Class 2 RCRA Permit Modification Application

Facility Upgrades to Accommodate Negative Pressure Ventilation System

Exide Technologies
Canon Hollow Battery Recycling Facility
Hazardous Waste Permit Number MOD030712822

February 2013
Revised May 2013
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BARR

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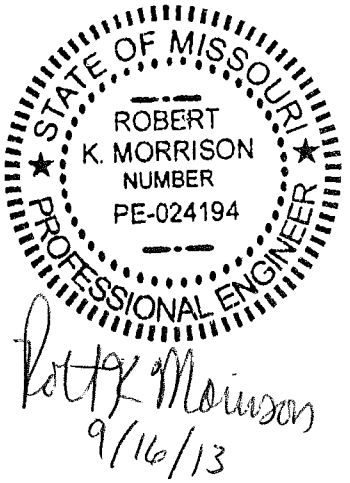

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1.0 Introduction

Exide Technologies owns and operates a secondary lead smelting plant located in Holt County in northwest Missouri. The plant, known as the Canon Hollow Recycling Facility, is located approximately four miles northwest of Forest City, Missouri just off State Highway 111. The plant recycles lead-acid storage batteries and other lead-bearing raw material obtained from offsite into new metallic lead pig and block ingots. Some of the raw materials are classified as a hazardous waste and require storage in RCRA-permitted units. The recycling process generates a slag residue that is considered a hazardous waste.

All hazardous waste activities at the facility are regulated by the Missouri Department of Natural Resources (MDNR) and the Environmental Protection Agency (EPA). The hazardous waste storage and disposal activities are regulated under Missouri Hazardous Waste Management Facility (MHWMF) Permit No. MOD030712822 and the recycling activities are regulated under Missouri Hazardous Waste Resource Recovery Certificate RR-0052.

Exide intends to modify their material flow routes and install ventilation equipment necessary to establish negative pressure systems on facility buildings in response to the National Emission Standards for Hazardous Air Pollutants (NESHAPs) and National Ambient Air Quality Standards (NAAQS). Installation of the negative pressure systems will require closing off or modifying some of the building doorways, sealing openings in the roofing and siding, removing the nonstructural/containment portions of certain interior walls, and installing new overhead doors in place of certain existing doors. Some of these modifications will affect RCRA-regulated units. Additionally, Exide also intends to convert a portion of the currently permitted South Containment Building bulk material storage area (S06) to add a container storage area to store industrial and automotive lead-acid batteries to support an industrial battery cell extraction resource recovery process that will be located in this area of the South Containment Building. Exide Technologies is submitting this application for a Class 2 permit modification to MHWMF Permit MOD030712822 for the following activities:

1. The addition of an unloading bay, dump pocket, and airlock to the 80-foot x 80-foot Storage Area containment building. This addition will accommodate the additional storage of 41 cubic yards of recyclable material to the 80-foot x 80-foot Storage Area (regulated containment building). The addition of the unloading bay and dump pocket will require the extension of the adjacent roadway by approximately 25 feet to accommodate truck traffic in the area. As shown on Drawings C-02, C-03, and C-04, the buffer land between the current roadway and the closed landfill will be regraded to allow for the extension of the roadway.

2. The addition of the Charge Floor Area as a regulated containment building unit with storage of up to 4 cubic yards of material containing no free liquids. The hazardous waste will be accumulated in a container that will be located on the south wall of the Charge Floor Area as shown on Drawing C-05. The building will also be modified to include the construction of a second hazardous waste bulk materials hopper equipped with a loading chute through the south exterior wall of the Charge Floor Area Building. The current/original nonhazardous waste bulk material hopper allows the passage of nonhazardous petroleum coke from the exterior of the Charge Floor Area Building into the interior of the building. The material will pass through a hopper and chute and be deposited onto the charge floor where it is picked up and utilized as fuel for the blast furnace. The current loading opening will be modified during the construction of the new blast furnace flux opening to create a better seal to support the negative pressure ventilation system. Both hoppers will consist of an opening in the wall connected to a hopper with a loading chute. This modification will allow flux material and fuel (petroleum coke) for the blast furnace to be transferred and stored in the hopper/chute in a manner that will isolate the interior of the Charge Floor Area building from the outdoor elements. The wall opening and material-handling hopper will be sufficiently isolated from the remainder of the building to maintain negative pressure. Loading and transportation equipment dedicated to the interior of the facility will remove the material from beneath the hopper/chute assembly and transport the material to the blast furnace in order to charge the furnace with either flux material or fuel.

3. The replacement of the existing exterior barn door with an overhead door and remodeling of the decontamination station at the northern entrance to the Dock Entry Building (DEB) (RCRA-regulated containment building).

4. Replacement of existing doors with new overhead doors at two regulated containment building locations and replace or rehabilitate/upgrade existing doors with overhead doors at five regulated containment building locations. The new doors provide a better seal around the perimeter.

5. The addition of a screw auger and discharge chute through the east wall of the Slag Stabilization Area (regulated containment building) to facilitate the transfer of scrubber sludge from the air pollution control baghouse and sludge from the onsite wastewater treatment facility (WWTF) to the interior of the Slag Storage Area. The scrubber sludge and sludge from the WWTF will be stored in containers on the floor of the permitted Slag Stabilization Area. It should be noted that scrubber sludge is not a listed hazardous waste and does not fail the Toxicity Characteristic Leaching Procedure (TCLP) analysis.

6. Eliminate an exterior barn door in the Slag Storage Area (regulated containment building), the replacement of an existing barn door with a standard overhead door, and the addition of an interior walled/garage area to isolate the stabilized slag truck load-out facility from the remainder of the Slag Processing Containment Building.

7. Replacement of the existing barn door between the DEB (regulated containment building) and the 80-foot x 80-foot Storage Area (regulated containment building) with a gate or chain door. This change will provide the physical separation and operational control that is occasionally needed between the buildings while allowing air circulation between the buildings as proposed within the new ventilation system airflow scheme.

8. Modify/upgrade the regulated buildings as needed to add the ventilation system necessary for a negative pressure facility in the permitted areas. This includes foundation and structural supports for the ventilation equipment and revised material routing throughout the facility.

9. Removal of the upper, nonstructural metal siding of three interior walls throughout the facility to support proper airflow within the negative pressure system and repair of gaps or openings in walls and roofing to improve the overall air tightness of the enclosures.

10. Modification of the Battery Breaking Area (regulated containment building) wall to accommodate the installation of two lead-screw augers. These augers will eliminate the manual vehicular transfer of grids, posts, and lead oxide recovered from the battery casing processing equipment, and instead, provide a mechanized means to convey the lead-bearing material from the Resource Recovery Building (non-RCRA) to the Battery Plate Storage Area/Deminimus Liquids Building without the need for mechanized hauling equipment.

11. Installation of two material lifts at the northern wall of the Mix Room (RCRA-regulated containment building). These material lifts will allow the movement of various materials between the Mix Room/Charge Floor Area to the Slag Product Area and Stabilization Area without vehicular equipment being required to exit the buildings, which are under the negative pressure ventilation system.

12. Modification of the South Containment Building (regulated containment building and container storage area) to convert a portion of the existing bulk material storage area (S06) into additional container storage (S01).

2.0 Modifications

This permit modification application proposes changes to the RCRA-regulated container storage buildings and containment buildings to accommodate the installation of ventilation, blower, and emission control equipment needed to facilitate bringing the facility under negative air pressure. These facility changes are needed to modify material movement within the facility to reduce the tracking of materials. All modifications are designed to bring the facility into compliance with the federal NESHAP requirements and to reduce fugitive air emissions from the facility. A drawing depicting the location of the facility is included as Drawing G-01, and the locations of all RCRA-regulated units except the landfill are included on Drawing C-01.

2.1 80-Foot x 80-Foot Storage Area Unloading Bay and Airlock

The 80-foot x 80-foot Storage Area is a RCRA-regulated containment building permitted to store lead-bearing materials to be processed through the smelter, smelter slag, air pollution control scrubber sludge, and wastewater sludge generated at the onsite treatment plant. Scrap lead from offsite, industrial plates from offsite, tin dross, and sometimes antimony dross may be temporarily stored in the 80-foot x 80-foot Storage Area. The 80-foot x 80-foot Storage Area building modifications will include the addition of an unloading bay and dump pocket within the new airlock.

2.1.1 Unloading Bay, Dump Pocket, and Airlock

The 80-foot x 80-foot Storage Area will be modified by adding a 20-foot x 80-foot unloading bay, ramp, dump pocket, and airlock. The bay will be connected to the eastern side of the 80-foot x 80-foot Storage Area building (see Drawings GA-01, GA-02, GA-03, GA-04, and GA-05). The unloading bay will also be equipped with ventilation equipment and two doors that will function in tandem to create and maintain a negative pressure for the unloading bay. The airlock will contain emissions at the northern end of the 80-foot x 80-foot Storage Area during deliveries of hazardous and nonhazardous waste via rear-dump trailers. The trailers may deliver hazardous and nonhazardous wastes such as lead-bearing battery plate materials, reverberatory slag, or other bulk materials from other recycling facilities. The airlock will also serve as a barrier to vehicle traffic through the north end of the 80-foot x 80-foot Storage Area building to the exterior, thus a vehicle wash is not needed at this location.

The airlock will be 80 feet long to allow delivery vehicles to back from the west into the airlock and up an incline ramp where their rear tires will come up against a divider wall. Once the tires contact the divider wall, the trailer will tip inside the airlock at the end of the ramp and the load will be deposited into an 18-

foot x 13-foot unloading dump pocket that will be the same elevation as the building interior. The storage capacity of the dump pocket is 41 cubic yards and is based upon a containment wall height/dump pocket depth of 60 inches. The volume calculation also includes a reduction for material that cannot be stored in close proximity to the door of the dump pocket, so as not to impede the operation of the door.

Additionally, the volume of each load of material that will typically be deposited by the dump trailers into the dump pocket is approximately 10 cubic yards. Approximately four dump trailer loads could be stored/managed in the dump pocket; however, normal operation will be to remove each load after it has been deposited in the dump pocket.

Any material that falls inside the airlock but outside of the dump pocket will be moved into the dump pocket within 24 hours of its falling inside the bay. A loader that is dedicated to the building interior and dump pocket will scoop the bulk materials from the unloading dump pocket and bring them into the building for storage and processing.

The height of the roof of the airlock will be between 42 feet and 43.5 feet to accommodate the height needed for tipping the dump trailers in order to fully unload the vehicles. Heavy industrial framing will be used for the airlock and unloading bay building superstructure. Light gage roofing and siding systems will be used for the airlock and unloading bay walls. The walls of the unloading bay dump pocket will be constructed with concrete walls approximately 10 feet in height and lined to approximately 6 feet in height with a steel plate. The remainder of the unloading bay wall will be a light gage siding system.

The addition will include two overhead doors, one door will be located at the airlock's entrance and the other will be at the top of the unloading ramp of the airlock. One of these two doors will be kept closed at all times. Door details are included on Drawing C-06.

The construction of the unloading bay and dump pocket will require the extension of the current roadway by approximately 25 feet to allow for the continued passage of truck traffic and to ensure that trucks can back into the dump pocket for unloading. As shown on Drawing C-02, the buffer area between the closed Landfill #1 and the current road will be regraded to accommodate the construction of the unloading bay and road. The excess soil will be handled and reused in accordance with the approved *Soils Management Plan* (Barr, 2013). Minor regrading of the slope near the closed landfill may be needed to match the existing contours, side slope, and surface water runoff control features associated with the existing landfill. Exide does not anticipate that the final cover of the landfill or any waste currently stored in Landfill #1 will be impacted or damaged by the regrading efforts. The area(s) will be graded to promote

and control runoff from the landfill area, seeded, and mulched to ensure an adequate stand of vegetation for erosion control.

The inspection checklist for the 80-foot x 80-foot Storage Area has been modified to include the unloading bay and airlock (see Appendix B). The approved opinion of closure cost has been updated to include an opinion of closure cost for the unloading pocket (see Appendix C). The following measures will be taken during construction to minimize the escape of fugitive emissions and track-out of materials during construction from the 80-foot x 80-foot Storage Area:

- Construction and utilization of temporary doors, walls and roof in areas of construction where the demolition of exterior walls and roof structures are necessary to complete the upgrades to the negative pressure ventilation system for the facility or to improve material routing within the facility. These temporary structures will involve the usage of plastic sheeting, tarps, and framing materials necessary to minimize the exposure of the contents of the building to the elements.

- During construction of the airlock and dump pocket, egress of equipment through the eastern door of the 80-foot x 80-foot Storage Area containment building will be minimized.

- Equipment exiting the containment area during construction activities will be decontaminated in accordance with the measures prescribed in Special Permit Condition II.C.8.c of the Hazardous Waste Management Facility Permit MOD030712822. This entails physically removing hazardous waste visible on vehicle tires inside the containment building prior to equipment egress.

- Decontamination of equipment may also be accomplished through the utilization of a temporary decontamination station at the exit of the 80-foot x 80-foot Storage Area containment building during construction of the airlock and dump pocket facility. This temporary facility will utilize plastic sheeting, tarps, buckets, scrub brushes, and hoses to clean and contain decontamination wash water from equipment exiting the 80-foot x 80-foot Storage Area containment building.

2.1.2 Additional Storage

The 80-foot x 80-foot Storage Area is currently permitted to store 2,253 cubic yards of material. Storage of an additional 41 cubic yards of hazardous waste inside the unloading bay dump pocket is proposed. 40 CFR 270.42 Appendix I indicates that modifications to containment buildings that do not involve increasing the facility's entire containment building storage capacity by more than 25 percent are considered Class 2 modifications. Since the modification to this building includes an increase in total

storage capacity of less than 25 percent (see Table 1), a Class 2 modification is required. The Part A permit application has been updated to include the additional storage capacity (see Appendix A) and the approved opinion of closure cost has been updated to include costs associated with the storage of the extra material (see Appendix C).

2.2 Charge Floor Area

The Charge Floor Area is a 60-foot x 98-foot x 29-foot (wall height) area that is currently unregulated (see Drawing C-05). The majority of the northern wall of the Charge Floor Area consists of the south side of the blast furnace. The area above the blast furnace is open to the Smelting Casting Area. The remainder of the Charge Floor Area walls is light gage metal siding. The eastern wall contains the entrance to the Mix Room (regulated containment building) and is the only equipment ingress and egress. This entrance is covered with plastic curtain strips. The south wall currently contains one material pass-through door along with equipment associated with the management and usage of petroleum coke in the furnace. An additional material pass-through opening is proposed to facilitate the movement of flux material to the Charge Floor for staging prior to loading into the blast furnace. The floor of the Charge Floor Area has a concrete floor with no substantial cracks. A substantial crack is a crack that appears to penetrate the full thickness of the floor.

Inclusion of the Charge Floor Area as a regulated containment building will facilitate the movement of materials that have been prepared to charge the blast furnace. The blast furnace charge is prepared in the Mix Room (regulated containment building) and carried into the Charge Floor Area where it is fed to the Blast Furnace.

Modifications to the Charge Floor Area building, as mentioned, include an opening in the south wall, a new hopper and chute for transfer of blast furnace flux material from the exterior to the floor of the Charge Floor Area building.

The existing hopper and chute, which is used to handle petroleum coke for the furnace, will be rehabilitated to have a similar configuration as the new flux opening. The petroleum coke and flux material will be stored in the Charge Floor Area behind doors that will provide a sufficient seal in support of the negative pressure ventilation equipment. This material is not a hazardous waste, but will be staged/stored on the floor of the Charge Floor Area in an area that is separate from the area used for the storage of hazardous waste. The blast furnace flux material and petroleum coke do not contain any free liquids.

It is proposed that the Charge Floor Area be a regulated containment building storing up to 4 cubic yards of hazardous waste with waste codes D004, D006, D007, D008, D010, D011, and K069 that do not contain free liquids. Hazardous waste stored inside the Charge Floor Area includes feed materials for the blast furnace. The storage of hazardous waste in the Charge Floor Area building will be confined to the area identified on Drawing C-05; however, Exide desires to have the entire building be permitted as a containment building to provide flexibility in handling and storing hazardous waste in the building and to facilitate the movement of hazardous waste throughout the facility.

40 CFR 270.42 Appendix I indicates that the addition of a containment building unit to the facility that does not increase the containment building capacity of the facility by greater than 25 percent requires a Class 2 permit modification (see Table 1); therefore, a Class 2 permit modification is required.

The Charge Floor Area meets the containment building requirements of 40 CFR 264 Subpart DD as incorporated by 10 CSR 25-7.264. In general, this requires that the containment building be a completely enclosed building that prevents releases of hazardous wastes due to leaking materials, fugitive dust emissions, or tracking of materials. The walls and roof of the Charge Floor Area will prevent run-on of precipitation. The floor of the Charge Floor Area has been inspected to determine if any cracks, gaps, or deterioration of the floor exists that could lead to a release of hazardous waste. Several significant cracks, gaps, or deterioration were identified that required repair. Exide has repaired all significant cracks, gaps or deterioration that were identified using an epoxy-resin bonding material that is resistant to corrosive/acidic and abrasive environments and meets the requirements of ASTM C881-99. Exide will continue to maintain the floor of the Charge Floor Area in a condition that is free of significant cracks and gaps and in a condition that will serve as a primary barrier to the release of hazardous waste from the unit. Future repairs will be completed in a manner similar to the procedure previously described. The material inside the Charge Floor Area will not contain free liquids, so leaking materials will not be an issue. Tracking of materials is prevented because all equipment entering the Charge Floor Area must exit through the decontamination station located at the DEB. Additionally, the seismic requirements of 10 CSR 25-7.270 (2)(B)(4) or the Charge Floor Area are addressed in Section 9.0 of the "approved permit application" as referenced in the final permit for the facility dated September 23, 2009. This building complies with the formerly referenced seismic requirements.

Closure of the building will be completed in accordance with the approved closure plan that is contained in Section I of the consolidated permit application for the facility. The closure cost estimate for the facility has been updated to include this unit, as well as other changes necessitated by this modification and is included in Appendix C of this modification request.

2.3 Replacement of Exterior Door and Decontamination Station for the DEB

The existing barn door will be replaced with an overhead door. The existing opening is 16.5 feet by 16 feet and will be remodeled to 14 feet by 16 feet to accommodate the overhead doors.

Equipment exiting the DEB will enter the decontamination station and be elevated approximately 6 to 10 inches to allow wash water to drain through grating and prevent the equipment from standing in dirty wash water. The automatic spray nozzles will be replaced on the existing wheel wash station and a hand-sprayer wand and hose, under plant water pressure, will be added and used to remove materials that have adhered to the equipment. The wash water that accumulates in the sump will be conveyed to the wastewater treatment plant. Water will be contained within the footprint of the decontamination station and the drain. The decontamination station area will be properly maintained. Any solid material that is accumulated inside the grate will be returned to the recycling process as needed, and at least once every three months.

Inspection of the decontamination station will occur simultaneously with the regularly scheduled inspections of the DEB, and a record of the inspection will be recorded on the inspection log (see Appendix B). The disposition of all drain contents will be recorded during inspection. If the decontamination station concrete or drain structure become damaged, repairs are made as soon as practicable. The time out of service and repairs will be recorded. During time when the decontamination station is being repaired, a temporary station will be erected, and all equipment exiting the containment building will be decontaminated prior to exiting or remain in the building until the station is back in service.

The following measures will be taken, if deemed necessary, during construction to minimize the escape of fugitive emissions and the track-out of materials from the DEB:

- Construction and utilization of a temporary door in the area where the existing exterior door is being replaced with an overhead door. These temporary measures will involve the usage of plastic sheeting, tarps, and framing materials necessary to minimize the exposure of the contents of the building to the elements.

- During construction of the remodeling of the decontamination station, egress of equipment from the DEB containment buildings will be minimized and decontamination will be accomplished with portable spray equipment that includes the usage of tank-mounted spray equipment.

- Equipment exiting the containment area during construction activities will be decontaminated in accordance with the measures prescribed in Special Permit Condition II.C.8.c of the Hazardous Waste Management Facility Permit MOD030712822. This entails physically removing hazardous waste visible on vehicle tires inside the containment building prior to equipment egress.

Modifications to the DEB include:

- Replacement of the existing exterior door.

- Renovation of the decontamination station to include the installation of a high-pressure wand to allow for complete vehicle washing prior to egress from the DEB.

2.4 Upgrade Existing Doors to Overhead Doors

The facility's existing doors at the following locations will be upgraded to overhead doors to accommodate the negative pressure system as described in Table 1:

- Eastern door of the Mix Room.

- The northern DEB door will be removed and replaced with an overhead door on the southern end of the airlock. The facility's existing doors at the following locations will be modified or upgraded to standard overhead doors to accommodate the negative pressure system:

    - Two doors at the DEB receiving bays will be modified from the current configuration of an overhead coil-type door to a standard overhead door type.

    - Eastern barn door of the 80-foot x 80-foot Storage Area will be removed and replaced with an overhead door.

    - 80-foot x 80-foot Storage Area building airlock receiving bay exterior door will be a standard overhead door.

    - Existing exterior barn door of the Slag Stabilization Area will be replaced with a standard overhead door.

Drawing C-01 provides a detail view of the overhead doors to be included in the project. New and existing overhead doors, excluding maintenance and airlock doors, may be at certain locations,

accompanied by a set of curtains to accommodate proper airflow throughout the facility. Each of the maintenance doors, which are regularly chained to prevent vehicular traffic, is denoted in Table 1.

The three doors on the east wall of the Smelting Casting Area will be left open for airflow purposes. The middle door will be commonly traveled, while the other two are chained and only used for maintenance activities or emergencies.

The following measures will be taken to minimize the escape of fugitive emissions during door upgrading activities:

- Construction and utilization of temporary doors, walls and roof in areas of construction where the demolition of exterior walls and roof structures are necessary to complete the upgrades to the negative pressure ventilation system for the facility or to improve material routing within the facility. These temporary structures will involve the usage of plastic sheeting, tarps, and framing materials necessary to minimize the exposure of the contents of the building to the elements.

2.5 Slag Stabilization Building Sludge Screw-Auger Conveyor

The addition of a screw-auger conveyor is planned for the area immediately adjacent to the Slag Stabilization Building. The conveyor will contain a hopper that will receive sludge from the air pollution control system/wastewater treatment facility and convey the material via a screw auger through a small opening (to be constructed) in the eastern wall of the Slag Stabilization Building. The auger will deposit the material in a container that will be located on the floor of the Slag Storage Area. The material will be transferred by loader equipment to the pug mill for mixing with the blast furnace slag and for stabilization prior to landfilling.

Exide does not believe that the screw-auger conveyor is a regulated unit as it will only convey and transport sludge from the air pollution control equipment and sludge from the wastewater treatment facility into the stabilization area for further processing. Additionally, the unit is not designed or intended to change the physical or chemical properties of the sludge. Its only function will be to convey the material into the interior of the building, thereby eliminating approximately 32 trips per day through the facility.

Closure of the exterior hopper area will be conducted in accordance with the approved closure plan for the area, and closure of the interior portions will not be affected by the addition of the screw auger.

The following measures will be taken during construction to minimize the escape of fugitive emissions from the South Containment Building:

- Construction and utilization of temporary doors, walls and roof in areas of construction where the demolition of exterior walls and roof structures are necessary to complete the upgrades to the negative pressure ventilation system for the facility or to improve material routing within the facility. These temporary structures will involve the usage of plastic sheeting, tarps, and framing materials necessary to minimize the exposure of the contents of the building to the elements.

2.6 Elimination of the Slag Storage Area Eastern Door and the Modification of the Slag Loading Facility

The existing eastern exterior barn door (designated Z on Drawing C-01) will be eliminated and the wall extended to cover the opening. The exterior barn door located on the northeastern wall (designated AA on Drawing C-01of the building) will be replaced with a standard overhead door.

The existing stabilized slag loading facility will remain in place and none of the existing slag storage volumes, processing equipment, or storage area will be affected by the project. The only substantive modification to the Slag Stabilization Containment Building is that the loading area will be walled-off from the rest of the Slag Stabilization Containment Building to restrict the airflow from the rest of the building during loading of stabilized material destined for landfilling. This area will be isolated and only manage stabilized, nonhazardous waste destined for disposal at the landfill. This area will not affect the storage volume of slag in the Slag Stabilization Building, and the processing of hazardous waste in this building will not be affected by the construction of this project. The construction of this garage area is depicted on drawings S-08 through S-13. This area will be equipped with a floor drain, which will be piped to the onsite wastewater treatment facility. It should also be noted that all concrete demolished during construction will have representative samples collected and analyzed for TCLP metals prior to disposal in the onsite landfill.

This area is being isolated from the remainder of the building primarily to minimize the volume of air that enters the facility during periods when the stabilized sludge/slag is being loaded via the hopper for transportation to the onsite landfill. Since hazardous waste will not be managed in this area, Exide does not consider this area to be part of the regulated containment building. Therefore, vehicles that enter the slag loading facility will not be entering areas of the containment building where hazardous waste is being managed and will not be required to be decontaminated prior to exiting the slag loading area. However, prior to remodeling/reconstruction of the area, Exide will physically clean the floor, equipment, and walls

in this area. This cleaning will include as needed, scraping, brushing, sweeping and power washing sufficient to remove visible debris in this area. All waste/wastewater generated during cleaning will be properly disposed of or returned to the recycling process.

After remodeling/reconstruction is complete, Exide, during routine operation, does intend to routinely clean this area and the trucks that ingress/egress as a matter of good housekeeping practice. The area will be equipped with a hand-spray wand for cleaning and wash down of dump vehicles and the area. Hand cleaning, including wash down of the area, will be conducted routinely as needed or in the event of significant spillage during loading operations. However, the decontamination of each truck as it leaves the load-out area is not planned.

Inspection of the slag stabilization loading area has been included in the inspection checklist for the Slag Stabilization Area (Appendix B). Closure of the slag loading facility will be completed in accordance with the approved closure plan, and the updated closure cost is included in Appendix C.

The following measures will be taken during construction to minimize the escape of fugitive emissions from the Slag Stabilization Area:

- Construction and utilization of temporary doors, walls and roof in areas of construction where the demolition of exterior walls and roof structures are necessary to complete the upgrades to the slag/sludge loading area. These temporary structures will involve the usage of plastic sheeting, tarps, and framing materials necessary to minimize the exposure of the contents of the building to the elements.

- Equipment exiting the area during construction activities will be decontaminated in accordance with the measures prescribed in Special Permit Condition II.C.8.c of the Hazardous Waste Management Facility Permit MOD030712822A. This entails physically removing hazardous waste visible on vehicle tires inside the containment building prior to equipment egress.

2.7 Replacement of the Eastern DEB Door

Construction activities for the DEB will include the replacement of the existing barn door between the DEB (regulated containment building) and the 80-foot x 80-foot Storage Area door (regulated containment building) with a chain door or gate. This change will provide the physical separation and operational control that is occasionally needed between the buildings while allowing air circulation between the buildings as proposed within the new ventilation system airflow scheme.

The replacement of this door or gate is not anticipated to affect the closure plan for this area or the associated closure cost estimate. Additionally, no special best management practices (BMP) or procedures are believed to be needed during construction to minimize fugitive emissions or track-out of material as this door/gate is located in the interior of the containment buildings.

2.8 Upgrade the Existing Buildings as Needed to Add and Maintain Negative Pressure

A new negative pressure ventilation system will be installed at Exide's buildings. The majority of the ventilation components are designed to be self-supporting and not require structural support from the existing walls and ceilings. The self-supporting components will require bracing onto the existing floor and should not require footings to be installed under the floors of regulated container storage buildings and containment buildings. The ventilation components for the storage area for battery plates with deminimus liquids will be supported by the roof of that building, which may require additional activities to strengthen the roof.

Exide may perform miscellaneous repair work to "tighten" buildings. This includes repair of damaged siding, addition of weather seals, or threshold improvements at doorways, sealing of junctions in siding and roofing, and other work.

The following measures will be taken during construction to minimize the escape of fugitive emissions:

- Construction and utilization of temporary doors, walls and roof in areas of construction where the demolition of exterior walls and roof structures are necessary to complete the upgrades to the negative pressure ventilation system for the facility or to improve material routing within the facility. These temporary structures will involve the usage of plastic sheeting, tarps, and framing materials necessary to minimize the exposure of the contents of the building to the elements.

2.9 Removal of Nonstructural Metal Sheet Walls

The nonstructural siding that forms the upper sections of the containment building walls will be removed at three locations throughout the facility in order to optimize airflow of the new negative pressure ventilation system. The concrete lower sections of the containment building walls that contain the hazardous waste managed in those buildings will remain unchanged and not affected by the modifications to the containment building walls. The ability of the containment building to contain the permitted volumes will be unchanged by this permit modification. The locations of wall sections to be removed include:

- Upper section of the wall between the 80-foot x 80-foot Storage Area containment building and the DEB.

- Upper section of the wall between the DEB and the South Containment Building.

- Upper section of the wall between the South Containment Building and the Deminimus Liquids/Battery Breaking/Battery Storage Containment Building.

Drawing C-01 also depicts the locations of the upper nonstructural sheet metal portions of the walls to be removed. Wall removal will consists of the removal of the nonstructural pre-fabricated metal of interior walls only. The bottom concrete portion of the walls will remain and continue to be suitable for containing the waste within the buildings.

2.10 Modification of the Battery Breaking Area Wall to Accommodate a Lead-Screw Conveyor

The northern wall of the Battery Breaking Area (regulated containment building) will be modified to allow a new lead-screw conveyor to pass through the wall. The lead-screw conveyor will transfer pulverized lead from the two existing lead-screw conveyors inside the Battery Recycling Area to a waste pile in the Deminimus Liquids Building that corresponds to the same location of the discharge from the battery breaker unit also located in the Deminimus Liquids Building. The rotary breaker undersize chute currently conveys battery plates from the breaker and will continue largely unchanged in its current capacity.

The northern wall of the Battery Breaking Area will be selectively demolished and sawed to ensure smooth edges for the opening. A reasonably airtight closure will be constructed around the new lead-screw conveyor using flashing and stainless steel plates.

Exide will take the following measures during construction to minimize the escape of fugitive emissions from the Battery Breaking Area:

- Construction and utilization of temporary doors, walls and roof in areas of construction where the demolition of exterior walls and roof structures are necessary to complete the upgrades to the negative pressure ventilation system for the facility or to improve material routing within the facility. These temporary structures will involve the usage of plastic sheeting, tarps, and framing materials necessary to minimize the exposure of the contents of the building to the elements.

2.11 Installation of Two Material Lifts at the Northern Wall of the Mix Room

Two new material lifts will be installed in the northern wall of the Mix Room (RCRA containment building). The lifts will be used to transport containerized materials between the Mix Room and the Slag Product Work Area (see Drawing C-08). The volume of material stored in the Mix Room is affected by the installation of the lifts, as material cannot be stored in front of the lifts in order for the lifts to be accessible. Consequently, approximately 16 feet of the originally designated 50 feet is no longer available for storage of lead-bearing material in the northern portion of the Mix Room. The revised storage volumes are shown as follows:

> [(22'x49') + (22'x(49'-16'))] x 8' (storage height)/27 (cu ft per cu yd) = 534.5 cu yds or 535 cu. yds.

Exide will take the following measures during construction of the lift to minimize the escape of fugitive emissions from the Mix Room:

- Construction and utilization of temporary doors, walls and roof in areas of construction where the demolition of exterior walls and roof structures are necessary to complete the upgrades to the negative pressure ventilation system for the facility or to improve material routing within the facility. These temporary structures will involve the usage of plastic sheeting, tarps, and framing materials necessary to minimize the exposure of the contents of the building to the elements.

2.12 Reduction of Bulk Material Storage and the Addition of Additional Container Storage in the South Containment Building

Automotive and industrial batteries received at the facility will be stored in two locations of the South Containment Building. The South Containment Building currently has one permitted area for the storage of containers (S01) with a capacity of 187 cubic yards of hazardous waste for the following hazardous waste codes: D004, D006, D007, D008, D010, D011, and K069.

The proposed reconfiguration of the building will include an industrial battery cell extraction resource recovery process and additional container storage of approximately 161 cubic yards. This will result in a revised maximum container storage capacity for the South Containment Building of 348 cubic yards in two locations of the building as identified on Drawing C-01.

40 CFR 270.42 Appendix I indicates that modifications to container storage areas that do not involve increasing the facility storage capacity by more than 25 percent are considered Class 2 modifications.

This modification does not increase the facility's permitted container storage capacity by more than 25 percent.

This modification also will result in a slight decrease in the permitted bulk material storage capacity (S06) of the South Containment Building by 161 cubic yards to a new total bulk material storage capacity of 1,588 cubic yards. A revised Part A and closure cost estimate are included in Appendix A and Appendix C.

Spent industrial and automotive batteries will be stored in the South Containment Building in a manner sufficient to allow for inspection and removal, should damaged or leaking battery casings be detected. Exide personnel will inspect batteries prior to entry into the South Containment Building to ensure that there are no leaks or packaging issues prior to placing the batteries in storage. The batteries shall be stored in an area that is 34 feet by 34 feet and in rows that are no more than 4 feet in width and no more than 8 feet high. The number of layers of batteries will vary depending upon the shipping source; however, any storage configuration will not compromise the structural integrity of the stack. Exide shall maintain a minimum aisle space of 30 inches between rows of batteries for inspections.

The walls and roof structures control run-on of precipitation. The floor and walls in this area of the South Containment Building and DEB are constructed of concrete with sufficient height to provide secondary containment so that no liquid released from containers will exit the building. Exits from the building (e.g., man-doors and vehicle door openings) have either sufficient wall height or sufficient sump capacity to retain any release of liquids from the container storage area. Floors are also sloped away from door openings or towards collection sumps (DEB) to further ensure liquids from the container storage area will not exit the building. Any liquid resulting from leaks will be removed from the area and placed into the acid recovery system currently in operation at the facility. The revised required secondary containment volume for this container storage area is:

$$348\ yd^3 \times 27\ ft^3/yd^3 \times 0.25\ \text{gal. bat electrolyte fluid}/ft^3\ \text{total battery storage volume} \times 10\% = 234.9\ \text{gal}$$

$$234.9\ \text{gal} \times 1\ ft^3/7.48\ \text{gal} = 31.4\ ft^3.$$

3.0 Modification of the RCRA Part A

Federal and State of Missouri regulations establish permitting and notification conditions for hazardous waste. A revised RCRA Part A permit application is included in Appendix A. Modifications include the addition of storage volume associated with the addition of the Charge Floor Area RCRA-regulated containment building, the decrease in storage volume of the Mix Room associated with the installation of the material lifts, and an increase in the storage capacity of the 80-foot x 80-foot Storage Area associated with the addition of the dump pocket.

4.0 Inspections

Inspection procedures for RCRA-regulated container storage buildings and containment buildings at Exide Technologies are detailed in Part 7.0 of Section A of the *RCRA Permit Renewal Application*, Revised October 2008 (Barr, 2008a). The Charge Floor Area containment building will be inspected as prescribed in the above-referenced renewal application. An example inspection worksheet is included in Appendix B. The Charge Floor containment building, slag loading facility, the 80-foot x 80-foot Storage Area airlock, and South Containment Building container storage area will be added to the existing inspection sheets and inspected as prescribed in the above-referenced renewal application.

5.0 Closure and Post-Closure Conditions

The Charge Floor Area, 80-foot x 80-foot Storage Area pocket and airlock will be closed in accordance with the approved closure plan. Currently, the approved closure plan is contained in Appendix I of the *RCRA Permit Renewal Application*, Revised October 2008 (Barr, 2008a).

6.0 Closure Opinion of Cost

Appendix I of the October 2008 *RCRA Permit Renewal Application* (Barr, 2008a) included a closure opinion of cost for the Exide facility. The new opinion of cost is based on the cost/units detailed in the October 2008 *RCRA Permit Renewal Application* (Barr, 2008a) updated for inflation. A revised opinion of cost is provided for the facility as a result of this modification. Included in the revised facility opinion of cost is the 80-foot x 80-foot Storage Area pocket, the Charge Floor Area, the DEB decontamination station rehab, the modifications to the South Containment Building, the addition of the material lifts to the Mix Room, the addition of a screw conveyor to the Deminimus Liquids Building, and the modifications to the Slag/Sludge Stabilization Building.

A revised closure opinion of cost is included in Appendix C and includes the following modifications:

- The addition of closure costs associated with the regulated addition to the 80-foot x 80-foot Storage Area.
- The addition of closure costs associated with regulation of the Charge Floor Area (see Drawing C-05 for coring locations).
- A reduction in costs associated with decreased bulk materials storage and the increase in the container storage area within the South Containment Building.
- A reduction in cost associated with decreased bulk material storage and increased cost due to the addition of two material lifts to the Mix Room.
- An increase as a result of the addition of a screw conveyor to the Slag Stabilization/Storage Building and Deminimus Liquids Building.
- Updating of the final closure opinion of cost using the implicit price deflator.

7.0 Financial Assurance Mechanism and Liability Coverage for Closure

The financial assurance mechanism for the Exide RCRA-regulated areas is contained in Appendix D. The option chosen for establishing both financial assurance and liability coverage is a financial guarantee bond. The financial guarantee bond will be updated to include the Appendix C opinion of cost within 30 days of this modification to the closure plan.

8.0 References

Barr, 2013. *Soils Management Plan*. Barr Engineering Co., May 2013.

Barr, 2008a. *RCRA Permit Renewal Application*, Revised October 2008. Barr Engineering Co., October 2008.

Barr, 2008b. *Class 2 Permit Renewal Application*, Revised October 2008. Barr Engineering Co., October 2008.

Barr, 1999. *Design Package for Proposed Whole Battery Storage Building.* Barr Engineering Co., 1999.