, the Permittee shall maintain a daily record of the pressure drop across the venturi scrubber controlling the battery crusher/breaker. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).

(c) Pursuant to Condition F.1.1(a)(8) and in order to document the compliance status with Condition D.3.12, the owner or operator of a secondary lead smelter shall comply with the following:

(1) Records for bag leak detection systems shall be maintained on site for a period of three (3) years and be available for an additional two (2) years and shall include the following information:

(A) Records of bag leak detection system output.

(B) Identification of the date and time of all bag leak detection system alarms.

(C) The time that procedures to determine the cause of the alarm were initiated.

(D) The cause of the alarm.

(E) An explanation of the corrective actions taken.

(F) The date and time the cause of the alarm was corrected.

(G) Records of total operating time of an affected source during smelting operations for each six (6) month period.

(d) In order to document the compliance status with Conditions D.3.3 and D.3.9, the Permittee shall maintain a daily record of the pressure drop across the RLS baghouse and HEPA filters controlling the RLS Line. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).

(e) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the record keeping required by this condition.

D.3.13 Reporting Requirements

The Permittee shall submit a report to document the compliance status with Condition D.3.11 not later than thirty (30) days after the end of each preceding six (6) month period ending June 30 and December 31 of each year that includes the following:

(1) A description of the actions taken following each bag leak detection system alarm pursuant to Condition F.1.1(a)(8).

(2) Calculations of the percentage of total operating time, or the total operating time in hours and minutes the alarm on the bag leak detection system was activated during the reporting period.

Section C - General Reporting Requirements contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official”, as defined by 326 IAC 2-7-1(35).

SECTION E.1 NSPS

Emissions Unit Description:

The affected sources are the existing reverberatory furnace, blast furnace (cupola), and twelve (12) pot furnaces.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart L.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:
Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.1.2 Secondary Lead Smelters NSPS [326 IAC 12] [40 CFR 60, Subpart L]

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart L (included as Attachment A of the operating permit), which are incorporated by reference as 326 IAC 12:

(1) 40 CFR 60.120
(2) 40 CFR 60.121
(3) 40 CFR 60.122
(4) 40 CFR 60.123

SECTION E.2 NESHAP

Emissions Unit Description:

The affected sources are the existing reverberatory furnace, blast furnace (cupola), rotary dryer, twelve (12) pot furnaces, lead pig casting, lead battery crusher/breaker, material handling, roadway surface fugitive emissions and all processes contributing to fugitive emissions and fugitive dust emissions associated with secondary lead smelting.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.1, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 for the emission unit(s) listed above, except as otherwise specified in 40 CFR 63, Subpart X.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.2.2 Lead Smelting NESHAP [40 CFR Part 63, Subpart X]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart X (included as Attachment B of the operating permit):

(1) 40 CFR 63.541
(2) 40 CFR 63.542
(3) 40 CFR 63.543 (a), (c), (f), (g), (h), (i), (j), (k), (l), (m)
(4) 40 CFR 63.544
(5) 40 CFR 63.545
(6) 40 CFR 63.546
(7) 40 CFR 63.547
(8) 40 CFR 63.548
(9) 40 CFR 63.549
(10) 40 CFR 63.550
(11) 40 CFR 63.551
(12) 40 CFR 63.552
(13) Table 1 to Subpart X of Part 63
(14) Table 2 to Subpart X of Part 63
(15) Table 3 to Subpart X of Part 63

SECTION F.1 **326 IAC 20-13.1**

Emissions Unit Description:

(a) One (1) natural gas-fired rotary dryer, identified as Unit 3, constructed in 1989 and modified in 2005, with a maximum capacity of 126,000 tons of lead scrap per year and a maximum heat input capacity of 12.5 million British thermal units per hour (MMBtu/hr), controlled by the rotary dryer baghouse.

(b) One (1) lead reverberatory furnace and, identified as Unit 4, constructed in 1989, with a maximum capacity of 24.3 million British thermal units per hour (MMBtu/hr), rated at 100,000 tons of lead per year, controlled by the process baghouse followed by identical, individual, and parallel, North and South sodium carbonate packed tower scrubbers.

(c) One (1) blast furnace (cupola), identified as Unit 5, constructed in 1973 and modified in 1989, rated at 30,000 tons of metal per year, controlled by the process baghouse followed by identical, individual, and parallel, North and South sodium carbonate packed tower scrubbers.

(d) Emission from the reverberatory charge point hoods and blast furnace (cupola) charge point hoods are controlled by the ventilation baghouse.

(e) Two (2) lead pig casting machines, constructed in 1989 and approved in 2014 for modification, identified collectively as Unit 7, each rated at 120,000 tons of lead per year controlled by refinery baghouse No. 1 and refinery baghouse No. 2, with each baghouse exhausting to a separate stack.

Note: The 2014 modification only consists of the approval to add refinery baghouse No. 2.

(f) Eleven (11) natural gas-fired pot furnaces, approved in 2014 for modification, identified as Units 6K1, 6K2 and Units 6K4 through 6K12, all controlled by refinery baghouse No. 1 and refinery baghouse No. 2, with each baghouse exhausting to a separate stack, and including:

(1) Two (2) rated at 120 tons holding capacity and 3.4 million British thermal units per hour (MMBtu/hr), constructed in 1989, identified as Units 6K1 and 6K2,

(2) Three (3) rated at 100 tons holding capacity and 3.0 MMBtu/hr, constructed in 1989, identified as Units 6K9, 6K10, and 6K12,

(3) One (1) rated at 120 tons holding capacity and 3.0 MMBtu/hr, constructed in 1989, identified as Unit 6K11,

(4) One (1) rated at 100 tons holding capacity and 3.0 MMBtu/hr, constructed in 1973, identified as Unit 6K6,

(5) Two (2) rated at 100 tons holding capacity and 3.4 MMBtu/hr, constructed in 1973, identified as Units 6K7 and 6K8,

(6) One (1) rated at 115 tons holding capacity and 3.0 MMBtu/hr, constructed in 1973, identified as Unit 6K5,

(7) One (1) rated at 100 tons holding capacity and 3.0 MMBtu/hr, constructed in 1973 and modified in October 2009, identified as Unit 6K4.

Note: The 2014 modification only consists of the approval to add refinery baghouse No. 2.

(g) One (1) lead-battery crusher/breaker, identified as Unit 1, constructed in 1989, which is rated at 126,000 tons of scrap metal per year, with particulate matter (PM) emissions controlled by a venturi scrubber followed by a voluntarily installed dust collector.

(i) Material handling, identified as Unit 9, approved in 2014 for modification, controlled by bin room baghouse No. 1 and bin room baghouse No. 2, with each baghouse exhausting to a separate stack.

(1) One (1) slag crusher, constructed in 1994, with emissions controlled by a baghouse, identified as slag crusher baghouse venting to bin room baghouses No. 1 and No. 2.

Note: The 2014 modification only consists of the approval to add refinery baghouse No. 2.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

F.1.1 Hazardous Air Pollutants: Secondary Lead Smelters [326 IAC 20-13.1]

(a) Pursuant to 326 IAC 20-13.1-1(c)(2) and 326 IAC 20-13.1-3(c), the Permittee shall comply with the following requirements by October 1, 2013 (included as Attachment C of this permit):

(1) 326 IAC 20-13.1-1 (Applicability)
(2) 326 IAC 20-13.1-2 (Definitions)
(3) 326 IAC 20-13.1-3(a) (Emission Limitations; lead standards for Exide Technologies, Incorporated)
(4) 326 IAC 20-13.1-5(b) and 5(h) (Emission limitations and operating provisions)
(5) 326 IAC 20-13.1-6 (Total enclosure requirements)
(6) 326 IAC 20-13.1-7 (Total enclosure monitoring requirements)
(7) 326 IAC 20-13.1-8 (Fugitive dust source requirements)
(8) 326 IAC 20-13.1-9 (Bag leak detection system requirements)
(9) 326 IAC 20-13.1-10(a) through 10(d) (Other requirements)
(10) 326 IAC 20-13.1-11(a) through 11(c) and 11(f) (Compliance testing)
(11) 326 IAC 20-13.1-12(a) (Compliance testing methods)
(12) 326 IAC 20-13.1-14(a), 14(b), 14(c)(1) through 14(c)(8), 14(c)(10) through 14(c)(13), 14(c)(15) through 14(c)(17), 14(d), 14(e)(1), 14(e)(4) through 14(e)(7), and 14(e)(9) through 14(e)(12) (Record keeping and reporting requirements)

(b) In addition to the requirements specified in Condition F.1.1(a) and pursuant to 326 IAC 20-13.1-1(c)(3), the Permittee shall comply with the following requirements beginning on January 6, 2014 (included as Attachment C of this permit):

(1) 326 IAC 20-13.1-5(d), 5(g), (5)(i), and (5)(j) (Emission limitations and operating provisions)
(2) 326 IAC 20-13.1-10(e) (Other requirements)
(3) 326 IAC 20-13.1-11(e) (Compliance testing)
(4) 326 IAC 20-13.1-12(b), 12(c), 12(d), 12(e) (Compliance testing methods)
(5) 326 IAC 20-13.1-13(a), 13}(b), and (d) (Notification requirements)
(6) 326 IAC 20-13.1-14(c)(9),14(e)(2),14(e)(8) through 14(e)(7), 14(e)(13), and 14(e)(14) (Record keeping and reporting requirements)
(7) 326 IAC 20-13.1-15 (Affirmative defense to civil penalties for exceedance of emissions limit during malfunction)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: Exide Technologies
Source Address: 2601 West Mt. Pleasant Blvd., Muncie, Indiana 47302
Part 70 Permit No.: T035-31230-00028

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify)

☐ Report (specify)

☐ Notification (specify)

☐ Affidavit (specify)

☐ Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Exide Technologies
Source Address: 2601 West Mt. Pleasant Blvd., Muncie, Indiana 47302
Part 70 Permit No.: T035-31230-00028

This form consists of 2 pages **Page 1 of 2**

□ This is an emergency as defined in 326 IAC 2-7-1(12)

- The Permittee must notify the Office of Air Quality (OAQ), no later than four (**4**) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile no later than two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Usage Report

(Submit Report Quarterly)

Source Name: Exide Technologies
Source Address: 2601 West Mt. Pleasant Blvd., Muncie, Indiana 47302
Part 70 Permit No.: T035-31230-00028
Facility: Blast furnace (cupola)
Parameter: Charging materials
Limit: Slag content - Between 70% and 100%
Lead content - Between 0% and 30%

Month: _____ Year: _____

Day		Day	
1		17	
2		18	
3		19	
4		20	
5		21	
6		22	
7		23	
8		24	
9		25	
10		26	
11		27	
12		28	
13		29	
14		30	
15		31	
16			

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on:

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Exide Technologies
Source Address: 2601 West Mt. Pleasant Blvd., Muncie, Indiana 47302
Part 70 Permit No.: T035-31230-00028
Facility: Reverberatory Furnace (Unit ID#4) and Blast Furnace (Cupola) (Unit ID#5)
Parameter: Sulfur Dioxide (SO_2)
Limit: 99 tons per twelve (12) consecutive month period

QUARTER : YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Exide Technologies
Source Address: 2601 West Mt. Pleasant Blvd., Muncie, Indiana 47302
Part 70 Permit No.: T035-31230-00028

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

□ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

□ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Significant Source and Significant Permit Modification

Source Description and Location

Source Name:	Exide Technologies
Source Location:	2601 West Mt. Pleasant Blvd., Muncie, IN 47302
County:	Delaware
SIC Code:	3341 (Secondary Smelting and Refining of Nonferrous Metals)
Operation Permit No.:	T035-31230-00028
Operation Permit Issuance Date:	August 1, 2012
Significant Source Modification No.:	035-36872-00028
Significant Permit Modification No.:	035-36882-00028
Permit Reviewer:	Madhurima Moulik

Existing Approvals

The source was issued Part 70 Operating Permit (Renewal) No. T035-31230-00028 on August 1, 2012. The source has since received the following approvals:

(a) Significant Permit Modification No. 035-33188-00028**,** issued on February 4, 2014;
(b) Significant Permit Modification No. 035-34525-00028**,** issued on September 9, 2014;
(c) Significant Source Modification No. 035-35751-00028, issued on July 9, 2015; and
(d) Significant Permit Modification No. 035-35766-00028, issued on July 28, 2015.

County Attainment Status

The source is located in Delaware County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.[1]
$PM_{2.5}$	Unclassifiable or attainment effective April 5, 2005, for the annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Nonattainment effective December 31, 2010, for a portion of the city of Muncie, Indiana bounded to the north by West Street/Hines Road, to the east by Cowan Road, to the south by West Fuson Road, and to the west by a line running south from the eastern edge of Victory Temple's driveway to South Hoyt Avenue and then along South Hoyt Avenue. Unclassifiable or attainment effective December 31, 2011, for the remainder of the county.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Delaware County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Delaware County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Lead
The portion of Delaware County in the City of Muncie bounded by West 26th Street/Hines Road to the north, Cowan Road to the east, West Fuson Road to the south, and South Hoyt Avenue to the west has been classified as nonattainment for Lead in 75 FR 71033 dated November 22, 2010. Therefore, Lead emissions were evaluated pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(d) Other Criteria Pollutants
Delaware County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this source is classified as a secondary lead smelting operation, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Greenhouse Gas (GHG) Emissions

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

Source Status - Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

	Source-Wide Emissions Before Modification (ton/year)									
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_X**	**VOC**	**CO**	**Lead**	**Single HAP***	**Combined HAPs**
Total for Source	99.14	99.88	98.63	99.14	42.03	2.12	32.36	4.70	4.70	5.43
PSD Major Source Thresholds	100	100	100	100	100	100	100	NA	--	--
Emission Offset Major Source Thresholds	---	---	---	---	---	---	---	5	--	--
*Single highest source-wide HAP.										

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHGs emissions to determine operating permit applicability or PSD applicability to a source or modification.

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant is emitted at a rate of one hundred (100) tons per year or more and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is not a major stationary source under Emission Offset (326 IAC 2-3) because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or more.

(c) This existing source is not a major source of HAPs, as defined in 40 CFR 63.2, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

(d) These emissions are based upon the Technical Support Document for the SSM No. 035-35751-00028 and SPM No. 035-35766-00028.

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Exide Technologies on April 23, 2015, relating to the incorporation of compliance requirements for the existing Rolled Lead Strip (RLS) operation at the source, as required as part of Consent Decree (Civil Action No. 15-433, United States of America and the State of Indiana v. Exide Technologies).

EPA recently approved Indiana rule to incorporate terms from Federal Concent Decrees and Federal District Court Orders into construction permits. These changes to 326 IAC 2-7-10.5(b) became effective on February 18, 2014.

Enforcement Issues

Pursuant to a Consent Decree filed on March 16, 2015 (Civil Action No. 15-433, United States of American and the State of Indiana v. Exide Technologies), Exide shall use the Rolled Lead Strip (RLS) Line Baghouse and HEPA Filters at all times that the RLS Line is operating. This permitting action is being processed in order to permit the RLS Line as required by the Consent Decree.

The Consent Decree has additional requirements that will be fulfilled in subsequent permitting action(s).

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

Permit Level Determination – Part 70 Modification to an Existing Source

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency."

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit. If the control equipment has been determined to be integral, the table reflects the PTE after consideration of the integral control device.

Increase in PTE Before Controls of the Modification	
Pollutant	**Potential To Emit** (ton/yr)
PM	0.61
PM_{10}	0.61
$PM_{2.5}$	0.61
SO_2	--
VOC	--
CO	--
NO_X	--
Single HAP	0.15 (lead)
Total HAPs	<25

Appendix A of this TSD reflects the unrestricted potential emissions of the modification.

This source modification is subject to 326 IAC 2-7-10.5(b)(2)(C) because it is incorporating the requirements set forth in a federal consent decree that is entered into for the purpose of resolving alleged violations of Section 112(g) of the Clean Air Act. Additionally, the modification will be incorporated into the Part 70 Operating Permit through a Significant Permit Modification issued pursuant to 326 IAC 2-7-12(d)(1) because the modification involves significant changes to existing monitoring Part 70 permit terms or conditions.

(Note: The RLS Line was permitted as strip casting machine which was identified as a part of material handling, identified in the current permit as Unit No. 9. However, the RLS Line is located in a separate building and exhausts to RLS Baghouse.)

Permit Level Determination – PSD and Emission Offset

The table below summarizes the potential to emit of the modification, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential to Emit of Modification (tons per year)**							
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**NO_X**	**VOC**	**CO**	**Pb**
RLS Line	0.61	0.61	0.61	--	--	--	--	0.15
Total for Modification	0.61	0.61	0.61	--	--	--	--	0.15
PSD Major Source Thresholds	100	100	100	100	100	100	100	NA
Emission Offset Major Source Thresholds	--	--	--	--	--	--	--	5

*$PM_{2.5}$ listed is direct $PM_{2.5}$.
** Based on stack test results

(a) This modification to an existing minor PSD stationary source is not major because the emissions increase of each PSD regulated pollutant are less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

(b) This modification to an existing minor Emission Offset stationary source is not major because the emissions increase of Lead (Pb) is less than the Emission Offset major source threshold. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

The table below summarizes the potential to emit of the entire source after issuance of this modification, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Modification (tons/year)								
	PM	PM10[1]	PM2.5[1]	SO_2	NOx	VOC	CO	Total HAPs	Pb
Battery Crusher/Breaker	9.86[2]	9.86[2]	9.86[2]	0	0	0	0	0.28	0.28[3]
Soda Ash Pneumatic Conveying thru 3 Silos	1.01[2]	1.01[2]	1.01[2]	0	0	0	0	0	0
Rotary Dryer (Including Combustion)	19.71[2]	19.71[2]	19.71[2]	0.03	5.37	0.30	4.51	0.23	0.13[3]
Reverberatory Furnace	20.15[2]	21.90[2]	21.90[2]	99.00[2]	15.00	0.57	8.77	1.69	1.49[3]
Blast Furnace (Cupola)					1.5	0	0		
Afterburner					2.56	0.28	4.29	0.10	
Reverberatory and Blast Furnaces (Cupola) Charging Points combined	12.05[2]	13.14[2]	13.14[2]	0	0	0	0	0.74	0.74[3]
Pot Furnaces (Stack 9) and Pig Castings Machines combined	20.81[2]	23.00[2]	23.00[2]	0.10	16.15	0.89	13.56	1.62	1.31[3]
Material Handling/Slag Crusher	9.24[2]	9.24[2]	9.24[2]	0	0	0	0	0.74	0.74[3]
Melting Pot MP-1	0.02	0.07	0.07	0.01	0.94	0.05	0.79	0.02	0.00
Melting Pot MP-2	0.01	0.04	0.04	0.00	0.52	0.03	0.43	0.01	0.00
Paved Roads	0.77	0.15	0.04	0	0	0	0	0	0
Unpaved Roads	4.95	1.26	0.13	0	0	0	0	0	0
RLS Line	0.61	0.61	0.61	0	0	0	0	0	0.153
Total PTE of Entire Source	**99.17**	**99.99**	**98.74**	**99.14**	**42.03**	**2.12**	**32.36**	**5.43**	**4.86**
Title V Major Source Thresholds	N/A	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	100	100	100	100	100	100	100	N/A	N/A
Emission Offset Major Source Thresholds	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5

N/A = not applicable
[1] Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant".
[2] Emissions are limited in order to limit the source wide PTE of PM, PM10, PM2.5, and SO2 to less than PSD major source thresholds.
[3] Emissions are limited in order to limit the source wide PTE of lead to less than the Emission Offset major source threshold.

(a) This existing minor PSD stationary source will continue to be minor under 326 IAC 2-2 because the emissions of each PSD regulated pollutant will continue to be less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

(b) This existing minor Emission Offset stationary source will continue to be minor under 326 IAC 2-3 because the emissions of the nonattainment pollutant Pb will continue to be less than the Emission Offset major source thresholds. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

Federal Rule Applicability Determination

Due to the modification at this source, federal rule applicability has been reviewed as follows:

New Source Performance Standards (NSPS):

(a) The RLS Line and melting pots MP-1 and MP-2 are not subject to the New Source Performance Standards (NSPS) for Secondary Lead Smelters, 40 CFR 60, Subpart L (326 IAC 12), because

these units are not pot furnaces of more than 550 lb charging capacity, or blast (cupola) or reverbatory furnaces, which are the units listed under 40 CFR 60.120(a).

(b) There are no new New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

National Emission Standards for Hazardous Air Pollutants (NESHAP):

(a) The requirements of the National Emission Standards for Hazardous Air Pollutants from Secondary Lead Smelting, 40 CFR 63, Subpart X (326 IAC 20-13.1), are not included in the permit for the Rolled Lead Strip (RLS) Line.

(b) There are no National Emission Standards for Hazardous Air Pollutants under 40 CFR 63, 326 IAC 14 and 326 IAC 20 included for this proposed modification .

CAM:

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

(b) Pursuant to 40 CFR 64.2(b)(1)(i), emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act are exempt from the requirements of CAM. Therefore, an evaluation was not conducted for any emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act.

(c) Pursuant to 40 CFR 64.2(b)(1)(iii), Acid Rain requirements pursuant to Sections 404, 405, 406, 407(a), 407(b), or 410 of the Clean Air Act are exempt emission limitations or standards. Therefore, CAM was not evaluated for emission limitations or standards for SO_2 and NO_X under the Acid Rain Program.

(d) Pursuant to 40 CFR 64.3(d), if a continuous emission monitoring system (CEMS) is required pursuant to other federal or state authority, the owner or operator shall use the CEMS to satisfy the requirements of CAM according to the criteria contained in 40 CFR 64.3(d).

The existing RLS line does not have PTE equal to or greater than the Part 70 major source threshold for PM10, PM2.5, or Pb.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to the RLS Line.

State Rule Applicability Determination

326 IAC 2-2 and 2-3 (PSD and Emission Offset)
PSD and Emission Offset applicability is discussed under the Permit Level Determination – PSD and Emission Offset section.

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the PM, PM10, PM2.5 bin room baghouses shall be limited as shown in the table below:

Emission Units	Control Equipment	PM Limit (lb/hr)	PM10 Limit (lb/hr)	PM2.5 Limit (lb/hr)
Material Handling/Slag Crusher	Bin Room Baghouses No. 1 and No. 2	2.11	2.11	2.11

Compliance with these limits in combination with the additional PM, PM10, and PM2.5 limits in the permit and the potential to emit PM, PM10, and PM2.5 from all other emission units at this source, shall limit the source wide total potential to emit PM, PM10, and PM2.5 to less than one hundred (100) tons per year, each, and will render the requirements of 326 IAC 2-2 (PSD) not applicable.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of the RLS Line will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-7-6(5) (Annual Compliance Certification)
The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certification that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The RLS Line has PM emissions below 0.551 lb/hr. Pursuant to 326 IAC 6-3-1(b)(14), it is not subject to the requirements of 326 IAC 6-3.

Federal Consent Decree Requirements

Pursuant to the Consent Decree lodged with the United States District Court for the Southern District of Indiana on March 16, 2015 in *United States and the State of Indiana v. Exide Technologies*, No. 15-cv-433 (S.D. Ind.), the Permittee was required to comply with the following:

(a) By no later than 90 days after the effective date, Exide was required to conduct a performance test for lead and PM at the RLS Baghouse exhaust, using EPA methods 5, 201, 202, and 12, to quantify emissions and establish an acceptable pressure drop operating range for the RLS baghouse and HEPA filters. Exide was required to submit the complete testing report to EPA by no later than the 60 days after the testing is complete, and to notify EPA of its intent to test at least 15 days after performing the test(s).

(b) Exide was required to comply with the RLS Line Interim Requirements specified no later than 60 days after the effective date and continuing until the RLS Line has been properly permitted by IDEM in accordance with Paragraph 28 of the Consent Decree.

(c) By no later than 120 days after the effective date, Exide was required to submit a permit application to IDEM to establish RLS Line permit requirements. The application was required to specify that Exide shall perform periodic testing - annually for lead and every

five years for particulate matter and to establish baghouse operating parameters. Exide was required to incorporate the following RLS Line permit requirements in its application:

(1) Exide shall use the RLS Baghouse and HEPA filters at all times that the RLS Line is operating;
(2) Exide shall continuously monitor and record the pressure drop across the RLS baghouse and HEPA filters whenever the RLS Line is being operated (or if the RLS Line is not being operated, then Exide shall include that information in a recorded notation);
(3) Exide shall report any pressure drop deviations to IDEM and Exide shall take immediate corrective action addressing any pressure drop deviation;
(4) Exide shall maintain records of monitoring, maintenance, and repair of the RLS Line air pollution control equipment.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance determination and monitoring requirements for the RLS Line are included in the Federal Consent Decree Requirements. No additional compliance determination or compliance monitoring requirements are included for the RLS Line.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit Renewal No. T035-31230-00028. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

(a) Sections A.2 and D.3 have been revised to include the Rolled Lead Strip Line.
(b) Condition D.3.1 has been modified to revise the PM, PM-10 and PM2.5 limitation for the material handling/slag crusher to 2.11 lb/hr, in order to render 326 IAC 2-2 (Prevention of Signficant Deterioration (PSD)) not applicable to the source.
(c) Condition D.3.3 - Federal Consent Decree Requirements - Rolled Lead Strip ("RLS Line") has been added to include the Federal Consent Decree requirements.
(d) Additional D.3 Conditions have been revised to address the compliance requirements associated with the Consent Decree.
(e) IDEM added the rule citation 326 IAC 2-7-5(1) to the Compliance Determination Requirements subsection title in Sections D.1 to D.3 to clarify the authority of these conditions.
(f) IDEM added the rule citation 326 IAC 2-7-5(1) to the New Source Performance Standards (NSPS) Requirements subsection title in Section E.1 to clarify the authority of these conditions.

(g) IDEM added the rule citation 326 IAC 2-7-5(1) to the National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements subsection title in Section E.2 to clarify the authority of these conditions.

(h) IDEM revised Sections E.1 and E.2 for clarity.

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(14)]

This stationary source consists of the following emission units and pollution control devices:

(a) ...

(i) Material handling, identified as Unit 9, approved in 2014 for modification, controlled by bin room baghouse No. 1 and bin room baghouse No. 2, with each baghouse exhausting to a separate stack.

(1) One (1) slag crusher, constructed in 1994, with emissions controlled by a baghouse, identified as slag crusher baghouse venting to bin room baghouses No.1 and No. 2.

~~(2) One (1) strip casting machine, constructed in 1997.~~

~~(3) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour:~~

~~(A) One (1) natural gas-fired seven (7) ton melting pot, identified as MP-1, constructed in 1997, with a capacity of 2.2 million British thermal units per hour; and~~

~~(B) One (1) natural gas-fired thirty-five (35) ton melting pot, identified as MP-2, constructed in 1997, with a capacity of 1.2 million British thermal units per hour.~~

Note: The 2014 modification only consists of the approval to add refinery baghouse No. 2.

(j) One (1) Rolled Lead Strip (RLS) Line, constructed in 1997 and permitted in 2016, with a maximum capacity of 3.5 tons per hour, exhausting to RLS baghouse and HEPA Filters, including the following:

~~Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour:~~

(1) One (1) natural gas-fired seven (7) ton melting pot, identified as MP-1, constructed in 1997, with a capacity of 2.2 million British thermal units per hour; and

(2) One (1) natural gas-fired thirty-five (35) ton melting pot, identified as MP-2, constructed in 1997, with a capacity of 1.2 million British thermal units per hour.

(~~j~~ **k**) Roadway surface fugitive emissions.

SECTION D.1 ~~FACILITY~~ **EMISSIONS UNIT** OPERATION CONDITIONS

~~Facility~~ **Emissions Unit** Description ~~[326 IAC 2-7-5(14)]~~:
(a) ...

Compliance Determination Requirements **[326 IAC 2-7-5(1)]**

SECTION D.2 ~~FACILITY~~ **EMISSIONS UNIT** OPERATION CONDITIONS

~~Facility~~ **Emissions Unit** Description ~~[326 IAC 2-7-5(14)]~~:

(e) ....

Compliance Determination Requirements **[326 IAC 2-7-5(1)]**

....

SECTION D.3 ~~FACILITY OPERATION~~ **EMISSIONS UNIT** CONDITIONS

~~Facility~~ **Emission Unit** Description ~~[326 IAC 2-7-5(14)]~~:

(g) ...

(i) Material handling, identified as Unit 9, approved in 2014 for modification, controlled by bin room baghouse No. 1 and bin room baghouse No. 2, with each baghouse exhausting to a separate stack.

(1) ...

~~(2) One (1) strip casting machine, constructed in 1997.~~

~~(3) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour:~~

~~(A) One (1) natural gas-fired seven (7) ton melting pot, identified as MP-1, constructed in 1997, with a capacity of 2.2 million British thermal units per hour; and~~

~~(B) One (1) natural gas-fired thirty-five (35) ton melting pot, identified as MP-2, constructed in 1997, with a capacity of 1.2 million British thermal units per hour.~~

(j) One (1) Rolled Lead Strip (RLS) Line, constructed in 1997 and permitted in 2016, with a maximum capacity of 3.5 tons per hour, exhausting to RLS baghouse and HEPA Filters, including the following:

(1) One (1) natural gas-fired seven (7) ton melting pot, identified as MP-1, constructed in 1997, with a capacity of 2.2 million British thermal units per hour; and

(2) One (1) natural gas-fired thirty-five (35) ton melting pot, identified as MP-2, constructed in 1997, with a capacity of 1.2 million British thermal units per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

...

D.3.1 PSD and Emission Offset Minor Limits [326 IAC 2-2] [326 IAC 2-3]

In order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable and pursuant to Administrative Amendment No. 035-21590-00028, issued on October 20, 2005, ~~and~~ revised by Significant Permit Modification No. 035-33188-00028 **and Significant Source Modification No. 035-36872-00028,** the PM, PM10, PM2.5 and Lead emissions from the venturi scrubber, fabric filters and bin room baghouses shall be limited as shown in the table below:

Emission Units	Control Equipment	PM Limit (lb/hr)	PM10 Limit (lb/hr)	PM2.5 Limit (lb/hr)	Lead Limit (lb/hr)
Battery crusher/breaker (Unit 1)	Venturi Scrubber	2.25	2.25	2.25	0.065
Soda ash wash and 2 silos (Unit 2)	Fabric filters	0.23	0.23	0.23	-
Material Handling/Slag Crusher~~/insignificant melting pots~~	Bin Room Baghouses No. 1 and No. 2	~~2.25~~ **2.11**	~~2.25~~ **2.11**	~~2.25~~ **2.11**	0.17

Compliance with these limits in combination with Conditions D.1.1 and D.2.1 and the potential to emit PM, PM10, and PM2.5 from all other emission units at this source, shall limit the source wide total potential to emit PM, PM10, and PM2.5 to less than one hundred (100) tons per year, each, and will render the requirements of 326 IAC 2-2 (PSD) not applicable.

Compliance with these limits in combination with Conditions D.1.1 and D.2.1 and the potential to emit lead from all other emission units at this source, shall limit the source-wide total potential to emit of lead to less than 5 tons per 12 consecutive month period, and shall render the requirements of 326 IAC 2-3 (Emission Offset) not applicable.

....

D.3.3 Federal Consent Decree Requirements - Rolled Lead Strip ("RLS Line")

Pursuant to Significant Source Modification No. 035-36872-00028 and the Consent Decree lodged with the United States District Court for the Southern District of Indiana on March 16, 2015 in *United States and the State of Indiana v. Exide Technologies*, No. 15-cv-433 (S.D. Ind.), the Permittee shall comply with the following:

(a) Exide shall use the RLS baghouse and HEPA filters at all times that the RLS Line is operating;

(b) Exide shall perform periodic testing annually for lead and every five years for particulate matter to demonstrate compliance with the permitted emission limits for those pollutants and to establish baghouse operating parameters;

(c) Exide shall continuously monitor and record the pressure drop across the RLS baghouse and HEPA filters whenever the RLS Line is being operated (or if the RLS Line is not being operated, then Exide shall include the information in a recorded notation);

(d) Exide shall report any pressure drop deviations to IDEM and Exide shall take immediate corrective action addressing any pressure drop deviation;

(e) Exide shall maintain records of monitoring, maintenance, and repair of the RLS Line air pollution control equipment.

D.3.~~3~~**4** Preventive Maintenance Plan [326 IAC 2-7-5(12)]

....

Compliance Determination Requirements **[326 IAC 2-7-5(1)]**

D.3.~~4~~**5** Particulate Matter (PM) and Lead (Pb) [326 IAC 2-7-6(6)]

(a) In order to ~~ensure~~ **assure** compliance with Conditions D.3.1 and D.3.2, the venturi scrubber shall be in operation at all times that the lead-battery crusher/breaker is in operation.

(b) In order to ~~ensure~~ **assure** compliance with Conditions D.3.1 and D.3.2, the bin room baghouses (No. 1 and No. 2) shall be in operation at all times that slag crushing is in operation.

(c) In order to assure compliance with Condition D.3.3, the RLS baghouse and HEPA filters shall be in operation at all times that the RLS Line is in operation.

(~~c~~**d**) ...

D.3.~~5~~**6** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

...

(c) Pursuant to the Consent Decree lodged with the United States District Court for the Southern District of Indiana on March 16, 2015 in *United States and the State of Indiana v. Exide Technologies*, No. 15-cv-433 (S.D. Ind.) and in order to demonstrate compliance with Condition D.3.3(b), the Permittee shall conduct PM and lead testing for the RLS Line utilizing methods as approved by the Commissioner in accordance with the following schedule:

(1) at least once every twelve (12) calendar months for lead; and

(2) at least once every five (5) years from the date of the most recent valid compliance demonstration for PM.

(~~c~~**d**) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the testing required by this condition.

D.3.~~6~~**7** Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

D.3.~~7~~**8** Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

D.3.9 Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall monitor and record the total static pressure drop across the RLS baghouse and HEPA filters used in conjunction with the RLS Line at least once daily when the processes are in operation. When for any one reading, the pressure drop is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 2.0 to 8.0 inches of water, unless a different upper-bound of lower-bound value for this range is determined during the latest stack test. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and shall be calibrated or replaced at least once every six (6) months.

D.3.~~8~~**10** Scrubber Failure Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.~~9~~**11** Bag Leak Detection System Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

Pursuant to 40 CFR 64, the Permittee shall install and continuously operate a bag leak detection system for all baghouses **(except RLS baghouse)** controlling process vents and process fugitive emissions sources. See Condition F.1.1(a)(8) of this permit or 326 IAC 20-13.1-9 of Attachment C for detailed bag leak detection system monitoring requirements.

D.3.~~10~~**12** Record Keeping Requirements

(a) In order to document the compliance status with Condition ~~D.3.6~~ **D.3.7**, the Permittee shall maintain a daily record of visible emission notations of the venturi scrubber stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).

(b) In order to document the compliance status with Condition ~~D.3.7~~ **D.3.8**, the Permittee shall maintain a daily record of the pressure drop across the venturi scrubber controlling the battery crusher/breaker. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).

(c) Pursuant to Condition F.1.1(a)(8) and in order to document the compliance status with Condition ~~D.3.9~~**D.3.12**, the owner or operator of a secondary lead smelter shall comply with the following:

(d) In order to document the compliance status with Conditions D.3.3 and D.3.9, the Permittee shall maintain a daily record of the pressure drop across the RLS baghouse and HEPA filters controlling the RLS Line. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).

(~~d~~ **e**) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the record keeping required by this condition.

D.3.~~11~~**13** Reporting Requirements

The Permittee shall submit a report to document the compliance status with Condition ~~D.3.9~~ **D.3.11** not later than thirty (30) days after the end of each preceding six (6) month period ending June 30 and December 31 of each year that includes the following:

(1) A description of the actions taken following each bag leak detection system alarm pursuant to Condition F.1.1(a)(8).

(2) Calculations of the percentage of total operating time, or the total operating time in hours and minutes the alarm on the bag leak detection system was activated during the reporting period.

Section C - General Reporting Requirements contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official”, as defined by 326 IAC 2-7-1(35).

....

SECTION E.1 ~~FACILITY OPERATION CONDITIONS~~ **NSPS**

~~Facility~~ **Emissions Unit** Description ~~[326 IAC 2-7-5(14)]~~:

...

New Source Performance Standards **(NSPS) Requirements** ~~[326 IAC 12-1] [40 CFR 60]~~**326 IAC 2-7-5(1)]**

E.1.1 General Provisions Relating to **New Source Performance Standards** ~~NSPS~~ [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) **Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart L.** ~~The Permittee shall comply with the provisions of 40 CFR 60, Subpart A (NSPS General Provisions), which are incorporated by reference as 326 IAC 12-1 for the affected sources.~~

(b) **Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:**
Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.1.2 ~~Standards of Performance for~~ Secondary Lead Smelters **NSPS** [326 IAC 12] [40 CFR 60, Subpart L]

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart L (included as Attachment A ~~of this~~ **of the operating** permit), which are incorporated by reference as 326 IAC 12:

....

SECTION E.2 ~~FACILITY OPERATION CONDITIONS~~**NESHAP**

~~Facility~~ **Emissions Unit** Description ~~[326 IAC 2-7-5(14)]~~:

....

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements ~~[326 IAC 20-1][40 CFR 63]~~**[326 IAC 2-7-5(1)]**

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants ~~from Secondary Lead Smelting~~**under 40 CFR 63** [326 IAC 20-1] [40 CFR Part 63, Subpart A]

~~(a)~~ Pursuant to 40 CFR 63.**1**~~1~~541~~(b)~~, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 for the ~~affected source~~**emission unit(s) listed above**, ~~as specified in Table 1 of~~**except as otherwise specified in** 40 CFR 63, Subpart X~~, in accordance with the schedule in 40 CFR 63, Subpart X~~.

(b) Pursuant to 40 CFR 63.1**0**~~3~~, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.2.2 ~~National Emission Standards for Hazardous Air Pollutants from Secondary~~ Lead Smelting **NESHAP** [40 CFR Part 63, Subpart X]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart X (included as Attachment B of ~~this~~ **the operating** permit):

....

SECTION F.1 ~~FACILITY OPERATION CONDITIONS~~**326 IAC 20-13.1**

~~Facility~~ **Emissions Unit** Description ~~[326 IAC 2-7-5(14)]~~:

...

(i) Material handling, identified as Unit 9, approved in 2014 for modification, controlled by bin room baghouse No. 1 and bin room baghouse No. 2, with each baghouse exhausting to a separate stack.

(1) One (1) slag crusher, constructed in 1994, with emissions controlled by a baghouse, identified as slag crusher baghouse venting to bin room baghouses No. 1 and No. 2.

~~(2) One (1) strip casting machine, constructed in 1997.~~

~~(3) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour:~~

~~(A) One (1) natural gas-fired seven (7) ton melting pot, identified as MP-1, constructed in 1997, with a capacity of 2.2 million British thermal units per hour; and~~

~~(B) One (1) natural gas-fired thirty-five (35) ton melting pot, identified as MP-2, constructed in 1997, with a capacity of 1.2 million British thermal units per hour.~~

Note: The 2014 modification only consists of the approval to add refinery baghouse No. 2.

....

....

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 035-36872-00028 and Significant Permit Modification 035-36882-00028. The staff recommends to the Commissioner that this Part 70 Significant Source and Significant Permit Modification be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Madhurima Moulik at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-0868 or toll free at 1-800-451-6027 extension 3-0868.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

Appendix A: Emission Calculations
Summary of Emissions

Company Name: Exide Technologies
Source Location: 2601 West Mt. Pleasant Blvd., Muncie, IN 47302
SSM No.: 035-36872-00028
SPM No.: 035-36882-00028
Permit Reviewer: Madhurima Moulik

Unlimited Potential to Emit (tons/year)									
Process	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**Total HAPs**	**Pb**
Battery Crusher/Breaker	493	493	493	0	0	0	0	14.3	14.3
Soda Ash Pneumatic Conveying thru 3 silos	2.88	2.88	2.88	0	0	0	0	0	0
Rotary Dryer (Including Combustion)	1,971	1,971	1,971	0.03	5.37	0.30	4.51	12.9	12.8
Reverberatory Furnace	16,150	9,690	9,690	4,000	15.00	0.57	8.77	2,124	2,124
Blast Furnace (Cupola)	4,605	1,935	1,935	795	1.50	0	0		
Afterburner	0.10	0.39	0.39	0.03	2.56	0.28	4.29	0.10	2.56E-05
Reverberatory and Blast Furnaces (Cupola) Charging Points combined	3,011	3,285	3,285	0	0	0	0	526	526
Eleven (11) Pot Furnaces (Stack 9)	2,081	2,301	2,301	0.10	16.15	0.89	13.56	9.3	9.0
Two (2) Pig Casting				0	0	0	0		
Material Handling/Slag Crusher	924	924	924	0	0	0	0	74.3	74.3
Insignificant Melting Pots	0.03	0.11	0.11	0.01	1.46	0.08	1.23	0.03	7.30E-06
RLS Line	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.15	1.53E-01
Fugitive Emissions - Paved Roads	0.77	0.15	0.04	0	0	0	0	0	0
Fugitive Emissions - Unpaved Roads	4.95	1.26	0.13	0	0	0	0	0	0
Total	**29,244**	**20,604**	**20,603**	**4,795**	**42.03**	**2.12**	**32.36**	**2,761**	**2,761**

Limited Potential to Emit (tons/year)									
Process	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**Total HAPs**	**Pb**
Battery Crusher/Breaker	9.86	9.86	9.86	0	0	0	0	0.28	0.28
Soda Ash Pneumatic Conveying thru 3 silos	1.01	1.01	1.01	0	0	0	0	0	0
Rotary Dryer (Including Combustion)	19.71	19.71	19.71	0.03	5.37	0.30	4.51	0.23	0.13
Reverberatory Furnace	20.15	21.90	21.90	99.00	15.00	0.57	8.77	1.69	1.49
Blast Furnace (Cupola)					1.5	0	0		
Afterburner					2.56	0.28	4.29	0.10	
Reverberatory and Blast Furnaces (Cupola) Charging Points combined	12.05	13.14	13.14	0	0	0	0	0.74	0.74
Eleven (11) Pot Furnaces (Stack 9)	20.81	23.00	23.00	0.10	16.15	0.89	13.56	1.62	1.31
Two (2) Pig Casting				0	0	0	0		
Material Handling/Slag Crusher	9.24	9.24	9.24	0	0	0	0	0.74	0.74
RLS Line	0.61	0.61	0.61	0	0	0	0	0.15	0.15
Melting Pot MP-1	0.02	0.07	0.07	0.01	0.94	0.05	0.79	0.02	0.00
Melting Pot MP-2	0.01	0.04	0.04	0.00	0.52	0.03	0.43	0.01	0.00
Fugitive Emissions - Paved Roads	0.77	0.15	0.04	0	0	0	0	0	0
Fugitive Emissions - Unpaved Roads	4.95	1.26	0.13	0	0	0	0	0	0
Total	**99.17**	**99.99**	**98.74**	**99.14**	**42.03**	**2.12**	**32.36**	**5.58**	**4.86**

Appendix A: Emission Calculations
Modification Summary

Company Name: Exide Technologies
Source Location: 2601 West Mt. Pleasant Blvd., Muncie, IN 47302
SSM No.: 035-36872-00028
SPM No.: 035-36882-00028
Permit Reviewer: Madhurima Moulik

RLS Line		
Maximum Throughput	3.5	tons/hr

Unrestricted Potential to Emit (tons/year)

Process	PM	PM	PM10	PM2.5	PM	PM10	PM2.5	Pb	Pb
	lb/ton	lb/hr	lb/hr	lb/hr	tons/yr	tons/yr	tons/yr	lb/ton	tons/yr
RLS Line	0.04	0.14	0.14	0.14	0.61	0.61	0.61	0.01	0.15
Total (tons/yr)					**0.61**	**0.61**	**0.61**		**0.15**

	Controlled Potential to Emit (tons/year)							
Process	PM	PM10	PM2.5	Pb	PM	PM10	PM2.5	Pb
	lb/hr	lb/hr	lb/hr	lb/hr	tons/yr	tons/yr	tons/yr	tons/yr
RLS Line	0.018	0.018	0.018	1.10E-04	0.08	0.08	0.08	4.82E-04
Total (tons/yr)					**0.08**	**0.08**	**0.08**	**4.82E-04**

Methodology
Uncontrolled emission factors in lb/ton based on AP-42, Chapter 12.11, Table 12.11-2 (SCC 3-04-004-09)
Controlled PM, PM10, and PM2.5 EFs based on stack test conducted on February 23, 2016
Controlled Emission factors based on stack test conducted on December 2, 2015
PTE (tons/yr) = emissions (lb/hr) x 8760 hr/yr /2000 lb/ton

Appendix A: Emission Calculations
Natural Gas Combustion (Less than 100 MMBtu/hr)

Company Name: Exide Technologies
Source Location: 2601 West Mt. Pleasant Blvd., Muncie, IN 47302
SSM No.: 035-36872-00028
SPM No.: 035-36882-00028
Permit Reviewer: Madhurima Moulik

			Criteria Pollutants						
			PM*	PM10*	PM2.5*	SO2	NOx**	VOC	CO
Emission Factor in lb/MMCF			1.9	7.6	7.6	0.6	100.0	5.5	84.0
Emission Factor in lb/MMCF							50.0		
Emission Unit	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)	Potential Emissions (tons/yr)						
Rotary Dryer	12.50	107.35	0.102	0.408	0.408	0.032	5.368	0.295	4.509
Reverberatory Furnace	24.30	208.69	0.198	0.793	0.793	0.063	10.435	0.574	8.765
Eleven (11) Pot Furnaces	37.60	322.92	0.307	1.227	1.227	0.097	16.146	0.888	13.563
Melting Pot (MP-1)	2.20	18.89	0.018	0.072	0.072	0.006	0.945	0.052	0.794
Melting Pot (MP-2)	1.20	10.31	0.010	0.039	0.039	0.003	0.515	0.028	0.433
Afterburner	11.90	102.20	0.097	0.388	0.388	0.031	2.555	0.281	4.292
Total			0.73	2.93	2.93	0.23	35.96	2.12	32.36

Emission Factors are from AP-42, Tables 1.4-1 and 1.4-2.
*PM emission factor is filterable PM only. PM10 emission factor is filterable PM10 and condensable PM combined. PM2.5 emission factor is filterable PM2.5 and condensable PM combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

			HAPs - Organics					HAPs - Metals					Total HAPs
			Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Lead	Cadmium	Chromium	Manganese	Nickel	
Emission Factor in lb/MMCF			2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	1.8880
Emission Unit	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)	Potential Emissions (tons/yr)										
Rotary Dryer	12.50	107.35	1.1E-04	6.4E-05	4.0E-03	9.7E-02	1.8E-04	2.7E-05	5.9E-05	7.5E-05	2.0E-05	1.1E-04	1.0E-01
Reverberatory Furnace	24.30	208.69	2.2E-04	1.3E-04	7.8E-03	1.9E-01	3.5E-04	5.2E-05	1.1E-04	1.5E-04	4.0E-05	2.2E-04	2.0E-01
Eleven (11) Pot Furnaces	37.60	322.92	3.4E-04	1.9E-04	1.2E-02	2.9E-01	5.5E-04	8.1E-05	1.8E-04	2.3E-04	6.1E-05	3.4E-04	3.0E-01
Melting Pot (MP-1)	2.20	18.89	2.0E-05	1.1E-05	7.1E-04	1.7E-02	3.2E-05	4.7E-06	1.0E-05	1.3E-05	3.6E-06	2.0E-05	1.8E-02
Melting Pot (MP-2)	1.20	10.31	1.1E-05	6.2E-06	3.9E-04	9.3E-03	1.8E-05	2.6E-06	5.7E-06	7.2E-06	2.0E-06	1.1E-05	9.7E-03
Afterburner	11.90	102.20	1.1E-04	6.1E-05	3.8E-03	9.2E-02	1.7E-04	2.6E-05	5.6E-05	7.2E-05	1.9E-05	1.1E-04	9.6E-02
Total			8.1E-04	4.6E-04	2.9E-02	6.9E-01	1.3E-03	1.9E-04	4.2E-04	5.4E-04	1.5E-04	8.1E-04	7.3E-01

Emission Factors are from AP-42, Tables 1.4-3 and 1.4-4.
The five highest organic and metal HAPs emission factors are provided above. The total HAPs is the sum of all HAPs listed in AP-42, Tables 1.4-3 and 1.4-4.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Methodology

Heating Value of Natural Gas is assumed to be 1020 MMBtu/MMCF
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) * 8,760 hrs/yr * 1 MMCF/1,020 MMBtu
Potential Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) * (1 ton/2,000 lb)

Appendix A: Emissions Calculations
Reverberatory and Blast Melting Furnaces

Company Name: Exide Technologies
Source Location: 2601 West Mt. Pleasant Blvd., Muncie, IN 47302
SSM No.: 035-36872-00028
SPM No.: 035-36882-00028
Permit Reviewer: Madhurima Moulik

		Acid and Soda Wash[1]	Twin Packed Bed Sodium Carbonate Scrubber Specifications				Process Baghouse
	Maximum Metal Throughput	SO2 Control	PM, PM10, PM2.5, and Pb Control	SO2 Control	Air Flow Rate per Scrubber	Outlet Grain Loading (Pb)[2]	PM, PM10, PM2.5, and Pb Control
	(tons/yr)	(%)	(%)	(%)	(ft^3/min)	(gr/ft^3)	(%)
	100,000	85.0%	65.0%	89.8%	45,000	0.00044	99.8%

Reverberatory Furnace (SCC 3-04-004-02)

	PM	PM_{10}	$PM_{2.5}$	SO2	NOx	Pb[3]
Emission Factors (lb/ton metal produced)	323.00	193.80	193.80	80.00	0.30	N/A
Uncontrolled Potential To Emit (tons/yr)	16,150	9,690	9,690	4,000	15	2,124
Controlled Potential to Emit (tons/yr)	11.31	6.78	6.78	61.2	15	1.49
Limited Potential to Emit (lb/hr)[4]	4.60	5.00	5.00	N/A	N/A	0.34
Limited Potential to Emit (tons/yr)[4]	20.15	21.90	21.90	99.00	N/A	1.49

Maximum Metal Throughput
(tons/yr)
30,000

Blast Furnace (Cupola) (SCC 3-04-004-26)

	PM	PM_{10}	$PM_{2.5}$	SO2	NOx	Pb
Emission Factors (lb/ton metal produced)	307.00	129.00	129.00	53.00	0.10	
Uncontrolled Potential To Emit (tons/yr)	4,605	1,935	1,935	795	1.50	
Controlled Potential to Emit (tons/yr)	3.22	1.35	1.35	12.16	1.50	See Above
Limited Potential to Emit (lb/hr)	See Above				N/A	
Limited Potential to Emit (tons/yr					N/A	

Reverberatory and Blast Furnace Charging Points

	Ventilation Baghouse Specifications		
	PM, PM10, PM2.5, and Pb Control	Air Flow Rate	Outlet Grain Loading[2]
	(%)	(ft^3/min)	(gr/ft^3)
	99.6%	90,000	0.000218

	PM	PM_{10}	$PM_{2.5}$	Pb[3]
Uncontrolled Potential To Emit (tons/yr)	3,011	3,285	3,285	526
Controlled Potential to Emit (tons/yr)	12.05	13.14	13.14	0.74
Limited Potential to Emit (lb/hr)[4]	2.75	3.00	3.00	0.17
Limited Potential to Emit (tons/yr)[4]	12.05	13.14	13.14	0.74

Methodology:
PM and SO2 Emission Factors from AP-42, Chapter 12.11 (Secondary Lead Processing), Table 12.11-2 (10/1986)
All other Emission Factors from EPA WebFire for respective Source Classification Code (SCC). Assumes PM2.5 = PM10
[1]The SO2 emissions are controlled first by the acid and soda wash which is equivalent to 85% and then followed by the scrubbers.
[2] Outlet grain loading based on stack test performed on August 23, 2005.
[3] Lead emissions from the reverberatory and blast furnaces based on control specifications.
[4] The PM, PM10, PM2.5, SO2, and Pb emission limits are combined for the reverberatory and blast furnaces since they have common control devices.
Pb = Lead
Reverberatory and Blast Furnace
Uncontrolled PTE (tons/yr) = Maximum Throughput (tons/yr) x EF (lb/ton) x 1/2,000 (ton/lb)
Controlled PTE (tons/yr) = Uncontrolled PTE (tons/yr) x (1 - Baghouse CE %) x (1 - Scrubber CE %)
Limited PTE (tons/yr) = Limited PTE (lb/hr) x 8,760 (hr/yr) x 1/2,000 (ton/lb)
Uncontrolled Pb PTE (tons/yr) = Controlled PTE (tons/yr) / ((1 - Baghouse CE %) x (1 - Scrubber CE %))
Controlled Pb PTE (tons/yr) = Outlet Grain Loading (gr/ft3) x Air Flow Rate (ft3/min) x 2 Scrubbers x 60 (min/hr) x 1/7,000 (lb/gr) x 8,760 (hr/yr) x 1/2,000 (ton/lb)
Charging Points
Charging Points Uncontrolled PTE (tons/yr) = Controlled PTE (tons/yr) / (1 - CE %)
Charging Points Controlled/Limited PTE (tons/yr) = Limited PTE (lb/hr) x 8,760 (hr/yr) x 1/2,000 (ton/lb)
Uncontrolled Pb PTE (tons/yr) = Controlled PTE (tons/yr) / ((1 - Baghouse CE %) x (1 - Scrubber CE %))
Controlled Pb PTE (tons/yr) = Outlet Grain Loading (gr/ft3) x Air Flow Rate (ft3/min) x 60 (min/hr) x 1/7,000 (lb/gr) x 8,760 (hr/yr) x 1/2,000 (ton/lb)

Appendix A: Emissions Calculations
Rotary Dryer, Pot Furnaces, and Pig Casting

Company Name: Exide Technologies
Source Location: 2601 West Mt. Pleasant Blvd., Muncie, IN 47302
SSM No.: 035-36872-00028
SPM No.: 035-36882-00028
Permit Reviewer: Madhurima Moulik

Baghouse Specifications		
Control Efficiency	Air Flow Rate	Outlet Grain Loading (Pb)[1]
(%)	(ft^3/min)	(gr/ft^3)
99.0%	15,500	0.00022

Rotary Dryer

	PM	PM_{10}	$PM_{2.5}$	Pb[2]
Uncontrolled Potential To Emit (tons/yr)	1,971	1,971	1,971	12.8
Controlled Potential to Emit (tons/yr)	19.71	19.71	19.71	0.13
Limited Potential to Emit (lb/hr)	4.50	4.50	4.50	0.029
Limited Potential to Emit (tons/yr)	19.71	19.71	19.71	0.13

Refinery Baghouse Specifications		
Control Efficiency	Air Flow Rate	Outlet Grain Loading (Pb)[1]
(%)	(ft^3/min)	(gr/ft^3)
99.0%	120,000	0.00002

Pot Furnaces and Pig Casting

	PM	PM_{10}	$PM_{2.5}$	Pb[2]
Uncontrolled Potential To Emit (tons/yr)	2,081	2,300	2,300	9.0
Controlled Potential to Emit (tons/yr)	20.81	23.00	23.00	0.09
Limited Potential to Emit (lb/hr)	4.75	5.25	5.25	0.30
Limited Potential to Emit (tons/yr)	20.81	23.00	23.00	1.31

Methodology:

[1] Outlet grain loading for lead based on stack test performed on August 23, 2005.

[2] Lead emissions based on control specifications.

Pb = Lead

Rotary Dryer modified 10/20/2005 and Rotary Dryer Baghouse installed on 10/20/2005.

Uncontrolled PTE (tons/yr) = Controlled PTE (tons/yr) / (1 - CE %)

Controlled/Limited PTE (tons/yr) = Limited PTE (lb/hr) x 8,760 (hr/yr) x 1/2,000 (ton/lb)

Uncontrolled Pb PTE (tons/yr) = Controlled PTE (tons/yr) / (1 - Baghouse CE %)

Controlled Pb PTE (tons/yr) = Outlet Grain Loading (gr/ft3) x Air Flow Rate (ft3/min) x 60 (min/hr) x 1/7,000 (lb/gr) x 8,760 (hr/yr) x 1/2,000 (ton/lb)

Appendix A: Emissions Calculations
Battery Crusher/Breaker
Material Handling/Slag Crushing

Company Name: Exide Technologies
Source Location: 2601 West Mt. Pleasant Blvd., Muncie, IN 47302
SSM No.: 035-36872-00028
SPM No.: 035-36882-00028
Permit Reviewer: Madhurima Moulik

Venturi Scrubber Specifications		
Control Efficiency	Air Flow Rate	Outlet Grain Loading[1]
(%)	(ft^3/min)	(gr/ft^3)
98.0%	35,000	0.000218

Battery Crusher/Breaker

	PM	PM_{10}	$PM_{2.5}$	Pb[3]
Uncontrolled Potential To Emit (tons/yr)	493	493	493	14.3
Controlled Potential to Emit (tons/yr)	9.86	9.86	9.86	0.29
Limited Potential to Emit (lb/hr)	2.25	2.25	2.25	0.065
Limited Potential to Emit (tons/yr)	9.86	9.86	9.86	0.28

Bin Room Baghouse Specifications		
Control Efficiency	Air Flow Rate	Outlet Grain Loading[2]
(%)	(ft^3/min)	(gr/ft^3)
99.0%	90,000	0.00022

Material Handling/Slag Crushing

	PM	PM_{10}	$PM_{2.5}$	Pb[3]
Uncontrolled Potential To Emit (tons/yr)	924	924	924	74.3
Controlled Potential to Emit (tons/yr)	9.24	9.24	9.24	0.74
Limited Potential to Emit (lb/hr)	2.11	2.11	2.11	0.17
Limited Potential to Emit (tons/yr)	9.24	9.24	9.24	0.74

Methodology:

[1] Outlet grain loading based on stack test performed on September 9, 2004 at the source.

[2] Outlet grain loading based on stack test performed on August 23, 2005 at the source.

[3] Lead emissions based on control specifications.

Pb = Lead

Uncontrolled PTE (tons/yr) = Controlled PTE (tons/yr) / (1 - CE %)

Controlled/Limited PTE (tons/yr) = Limited PTE (lb/hr) x 8,760 (hr/yr) x 1/2,000 (ton/lb)

Uncontrolled Pb PTE (tons/yr) = Controlled PTE (tons/yr) / (1 - CE %)

Controlled Pb PTE (tons/yr) = Outlet Grain Loading (gr/ft3) x Air Flow Rate (ft3/min) x 60 (min/hr) x 1/7,000 (lb/gr) x 8,760 (hr/yr) x 1/2,000 (ton/lb)

Appendix A: Emissions Calculations
Soda Ash

Company Name: Exide Technologies
Source Location: 2601 West Mt. Pleasant Blvd., Muncie, IN 47302
SSM No.: 035-36872-00028
SPM No.: 035-36882-00028
Permit Reviewer: Madhurima Moulik

Maximum Soda Ash Throughput per Silo (tons/yr)
6,389

Soda Ash Pneumatic Conveying thru 3 Silos

	PM	PM_{10}	$PM_{2.5}$
Emission Factors (ton/ton of soda ash)	0.00015	0.00015	0.00015
Uncontrolled Potential To Emit (tons/yr)	2.88	2.88	2.88
Limited Potential to Emit (lb/hr)	0.23	0.23	0.23
Limited Potential to Emit (tons/yr)	1.01	1.01	1.01

Emission Factor from AP-42 Chapter 9 (grain silo loading)
Uncontrolled PTE (tons/yr) = Maximum Throughput (tons/yr) x EF (lb/ton) x 1/2,000 (ton/lb) x 3 Silos
Limited PTE (tons/yr) = Limited PTE (lb/hr) x 8,760 (hr/yr) x 1/2,000 (ton/lb)

Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads (Sector 1)

Company Name: Exide Technologies
Source Location: 2601 West Mt. Pleasant Blvd., Muncie, IN 47302
SSM No.: 035-36872-00028
SPM No.: 035-36882-00028
Permit Reviewer: Madhurima Moulik

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Informtation (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Tool Room deliveries - Sector 1, loaded	6.0	1.0	6.0	7.0	42.0	181	0.034	0.2	75.1
Refinery Fuel Station deliveries - Sector 1, loaded	1.0	1.0	1.0	7.0	7.0	251	0.048	0.0	17.4
Bin Room to Maintenance Room - Sector 1, loaded	6.0	1.0	6.0	7.0	42.0	127	0.024	0.1	52.7
Tool Room deliveries - Sector 1, unloaded	6.0	1.0	6.0	5.0	30.0	181	0.034	0.2	75.1
Refinery Fuel Station deliveries - Sector 1, unloaded	1.0	1.0	1.0	5.0	5.0	251	0.048	0.0	17.4
Bin Room to Maintenance Room - Sector 1, unloaded	6.0	1.0	6.0	5.0	30.0	127	0.024	0.1	52.7
		Totals	**26.0**		**156.0**			**0.8**	**290.2**

Average Vehicle Weight Per Trip = 6.0 tons/trip
Average Miles Per Trip = 0.03 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	6.0	6.0	6.0	tons = average vehicle weight (provided by source)
sL =	2.96	2.96	2.96	g/m^2 = silt loading value based on site specific source sample)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 120 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.184	0.037	0.0090	lb/mile
Mitigated Emission Factor, Eext =	0.169	0.034	0.0083	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Tool Room deliveries - Sector 1, loaded	0.007	1.38E-03	3.39E-04	0.006	1.27E-03	3.11E-04
Refinery Fuel Station deliveries - Sector 1, loaded	1.59E-03	3.19E-04	7.83E-05	1.46E-03	2.93E-04	7.18E-05
Bin Room to Maintenance Room - Sector 1, loaded	4.84E-03	9.68E-04	2.38E-04	4.44E-03	8.89E-04	2.18E-04
Tool Room deliveries - Sector 1, unloaded	6.90E-03	1.38E-03	3.39E-04	0.006	1.27E-03	3.11E-04
Refinery Fuel Station deliveries - Sector 1, unloaded	1.59E-03	3.19E-04	7.83E-05	1.46E-03	2.93E-04	7.18E-05
Bin Room to Maintenance Room - Sector 1, unloaded	4.84E-03	9.68E-04	2.38E-04	4.44E-03	8.89E-04	2.18E-04
Totals	**0.027**	**0.005**	**0.001**	**0.024**	**0.005**	**0.001**

Methodology
Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)

Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads (Sector 2)

Company Name: Exide Technologies
Source Location: 2601 West Mt. Pleasant Blvd., Muncie, IN 47302
SSM No.: 035-36872-00028
SPM No.: 035-36882-00028
Permit Reviewer: Madhurima Moulik

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Informtation (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Shipping dock - Sector 2, loaded	20.0	1.0	20.0	36.0	720.0	368	0.070	1.4	508.8
Pb to RLS - Sector 2, loaded	2.0	1.0	2.0	36.0	72.0	387	0.073	0.1	53.5
Slag out - Sector 2, loaded	4.0	1.0	4.0	36.0	144.0	132	0.025	0.1	36.5
Shipping dock - Sector 2, unloaded	20.0	1.0	20.0	16.0	320.0	368	0.070	1.4	508.8
Pb to RLS - Sector 2, unloaded	2.0	1.0	2.0	16.0	32.0	387	0.073	0.1	53.5
Slag out - Sector 2, unloaded	4.0	1.0	4.0	16.0	64.0	132	0.025	0.1	36.5
Maintenance deliveries - Sector 2, loaded	6.0	1.0	6.0	7.0	42.0	439	0.083	0.5	182.1
Tool Room deliveries - Sector 2, loaded	6.0	1.0	6.0	7.0	42.0	421	0.080	0.5	174.6
Refinery Fuel Station deliveries - Sector 2, loaded	1.0	1.0	1.0	7.0	7.0	439	0.083	0.1	30.3
Bin Room to Maintenance Room - Sector 2, loaded	6.0	1.0	6.0	7.0	42.0	443	0.084	0.5	183.7
Maintenance deliveries - Sector 2, unloaded	6.0	1.0	6.0	5.0	30.0	439	0.083	0.5	182.1
Tool Room deliveries - Sector 2, unloaded	6.0	1.0	6.0	5.0	30.0	421	0.080	0.5	174.6
Refinery Fuel Station deliveries - Sector 2, unloaded	1.0	1.0	1.0	5.0	5.0	439	0.083	0.1	30.3
Bin Room to Maintenance Room - Sector 2, unloaded	6.0	1.0	6.0	5.0	30.0	443	0.084	0.5	183.7
		Totals	**90.0**		**1,580.0**			**6.4**	**2,339.2**

Average Vehicle Weight Per Trip = 17.6 tons/trip
Average Miles Per Trip = 0.07 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	17.6	17.6	17.6	tons = average vehicle weight (provided by source)
sL =	0.45	0.45	0.45	g/m^2 = silt loading value based on site specific source sample)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 120 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.099	0.020	0.0049	lb/mile
Mitigated Emission Factor, Eext =	0.091	0.018	0.0045	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Shipping dock - Sector 2, loaded	0.03	0.01	0.00	0.02	0.00	0.00
Pb to RLS - Sector 2, loaded	0.00	0.00	0.00	0.00	0.00	0.00
Slag out - Sector 2, loaded	0.00	0.00	0.00	0.00	0.00	0.00
Shipping dock - Sector 2, unloaded	0.03	0.01	0.00	0.02	0.00	0.00
Pb to RLS - Sector 2, unloaded	0.00	0.00	0.00	0.00	0.00	0.00
Slag out - Sector 2, unloaded	0.00	0.00	0.00	0.00	0.00	0.00
Maintenance deliveries - Sector 2, loaded	0.01	0.00	0.00	0.01	0.00	0.00
Tool Room deliveries - Sector 2, loaded	0.01	0.00	0.00	0.01	0.00	0.00
Refinery Fuel Station deliveries - Sector 2, loaded	0.00	0.00	0.00	0.00	0.00	0.00
Bin Room to Maintenance Room - Sector 2, loaded	0.01	0.00	0.00	0.01	0.00	0.00
Maintenance deliveries - Sector 2, unloaded	0.01	0.00	0.00	0.01	0.00	0.00
Tool Room deliveries - Sector 2, unloaded	0.01	0.00	0.00	0.01	0.00	0.00
Refinery Fuel Station deliveries - Sector 2, unloaded	0.00	0.00	0.00	0.00	0.00	0.00
Bin Room to Maintenance Room - Sector 2, unloaded	0.01	0.00	0.00	0.01	0.00	0.00
Totals	**0.12**	**0.02**	**0.01**	**0.11**	**0.02**	**0.01**

Methodology
Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)

Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads (Sector 3)

Company Name: Exide Technologies
Source Location: 2601 West Mt. Pleasant Blvd., Muncie, IN 47302
SSM No.: 035-36872-00028
SPM No.: 035-36882-00028
Permit Reviewer: Madhurima Moulik

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Informtation (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Breaker deliveries - Sector 3, loaded	18.0	1.0	18.0	36.0	648.0	276	0.052	0.9	343.4
RLS deliveries - Sector 3, loaded	22.0	1.0	22.0	36.0	792.0	308	0.058	1.3	468.4
Bin Room deliveries - Sector 3, loaded	1.0	1.0	1.0	36.0	36.0	176	0.033	0.0	12.2
Pb to RLS - Sector 3, loaded	2.0	1.0	2.0	36.0	72.0	258	0.049	0.1	35.7
Plastic out - Sector 3, loaded	2.0	1.0	2.0	36.0	72.0	185	0.035	0.1	25.6
Breaker deliveries - Sector 3, unloaded	18.0	1.0	18.0	16.0	288.0	276	0.052	0.9	343.4
RLS deliveries - Sector 3, unloaded	22.0	1.0	22.0	16.0	352.0	308	0.058	1.3	468.4
Bin Room deliveries - Sector 3, unloaded	1.0	1.0	1.0	16.0	16.0	176	0.033	0.0	12.2
Pb to RLS - Sector 3, unloaded	2.0	1.0	2.0	16.0	32.0	258	0.049	0.1	35.7
Plastic out - Sector 3, unloaded	2.0	1.0	2.0	16.0	32.0	185	0.035	0.1	25.6
Bin Room Fuel Station deliveries - Sector 3, loaded	1.0	1.0	1.0	7.0	7.0	186	0.035	0.0	12.9
Bin Room Fuel Station deliveries - Sector 3, unloaded	1.0	1.0	1.0	5.0	5.0	186	0.035	0.0	12.9
		Totals	**92.0**		**2352.0**			**4.9**	**1796.2**

Average Vehicle Weight Per Trip = 25.6 tons/trip
Average Miles Per Trip = 0.05 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	25.6	25.6	25.6	tons = average vehicle weight (provided by source)
sL =	0.90	0.90	0.90	g/m^2 = silt loading value based on site specific source sample)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 120 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.272	0.054	0.0134	lb/mile
Mitigated Emission Factor, Eext =	0.250	0.050	0.0123	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Breaker deliveries - Sector 3, loaded	0.05	0.01	0.00	0.04	0.01	0.00
RLS deliveries - Sector 3, loaded	0.06	0.01	0.00	0.06	0.01	0.00
Bin Room deliveries - Sector 3, loaded	0.00	0.00	0.00	0.00	0.00	0.00
Pb to RLS - Sector 3, loaded	0.00	0.00	0.00	0.00	0.00	0.00
Plastic out - Sector 3, loaded	0.00	0.00	0.00	0.00	0.00	0.00
Breaker deliveries - Sector 3, unloaded	0.05	0.01	0.00	0.04	0.01	0.00
RLS deliveries - Sector 3, unloaded	0.06	0.01	0.00	0.06	0.01	0.00
Bin Room deliveries - Sector 3, unloaded	0.00	0.00	0.00	0.00	0.00	0.00
Pb to RLS - Sector 3, unloaded	0.00	0.00	0.00	0.00	0.00	0.00
Plastic out - Sector 3, unloaded	0.00	0.00	0.00	0.00	0.00	0.00
Bin Room Fuel Station deliveries - Sector 3, loaded	0.00	0.00	0.00	0.00	0.00	0.00
Bin Room Fuel Station deliveries - Sector 3, unloaded	0.00	0.00	0.00	0.00	0.00	0.00
Totals	**0.24**	**0.05**	**0.01**	**0.22**	**0.04**	**0.01**

Methodology
Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)

Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads (Sector 4)

Company Name: Exide Technologies
Source Location: 2601 West Mt. Pleasant Blvd., Muncie, IN 47302
SSM No.: 035-36872-00028
SPM No.: 035-36882-00028
Permit Reviewer: Madhurima Moulik

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Informtation (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
RLS deliveries - Sector 4, loaded	22.0	1.0	22.0	36.0	792.0	308	0.058	1.3	468.4
Pb to RLS - Sector 4, loaded	2.0	1.0	2.0	36.0	72.0	322	0.061	0.1	44.5
Junk Transfers - Sector 4, loaded	8.0	1.0	8.0	36.0	288.0	399	0.076	0.6	220.7
Plastic out - Sector 4, loaded	2.0	1.0	2.0	36.0	72.0	309	0.059	0.1	42.7
RLS deliveries - Sector 4, unloaded	22.0	1.0	22.0	16.0	352.0	308	0.058	1.3	468.4
Pb to RLS - Sector 4, unloaded	2.0	1.0	2.0	16.0	32.0	322	0.061	0.1	44.5
Junk Transfers - Sector 4, unloaded	8.0	1.0	8.0	16.0	128.0	399	0.076	0.6	220.7
Plastic out - Sector 4, unloaded	2.0	1.0	2.0	16.0	32.0	309	0.059	0.1	42.7
		Totals	**68.0**		**1,768.0**			**4.3**	**1,552.6**

Average Vehicle Weight Per Trip = 26.0 tons/trip
Average Miles Per Trip = 0.06 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	26.0	26.0	26.0	tons = average vehicle weight (provided by source)
sL =	1.85	1.85	1.85	g/m^2 = silt loading value based on site specific source sample)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 120 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.533	0.107	0.0262	lb/mile
Mitigated Emission Factor, Eext =	0.489	0.098	0.0240	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
RLS deliveries - Sector 4, loaded	0.12	0.02	0.01	0.11	0.02	0.01
Pb to RLS - Sector 4, loaded	0.01	0.00	0.00	0.01	0.00	0.00
Junk Transfers - Sector 4, loaded	0.06	0.01	0.00	0.05	0.01	0.00
Plastic out - Sector 4, loaded	0.01	0.00	0.00	0.01	0.00	0.00
RLS deliveries - Sector 4, unloaded	0.12	0.02	0.01	0.11	0.02	0.01
Pb to RLS - Sector 4, unloaded	0.01	0.00	0.00	0.01	0.00	0.00
Junk Transfers - Sector 4, unloaded	0.06	0.01	0.00	0.05	0.01	0.00
Plastic out - Sector 4, unloaded	0.01	0.00	0.00	0.01	0.00	0.00
Totals	**0.41**	**0.08**	**0.02**	**0.38**	**0.08**	**0.02**

Methodology
Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)

Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads (Parking Lot #1)

Company Name: Exide Technologies
Source Location: 2601 West Mt. Pleasant Blvd., Muncie, IN 47302
SSM No.: 035-36872-00028
SPM No.: 035-36882-00028
Permit Reviewer: Madhurima Moulik

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Informtation (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)[1]	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Paved Parking Lot #1 - Employee Vehicles	40.0	1.0	40.0	2.1	84.0	450	0.085	3.4	1244.3
		Totals	**40.0**		**84.0**			**3.4**	**1244.3**

Average Vehicle Weight Per Trip = 2.1 tons/trip
Average Miles Per Trip = 0.09 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	2.1	2.1	2.1	tons = average vehicle weight (provided by source)
sL =	2.96	2.96	2.96	g/m^2 = silt loading value based on site specific source sample)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 120 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.063	0.013	0.0031	lb/mile
Mitigated Emission Factor, Eext =	0.058	0.012	0.0028	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Paved Parking Lot #1 - Employee Vehicles	0.04	0.01	0.00	0.04	0.01	0.00
Totals	**0.04**	**0.01**	**0.00**	**0.04**	**0.01**	**0.00**

Methodology
[1] Average vehicle wieght estimated based upon information provided in reference: United States Environmental Protection Agency (USEPA). 2012. Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 Through 2011

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)

Appendix A: Emission Calculations
Fugitive Dust Emissions - Unpaved Roads (Parking Lot #2)

Company Name: Exide Technologies
Source Location: 2601 West Mt. Pleasant Blvd., Muncie, IN 47302
SSM No.: 035-36872-00028
SPM No.: 035-36882-00028
Permit Reviewer: Madhurima Moulik

Unpaved Roads at Industrial Site
The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)[1]	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Unpaved Parking Lot #2 - Employee Vehicles	60.0	1.0	60.0	2.1	126.0	420	0.080	4.8	1742.0
		Totals	**60.0**		**126.0**			**4.8**	**1742.0**

Average Vehicle Weight Per Trip = 2.1 tons/trip
Average Miles Per Trip = 0.08 miles/trip

Unmitigated Emission Factor, Ef = k*[(s/12)^a]*[(W/3)^b] (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Sand/Gravel Processing Plant)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	2.1	2.1	2.1	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365] (Equation 2 from AP-42 13.2.2)
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 120 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	2.20	0.56	0.06	lb/mile
Mitigated Emission Factor, Eext =	1.48	0.38	0.04	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Unpaved Parking Lot #2 - Employee Vehicles	1.91	0.49	0.05	1.28	0.33	0.03
Totals	**1.91**	**0.49**	**0.05**	**1.28**	**0.33**	**0.03**

Methodology

[1] Average vehicle wieght estimated based upon information provided in reference: United States Environmental Protection Agency (USEPA). 2012. Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 Through 2011

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)

Appendix A: Emission Calculations
Fugitive Dust Emissions - Unpaved Roads (Truck Parking)

Company Name: Exide Technologies
Source Location: 2601 West Mt. Pleasant Blvd., Muncie, IN 47302
SSM No.: 035-36872-00028
SPM No.: 035-36882-00028
Permit Reviewer: Madhurima Moulik

Unpaved Roads at Industrial Site
The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)[1]	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Truck Parking and Turnaround, loaded	50.0	1.0	50.0	36.0	1800.0	400	0.076	3.8	1382.6
		Totals	**50.0**		**1800.0**			**3.8**	**1382.6**

Average Vehicle Weight Per Trip = 36.0 tons/trip
Average Miles Per Trip = 0.08 miles/trip

Unmitigated Emission Factor, Ef = k*[(s/12)^a]*[(W/3)^b] (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Sand/Gravel Processing Plant)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	36.0	36.0	36.0	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365] (Equation 2 from AP-42 13.2.2)
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 120 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	7.89	2.01	0.20	lb/mile
Mitigated Emission Factor, Eext =	5.30	1.35	0.14	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Truck Parking and Turnaround, loaded	5.46	1.39	0.14	3.66	0.93	0.09
Totals	**5.46**	**1.39**	**0.14**	**3.66**	**0.93**	**0.09**

Methodology

[1] Average vehicle wieght estimated based upon information provided in reference: United States Environmental Protection Agency (USEPA). 2012. Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 Through 2011

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)

Indiana Department of Environmental Management
We Protect Hoosiers and Our Environment.
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(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Carol S. Comer
Commissioner

August 24, 2016

Mike Henry
Exide Technologies
2601 W Mount Pleasant Blvd
Muncie, IN 47302

Re: Public Notice
Exide Technologies
Permit Level: Title V - Significant Source Modification & Title V - Significant Permit Modification
Permit Number: 035 - 36872 - 00028 & 035 - 36882 - 00028

Dear Mike Henry:

Enclosed is a copy of your draft Title V - Significant Source Modification & Title V - Significant Permit Modification, Technical Support Document, emission calculations, and the Public Notice which will be printed in your local newspaper.

The Office of Air Quality (OAQ) has prepared two versions of the Public Notice Document. The abbreviated version will be published in the newspaper, and the more detailed version will be made available on the IDEM's website and provided to interested parties. Both versions are included for your reference. The OAQ has requested that the Muncie Star Press in Muncie, Indiana publish the abbreviated version of the public notice no later than August 31, 2016. You will not be responsible for collecting any comments, nor are you responsible for having the notice published in the newspaper.

OAQ has submitted the draft permit package to the JFK Public Library - Muncie Branch, 1700 McGalliard Road in Muncie IN. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Madhurima Moulik, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 3-0868 or dial (317) 233-0868.

Sincerely,
Len Pogost

Len Pogost
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover letter 2/17/2016

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Carol S. Comer
Commissioner

ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING

August 23, 2016

Muncie Star Press
Attn: Classifieds
P.O. Box 2408
Muncie, Indiana 47307

Enclosed, please find one Indiana Department of Environmental Management Notice of Public Comment for Rea Magnet Wire Company, Tippecanoe County, Indiana.

Since our agency must comply with requirements which call for a Notice of Public Comment, we request that you print this notice one time, no later than August 31, 2016.

Please send a notarized form, clippings showing the date of publication, and the billing to the Indiana Department of Environmental Management, Accounting, Room N1345, 100 North Senate Avenue, Indianapolis, Indiana, 46204.

To ensure proper payment, please reference account # 100174737.

We are required by the Auditor's Office to request that you place the Federal ID Number on all claims. If you have any conflicts, questions, or problems with the publishing of this notice or if you do not receive complete public notice information for this notice, please call Len Pogost at 800-451-6027 and ask for extension 3-2803 or dial 317-233-2803.

Sincerely,

Len Pogost

Len Pogost
Permit Branch
Office of Air Quality

Permit Level: Title V - Significant Source Modification & Title V - Significant Permit Modification
Permit Number: 035 - 36872 - 00028 & 035 - 36882 - 00028

Enclosure
PN Newspaper.dot 6/13/2013

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Michael R. Pence
Governor

Carol S. Comer
Commissioner

August 24, 2016

To: JFK Public Library - Muncie Branch 1700 McGalliard Road Muncie IN

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information to Display Regarding a Public Notice for an Air Permit**

Applicant Name: Exide Technologies
Permit Number: 035 - 36872 - 00028 & 035 - 36882 - 00028

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Request to publish the Notice of 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. **Please make this information readily available until you receive a copy of the final package.**

If you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library.dot 2/16/2016

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Michael R. Pence
Governor

Carol S. Comer
Commissioner

Notice of Public Comment

August 24, 2016
Exide Technologies
035 - 36872 - 00028 & 035 - 36882 - 00028

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has been placed in the Legal Advertising section of your local newspaper. The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana's Air Permitting Program.

Please Note: *If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure
PN AAA Cover.dot 2/17/2016

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Michael R. Pence
Governor

Carol S. Comer
Commissioner

AFFECTED STATE NOTIFICATION OF PUBLIC COMMENT PERIOD
DRAFT INDIANA AIR PERMIT

August 24, 2016

A 30-day public comment period has been initiated for:

Permit Number: **035 - 36872 - 00028 & 035 - 36882 - 00028**
Applicant Name: **Exide Technologies**
Location: **Muncie, Delaware County, Indiana**

The public notice, draft permit and technical support documents can be accessed via the **IDEM Air Permits Online** site at:
http://www.in.gov/ai/appfiles/idem-caats/

Questions or comments on this draft permit should be directed to the person identified in the public notice by telephone or in writing to:

Indiana Department of Environmental Management
Office of Air Quality, Permits Branch
100 North Senate Avenue
Indianapolis, IN 46204

Questions or comments regarding this email notification or access to this information from the EPA Internet site can be directed to Chris Hammack at chammack@idem.IN.gov or (317) 233-2414.

Mail Code 61-53

IDEM Staff	LPOGOST 8/24/2016 Exide Technologies 035 - 36872 - 00028 & 035 - 36882 - 00028 draft		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee / Remarks
1		Mike Henry Exide Technologies 2601 W Mount Pleasant Blvd Muncie IN 47302 (Source CAATS)									
2		Robert Saurer Plant Manager Exide Technologies 2601 W Mount Pleasant Blvd Muncie IN 47302 *(RO CAATS)*									
3		Muncie City Council and Mayors Office 300 N. High St Muncie IN 47305 *(Local Official)*									
4		Delaware County Health Department 200 W Main St, County Bldg Room 207-309 Muncie IN 47305-2874 *(Health Department)*									
5		Delaware County Commissioners 100 West Main Street Muncie IN 47305 *(Local Official)*									
6		JD Gibbs ENVIRON International Corp. 5747 Perimeter Drive, Suite 220 Dublin OH 43017 *(Consultant)*									
7		JFK Public Library - Muncie Branch 1700 McGalliard Road Muncie IN 47304 *(Library)*									
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