Appendix E

Exide Technologies:
Fugitive Dust Control Plan

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EXIDE® TECHNOLOGIES

Muncie, Indiana Facility

FUGITIVE DUST CONTROL PLAN-

Standard Operating Procedures for Control of Fugitive Dust Emission Sources

Per 40 CFR § 63.545 Standards for Fugitive Dust Sources

Revised- October 2009

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INTRODUCTION

The Fugitive Dust Control Plan is designed to prevent deterioration of control equipment performance and to minimize emissions of lead from fugitive emission points. Potential sources of fugitive emissions at secondary lead smelters have been identified by the U.S. Environmental Protection Agency (40 CFR Part 63.545) as the following:

I. Plant Roadways
II. Battery Breaking Area
III. Furnace Area
IV. Refinery and Casting Area
V. Raw Material Storage and Handling Areas

The program also provides a complete assessment of all operations that have a potential for emitting lead into the ambient air. This assessment includes a summary of potentially significant lead emission points, operation practices, and controls designed to reduce lead emissions. The program also establishes a fabric filter and scrubber maintenance guide and inspection schedule. Examples of the equipment operation logs and baghouse checklists are provided as attachments.

It is anticipated that this program will be subject to periodic review and, when necessary, revision. Modifications to the program and record keeping forms will be made by Exide Technologies. Exide Technologies recognizes that effective operation and maintenance and fugitive dust programs are necessary to ensure that operations do not produce emissions that may adversely impact the public health or environment.

FUGITIVE DUST CONTROL PROGRAM

The purpose of the Fugitive Dust Plan (Plan) is to identify the potential sources of fugitive lead dust emissions from material handling, storage, and transportation activities during operations at the Exide Technologies facility located in Muncie, Indiana and to describe the control programs utilized to minimize fugitive emissions. This program is responsive to the applicable regulatory requirements in 326 IAC 6-5, 40 CFR Part 63 Subpart X: National Emission Standards for Hazardous Air Pollutants from Secondary Lead Smelting, and condition E.1.2 of the Title V Operating Permit (for Exide.

Facility Information

Name of Facility:	Exide Technologies
Facility Contact Name:	Kimberly Davis, Environmental Manager
Facility Responsible Official:	Daniel Henke, Plant Manager
Facility Location:	2601 West Mount Pleasant Boulevard Muncie, Indiana 47302
Latitude and Longitude:	Latitude: 040° 09' 27" Longitude: 5° 25' 03"
Facility Operations Description:	Secondary Lead Smelting

Source Identification

The following is a list of all processes, operations, and areas which have the potential to emit fugitive emissions as specified in 326 IAC 6-5-4 and 40 CFR 63.545:

Plant Roadways

The plant is comprised of concrete material roadways and parking areas.

Battery Breaking Area

The Battery Breaking Area is located inside the Production Building. The following unit is located in the Battery Breaking Area:

- Unit 1- One (1) lead-battery breaker/crusher

Process and fugitive emission sources related to the Battery Breaking Area include:

- Trailer unloading activities
- Battery breaking
- Material movement/conveyance

Furnace Area

The Furnace Area is located inside the Production Building. The following units are located in the Furnace Area:

- Unit 3- Natural Gas Rotary Dryer
- Unit 4- Reverberatory Furnace

- Unit 5- Blast Furnace (Cupola)

Processes and fugitive emission sources related to the furnace operations include:

- Lead taps
- Slag taps
- Furnace feed systems

Refining and Casting Area

The Refining and Casting Areas and related operations are located inside the Production Building. The following units are located in the Refining and Casting Areas:

- Units 6K1-6K3 and Units 6K5-6K12- Eleven (11) natural gas-fired pot furnaces
- Unit 7- Two (2) lead pig casting machines

Processes and fugitive emission sources related the refining and casting area areas include:

- Kettle- skimming/filling/mixing
- Material transfer
- Casting- blocks and pigs

Materials Storage and Handling Areas

The three primary materials storage and handling areas in the Production Building include:

- Battery Breaking Area- Battery Breaking Area
- Raw Material Storage- Bin Room
- Processed/Finished Product (blocks and pigs)- Shipping and Receiving

The lead bearing materials stored in the Bin Room prior to reclamation in the Reverberatory and Blast furnaces include:

- Breaker/Furnace feed
- Reverberatory Furnace slag
- Blast Furnace slag

The material handling operations in the Production Building include:

- Slag Crusher
- Strip Casting Machines- two units

If materials need to be transported or stored outside of the plant building, all such materials will be transported or stored by the following methods:

- Closed containers
- Temporarily loaded and stored on completely enclosed trailers
- Securely covered with plastic sheeting or tarpaulin
- Dump trailers containing slag will have covers/tarps in place
- Rolloffs will have covers/tarps in place

Augers are used to convey lead bearing material from the Battery Breaking Area into the Bin Room.

Site Map

The map in Figure 1 details the layout of the facility including:

- Concrete surfaced parking areas
- Concrete surfaced driveway areas
- Material conveyance paths
- Transfer points

Vehicular Traffic

Vehicular traffic on the Exide site consists of the following:

- Semi-trucks: 20-50 deliveries per day
  - Delivering lead-acid batteries and lead-bearing materials
  - Delivering bulk materials/liquid oxygen/chemicals/petroleum products
  - Delivering containerized/packaged materials and chemicals
  - Delivering/picking up rolloffs for scrap/trash/waste
- Delivery trucks: 10-20 deliveries per day
  - Delivering parts/materials/metal stock
  - Delivering compressed gas cylinders
- Cars and passenger trucks: 50-150 per day
  - Employee parking
  - Contractor parking
  - Visitor parking

Materials Reclaimed

Spent Lead-Acid Batteries

The types of batteries handled are spent lead-acid batteries with various uses including starting, lighting, and ignition of electrical systems. The sources of the batteries include automotive, commercial, industrial, and recreational uses. The spent batteries are comprised of three basic components: a liquid electrolyte battery acid that contains a solution of approximately 20% sulfuric acid, lead plates with rubber and paper separators, and a polypropylene casing. Exide typically recycles approximately 3.5 million batteries per year.

Lead-Containing Recyclable Materials

Two types of lead-bearing materials generated off-site will be received and stored temporarily prior to recycling: lead-bearing spent materials being reclaimed and lead-bearing scrap metal being reclaimed. The lead-containing recyclable materials will be accepted only if the materials contain no free liquids.

Lead-Bearing Spent Materials Being Reclaimed

Sources of these lead-bearing spent materials include:

- Floor sweepings which contain particles of lead
- Lead-bearing sediment from sump cleanouts in battery manufacturing process areas
- Lead-contaminated clean-up rags, clothing, baghouse bags, scrubber sludge, wastewater treatment sludge, and other material.

Exide typically handles 2.5 million pounds of lead-bearing materials per year.

Lead-Bearing Scrap Metal Being Reclaimed
The majority of lead-bearing scrap metal is from the battery manufacturing process where lead plates are formed and pressed into grids which are then pasted onto separators to allow for the creation of individual battery cells. The battery manufacturing process produces lead scrap. Lead-bearing scrap is also be generated from sources other than the lead-acid battery industry. Exide typically handles 16.5 million pounds of lead-bearing scrap metal per year.

Control Measures

40 CFR 63.545(c) specifies the control measures for the process operations and areas located at a secondary lead smelting facility. The control measures that Exide will follow to meet the control requirements as specified under the NESHAP are as follows:

Plant Roadways

Fugitive lead dust emissions from plant roadways and parking areas will be controlled by several different methods. The primary plant roadways and parking areas are paved with concrete, an impervious hard material that can be effectively cleaned and allow for removal of any fugitive lead dust that potentially could be present. Water flushing, wet scrubbing and mechanical sweeping are all utilized to clean the concrete surfaced plant roadways and parking areas. All paved areas are swept at least twice per day. Records of water flushing and mechanical sweeping will be recorded in the Sweeper Maintenance and Operation Log (Attachment 1). These methods will be applied daily, except under the following weather-related conditions:

- Days with rain in excess of 0.01 inch
- When sand or a similar material has been spread on plant roadways to provide traction on ice or snow
- When the temperature is expected to be below 35^0 F

During periods of temperature below 35^0 F and no precipitation, the paved areas will be mechanically swept at least twice per day, but water flushing will not be used to avoid hazards associated with ice accumulation on roadways. The climatology of the area suggests that these cold-weather conditions will occur primarily from December to March.

During periods of temperature below 35^0 F and snow/ice accumulation, the accumulated snow/ice will be moved in to piles. The piles will be positioned on impervious surfaces so that the melted snow/ice will be collected and treated through the onsite industrial wastewater treatment plant. The treated water is then discharged to the sanitary sewer. Mechanical sweeping will not occur on days when snow/ice is present on the roadways and parking areas. Water flushing will not be performed during these conditions to avoid safety hazards associated with ice accumulation on roadways and parking areas.

Vehicle speed will be limited to five miles per hour and by virtue of the fact that the longest stretch of plant roadway is less than 700 feet long (see Figure 1). This represents a defacto control that will further reduce emissions.

The material storage area (Bin Room in Production Building) is designed so that all vehicles and mobile equipment exiting the Bin Room pass across a vehicle wash to remove any lead bearing debris from the vehicle wheels and body. A pressure washer can utilized to supplement cleaning of vehicles and mobile equipment as well as cleaning any equipment, scrap or other items leaving the Bin Room.

Control of fugitive lead dust emissions from unpaved areas is not necessary and not feasible. There is potential for lead bearing material to be carried outside of the plant buildings on areas not completely flushed the vehicle wash. This material could be tracked onto roadways and parking areas by vehicle and mobile equipment traffic traveling out of the buildings. The control of these areas is discussed above. The perimeter of the paved area will be separated from unpaved areas by curbing to minimize the transfer of lead-bearing dust between paved and unpaved areas.

Battery Breaking Area

Fugitive dust emissions from the battery breaking operation are conducted entirely inside the Production Building. This building is maintained under constant negative pressure and is a structure that meets the requirements of 40 CFR 265.1101(a) and (c). The inflow of air at each overhead doorway in the Production Building is measured and recorded on a quarterly basis on the Quarterly Ventilation Test Points Drawing. A third party contractor performs the monitoring and records the data. The quarterly data records are maintained in the CEMS room (Attachment 2).

A Venturi Scrubber is utilized to capture the emissions from the Battery Breaking Area. The Venturi Scrubber is a 40,000 CFM emission control unit as permitted by the Indiana Department of Environmental Management (IDEM) Office of Air Quality (Operating Permit No. T035-22352-00028). This scrubber is operated and maintained in accordance with the facility's Operation and Maintenance Program.

Furnace Area

The Reverberatory Furnace and the Blast Furnace (Cupola) are located inside of the Production Building. This building is maintained under constant negative pressure and is a structure that meets the requirements of 40 CFR 265.1101(a) and (c). The inflow of air at each overhead doorway in the Production Building is measured and recorded on a quarterly basis on a quarterly basis on the Quarterly Ventilation Test Points Drawing. A third party contractor performs the monitoring and records the data. The quarterly data records are maintained in the CEMS room (Attachment 2).

All processes and fugitive emission sources related to furnace operations, including the emissions from all lead taps, slag taps and furnace feed systems, are ventilated to fabric filter baghouses as permitted by the Office of Air Quality (Operating Permit No. T035-22352-00028). These baghouses are operated and maintained in accordance with the facility's Operation and Maintenance Program.

Refining and Casting Area

All refining and casting activities are conducted inside of the Production Building. This building is maintained under constant negative pressure and is a structure that meets the requirements of 40 CFR 265.1101(a) and (c). The inflow of air at each overhead doorway in the Production Building is measured and recorded on a quarterly basis on a quarterly basis on the Quarterly Ventilation Test Points Drawing. A third party contractor performs the monitoring and records the data. The quarterly data records are maintained in the CEMS room (Attachment 2).

All process and fugitive emission sources related to refining and casting, including all kettle hoods (Units 6K1-6K3 and 6K5-6K12) and both casting machines, are ventilated to a fabric filter baghouse as permitted by the Office of Air Quality (Operating Permit No. T035-22352-00028). This baghouse is operated and maintained in accordance with the facility's Operation and Maintenance Program.

Materials Storage and Handling Area- Baghouse

Lead bearing materials are stored in the Bin Room prior to reclamation in the Reverberatory and Blast smelting furnaces. The material storage area (Bin Room) is located inside the Production Building. This building is maintained under constant negative pressure and is a structure that meets the requirements of 40 CFR 265.1101(a) and (c). The inflow of air at each overhead doorway in the Production Building is measured and recorded on a quarterly basis on a quarterly basis on the Quarterly Ventilation Test Points Drawing. A third party contractor performs the monitoring and records the data. The quarterly data records are maintained in the CEMS room (Attachment 2).

Potential fugitive emissions from this area are controlled by a fabric filter baghouse as permitted by the Office of Air Quality (Operating Permit No. T035-22352-00028). This baghouse is operated and maintained in accordance with the facility's Operation and Maintenance Program.

Materials Storage and Handling Area- Outside Storage

To minimize fugitive emissions, there will be no outside storage of bulk materials containing more than one percent (1%) lead by weight of less than 200-mesh-size particles. (Spent batteries may be temporarily stored outside the building if the battery-breaker equipment were to fail.) This would be for accumulation purposes only during equipment repair. Also, finished product may be stored outside in the event of an emergency. The product will be covered to prevent run-off. Likewise, all such materials will be transported or stored in closed containers, completely enclosed trailers, rolloffs or securely covered when outside of plant buildings. All loading/unloading of hazardous waste, lead bearing raw materials, and processed lead will be done in enclosed areas of the plant building which are to be maintained under constant negative pressure. This should prevent or minimize the potential release of any fugitive emissions to the environment.

Materials Storage and Handling Area- Material Conveyance

To minimize fugitive emissions associated with material conveyance, augers conveying emission control dust will be inspected daily for visible emissions. If visible emissions are observed, the conveyor will be repaired or resealed as required. All augers conveying emission control dust will be covered or otherwise completely

enclosed to minimize the potential release of any fugitive emissions. The conveyance distances will be minimized for all conveyances of emission control dust.

Materials Storage and Handling Area- Vehicle Exiting

The material storage area is also designed so that vehicles exiting the building must pass across a manual truck wash to remove any lead bearing debris from the tires and vehicle body. To supplement this process, all paved areas of the plant yard are swept at least twice per day (pending appropriate weather related conditions). A daily record is maintained of all sweeping operations in the Sweeper Maintenance and Operation Log (Attachment 1). In addition, all paved areas of the plant yard are washed down at least once per day.

Additional information regarding the control systems at the Exide facility is included as Attachment 3.

To ensure that the control measures put in place by Exide are operating properly, a Preventative Maintenance Plan has been developed. The Preventative Maintenance Practices, including inspection and recordkeeping requirements, are included as Attachment 4.

Spill Cleanup

Any spills of lead-bearing material that occur during loading/unloading would be enclosed areas of the Production Building. Fugitive lead dust emissions will be controlled inside the building as it is maintained under constant negative pressure. If the spilled material is batteries then they will be restacked if in good condition and not leaking. If the batteries are leaking or otherwise in poor condition they will be palletized or placed in container for transport and processing in the Battery Breaker. If the spilled material is debris, paste, emission control dust or other lead-bearing pieces it will be collected and placed into containers or piles depending on the volume of spilled material. Spilled material placed in containers will be processed through Bin 6 or placed into and mixed into and aggregrate furnace feed pile. Excess material remaining on the building floor will be cleaned up to minimize the amount of material tracked out of the building onto the paved roadways. The lead-bearing material (particles, less than 200 mesh size and 1% by weight) will be transported in enclosed containers or wetted down. In this case, there will be no need to notify the IDEM of the spill because it occurred in a controlled environment.

In the event of a spill outside of the plant buildings and on the facility site from outdoor material handling, baghouse failure, or spill from auger conveyors, the material will be reloaded for transport or removed to the appropriate enclosed storage area as soon as possible. If the clean-up activity will take more than one (1) day, IDEM will be notified of the incident. The material will be wetted down, if appropriate, to minimize the release of fugitive dust emissions. The spill area will be water-flushed and mechanically swept (permitting mechanical sweeping units can reach the area) to remove any residual material following the clean-up.

Dust Suppressant Materials

Exide will utilize water as a dust suppressant on all paved roadways applied daily except under specific weather related conditions, as described above. No other dust suppressant materials are utilized on-site. Lead bearing materials are stored in the bin room prior to reclamation in the smelting furnaces and there is no outside storage of bulk materials containing more than one percent (1%) lead by weight of less than 200-mesh-size particles. Therefore, there are no aggregate piles stored outdoors that would require dust suppression to reduce fugitive dust emissions.

Particulate Matter Collection and Control Equipment

Plant Roadways

Fugitive lead dust emissions from plant roadways/paved areas are controlled by water flushing and mechanical sweeping. All paved areas will be swept at least twice per day.

Battery Breaking Area

All activities are conducted inside the main smelter building which is maintained under constant negative pressure. An emission control hood is located directly above the Battery Breaking Area. A Venturi Scrubber is utilized to capture the emissions from the Battery Breaking Area. The Venturi Scrubber is a 40,000 CFM emission control unit as permitted by the Indiana Department of Environmental Management (IDEM) Office of Air Quality (Operating Permit No. T035-22352-00028). This scrubber is operated and maintained in accordance with the facility's Operation and Maintenance Program.

Furnace Area

The Reverberatory Furnace and the Blast Furnace (Cupola) are located inside of the main smelter building which is maintained under constant negative pressure. All processes and fugitive emission sources related to furnace operations, including the emissions from all lead taps, slag taps and furnace feed systems, are ventilated to fabric filter baghouses (Process and Ventilation Baghouses) as permitted by the Office of Air Quality (Permit No. T035-22352-00028). These baghouses are operated and maintained in accordance with the facility's Operation and Maintenance Program.

Refining and Casting Area

All refining and casting activities are conducted inside of the Production Building which is maintained under constant negative pressure. All process and fugitive emission sources related to refining and casting, including all kettle hoods (Units 6K1-6K3 and 6K5-6K12) and both casting machines, are ventilated to a fabric filter baghouse (Refinery Baghouse) as permitted by the Office of Air Quality (Operating Permit No. T035-22352-00028). This baghouse is operated and maintained in accordance with the facility's Operation and Maintenance Program.

Materials Storage and Handling Area

Lead bearing materials are stored in the Bin Room prior to reclamation in the Reverberatory and Blast smelting furnaces. The material storage area (Bin Room) is located inside of the Production Building which is maintained under constant negative pressure. Potential fugitive emissions from this area are controlled by a fabric filter baghouse (Bin Room Baghouse) as permitted by the Office of Air Quality (Operating

Permit No. T035-22352-00028). This baghouse is operated and maintained in accordance with the facility's Operation and Maintenance Program.

The auger material conveyors are not covered. The augers are operated and maintained in accordance with the facility's Operation and Maintenance Program. When operating properly, fugitive emissions from the augers entering the Bin Room from the Battery Breaking Area are not expected to create fugitive emissions due to the material having a variable moisture content level.

Compliance Schedule

The initial compliance date for the requirements of 40 CFR 63.545 was December 23, 1997. Exide is in compliance with the requirements for fugitive particulate matter emission control measures.

Record Keeping

Records to document all control measures and activities required under this Plan shall be maintained for a duration of five (5) years. The records must be stored on-site for three (3) years and can be moved to off-site storage for the last two (2) years. The following records must be maintained by Exide:

- Purchasing records and manufacturer's specifications of all HEPA filters on all process fugitive and fugitive dust stacks demonstrating that the HEPA filters meet the definition of a HEPA filter as stated in 40 CFR 63.542.
- Daily records of all mechanical sweeping performed with mechanical sweeper unit to control fugitive dust emissions are documented on Attachment 1.
- Quarterly records of the inflow of air at each doorway in the Production Building are recorded on Attachment 2.

OPERATION AND MAINTENANCE PROGRAM

The purpose of the Operation and Maintenance Program (O&M Plan) is to detail the procedures for inspection, maintenance, bag leak detection and corrective action plans for all baghouses (fabric filters) that are used to control process, process fugitive, or fugitive dust emissions from the source. The O&M Plan is responsive to the applicable regulatory requirements in 40 CFR 63.548. A description of all manufacturing activities and associated controls are included as Attachment 3.

Operation and Maintenance Guide- Fabric Filter Baghouses

Table 1 presents the operation and maintenance guide for fabric filter baghouses. The table details potential operational issues with the fabric filter baghouses, possible causes for the operational issues, and potential corrective actions to return the baghouse to proper operation.

Table 1: Operation and Maintenance Guide- Fabric Filter Baghouses

Issue	Causes	Corrective Action
Dirty discharge at stack or Broken bag leak detector alarm	Bag leaking	Isolate leaking compartment, if allowable without upsetting system.
		Replace bags.
	Blinded filter Fabric bleed through	Isolate leaking compartment, if allowable without upsetting system.
	Bag clamps not sealing	Isolate leaking compartment, if allowable without upsetting system.
		Smooth out cloth under clamp and re-clamp.
		Check and tighten clamps.
	Failure of seals in joints at clean/dirty air connection.	Isolate leaking compartment, if allowable without upsetting system.
		Caulk and repair joints.
	Insufficient filter cake	Isolate leaking compartment, if allowable without upsetting system.
		Check bags
		Allow more dust to build up on bags by cleaning less frequently
		Use a pre-coating of dust on bags.
	Bags too porous	Send bag in for permeability test and review with manufacturer.
High baghouse pressure drop	Bag cleaning mechanism not operating properly	Isolate leaking compartment if allowable without upsetting system.
		Check bag cleaning mechanical mechanisms for proper operation
		Increase duration of cleaning cycle.
		Check bag for blinding. Replace bag.
	Cell isolation damper valve not open/closing	Check mechanically. Check pneumatic system. Check electric sensor system.
	Improper bag tension.	Isolate cell. Tighten bag. Shakedown cell.
	Cleaning time failure	Check to see if timer is indexing to all contacts. Check output on all terminals.
	Not capable of removing dust from bags	Replace bags.
	Incorrect static pressure readings	Clean magnehelic lines. Calibrate magnehelic. Replace magnehelic.

Excessive bag failure	Excessive shaking	Change shaking cycle/duration. Review furnace/lead pot operations and change if necessary to prolong bag life.
	Too much dust	Check process operation.
	Cleaning cycle too frequent	Slow down cleaning.
Bag failure/burning	Improper system operations	Review operations and change to eliminate symptoms.
High bag failure decomposition	Bag material improper for chemical composition of gas or dust	Analyze gas and dust and check with manufacturer. Treat with neutralizer before baghouse.
	Operating below acid dew point	Increase inlet temperature.
Moisture in baghouse	System not purged after shutdown	Keep fan running for 5 to 10 minutes to purge exhaust gases from baghouse after process is shut down.
	Wall temperature below dew point	Raise gas temperature. Insulate, if applicable. Lower dew point by keeping moisture out of system.
	Cold spots at structural members	Fully insulate or coast structural members.
High screw conveyor wear	Screw conveyor undersized	Measure hourly collection of dust and consult manufacturer.
	Conveyor speed too high	Slow down speed
Material bridging in hopper	Moisture in baghouse	Add hopper heaters.
	Dust being stored	Remove dust continuously
	Hopper slope insufficient	Remove or replace hoppers.
	Conveyor opening too small	Modify opening.
Frequent screw conveyor/air lock failure	Equipment undersized	Consult manufacturer.
	Screw conveyor	Align conveyor.
	Overloading components	Check sizing to see that each component is capable of handling a 100% delivery from the previous component.
High pneumatic conveyor wear (soda ash)	Pneumatic blower too fast	Slow down blower.
	Piping undersized	Review design and slow blower or increase pipe size.
	Elbow radius too short	Replace with long radius elbows.
Pneumatic conveyor pipes plugging (soda ash)	Overloading pneumatic conveyor	Review design
	Moisture in dust	See above.

Sudden changes in monitored parameters may indicate a problem. For example, the failure or partial failure of the cleaning (shaker or pulse-jet) system or moisture generally will cause a relatively rapid increase in pressure drop in most systems. While the increase in pressure drop cannot by directly correlated to any increase in emissions, the timely identification, location, and correction of this problem can minimize operational problems and long-term effects on bag life. Although identification and subsequent correction of relatively minor problems have little short term impact on fabric life. If minor problems are ignored, they may ultimately have a deleterious effect. Thus the operation of a fabric filter baghouse must be tracked on a daily basis and any required corrective action taken in an expedient manner.

Maintenance- Fabric Filter Baghouses

Pursuant to 40 CFR 63.548(c), the following inspection and routine maintenance for all dust collectors at Exide shall at a minimum include the following:

- An appropriate method for monitoring cleaning cycles to ensure proper operation.
- Daily monitoring of pressure drop across each baghouse cell.
- Daily checks of compressed air supply for pulse-jet baghouses.

- Weekly confirmation that dust is being removed from hoppers through visual inspection, or equivalent means of ensuring the proper function of removal mechanisms.
- Monthly checks of bag cleaning mechanisms for proper functioning through visual inspection or equivalent means.
- Monthly check of bag tension on reverse air and shaker-type baghouses. Such checks are not required for shaker-type baghouses using self-tensioning (spring loaded) devices.
- Quarterly confirmation of the physical integrity of the baghouse through visual inspection of the baghouse interior for air leaks.

Table 2: Maintenance Inspections Schedule- Fabric Filter Baghouses

Inspection Frequency	Component	Procedure
Shift	Stack	Check exhaust for visible emissions or plume discoloration.
Shift	Compressed air system	Check system pressure and record- Refinery, Bin Room and Rotary Dryer/Kiln Baghouses.
Shift	Collectors	Check and record readings and status on all indicators.
Shift	Auger/screw conveyors Rotary valves	Check for operation and proper rotation.
Shift	Dust conveyor systems	Check discharge point of systems to ensure that collector hoppers are continuously purged.
Daily	Magnehelic	Check and record Differential pressure at least one (1) time per day.
Daily	Cleaning system	Check differential pressure and visually inspect compressed and mechanical systems for proper operation.
Daily	Fans	Monitor and record vibration detector readings (or amp draw) for all baghouse fans.
Daily	Inlet/Outlet Dampers	Confirmation dampers are operating properly can be confirmed by the pressure differential and visual inspections
Weekly	Filter Bags	Visually confirm that bag tension is correct and adjust if required.
Weekly	Baghouse(s)	Confirm physical integrity of unit by visually inspecting each cell for air leaks and integrity breeches.
Quarterly	Filter Bags	Review replacement bag usage and re-bag compartments as required.
Quarterly	Baghouse cells	Inspect the interior of each baghouse cell for air leaks or moisture.
Quarterly	Fans	Inspect for wear, material buildup, and corrosion through visual inspection or equivalent means.
Annually	Ducts	Visually inspect the interior of all ducts for air leaks or blockages-repair as required
Annually	Filter bags	Visually inspect all filter bags for wear and proper tension-replace and/or adjust as needed.
Annually	Cell doors	Visually inspect and replace worn door gaskets to ensure a proper seal.
Annually	Shakers	Inspect all shaker type cleaning mechanisms to ensure proper operation-repair as needed.
Annually	Pulse-jet cleaning system	Inspect pulse-jet cleaning system for refinery and kiln baghouse to ensure proper operation-repair as needed.
Annually	Fans, housings, and motors	Visually inspect all fans, fan housings and motors for deterioration-repair and/or replace as required.
Annually	Screw conveyor and hopper	Inspect all screw conveyors and baghouse hoppers for leaks. Seal if leaks are present.

Annual Inspection/Preventive Maintenance- Fabric Filter Baghouses

During the semi-annual scheduled maintenance rebuilds, baghouse personnel will inspect the baghouse units for the following:

At a minimum, a visual inspection will be conducted to include:

1. The interior of all ducts for air leaks or blockages,
2. The interior of each baghouse cell for air leaks or moisture,
3. All filter bags for wear and proper tension,
4. All gasket material on cell doors to ensure a proper seal,
5. All shaker type cleaning mechanisms to ensure proper operation,
6. The pulse-jet cleaning system for the refinery baghouse and the rotary dryer baghouse to ensure proper operation,
7. All fans, fan housings and motors for apparent deterioration, and
8. All screw conveyors and baghouse hoppers for leaks.
9. Structural integrity of enclosures and partial enclosures including structural steel, sheet metal, roofing panels, trim, etc.

Any deficiencies noted during this inspection will be documented in the baghouse maintenance logbook and corrected in a timely manner.

Beyond routine and preventive maintenance, regimented schedules cannot be established for such items as bag (filter) replacement and certain maintenance items. Bag failures tend to occur shortly after installation, near the end of a bag's useful life, or when operations or bag cleaning varies from normal. A record of bag failures and replacement is invaluable for identifying recurrent problems and identifying when the end of bag life has been reached. Initial bag failures usually occur because of installation errors or bag manufacturing defects. When new bags are installed, a period with few or no bag failures is normally expected unless serious design or operational problems exist. As bags near the end of their useful life, the number of failures will increase.

To help identify the need for wholesale bag replacement, baghouse employees will document the specific location of any individual bags replaced during daily (or weekly) inspections on the appropriate baghouse cell checklist (Attachment 7). The Environmental Supervisor will review these checklists on a quarterly basis to identify any apparent trends. Alarm logs for the broken bag detector system will also be utilized.

To maintain an adequate supply of replacement filter bags, an inventory will be completed quarterly. Under normal conditions, a sufficient quantity of filter bags will be maintained on-site to replace one complete cell in each of the following units:

1. Process baghouse,
2. Ventilation baghouse,
3. Rotary Dryer baghouse,
4. Refinery baghouse, and

5. Bin room baghouse.

Leak Detection System- Fabric Filter Baghouses

In response to the requirements of the National Emission Standards for Hazardous Air Pollutants From Secondary Lead Smelting at 40 CFR Part 63, Subpart X, a broken bag leak detection system (BHA, Inc., Model CPM 5000) has been installed in the outlet ducts on the baghouses listed below:

1. Process baghouse
2. Ventilation baghouse
3. Rotary Dryer/Kiln baghouse
4. Refinery baghouse
5. Bin Room baghouse

In accordance with 40 CFR 63.548 (e), the system is designed to meet the following specifications:

- The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligram per actual cubic meter (0.9944 grains per actual cubic foot) or less.
- The bag leak detection system sensor must provide output of relative particulate matter loadings (mg/dscf).
- The bag leak detection system must be equipped with an alarm system that will alarm when an increase in relative particulate loading is detected over a preset level.
- The bag leak detection system shall be installed and operated in a manner consistent with available written guidance from the U.S. Environmental Protection Agency, or in the absences of such written guidance, the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system.
- The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device and establishing the alarm set points and the alarm delay time.
- Following initial adjustment, the owner or operator shall not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in the approved SOP required under paragraph (a) of this section. In no event shall the sensitivity be increased by more than 100 percent or decreased by more than 50 percent over a 365 day period unless adjustment follows a complete baghouse inspection which demonstrates the baghouse is in good operating condition.
- For negative pressure, induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detector must be installed downstream of the baghouse and upstream of any wet acid gas scrubber.
- Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

The broken bag leak detector installed in these locations has been certified by the manufacturer (BHA Group, Incorporated) to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less. The CPM 5000 is a microprocessor based optical emissions monitoring device that measures particulate flow with a beam of light. The movement of particulate through the beam causes a variation or attenuation in the intensity of the light received. The BHA monitor does not utilize triboelectric or electrodynamic monitoring principles. Each of these units will be in continuous operation. The daily operation, calibration and maintenance of these units will be in accordance with the manufacturer's recommendations.

The broken bag leak detector installed in the outlet duct of the Bin Room baghouse is not required by the NESHAP Standard. It was installed to provide the same monitoring and continuity on that emission control unit as on the other units. The purpose of the Bin Room baghouse is to control dust generated by material storage and material transfer within the Production Building.

Corrective Action Plan

Pursuant to 63.548(f), a corrective action plan was developed to specify the procedures to be followed in the event of a bag leak detection system alarm. These procedures will document the time and cause of the alarm, as well as the corrective actions taken to correct the control device malfunction or minimize emissions. Baghouse employees will monitor the broken bag detector emission alarm strobes during each shift. If an alarm occurs, baghouse employees will take the appropriate corrective action within 30 minutes of the alarm. At a minimum, the corrective action taken will include one or more of the following:

1. Check to ensure alarm is not false: Check emissions from the emission points for particulates using a glass rod test following an opacity monitor alarm. In the event the glass rod test does not indicate particulate in the exhaust, then the alarm is likely to be a false alarm. If the alarm is false, no further action required. If alarm is not false continue with the remaining steps of the corrective action plan:
2. Inspecting the baghouse for air leaks, torn or broken filter elements, or any other malfunction that may cause an increase in emissions;
3. Sealing off defective bags or filter media;
4. Replacing defective bags or filter media, or otherwise repairing the control device;
5. Sealing off a defective baghouse compartment;
6. Cleaning the bag leak detection system optics or otherwise repairing the leak detection system if a false alarm is suspected; and/or
7. Shutting down the process producing the particulate emissions.

Baghouse employees will document all corrective action taken including the date and time completed in the shift log book (Attachment 5). The time of the initial alarm and the identification of the affected unit will be maintained in the computer database for the leak detection system.

Table 3 presents the operation and maintenance guide for a wet scrubber. The table provides operational issues with the wet scrubber, possible causes for the operational problems, and potential solutions to allow for the wet scrubber to return to proper operation.

Table 3: Operation and Maintenance Guide- Wet Scrubbers

Issue	Causes	Corrective Action
Particulate in plume (visible)	Inadequate liquid to air contact	Check liquid feed to scrubber. Check process for proper operation. Check soda ash feed.*
Low Pressure drop	Loss of liquid or packing	Check liquid feed to scrubber. Check process for proper operation. Check soda ash feed.*
	Holes in scrubber	Repair.
High pressure drop	Excessive liquid feed	Adjust feed.
	Damper improperly adjusted	Adjust damper.
	Blocking in packing	Isolate area and clean.
Elevated SO2 emissions	Inadequate air to liquid contact and reaction	Check liquid feed. Check SO2 monitor. Check pH control. Check soda ash addition. Check process operation. Correct as required.

* **Process scrubber only**

Maintenance- Wet Scrubbers

The following table presents the inspection and routine maintenance for all wet scrubbers at Exide:

Table 4: Maintenance Inspections Schedule- Wet Scrubbers

Frequency	Component	Procedure
Shift	Stack	Check for visible dust or discoloration of plume.
Shift	Liquid flow pumps	Check each shift for rotation and motor current.
Shift	pH controls	Check each shift.
Daily	Pressure differential	Check at least (1) time per day.
Each shut down	Internals	Check for blockages, broken components, and corrosion.

***Process system only**

Maintenance- Venturi Scrubber

The following table presents the inspection and routine maintenance for the Venturi Scrubber at Exide:

Table 5: Maintenance Inspections Schedule- Venturi Scrubber

Frequency	Component	Procedure
Shift	Stack	Check for visible dust or discoloration of plume.
Shift	Liquid flow pumps	Check each shift for rotation and motor current.
Daily	Pressure differential	Check at least (1) time per day.
Each shut down	Internals	Check for blockages, broken components, and corrosion.

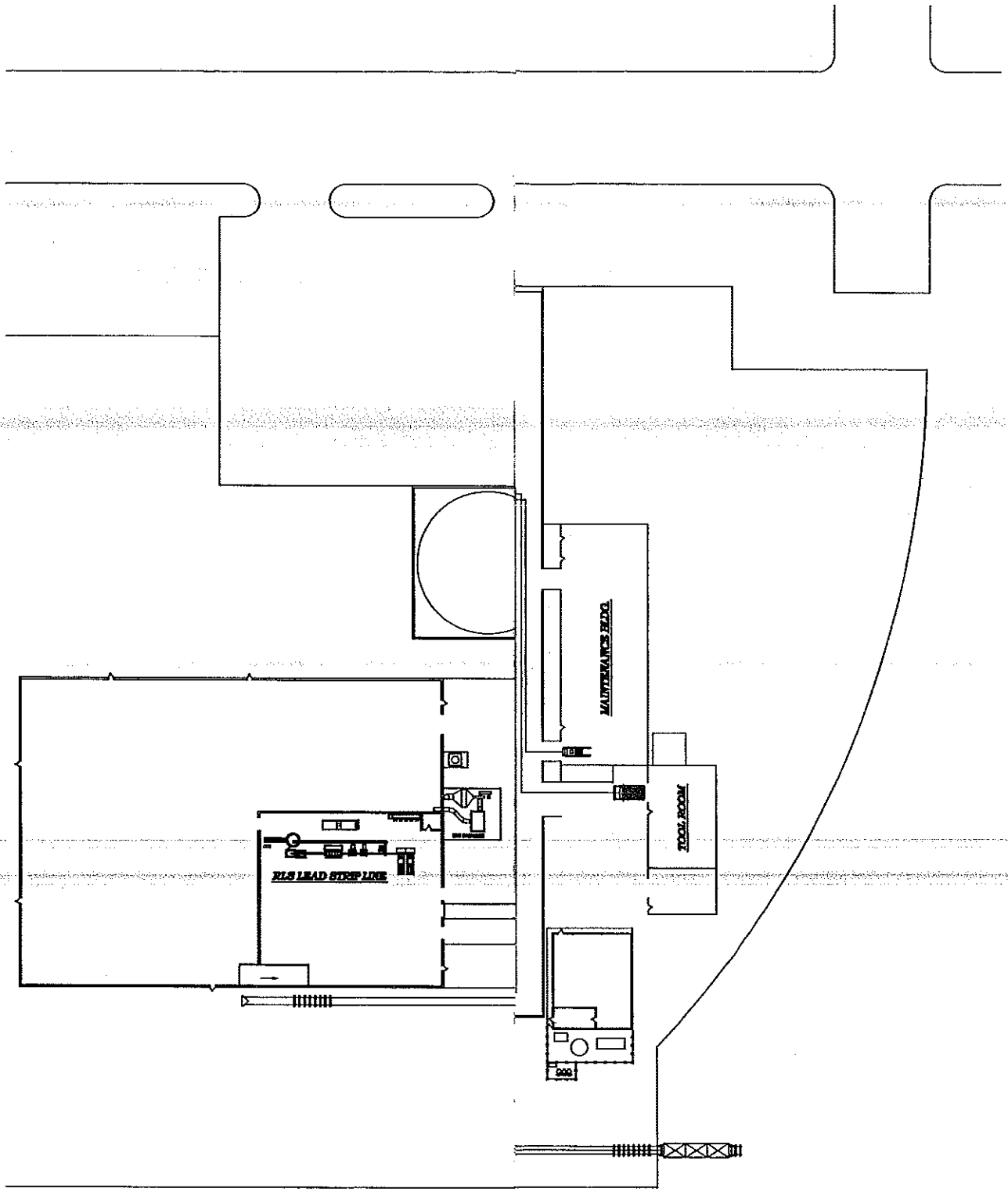
***Process system only**

Attachment 4 provides a detailed daily shift checklist for the operation of the baghouses and wet scrubbers.

EXIDE TECHNOLOGIES

FIGURE 1

FACILITY DRAWING



LEGEND

- RLS DELIVERIES
- BREAKER DELIVERIES
- SHIPPING DOCK
- TOOL ROOM DELIVERIES
- BIN ROOM DELIVERIES
- MAINTENANCE DELIVERIES
- REFINERY FU
- BIN ROOM FU
- BIN ROOM TO
- EQUIPMENT
- SODA ASH DI
- RAIL CARS

EXIDE

EXIDE CORPORATIOI MUNCIE, INDIA

METALS DI

TRAFFIC PATTERNS LAYO

DRAWN TLM	DATE 1/9/2009	SCALE 1" =
CHECKED	DRAWING NO.	
APPROVED	348-320-0013	

SWEEPER MAINTENANCE AND OPERATION LOG

SHIFT OPERATOR: _____ DATE: _____

MAINTEANCE LOG:

1. TRUCK ENGINE OIL LEVEL	____OK	____ LOW
2. TRUCK ENGINE COOLANT LEVEL	____OK	____ LOW
3. AUXILLARY ENGINE OIL LEVEL	____OK	____ LOW
4. AUXILLARY ENGINE AIR CLEANER INDICATOR	____OK	____ UP
5. AUXILLARY ENGINE COOLANT LEVEL	____OK	____ LOW
6. HYDRAULIC OIL LEVEL	____OK	____ LOW
7. HOPPER CONDITION	____OK	____ IF NOT- REPORT_____
8. ALL HOPPER DOORS SEALED	____YES	____ NO
9. DUST COLLECTOR PRESSURE RELIEF VALVE	____OK	____ IF NOT- REPORT_____
10. ALL LIGHTS WORKING	____OK	____ NOT WORKING_____
11. PICK-UP HEAD	____OK	____ NEEDS REPAIR_____
12. VISIBLE LEAKS	____NO	____ YES _____
13. TIRE CONDITION	____OK	____ IF NOT- REPORT_____
14. TRUCK CLEANED AT END OF SHIFT	____YES	____ NO
15. CAB CLEANED AT END OF SHIFT	____YES	____ NO
16. AIR COMPRESSOR OIL LEVEL	____OK	____ LOW

OPERATION LOG:

1. HOURS OF OPERATION	_____ TO _____	
2. PLANT ROADWAYS/PAVED AREAS SWEPT TWICE	____YES	____ NO
IF NO – REASON (E.G. RAIN, SNOW)	_____	
3. PLANT ROADWAYS/PAVED AREAS WASHED	____YES	____ NO
IF NO – REASON (E.G. RAIN, SNOW)	_____	
4. TRUCK WASH OPERATIONAL	____YES	____ NO
IF NO – CORRECTIVE ACTION TAKEN	_____	

ADDITIONAL SPACE (IF NECESSARY)

_____

_____

_____

_____

EXIDE TECHNOLOGIES

ATTACHMENT 2

QUARTERLY VENTILATION TEST POINTS DRAWING

OPERATIONAL CONTROLS

Manufacturing Activities

All manufacturing activities are conducted inside of the Production Building. The Production Building is completely enclosed, under negative pressure, has a concrete floor and solid doors at pedestrian and vehicle accesses. This building meets the requirements of 40 CFR 265.1101 (a) and (c). The indraft at all doorways will be measured and recorded quarterly (see Attachment 2).

Emission Control Unit	Frequency	Operational Parameter	Operational Control	Documentation
Process Baghouse	daily inspection	baghouse temperature	maintain proper temperature range to prevent fabric deterioration	Attachment 5- Daily Shift Log
Process Baghouse	daily inspection	differential pressure	maintain proper differential pressure (2-10 inches water) to prevent fabric deterioration	Attachment 5- Daily Shift Log
Process Baghouse	continuous	monitor particulate in stack emissions	maintain broken bag leak detectors	Attachment 6- Daily Visible Emissions and Operating Parameters Form
Process Scrubbers	hourly reading	specific gravity	Maintain proper level specific gravity in re-circulation tanks for effectiveness in scrubbers	Attachment 8- Scrubber Shift Checklist
Process Scrubbers	daily inspection	differential pressure	maintain proper differential pressure (5-25 inches water)	Attachment 5- Daily Shift Log
Process Scrubbers	daily inspection	liquid flow	maintain proper amp draw on pump	Attachment 5- Daily Shift Log
Process Scrubber	continuous	sulfur dioxide levels	Maintain proper liquid flow	Attachment 5- Daily Shift Log
Ventilation Hoods	daily inspection	engineering control to collect fugitive emissions	Maintain integrity and flow at ventilation hoods	Attachment 9- Hood Shift Reference to Attachment 5- Daily Shift Log
Ventilation Baghouse	daily inspection	baghouse temperature	maintain proper	Attachment 5- Daily Shift Log

			temperature range to prevent fabric deterioration	
Ventilation Baghouse	daily inspection	differential pressure	maintain proper differential pressure to prevent fabric deterioration	Attachment 5- Daily Shift Log
Ventilation Baghouse	continuous	monitor particulate in stack emissions	maintain broken bag leak detectors	Attachment 6- Daily Visible Emissions and Operating Parameters Form
Rotary Dryer Baghouse	daily inspection	baghouse temperature	maintain proper temperature range to prevent fabric deterioration	Attachment 5- Daily Shift Log
Rotary Dryer Baghouse	daily inspection	differential pressure	maintain proper differential pressure to prevent fabric deterioration	Attachment 5- Daily Shift Log
Rotary Dryer Baghouse	continuous	monitor particulate in stack emissions	maintain broken bag leak detectors	Attachment 6- Daily Visible Emissions and Operating Parameters Form
Rotary Dryer Baghouse Enclosure	daily inspection	monitor for particulate release inside enclosure	minimize release of fugitive dust	Attachment 7- Baghouse Cell Checklist for Kiln/Rotary Dryer Baghouse
Rotary Dryer Baghouse Enclosure	daily inspection	inspect integrity of structure including doors	minimize release of fugitive dust	Attachment 7- Baghouse Cell Checklist for Kiln/Rotary Dryer Baghouse
Bin Room Baghouse	daily inspection	differential pressure	maintain proper differential pressure (2-10 inches water) to prevent fabric deterioration	Attachment 5- Daily Shift Log

Battery Breaker

Emission Control Unit	Frequency	Operational Parameter	Operational Control	Documentation
Venturi Scrubber	daily inspection	differential pressure	maintain proper differential pressure (5-25 inches water)	Attachment 4- Venturi Shift Checklist
Venturi Scrubber	daily inspection	liquid flow	maintain proper amp draw on pump	Attachment 4- Venturi Shift Checklist

Material Storage and Handling

Emission Control Unit	Frequency	Operational Parameter	Operational Control	Documentation
Bin Room Baghouse	daily inspection	differential pressure	maintain proper differential pressure to prevent fabric deterioration	Attachment 6- Daily Visible Emissions and Operating Parameters Form Attachment 7- Baghouse Shift Checklist

Refinery and Casting Area

Emission Control Unit	Frequency	Operational Parameter	Operational Control	Documentation
Refinery Baghouse	daily inspection	baghouse temperature	maintain proper temperature range to prevent fabric deterioration	Attachment 6- Daily Visible Emissions and Operating Parameters Form Attachment 7- Baghouse Shift Checklist
Refinery Baghouse	daily inspection	differential pressure	maintain proper differential pressure to prevent fabric deterioration	Attachment 6- Daily Visible Emissions and Operating Parameters Form Attachment 7- Baghouse Shift Checklist
Refinery Baghouse	continuous	monitor particulate in stack emissions	maintain broken bag leak detectors	Attachment 6- Daily Visible Emissions and Operating Parameters Form
Ventilation Hoods	daily inspection	engineering control to collect fugitive emissions	Maintain integrity and flow at ventilation hoods	Attachment 9- Hood Shift Reference to Attachment 5- Daily Shift Log

Emissions Control Dust Handling and Transfer

Emission control dust is conveyed through covered/completely enclosed auger conveying system to the inside of Production Building. Emission control dust is processed through the Reverberatory furnace for reclamation.

Vehicular Traffic

All storage and production areas constructed of concrete and enclosed under negative pressure. The material storage area (Bin Room in Production Building) is designed so that all vehicles and mobile equipment exiting the Bin Room pass across a vehicle wash to remove any lead bearing debris from the vehicle wheels and body. A pressure washer can utilized to supplement cleaning of vehicles and mobile equipment as well as cleaning any equipment, scrap or other items leaving the Bin Room. To supplement this process, all paved areas of the plant yard are swept at least twice per day (pending appropriate weather related conditions). A daily record is maintained of all sweeping operations in the Sweeper Maintenance and

Operation Log (Attachment 1). In addition, all paved areas of the plant yard are washed down at least once per day.

EXIDE TECHNOLOGIES

ATTACHMENT 4

VENTURI SHIFT CHECKLIST

VENTURI SHIFT CHECKLIST

VENTURI	Flow Reading (gpm)
1	
2	
3	
4	
5	
6	
7	
8	

VENTURI	Pump Amp Draw (amps)
1	
2	
3	
4	
5	
6	
7	
8	

NOTES:

EXIDE TECHNOLOGIES

ATTACHMENT 5

DAILY SHIFT LOG

DAILY SHIFT LOG

Complete at the beginning of each shift

Date:_____

	1st	2nd	3rd
Shift Operator Signature			
Visible Emissions	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No
Process Temperature (inlet)	°F	°F	°F
Dust Discharge Functioning?	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No
Kiln Inlet Temperature	°F	°F	°F
Screw Conveyor Functioning?	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No
Compressed Air Pressure	psig	psig	psig
FANS			
Process - North	amps	amps	amps
Process – South	amps	amps	amps
Refinery – North	amps	amps	amps
Refinery – South	amps	amps	amps
Ventilation – North	amps	amps	amps
Ventilation – South	amps	amps	amps
Bin Room	amps	amps	amps
Kiln	amps	amps	amps
Refinery Ventilation Hood	amps	N/A	N/A

Refinery draft/dross lines in place & functioning?	____ yes	____ no	If no, describe condition-
Refinery draft hoods in place & functioning?	____ yes	____ no	If no, describe condition-

Note any items needing attention below or on reverse side of form:

_____

Daily Visible Emissions And Operating Parameters Form

EXIDE TECHNOLOGIES **TITLE V OPERATION PERMIT NO.: T035-22352-00028** **DATE:**_____

MUNCIE, IN

Air Pollution Control Device	Visible Emissions		Pressure Drop (in. water)	Time	Observer's initials	Comments- Explain any "Abnormal" readings. If none, then write "None"
	Normal	Abnormal				
Bin Room BH						
Ventilation BH			N S			
North Scrubber						
South Scrubber						
Process BH	N/A	N/A	N S			
Refinery BH						
Kiln BH						
Venturi Scrubber						
Soda Ash Silos			N/A			

General Comments: _____

EXIDE TECHNOLOGIES

ATTACHMENT 7

BAGHOUSE CELL CHECKLISTS

****DAILY KILN BAGHOUSE CELL CHECKLIST****

DATE:_____ OPERATOR _____ CELL # _____

PRESSURE DROP WHILE CELL ISOLATED:_____

INLET CLEAN: YES_____ NO_____ - EXPLAIN_____

OUTLET DAMPER WORKING: YES_____ NO_____-EXPLAIN_____

HOPPER BRIDGING: YES_____-HOW FAR_____ NO_____

ROTARY VALVE RUNNING: YES_____ NO_____-EXPLAIN_____

BAG SEAT TIGHT IN TUBESHEET: YES_____ NO_____

BAD BAGS: NO_____ YES_____-LOCATION_____

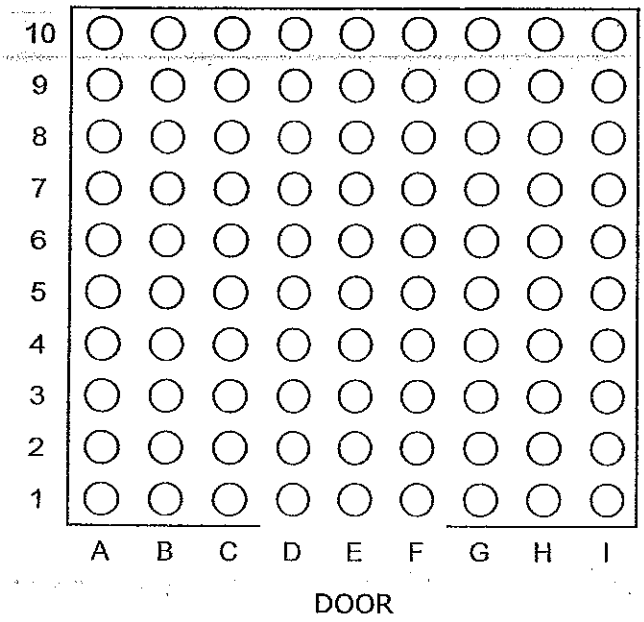
BLOWPIPE ASSEMBLY: OK YES_____ NO_____-EXPLAIN_____

HOLES IN DUCTWORK: NO_____ YES_____-EXPLAIN_____

PULSE JET AIR PRESSURE: _____PSI

BAGS REPLACED: NO_____ YES_____-LOCATION_____

DOES CELL NEED CLEANED: NO_____ YES_____-ACTION TAKEN_____



NOTES

DAILY PROCESS BAGHOUSE CELL CHECKLIST

DATE : _____ OPERATOR : _____ CELL # : _____

PRESSURE DROP WHILE CELL ISOLATED _____

INLET DAMPER WORKING YES _____ NO _____ EXPLAIN _____

OUTLET DAMPER WORKING YES _____ NO _____ EXPLAIN _____

HOPPER BRIDGING YES _____ HOW FAR _____ NO _____

AUGER RUNNING YES _____ NO _____ EXPLAIN _____

BAG TENSION GOOD YES _____ NO _____ LOCATION OF LOOSE BAG _____

BAGS DOWN NO _____ YES _____ LOCATION _____

BAD BAGS NO _____ YES _____ LOCATION _____

SHAKER ASSEMBLY OK YES _____ NO _____ EXPLAIN _____

HOLES IN DUCTWORK NO _____ YES _____ EXPLAIN _____

WATER TRAP MT YES _____ NO _____ OILER LEVEL _____

BAGS REPLACED NO _____ YES _____ LOCATION _____

DOES HOPPER VIBRATOR WORK YES _____ NO _____ EXPLAIN _____

DOES CELL NEED CLEANED YES _____ NO _____

NOTES

A	B	C	D	E	F	G	H	
O	O	O	O	O	O	O	O	1
O	O	O	O	O	O	O	O	2
O	O	O	O	O	O	O	O	3
O	O	O	O	O	O	O	O	4
O	O	O	O	O	O	O	O	5
O	O	O	O	O	O	O	O	6
O	O	O	O	O	O	O	O	7
O	O	O	O	O	O	O	O	8
O	O	O	O	O	O	O	O	9
O	O	O	O	O	O	O	O	10
O	O	O	O	O	O	O	O	11
O	O	O	O	O	O	O	O	12
O	O	O	O	O	O	O	O	13
O	O	O	O	O	O	O	O	14
O	O	O	O	O	O	O	O	15

DOOR

DAILY REFINERY BAGHOUSE CELL CHECKLIST

DATE : _____ OPERATOR : _____ CELL # : _____

PRESSURE DROP WHILE CELL ISOLATED _____

INLET DAMPER WORKING YES _____ NO _____ EXPLAIN _____

OUTLET DAMPER WORKING YES _____ NO _____ EXPLAIN _____

HOPPER BRIDGING YES _____ HOW FAR _____ NO _____

ROTARY VALVE RUNNING YES _____ NO _____ EXPLAIN _____

BAG SEAT TIGHT AT TUBESHEET YES _____ NO _____

BAD BAGS NO _____ YES _____ LOCATION _____

BLOWPIPE ASSEMBLY OK YES _____ NO _____ EXPLAIN _____

HOLES IN DUCTWORK NO _____ YES _____ EXPLAIN _____

PULSE JET AIR PRESSURE PSI _____

BAGS REPLACED NO _____ YES _____ LOCATION _____

DOES CELL NEED CLEANED YES _____ NO _____

NOTES

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	
o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	1
o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	2
o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	3
o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	4
o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	5
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o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	9
o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	10
o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	11
o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	12
o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	13
o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	14
o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	15
o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	16

DOOR

DAILY VENT BAGHOUSE CELL CHECKLIST

DATE : _____ OPERATOR : _____ CELL # : _____

PRESSURE DROP WHILE CELL ISOLATED _____

INLET DAMPER WORKING YES _____ NO _____ EXPLAIN _____

OUTLET DAMPER WORKING YES _____ NO _____ EXPLAIN _____

HOPPER BRIDGING YES _____ HOW FAR) _____ NO _____

AUGER RUNNING YES _____ NO _____ EXPLAIN _____

BAG TENSION GOOD YES _____ NO _____ LOCATION OF LOOSE BAG _____

BAGS DOWN NO _____ YES _____ LOCATION _____

BAD BAGS NO _____ YES _____ LOCATION _____

SHAKER ASSEMBLY OK YES _____ NO _____ EXPLAIN _____

HOLES IN DUCTWORK NO _____ YES _____ EXPLAIN _____

WATER TRAP MT YES _____ NO _____ OILER LEVEL _____

BAGS REPLACED NO _____ YES _____ LOCATION _____

DOES CELL NEED CLEANED YES _____ NO _____

NOTES

A	B	C	D	E	F	G	H	I	J	K	L	
O	O	O	O	O	O	O	O	O	O	O	O	1
O	O	O	O	O	O	O	O	O	O	O	O	2
O	O	O	O	O	O	O	O	O	O	O	O	3
O	O	O	O	O	O	O	O	O	O	O	O	4
O	O	O	O	O	O	O	O	O	O	O	O	5
O	O	O	O	O	O	O	O	O	O	O	O	6
O	O	O	O	O	O	O	O	O	O	O	O	7
O	O	O	O	O	O	O	O	O	O	O	O	8
O	O	O	O	O	O	O	O	O	O	O	O	9
O	O	O	O	O	O	O	O	O	O	O	O	10
O	O	O	O	O	O	O	O	O	O	O	O	11
O	O	O	O	O	O	O	O	O	O	O	O	12
O	O	O	O	O	O	O	O	O	O	O	O	13
O	O	O	O	O	O	O	O	O	O	O	O	14
O	O	O	O	O	O	O	O	O	O	O	O	15
O	O	O	O	O	O	O	O	O	O	O	O	16
O	O	O	O	O	O	O	O	O	O	O	O	17
O	O	O	O	O	O	O	O	O	O	O	O	18
O	O	O	O	O	O	O	O	O	O	O	O	19
O	O	O	O	O	O	O	O	O	O	O	O	20
O	O	O	O	O	O	O	O	O	O	O	O	21
O	O	O	O	O	O	O	O	O	O	O	O	22
O	O	O	O	O	O	O	O	O	O	O	O	23
O	O	O	O	O	O	O	O	O	O	O	O	24

DOOR

****WEEKLY BIN ROOM BAGHOUSE CELL CHECKLIST****

DATE:_____ OPERATOR:_____ CELL#_____

PRESSURE DROP WHILE CELL ISOLATED_____

INLET DAMPER WORKING: YES_____ NO_____ - EXPLAIN_____

OUTLET DAMPER WORKING: YES_____ NO_____-EXPLAIN_____

HOPPER BRIDGING: YES_____-HOW FAR_____ NO_____

GATHER SCREW RUNNING: YES_____ NO_____-EXPLAIN_____

BAG SEAT TIGHT IN TUBESHEET: YES_____ NO_____

BAD BAGS: NO_____ YES_____-LOCATION_____

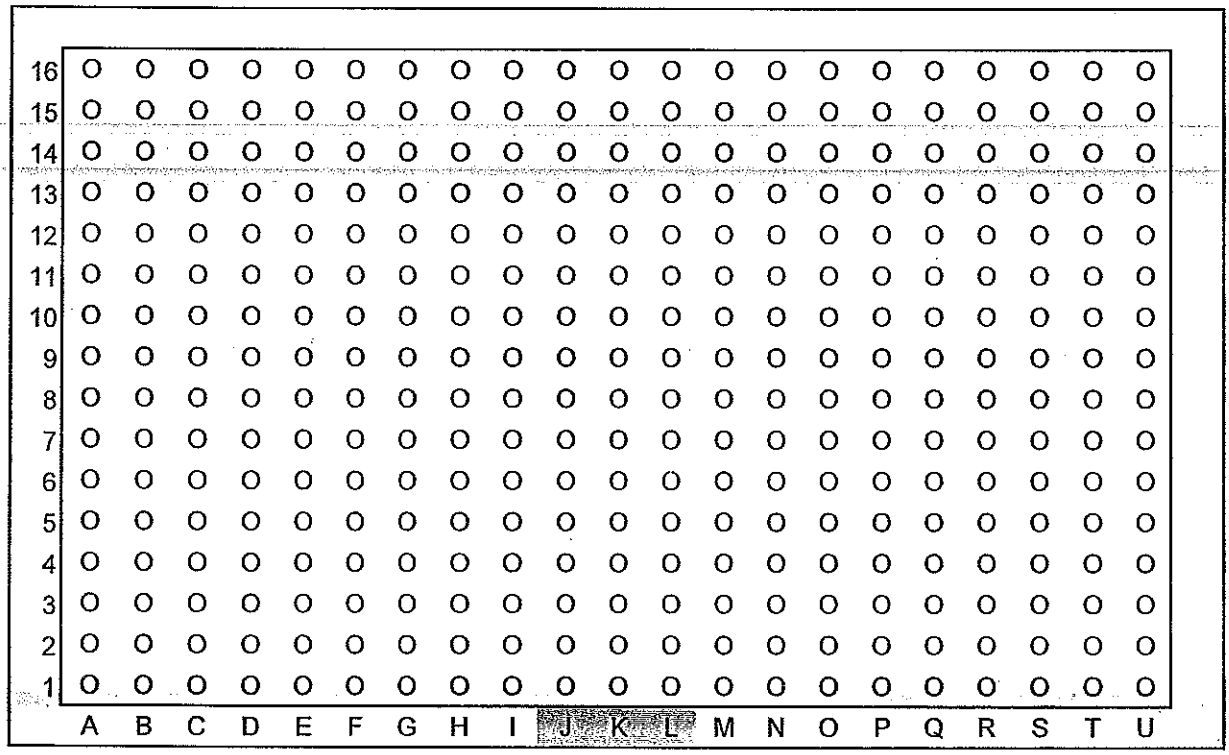
BLOWPIPE ASSEMBLY OK: YES_____ NO_____-EXPLAIN_____

HOLES IN DUCTWORK: NO_____ YES_____-EXPLAIN_____

PULSE JET AIR PRESSURE: _____PSI

BAGS REPLACED: NO_____ YES_____-LOCATION_____

DOES CELL NEED CLEANED: NO_____ YES_____-ACTION TAKEN_____



NOTES:_____

EXIDE TECHNOLOGIES

ATTACHMENT 9

HOOD SHIFT CHECKLIST

THE HOOD SHIFT CHECKLIST IS INCLUDED ON THE DAILY SHIFT LOG.

Appendix F

Exide Technologies:
Agreed Order Case No. 2008-18144-A

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis. Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

October 20, 2009

VIA CERTIFIED MAIL 7002 0510 0002 5825 1765

Mr. Gordon Ulsh, President
Exide Technologies, Inc.
13000 Deerfield Parkway, Bldg. 200
Milton, GA 30004

Re: Adoption of Agreed Order
Commissioner, Indiana Department of Environmental Management
v.
Exide Technologies, Inc.
Case No. 2008-18144-A
Muncie, Delaware Co.

Dear Mr. Ulsh:

This is to inform you that the Agreed Order in the above-referenced case has been approved and adopted by the Indiana Department of Environmental Management. A copy of the Agreed Order is enclosed.

Please note the terms of compliance contained in the Agreed Order. The time frames for compliance are effective upon your receipt of this correspondence. Please note that the civil penalty is due within forty-five (45) days after the effective date of the Agreed Order. Payment should be made payable to the Environmental Management Special Fund and sent to Cashier - Mail Code 50-10C, IDEM, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251. Please include the Case Number on the front of the check. If you have any questions, please contact Lynne Sullivan at (317) 233-5521 or via e-mail at lsulliva@idem.in.gov.

Sincerely,

Phil Perry, Chief
Compliance and Enforcement Branch
Office of Air Quality

Enclosure
cc: Joseph Acker, Exide Technologies, Milton, GA
Frederick Ganster, Exide Technologies, Reading, PA
Kimberly Davis, Exide Technologies, Muncie, IN
Rochelle Marceillars, US EPA, Region 5
Delaware County Health Department
Lynne Sullivan, Compliance and Enforcement Branch, OAQ
Enforcement File
http://www.IN.gov/idem

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

STATE OF INDIANA)
) SS:
COUNTY OF MARION)

BEFORE THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT,

Complainant,

v.

EXIDE TECHNOLOGIES, INC.,

Respondent.

Case No. 2008-18144-A

AGREED ORDER

Complainant and Respondent desire to settle and compromise this action without hearing or adjudication of any issue of fact or law, and consent to the entry of the following Findings of Fact and Order. Pursuant to IC 13-30-3-3, entry into the terms of this Agreed Order does not constitute an admission of any violation contained herein. Respondent's entry into this Agreed Order shall not constitute a waiver of any defense, legal or equitable, which Respondent may have in any future administrative or judicial proceeding, except a proceeding to enforce this order.

I. FINDINGS OF FACT

1. Complainant is the Commissioner ("Complainant") of the Indiana Department of Environmental Management ("IDEM"), a department of the State of Indiana created by Indiana Code ("IC") 13-13-1-1.

2. Respondent is Exide Technologies, Inc. ("Respondent"), which owns and operates a secondary lead smelting company with Plant I.D. No. 035-00028 located at 2601 West Mount Pleasant Boulevard, in Muncie, Delaware County, Indiana ("Site").

3. IDEM has jurisdiction over the parties and the subject matter of this action.

4. Pursuant to IC 13-30-3-3, IDEM issued a Notice of Violation ("NOV") on February 20, 2009 via Certified Mail to:

Mr. Gordon Ulsh, President
Exide Technologies, Inc.
13000 Deerfield Parkway, Bldg. 200
Alpharetta, GA 30004

CT Corporation System
251 E. Ohio Street, Suite 1100
Indianapolis, IN 46204

5. During an investigation conducted by representatives of IDEM, the following violations were found:

   a. Pursuant to IC 13-30-2-1, a person may not discharge, emit, cause, allow, or threaten to discharge, emit, cause or allow any contaminant or waste into the environment in any form that causes or would cause pollution that violates or would violate rules, standards, or discharge or emission requirements adopted by the appropriate board under the environmental management laws.

   b. 326 IAC 1-3-4 establishes the maximum permissible ambient air quality level for lead to be 1.5 micrograms lead per cubic meter of air, averaged over a calendar quarter and measured as elemental lead.

   c. Respondent experienced a short duration event (fire in the process dryer) that caused ambient lead concentrations from the Site to exceed 1.5 micrograms per cubic meter of air averaged over a calendar quarter during the 2nd Quarter of 2008, in violation of IC 13-30-2-1 and 326 IAC 1-3-4. The average lead emissions for that quarter were reported to be 2.33 micrograms per cubic meter.

6. In recognition of the settlement reached, Respondent waives any right to administrative and judicial review of this Agreed Order.

II. ORDER

1. This Agreed Order shall be effective ("Effective Date") when it is approved by Complainant or Complainant's delegate, and has been received by Respondent. This Agreed Order shall have no force or effect until the Effective Date.

2. Respondent shall comply with all applicable federal and state environmental statutes, rules and permits.

3. By October 15, 2009, Respondent shall construct a total enclosure sheet metal structure around the Rotary Dryer Kiln baghouse to minimize the potential release of fugitive lead emissions from the Rotary Dryer Kiln baghouse structure.

4. Respondent shall update its Standard Operating Procedure Manual for Fugitive Dust Control by October 31, 2009 to include cleaning and maintenance of baghouse enclosures as specified by paragraph 3 of this Order, to minimize the potential release of fugitive lead emissions.

5. By October 31, 2009, Respondent shall replace the existing 135 ft enclosed/covered auger at the Ventilation baghouse with a 25 ft enclosed/covered auger to convey baghouse dust directly into the Bin Room.

6. Respondent shall install upgraded bags in the Refinery baghouse according to the following schedule.

   a. By October 31, 2009, Respondent shall install upgraded bags in one cell of the Refinery baghouse as specified in Attachment 1.
   b. Respondent shall evaluate performance of the upgraded bags between six (6) to eight (8) months of installation to determine if bag performance has been improved.
   c. Provided that performance of upgraded bags has been improved, Respondent shall replace the remaining bags in the Refinery baghouse with the upgraded bags within ninety (90) days of the successful performance evaluation. Respondent may utilize an equivalent baghouse bag as specified in Attachment 1 during the initial replacement phase and during any subsequent changes.
   d. In the event that the evaluation of the upgraded bags demonstrates unacceptable performance, Respondent shall submit a proposal for approval by IDEM to evaluate an alternative bag for evaluation within thirty (30) days of the performance evaluation specified in 6b.
   e. Within thirty (30) days of IDEM approval, Respondent shall initiate the steps in paragraph 6 of this Order. Should the events in paragraphs 6.d and 6.e. not produce a successful trial and performance evaluation, Respondent has the option to continue utilizing the baghouse bags that were in place during the most recent performance test that demonstrated compliance with the applicable emission standards.

7. Respondent shall provide a written notification to IDEM within fifteen (15) days of completion of each project required in paragraphs 3, 4, and 5. Respondent shall provide details and documentation of each completed project in the next subsequent status report after the completion of each project. This information shall be submitted to IDEM as specified in paragraph 8 of this Order.

8. Respondent shall provide a status report to IDEM on the 15th of each month to include an update of the project required in paragraph 6 including and until the date the project is complete.

9. All submittals required by this Agreed Order, unless Respondent is notified otherwise in writing by IDEM, shall be sent to:

   Lynne Sullivan, Compliance and Enforcement Manager
   Compliance and Enforcement Branch – Mail Code 61-53
   Indiana Department of Environmental Management
   100 North Senate Avenue
   Indianapolis, IN 46204-2251

10. Respondent is assessed a civil penalty of Ninety-Seven Thousand Five Hundred Dollars ($97,500). Within forty-five (45) days of the Effective Date of the Agreed Order, Respondent shall pay a portion of this penalty in the amount of Nineteen Thousand Five

Hundred Dollars ($19,500) to the Environmental Management Special Fund, noting the case number on the check. In lieu of payment of the remaining civil penalty, Respondent shall make a payment in the amount of Seventy-Eight Thousand Dollars ($78,000) to the Environmental Management Special Fund, noting "DieselWise Indiana Initiative" on the check, to be used for diesel emission reduction projects in Indiana. Payment for the DieselWise Indiana Initiative satisfies Respondent's obligation to undertake a SEP to offset a portion of the civil penalty assessed in this matter. Implementation of this SEP will benefit Indiana's air quality by providing funds to IDEM's DieselWise Indiana Initiative which works to reduce the exposure of pollution from diesel exhaust.

11. In the event that the civil penalty as stated in paragraph 10 above is not paid within forty-five (45) days of the Effective Date, Respondent shall pay interest on the unpaid balance at the rate established by IC 24-4.6-1-101. The interest shall continue to accrue until the civil penalty is paid in full.

12. In the event that Respondent does not make its SEP payment within forty-five (45) days of the Effective Date of this Agreed Order, the full amount of the civil penalty as stated in paragraph 10 above, plus interest established by IC 24-4.6-1-101 on the remaining amount, less the portion of the civil penalty Respondent has already paid, will be due within fifteen (15) days from Respondent's receipt of IDEM's notice to pay. Interest, at the rate established by IC 24-4.6-1-101, shall be calculated on the amount due from the date which is forty-five (45) days after the Effective Date of this Agreed Order until the full civil penalty is paid.

13. In the event the terms and conditions of the following paragraphs are violated, Complainant may assess and Respondent shall pay a stipulated penalty in the following amount:

Paragraph	Violation	Stipulated Penalty
3	Install enclosure on Rotary Dryer Kiln baghouse by October 15, 2009.	$1,000 per week
4	Update SOP Manual by October 31, 2009.	$500 per week
5	Replace Ventilation baghouse auger by October 31, 2009.	$1,000 per week
6a	Upgrade bags in one cell of Refinery baghouse by October 31, 2009.	$1,000 per week
6b	Evaluate performance of upgraded bags between 6 – 8 months of installation.	$500 per week
6c	Upgrade remaining bags in Refinery baghouse within 90 days of successful performance evaluation.	$1,000 per week
6d	Submit proposal for alternative bag, if necessary.	$500 per week
6e	Install alternative upgraded bags, if necessary.	$1,000 per week
7 and 8	Provide reports on project status	$100 per week per report

14. Stipulated penalties shall be due and payable within thirty (30) days after Respondent receives written notice that Complainant has determined a stipulated penalty is due. Assessment and payment of stipulated penalties shall not preclude Complainant from seeking any additional relief against Respondent for violation of this Agreed Order. In lieu of any of the stipulated penalties set out above, Complainant may seek any other remedies or sanctions available by virtue of Respondent's violation of this Agreed Order or Indiana law, including, but not limited to, civil penalties pursuant to IC 13-30-4.

15. Civil and stipulated penalties are payable by check to the "Environmental Management Special Fund." Checks shall include the Case Number of this action and shall be mailed to:

Indiana Department of Environmental Management
Cashier – Mail Code 50-10C
100 North Senate Avenue
Indianapolis, IN 46204-2251

16. This Agreed Order shall apply to and be binding upon Respondent and its successors and assigns. Respondent's signatories to this Agreed Order certify that they are fully authorized to execute this Agreed Order and legally bind the party they represent. No change in ownership, corporate, or partnership status of Respondent shall in any way alter its status or responsibilities under this Agreed Order.

17. In the event that any terms of this Agreed Order are found to be invalid, the remaining terms shall remain in full force and effect and shall be construed and enforced as if this Agreed Order did not contain the invalid terms.

18. Respondent shall provide a copy of this Agreed Order, if in force, to any subsequent owners or successors before ownership rights are transferred. Respondent shall ensure that all contractors, firms and other persons performing work under this Agreed Order comply with the terms of this Agreed Order.

19. This Agreed Order is not and shall not be interpreted to be a permit or a modification of an existing permit. This Agreed Order, and IDEM's review or approval of any submittal made by Respondent pursuant to this Agreed Order, shall not in any way relieve Respondent of its obligation to comply with the requirements of its applicable permits or any applicable Federal or State law or regulation.

20. Complainant does not, by its approval of this Agreed Order, warrant or aver in any manner that Respondent's compliance with any aspect of this Agreed Order will result in compliance with the provisions of any permit, order, or any applicable Federal or State law or regulation. Additionally, IDEM or anyone acting on its behalf shall not be held liable for any costs or penalties Respondent may incur as a result of Respondent's efforts to comply with this Agreed Order.

21. Nothing in this Agreed Order shall prevent or limit IDEM's rights to obtain penalties or injunctive relief under any applicable Federal or State law or regulation, except that IDEM

may not, and hereby waives its right to, seek additional civil penalties for the same violations specified in the Notice of Violation.

22. Nothing in this Agreed Order shall prevent IDEM or anyone acting on its behalf from communicating with the EPA or any other agency or entity about any matters relating to this enforcement action. IDEM or anyone acting on its behalf shall not be held liable for any costs or penalties Respondent may incur as a result of such communications with the EPA or any other agency or entity.

23. Respondent shall perform the requirements of this Order in the manner and within the time limits set forth herein, unless the performance is prevented or delayed by events which constitute a force majeure. *Force majeure*, for purposes of this Agreed Order, is defined as any event arising from causes totally beyond the control and without fault of Respondent that delays or prevents the performance of any obligation under this Agreed Order despite Respondent's best efforts to fulfill the obligation. The requirement that Respondent exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential *force majeure* event and best efforts to address the effects of any potential *force majeure* event (1) as it is occurring and (2) following the potential *force majeure* event, such that the delay is minimized to the greatest extent possible. *Force majeure* does not include (1) changed business or economic conditions; (2) financial inability to complete the work required by this Agreed Order; or (3) increases in costs to perform the work.

Respondent shall notify IDEM by calling the case manager within three (3) calendar days and by writing no later than seven (7) calendar days after it has knowledge of any event which Respondent contends is a force majeure. Such notification shall describe (1) the anticipated length of the delay; (2) the cause or causes of the delay; (3) the measures taken or to be taken by Respondent to minimize the delay; and (4) the timetable by which these measures will be implemented. Respondent shall include with any notice all available documentation supporting its claim that the delay was attributable to a force majeure. Failure to comply with the above requirements shall preclude Respondent from asserting any claim of force majeure for that event. Respondent shall have the burden of demonstrating that the event is a force majeure. The decision of whether an event is a force majeure shall be made by IDEM.

If a delay is attributable to a force majeure, IDEM shall extend, in writing, the time period for performance under this Agreed Order, by the amount of time that is directly attributable to the event constituting the force majeure.

24. This Agreed Order shall remain in effect until Respondent has complied with all terms and conditions of this Agreed Order and IDEM issues a Resolution of Case letter to Respondent.

TECHNICAL RECOMMENDATION:
Department of Environmental Management

By: Craig Henry
Craig Henry, Chief
Compliance and Enforcement
Section 4
Office of Air Quality

Date: 9/17/09

RESPONDENT:
Exide Technologies, Inc.

By: Joseph Acker Jr.

Printed: Joseph Acker Jr.

Title: Vice President + General Manager

Date: 10/06/09

COUNSEL FOR COMPLAINANT:
For the Department of Environmental Management

By: David Lashbrook
Deputy Attorney General

Date: 9/25/2009

COUNSEL FOR RESPONDENT:

By: _____

Date: _____

APPROVED AND ADOPTED BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT THIS 20th DAY OF October, 2009.

For the Commissioner:

Daniel Murray
Assistant Commissioner
Office of Air Quality

Attachment 1

Filtration Fabric Datasheet

Style:	PE806	
Fiber:	100% Spun Bonded Polyester	
Construction:	Non-woven, spun bond	
Finish:	Calendered, Heat Set	
Weight:	8 oz/yd² (271 g/m²)	
Air Permeability:	13 - 25 ft³/min/ft² (cfm) @ .5" H_2O	-ASTM D 737 (U.S.)
	62.4 - 120 l/dm²/min @ 200 Pa	-DIN 53887 (Germany)
	6.5 - 12.5 cm³/cm²/s @ 125 Pa	-JIS L 1096-A (Japan)
Minimum Mullen Burst Strength:	287 psi (20 kg/cm²)	
Maximum Operating Temperature:	275° F (135° C)	
Thermal Stability:	2% max. @ 275° F	2% max. @ 135° C

GE Energy Sales: 1.800.821.2222/816.356.8400 8800 East 63rd St. Kansas City MO 64133 U.S.A

K6MK857 Rev. 08/09/05

APPENDIX G

Modeling Summary

- **Air Quality Analysis**
- **Wind Rose Analysis**
- **Precipitation and Snow Cover Analysis**

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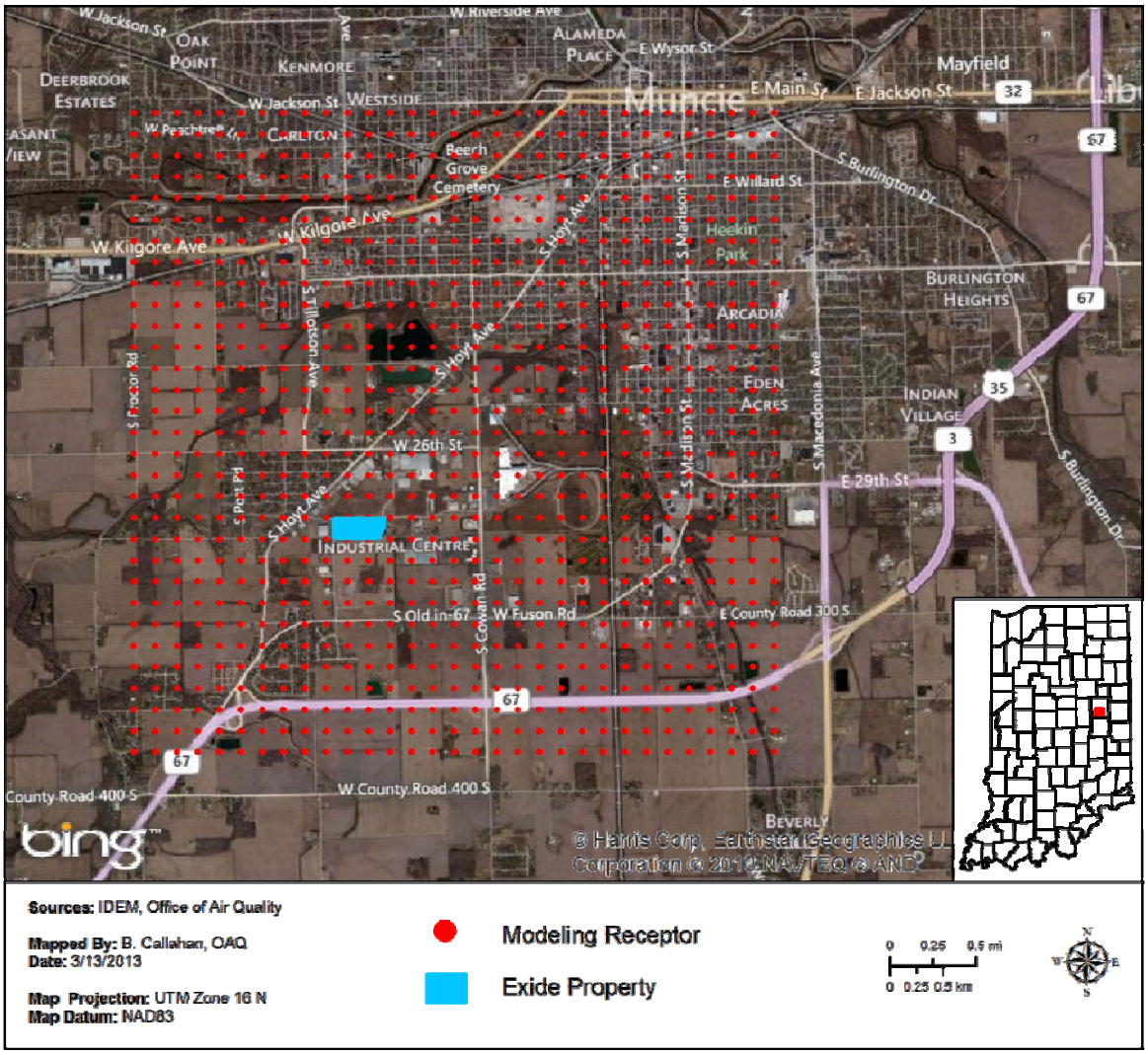
Modeling Receptor Grid for Exide Technologies



Exide's sources are indicated by the red thumbtacks.

2009 Point Sources – Exide Technologies

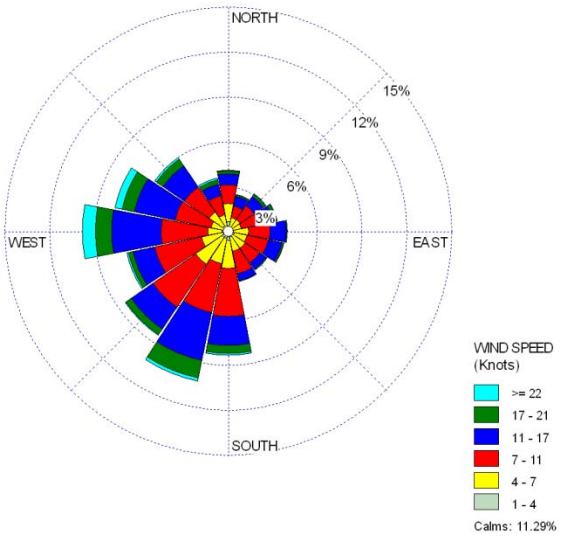
Unit	Description	Permitted Lead Emission Limits (tpy)
Unit 1	Lead Battery Crusher/Breaker	0.28
Unit 4	Lead Reverberatory Furnace	1.49
Unit 8	Material Handling	0.08
Unit 9	Slag Crusher/Melting Pots	0.74
Total Lead Emissions		**2.59**

2011 Point Sources – Exide Technologies

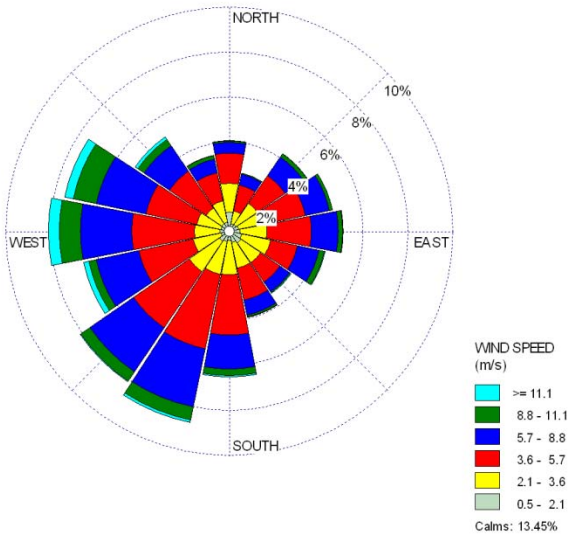
Unit	Description	NESHAP Lead Emission Limits (tpy)
Unit 1	Lead Battery Crusher/Breaker	0.27
Unit 4	Lead Reverberatory Furnace	0.48
Unit 8	Material Handling	0.004
Unit 9	Slag Crusher/Melting Pots	0.008
Total Lead Emissions		**0.76**

Annual Wind Roses for 2008-2011

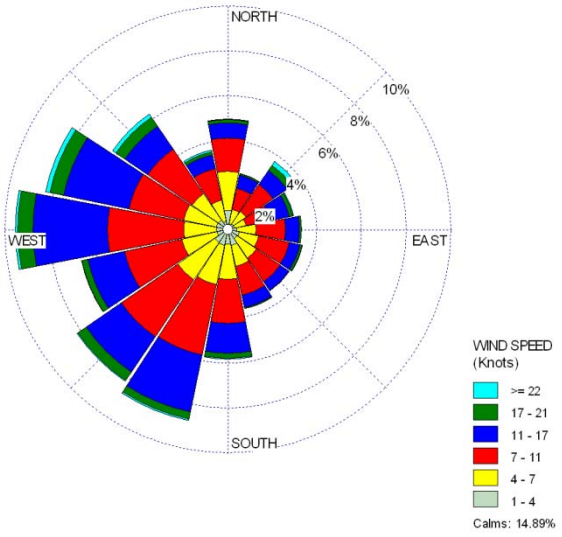
2008



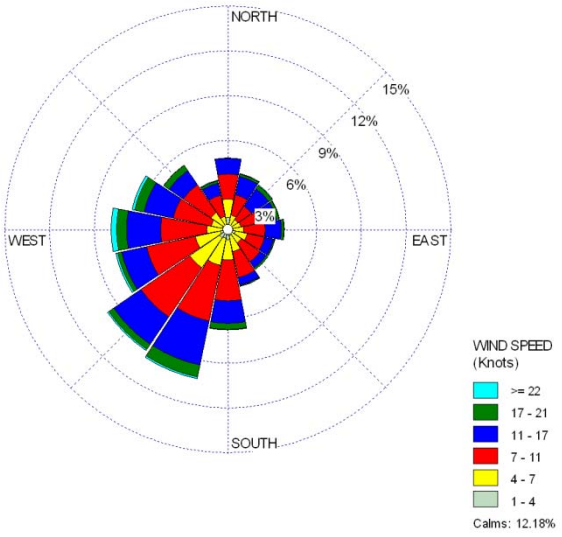
2009



2010



2011



Snow Cover Observed on Monitored Days (Delaware County – Johnson ASOS Station)

	Snow Cover on 33 days		No Snow Cover on 227 days	
	Exide East Site	**Exide West Site**	**Exide East Site**	**Exide West Site**
	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
Average	0.324	0.058	0.710	0.171
Maximum	1.650	0.289	39.080	5.800

Precipitation Recorded on Monitored Days (Delaware County – Johnson ASOS station)

	Exide East Site	**Exide West Site**
Concentrations when…	($\mu g/m^3$)	($\mu g/m^3$)
No precipitation was recorded	0.440	0.126
Precipitation was recorded	0.913	0.193

Wind Conditions/Precipitation on the Highest Concentration Days at the Muncie – Exide East Site Monitor

Date / Day	**Exide East Site**	**Exide West Site**	**Precipitation?**	**Wind Conditions**
	($\mu g/m^3$)	($\mu g/m^3$)	(inches)	(direction and speed)
6/27/2008 - Friday	39.08	0.03	Yes - 0.21 rain	SW winds (3 to 13 mph) all day
6/5/2008 - Thursday	6.62	0.03	No	SSW to SW winds (6 to 15 mph) all day
5/26/2008 - Monday	4.26	0.04	Yes - trace rain	SW to WSW winds (3 to 20 mph) all day
7/3/2008 - Thursday	4.23	0.03	Yes - 1.03 rain	Wind shift at noon from SW (3 to 17 mph) to NE
6/9/2008 - Monday	3.99	0.03	Yes - 0.64 rain	SW to SSW winds (6 to 15 mph) all day
3/11/2008 - Tuesday	3.82	0.03	No	NW to W to SW winds (3 to 20 mph) all day
3/25/2008 - Tuesday	3.67	0.03	No	SW to WSW to W winds (6 to 28 mph) all day
5/14/2008 - Wednesday	3.47	0.03	Yes - 0.61 rain	SW to S to SW to NW winds (5 to 15 mph) all day
4/25/2009 - Saturday	2.98	0.03	No	SW winds (7 to 24 mph) all day
6/7/2008 - Saturday	2.79	0.03	Yes - 0.84 rain	W to SW to S winds (4 to 16 mph) all day
8/9/2009 - Sunday	2.64	0.03	No	SW to W to SW winds (6 to 15 mph) all day
6/29/2008 - Sunday	2.47	0.03	Yes - 0.08 rain	SW to WSW to W to NW winds (5 to 20 mph) all day
6/3/2008 - Tuesday	2.32	0.39	Yes - 0.52 rain	SSW to SW to NW to E winds (5 to 13 mph) all day
8/21/2009 - Friday	2.29	0.03	Yes - 0.03 rain	SW to NW winds (5 to 16 mph) all day
6/25/2008 - Wednesday	2.28	0.03	No	S to SW winds (3 to 15 mph) all day
7/11/2008 - Friday	2.14	0.05	Yes - trace rain	WSW to W to SW winds (3 to 13 mph) all day
7/7/2008 - Monday	1.94	0.14	No	S to SW to W to SW winds (3 to 11 mph) all day
6/8/2011 - Wednesday	1.80	N/A	No	S to SW to WSW to SW winds (6 to 15 mph) all day
5/30/2008 - Friday	1.78	0.04	Yes - 0.08 rain	S to SW winds (3 to 23 mph) all day
1/23/2008 - Wednesday	1.65	0.03	No	SW to W to SW winds (7 to 13 mph) all day

Wind Conditions/Precipitation on Highest Concentration Days at the Muncie – Exide West Site Monitor

Date / Day	Exide West Site	Exide East Site	Precipitation?	Wind Conditions
	($\mu g/m^3$)	($\mu g/m^3$)	(inches)	(direction and speed)
4/10/2008 - Thursday	5.80	N/A	Yes - 0.43 rain	E to SE winds (9 to 18 mph) all day
4/8/2008 - Tuesday	1.76	N/A	Yes - trace rain	NW to NE to SE to S winds (3 to 17 mph) all day
4/24/2008 - Thursday	1.55	N/A	Yes - 0.18 rain	SE to S winds (5 to 23 mph) all day
3/17/2008 - Monday	1.44	0.03	Yes - 0.1 rain	SE winds (9 to 18 mph) all day
3/21/2008 - Friday	1.01	0.44	Yes - 0.02 rain	E to SE to NE winds (5 to 17 mph) all day
9/23/2008 - Tuesday	0.59	0.04	No	SE to S to SE winds (calm to 10 mph) all day
10/7/2008 - Tuesday	0.57	0.17	Yes - 0.41 rain	SE to SW to S winds (6 to 13 mph) all day
9/19/2008 - Friday	0.56	0.06	No	ESE to E to SE to SW winds (calm to 5 mph) all day
7/14/2009 - Tuesday	0.50	0.031	No	SE winds (calm to 15 mph) all day
3/29/2008 - Saturday	0.49	0.03	No	NE to E to SE to E winds (3 to 18 mph) all day

Appendix H

Public Participation Process Documentation

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LEGAL NOTICE OF PUBLIC HEARING

Attainment Demonstration and Technical Support Document in association with the 2008 Lead Standard for the Muncie, Delaware County, Indiana Area

Notice is hereby given under 40 CFR 51.102 that the Indiana Department of Environmental Management (IDEM) is accepting written comment and providing an opportunity for public hearing regarding the Draft Attainment Demonstration and Technical Support Document in association with the 2008 lead standard, for the Muncie, Delaware County, Indiana area. The area includes the Exide Technologies, Muncie, Indiana facility and is bounded by the following city streets: West 26th Street/Hines Road to the north, Cowan Road to the east, West Fuson Road to the south, and South Hoyt Avenue extended to West 26th Street to the west. All interested persons are invited and will be given reasonable opportunity to express their views concerning the submittal of the proposed Attainment Demonstration and Technical Support Document in association with the 2008 lead standard for the Muncie, Delaware County, Indiana area.

The Muncie, Delaware County, Indiana area was designated as "nonattainment" for the 2008 lead standard and subject to the requirements of Section 172 of the Clean Air Act (CAA). One of the compliance requirements mandated by Section 172(c) of the CAA is the development of a plan demonstrating that the area will meet the federal 2008 air quality standard by the required attainment date. This Attainment Demonstration and Technical Support Document is being drafted and submitted consistent with United States Environmental Protection Agency (U.S. EPA) guidance.

Copies of the draft documents will be available on or before December 14, 2012, to any person upon request at the following locations:

- Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, 100 North Senate Avenue, Room N1003, Indianapolis, Indiana

- Muncie-Center Township Public Library, 2005 South High Street, Muncie, Indiana

- Yorktown-Mount Pleasant Township Public Library, 8920 West Adaline Street, Yorktown, Indiana

The draft documents will also be available on the following web page:

http://www.in.gov/idem/4654.htm

Any person may submit written comments on the Attainment Demonstration and Technical Support Document in association with the 2008 lead standard, for the Muncie, Delaware County, Indiana area on or before January 21, 2013. Written comments should be directed to Mr. Gale Ferris, Mail Code 61-50, Office of Air Quality, Indiana Department of Environmental Management, 100 North Senate Avenue, Indianapolis, Indiana 46204; or fax (317) 233-5967; or e-mail at gferris@idem.in.gov. Interested parties may also present oral or written comments at the public hearing, if held. Oral statements will be heard, but for the accuracy of the record, statements should be submitted in writing. Written statements may be submitted to the attendant designated to receive written comments at the public hearing.

A public hearing on the Attainment Demonstration and Technical Support Document in association with the 2008 lead standard for the Muncie, Delaware County, Indiana area will be held if a public hearing request is received by January 7, 2013. A hearing has been scheduled for January 16, 2013. The hearing will convene at 6:00 p.m. local time at the Kennedy Library located at 1700 West McGalliard Road, Muncie, Indiana 47304. If a request for a public hearing is not received by January 7, 2013, the hearing will be cancelled. Interested parties can check the online IDEM calendar at http://www.in.gov/idem/5390.htm or contact Mr. Gale Ferris at (317) 234-3653, after January 7, 2013, to see if the hearing has been cancelled or will convene.

A transcript of the hearing and all written submissions provided at the public hearing shall be open to public inspection at IDEM and copies may be made available to any person upon payment of reproduction costs. Any person heard or represented at the hearing or requesting notice shall be given written notice of actions resulting from the hearing.

For additional information contact Mr. Gale Ferris, at the Indiana Department of Environmental Management, Office of Air Quality, Room N1001, Indiana Government Center North, 100 North Senate Avenue, Indianapolis, IN 46204 or call (317) 234-3653 or (800) 451-6027 ext. 4-3653 (in Indiana).

Individuals requiring reasonable accommodations for participation in this hearing, if held, should contact the IDEM Americans with Disabilities Act (ADA) coordinator at:

Attn: ADA Coordinator
Indiana Department of Environmental Management – Mail Code 50-10
100 North Senate Avenue
Indianapolis, IN 46204-2251

Or call (317) 233-1785 (voice) or (317) 232-6565 (TDD). Please provide a minimum of 72 hours notification.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

December 11, 2012

CERTIFICATE OF PUBLICATION

This is to certify that the Indiana Department of Environmental Management (IDEM) Notice of the opportunity for a Public Hearing regarding the following:

- Draft Attainment Demonstration and Technical Support Document in association with the 2008 Lead Standard for the Muncie, Delaware County, Indiana Area

was published on IDEM's web site on December 11, 2012. It remained posted on the site until at least January 21, 2013.

The notice in full was available online at the following web address, under "Delaware" county.

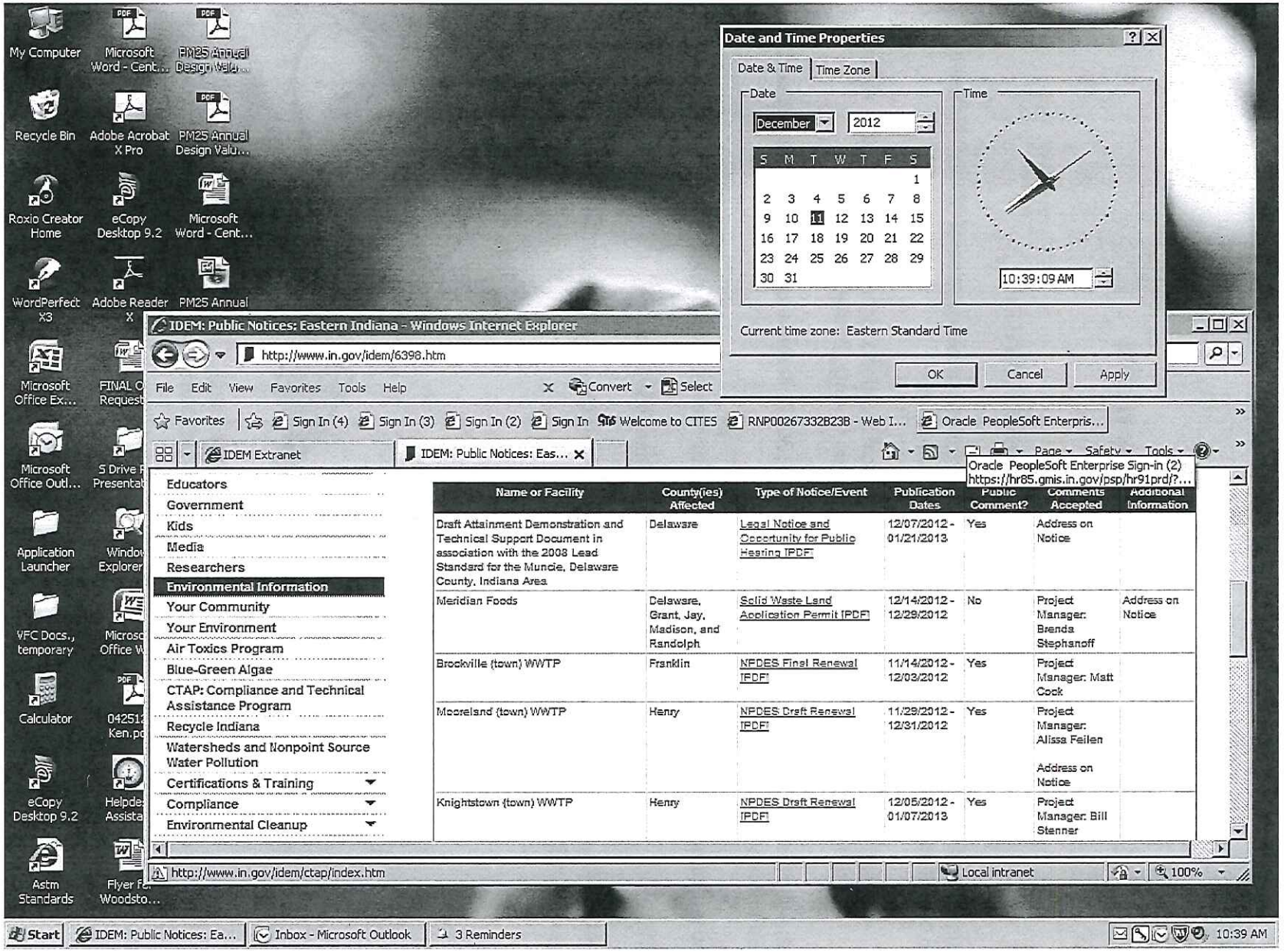
http://www.in.gov/idem/6398.htm

Web publication of the notice was at the request of Scott Deloney, Branch Chief, Programs Branch, Office of Air Quality, IDEM.

By:

Mike Finklestein
IDEM Webmaster

Attachments:
Copy of web page as published.


Date and Time Properties
Date & Time
Time Zone
Date
December
2012
Time
10:39:09 AM
Current time zone: Eastern Standard Time
OK
Cancel
Apply
IDEM: Public Notices: Eastern Indiana - Windows Internet Explorer
http://www.in.gov/idem/6398.htm
File Edit View Favorites Tools Help
Favorites
IDEM Extranet
IDEM: Public Notices: Eas...
Oracle PeopleSoft Enterprise Sign-in (2)
https://hr85.gmis.in.gov/psp/hr91prd/?...
Educators
Government
Kids
Media
Researchers
Environmental Information
Your Community
Your Environment
Air Toxics Program
Blue-Green Algae
CTAP: Compliance and Technical Assistance Program
Recycle Indiana
Watersheds and Nonpoint Source Water Pollution
Certifications & Training
Compliance
Environmental Cleanup
Name or Facility
County(ies) Affected
Type of Notice/Event
Publication Dates
Public Comment?
Comments Accepted
Additional Information
Draft Attainment Demonstration and Technical Support Document in association with the 2008 Lead Standard for the Muncie, Delaware County, Indiana Area
Delaware
Legal Notice and Opportunity for Public Hearing [PDF]
12/07/2012 - 01/21/2013
Yes
Address on Notice
Meridian Foods
Delaware, Grant, Jay, Madison, and Randolph
Solid Waste Land Application Permit [PDF]
12/14/2012 - 12/29/2012
No
Project Manager: Brenda Stephanoff
Address on Notice
Brookville (town) WWTP
Franklin
NPDES Final Renewal [PDF]
11/14/2012 - 12/03/2012
Yes
Project Manager: Matt Cook
Mooreland (town) WWTP
Henry
NPDES Draft Renewal [PDF]
11/29/2012 - 12/31/2012
Yes
Project Manager: Alissa Feilen
Address on Notice
Knightstown (town) WWTP
Henry
NPDES Draft Renewal [PDF]
12/05/2012 - 01/07/2013
Yes
Project Manager: Bill Stenner
http://www.in.gov/idem/ctap/index.htm
Local intranet
100%
Start
IDEM: Public Notices: Ea...
Inbox - Microsoft Outlook
3 Reminders
10:39 AM