



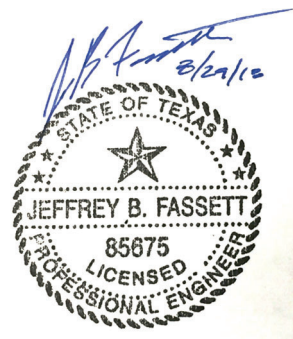
NORTH CAMU O&M PLAN

NORTH CAMU OPERATION & MAINTENANCE PLAN

Exide Technologies Frisco Recycling Facility
Frisco, Texas

Submitted To: Exide Technologies
Mr. Brad Weaver
P.O. Box 250
7471 Fifth Street
Frisco, TX 75034

Submitted By: Golder Associates Inc.
14950 Heathrow Forest Parkway, Suite 280
Houston, TX 77032



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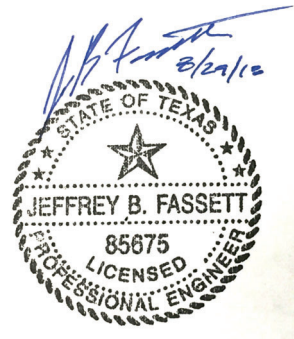
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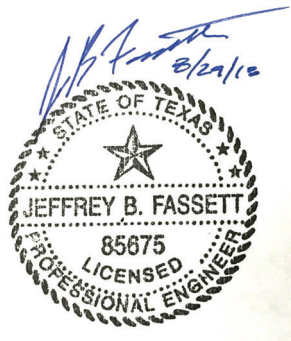




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Appendix A Inspection and Maintenance Forms





1.0 INTRODUCTION

Golder Associates Inc. (Golder) has prepared this operation and maintenance plan (O&M Plan) for the North Corrective Action Management Unit (North CAMU) at the Former Operating Plant (FOP) of the Exide Technologies (Exide) Frisco Recycling Center (FOP) in Frisco, Collin County, Texas (Site). A Site Location Map is provided as Figure 1 of the Final Closure Plan. The layout of the North CAMU is depicted in Figure 3 in Appendix C of the Final Closure Plan. The North CAMU already contains treated slag generated during operations at the FRC (which have now ceased) and metals-impacted soils from the Undeveloped Buffer Property (J-Parcel) surrounding the Site. It also will be used for the disposal of Class 2 wastes generated during the ongoing demolition and remediation activities at the FOP.

1.1 Background

Initial notification for construction of a Class 2 industrial landfill, including engineering plans and a landfill operations plan, was provided to the Texas Natural Resource Conservation Commission (TNRCC) by GNB Technologies, Inc. in August 1995 (1995 Notification). TNRCC acknowledgement of receipt and review of the notification was provided in a September 14, 1995 letter. Landfill construction commenced thereafter and Exide records indicate that the Landfill operations began in 1996. The North CAMU currently consists of fifteen cells, nine of which (Cells 1 through 9) have been closed and capped. The closed cells of the North CAMU consist of treated slag monofills (PBW, 2013). The active cells (Cells 10 through 12) of the North CAMU currently contain treated slag, and they, along with the new cells that are part of a partially constructed expansion (cells 13 through 15) also contain Class 2 wastes generated during the ongoing demolition and remediation activities at the adjacent J-Parcel. (PBW, 2013). Additional Class 2 remediation waste from the FOP will be disposed in cells 13-15.

1.2 Organization of Report

This O&M Plan is being prepared in accordance with the requirements listed in the Agreed Order effective April 27, 2015, Docket No. 2013-2207-IHW-E (Agreed Order). The Agreed Order specifies that the Final Closure Plan for the North CAMU must include detailed operations and maintenance plans. This O&M Plan has been prepared as a supplement to the Landfill Operations Plan included in the 1995 Notification.

This O&M Plan provides general instructions to be followed by Site management and operating personnel for operations at the North CAMU throughout the operating life of the North CAMU in accordance with the Agreed Order. This O&M Plan also includes a description of waste management practices to be followed during implementation of the final closure methods, including removal and decontamination of equipment and devices during North CAMU closure activities. The operations and maintenance items included in this O&M Plan are as follows:

- Section 2.0 presents the North CAMU Filling Procedures;



- Section 3.0 presents the Final Closure Procedures;
- Section 4.0 details the specific Leachate and Storm Water Management Procedures;
- Section 5.0 presents Support Operations Procedures;
- Section 6.0 presents Inspection and Monitoring Procedures;
- Section 7.0 outlines Equipment Descriptions; and
- Section 8.0 discusses Personnel and Training.

Inspections, monitoring and maintenance during the post-closure period are included in the Final Closure Plan text, to which this O&M Plan is an Appendix. Other information previously submitted in existing documents or in the Final Closure Plan is referenced where appropriate.



2.0 ACTIVE NORTH CAMU OPERATIONS PROCEDURES

This section describes the Site-specific procedures for active North CAMU filling operations including management objectives, the waste acceptance criteria, working face practices, and placement of initial and subsequent soil waste lifts. Support functions including leachate and storm water management procedures to be followed during the active period are presented in Section 4.0 of this document.

2.1 General

Class 2 waste will be placed in the existing constructed North CAMU in lifts. The general operational approach dictates that the lifts be placed with the primary objective of protection of the geosynthetic liner system along interior side slopes (subsequent soil waste lifts).

A significant rainfall event (determination to be made by the Construction Manager) would stop all loading and transportation activities in the North CAMU. No waste will be loaded, transported or placed into the North CAMU during such an event. Work will resume as soon as possible after the rain stops and conditions allow. The decision to resume work will be the responsibility of the Construction Manager.

The following subsections provide a narrative of how waste placement requirements will be implemented during the filling operations.

2.2 Waste Acceptance Limits and Testing

Based on the Agreed Order, the following wastes are CAMU-eligible wastes that are authorized to be placed in the CL2LF CAMU:

- The treated slag that currently exists in cells 1 through 12; and
- Class 2 non-hazardous remediation waste associated with clean-up activities for Voluntary Cleanup Program (VCP) No. 2541 (J Parcel) and other Class 2 remediation waste approved in the Final Closure Plan.

Waste characterization for the Class 2 non-hazardous remediation waste associated with clean-up activities for the J-Parcel is being performed in accordance with the Response Action Soil Sampling and Analysis Plan included in the Undeveloped Buffer Property VCP Response Action Plan, prepared by Pastor, Behling & Wheeler, LLC. (PBW).

Other Class 2 remediation waste may also be placed in the North CAMU. These wastes may include soils from surface or subsurface excavation areas, concrete, sediment, or other remediation wastes that are within class 2 standards. These Class 2 remediation waste will be characterized in accordance with the proposed Response Action Plan and corresponding Sampling and Analysis Plan. Any waste characterized as hazardous waste will not be placed in the North CAMU and will be disposed off-Site at an appropriate permitted facility.



2.3 Method of North CAMU Filling

The waste placement technique to be used will incorporate use of the existing footprint of the North CAMU. As shown on the Site Layout (Figure 3 in Appendix C of the Final Closure Plan), waste hauling vehicles will use a partially concrete paved road to access the North CAMU area, then, once in the North CAMU area, use an access road located to the west side of the North CAMU, as directed by the Construction Manager. These waste hauling vehicles will back down the interior North CAMU embankment ramp and will unload in the designated drop area. This drop area will be demarcated by use of temporary barriers. Tracked equipment (excavator and dozer) will be stationed within the North CAMU and will work in tandem to place the waste in lifts as required.

2.3.1 Interim Storage

Interim storage areas are not anticipated to be needed for North CAMU operations.

2.3.2 Initial Waste Placement

Soil waste shall be placed and graded to direct drainage away from the work and minimize ponding. Areas shall be uniformly graded to provide a finished surface that is smooth, compacted, and free of irregularities.

A dozer will be used as the primary spreading machine for the initial lift of soil waste from the remediation activities. The initial lift of waste in a new cell will be free of woody roots and sticks or other angular materials that could pose a hazard to the lining system. The initial lift will consist of soil only and will be a minimum of 24 inches thick. Equipment will be prohibited from operating directly on liner materials or geosynthetics during waste placement.

2.3.3 Subsequent Waste Lifts

After completion of the initial waste layer on the side slopes, a route of travel for subsequent lifts in the North CAMU will be established. Waste filling operations will continue to progress and waste will be placed in loose lifts compacted to a general thickness of approximately 1 foot. The waste will be compacted by a combination of the tracked dozer operating on the surface and by the haul trucks traveling over the in place soil waste. Following compaction, the soil waste should have sufficient strength to adequately support construction equipment.

2.3.4 Ponded Water

Ponding of water over waste filled areas will be prevented using the following techniques:

- Proper grading of interim waste slopes to promote positive water surface drainage toward drainage features (Figure 1 of Appendix C of the Final Closure Plan), then collected contact surface water will be handled as described below;



- Proper grading of final waste slopes to the elevations shown in the design plans (Appendix C of the Final Closure Plan), which provide surface water drainage without depressions or low spots; and
- Installation of upgradient temporary diversion berms as required to minimize the amount of water entering the disposal area.

Waste fill areas will be inspected to identify depressions or other potential ponding locations. In the event ponded water on the North CAMU is observed, action will be taken to remedy the problem. If water begins to accumulate in the active portion of the North CAMU, it will be removed with a small portable pump. The area of ponding will be filled with clean soil or waste fill and re-graded within seven days of the occurrence, weather permitting. Water that has been in contact with waste will be removed and treated on-Site as described in Section 4.0.

2.4 Physical Criteria of Waste

Soil, slag, sediment and other approved remediation waste to be placed in the North CAMU shall not contain free water. Putrescible wastes shall not be placed in the North CAMU. Wastes shall be placed in a manner to minimize formation of bridging or voids and to allow adequate compaction to prevent excessive consolidation, piping, or settlement after placement.

2.5 Daily Cover Operations

Daily cover will not be required because the waste will not attract birds or animals and does not contain material susceptible to being windblown. A Dust Control Plan is included as Appendix I to the Final Closure Plan. The exposed face of the North CAMU will be limited to the area actively being filled. Other areas of exposed waste may be covered by a spray applied cover or other temporary cover (as previously used at the North CAMU).

2.6 Equipment Decontamination

An equipment decontamination area within the North CAMU at the northwest and/or northeast corner or within the material laydown area shown in Figure 3 in Appendix C of the Final Closure Plan. Berms will be used. The decontamination area will be large enough to accommodate the largest piece of equipment that will be used during the operation and closure activities. The area will be graded to drain to one corner to allow the fluids generated during decontamination to be removed. A 40-mil high density polyethylene (HDPE) geomembrane will be placed over the graded area extending over the berms. The HDPE geomembrane will be anchored at the bottom of the berms to prevent it from becoming windblown. Timbers will be installed over the HDPE geomembrane to protect it from the tracks and tires of the heavy equipment during the decontamination activities.

The equipment will be decontaminated using potable water and high pressure washers. The decontamination fluids will be pumped out of the lined decontamination area into a tank and transferred to



the Facility's on-Site wastewater treatment facility for treatment and disposal in accordance with applicable regulations. To limit the generation of contact storm water, the decontamination pad will be covered with poly sheeting weighted with sandbags during periods of inactivity and during significant storm events.

During the operation and closure activities, decontamination residue will be containerized and transferred to a less than 90-day container for characterization, storage and disposal in accordance with local, state and federal requirements. If the decontamination residue meets Class 2 Non-Hazardous waste criteria, it will be placed in the North CAMU provided capacity is available for this waste. The geomembrane and timbers will be decontaminated using high pressure water which will subsequently be collected and transferred to the Facility's on-Site wastewater treatment facility for treatment and disposal in accordance with applicable regulations. Once decontamination is complete, the liner and timbers will be transferred to a less than 90-day container for characterization, storage and disposal in accordance with local, state and federal requirements. If the liner and timbers meet Class 2 Non-Hazardous waste criteria, it will be placed in the North CAMU provided capacity is available for this waste.

Following completion of decontamination activities and removal of the decontamination pad, three grab samples will be collected from beneath the decontamination area.

If the decontamination pad is within the North CAMU, the samples will be analyzed for TCLP lead, cadmium, arsenic and selenium. Should any of the results exceed Class 2 Standards for any of these four metals, a minimum of six (6) inches of material underlying the decontamination area will be removed and sent to RCA, if applicable, or placed into a temporary less than 90-day container meeting applicable standards for waste characterization and analysis. This process will be repeated as required until the grab samples exhibits TCLP results that meet the Class 2 Standards for these four metals. Material that does not meet the Class 2 Standards will be transported to the RCA or off-Site for disposal in accordance with local, state and federal requirements.

If the decontamination pad is outside the North CAMU, the samples will be analyzed for total lead, cadmium, arsenic and selenium. Should any of the results exceed applicable Protective Concentration Limits (PCLs) for any of these four metals, a minimum of six (6) inches of material underlying the decontamination area will be removed and placed into a temporary less than 90-day container meeting applicable standards for waste characterization and analysis. This process will be repeated as required until the grab samples exhibits results that meet the PCLs for these four metals. Material will be transported to the RCA or off-Site for disposal in accordance with local, state and federal requirements.



3.0 FINAL CLOSURE PROCEDURES

This section describes the Site-specific procedures for Final Closure activities, including placement of final cover. Final closure procedures and specifications are included in the Final Closure Plan and QA/QC Plan and included here for reference. Should the specifications listed within this document differ from the Final Cover System Drawings (Appendix C of the Final Closure Plan) or the QA/QC Plan (Appendix E of the Final Closure Plan), the Engineering Drawings take precedence, followed by the QA/QC Plan and then the Final Closure Plan.

Support functions, including leachate and storm water management procedures during final closure, will be the same as those identified during active operations and summarized in Sections 2.0 and 4.0 of this O&M Plan.

3.1 Working Surface Soil

The final surface of waste will be covered with a minimum 12-inch thick working surface soil layer (see the QA/QC Plan for the North CAMU which is included as Appendix E to the Final Closure Plan for more detail). The surface will be drum rolled to a smooth condition and surveyed at 100-foot intervals to establish the elevations of the surface prior to placement of a geosynthetic clay liner (GCL). The working surface soil material will be obtained from an on- or off-site source, delivered using haul trucks, and spread with a dozer to prepare a smooth surface for the GCL. The 12-inch working surface soil layer may be composed of waste placed, given the top four inches of the working surface is smooth and free of all sharp, angular objects as described above. The surface should provide a firm, unyielding foundation for the GCL with no sudden sharp or abrupt changes or break in grade.

3.2 Geosynthetic Clay Liner

Following the grading and smoothing of the working surface soil, a GCL will be placed directly above the working surface soil as shown on Figure 2 in Appendix C of the Final Closure Plan. The new GCL shall tie in to the existing compacted clay liner of the cells that have already been closed and extend beyond the liner system as shown on Figure 2 in Appendix C of the Final Closure Plan.

3.3 Geomembrane Barrier

Following the installation of the geosynthetic clay liner, a 40-mil high density polyethylene (HDPE) geomembrane will be installed over the North CAMU. The geomembrane will be anchored in a trench outside the North CAMU perimeter, as shown on Figure 2 in Appendix C of the Final Closure Plan.

3.4 Geotextile

A nonwoven geotextile layer shall be placed over the 40-mil textured HDPE geomembrane. The nonwoven geotextile shall be an 8-ounce per square yard (oz/sy), nonwoven and needle-punched.



3.5 Clean Fill Material

An 18-inch thick layer of general clean fill material will be placed on top of the geotextile layer. The clean fill soil layer will consist of suitable soil obtained from an approved borrow source.

3.6 Vegetative Cover Soil

An 18-inch thick layer of topsoil will then be placed above the general clean fill layer. The uppermost 6-inch layer of the vegetative cover soil will be placed in a loose condition and will be amended as necessary to establish a dense growth of vegetation. Once placement of the vegetative growth layer is completed, the area will be hydroseeded.



4.0 LEACHATE AND STORM WATER MANAGEMENT PROCEDURES

There are two distinct leachate and storm water management procedures to be used at the North CAMU. During the active waste placement period, the North CAMU will receive direct rainfall. Therefore, comprehensive storm water and leachate management procedures will need to be used. After the North CAMU is filled and the cover system installed, the leachate generation is expected to fall significantly and the associated management procedures are simplified. This section presents the details of the procedures to be used during the active operations and closure of the North CAMU as well as during the post-closure period. Inspection and monitoring requirements are presented in Section 6.0.

4.1 Water Management During Active North CAMU Filling and Closure Operations

4.1.1 Interior North CAMU Leachate Management

As described in the Final Closure Plan, the North CAMU was constructed with a leachate collection system (LCS). The LCS will be pumped using submersible pump, which will be water-level activated. During active North CAMU filling operations, water collected in the LCS will be pumped to a storage tank adjacent to the North CAMU and will subsequently be disposed offsite in accordance with applicable regulations. A detailed description of the operations for the LCS is included in Section 2.2.2 of the Final Closure Plan.

4.1.2 North CAMU Contact Storm Water Management

The existing final cover slopes toward the southwest, away from the active North CAMU area. The remainder of the active area is surrounded by a perimeter berm with an elevation higher than the surrounding ground surface. Therefore, there is no mechanism for storm water run-on to occur and no additional measures are required to control storm water run-on.

Storm water from minor rain events falling on the working face will either evaporate, or will infiltrate through the waste and be removed through the leachate collection system. In the event that there is a significant amount of rainfall and water removal is needed, contact storm water (defined as storm water that contacts the waste during active placement in the North CAMU) will be directed toward a sump in the North CAMU and either directed to the solar evaporation pond for offsite disposal or treatment and discharge (if authorized) or to the stormwater pond for treatment and discharge (if authorized) or pumped to frac tanks for storage until this water can be disposed of in accordance with applicable regulations.

4.1.3 Exterior North CAMU Storm Water Management

Run-on control is not an issue for the majority of the North CAMU due to the height of the perimeter berm above existing grade. Run-on from along the northern portion of the unit will be diverted to the west. Run-off from capped areas will be controlled using mulch and erosion control netting on exposed slopes,



placement of lining materials on concentrated flow paths, and installation of culverts for road crossings over channels (see Figure 3 in Appendix C of the Final Closure Plan).

4.1.4 Decontamination Water

Decontamination procedures and protocols to be used at this Site are discussed in Section 2.6 above. Decontamination waters will be handled as described in Section 2.6.

4.2 Post-Closure Water Management

During the post-closure period, only interior North CAMU leachate and non-contact storm water will be generated.

4.2.1 Leachate Management

As described above and in the Final Closure Plan, the North CAMU was constructed with a leachate collection system (LCS). The LCS uses a submersible pump, which will be water-level activated. During the post-closure care period, leachate collected in the LCS will be pumped to a storage tank adjacent to the North CAMU and subsequently disposed off-Site. A detailed description of the operations for the LCS is included in Section 2.1.2.2 of the Final Closure Plan.

4.2.2 Storm Water Management

Following final closure, storm water run-off from the North CAMU will flow primarily off the final cover to the southwest with a small amount of flow off of the final cover toward the northwest. Storm water run-off will be directed to a channel along the northern and western perimeter of the North CAMU, where it will be conveyed to an existing tributary to Stewart Creek located south of the North CAMU. Calculations for channel and culvert sizing are included in Appendix G of the Final Closure Plan. Two 12-inch culverts will convey water under the access road on the west side of the North CAMU. Storm water management details are also included in Figure 3 of Appendix C of the Final Closure Plan.

Storm water drainage facilities will be inspected regularly as described in the Final Closure Plan. Fill material, siltation and excessive plant growth will be removed from drainage waterways to prevent obstruction of flow. Erosion on the sides or bottoms of the drainage waterways will be repaired and reconstructed.



5.0 SUPPORT OPERATIONS PROCEDURES

This section describes the Site-specific support operations procedures for hauling and handling Class 2 waste.

5.1 Waste Hauling Vehicles and Traffic Control

Vehicles for hauling Class 2 waste must be suitable for transporting this material from the FOP areas to the North CAMU. Waste haulers will be responsible for observing the speed limits, traffic and safety requirements. Waste hauling vehicles shall be covered to minimize dust migration during transportation. Waste hauling vehicles will follow only those routes designated by the Construction Manager.

Waste hauling vehicles will track each load, documenting the quantity and time loaded. The Construction Manager designee at the entry to the North CAMU will stop each truck and log its arrival in the North CAMU records. An inventory number will be assigned to each load by the Construction Manager designee. These logs will become part of the final recordkeeping as described in the Final Closure Plan.

5.2 Surveying

As described in the QA/QC Plan, the working surface layer and the soil cover layers will be surveyed by a surveyor licensed in the state of Texas.

5.3 Soil Erosion and Sediment Control

Erosion and sedimentation will be reduced and controlled using best management practices. Erosion control measures at the North CAMU will include hydroseeding as specified in the Agreed Order. Erosion calculations, included in Appendix G of the Final Closure Plan, indicate that, once the final cover is installed and vegetation is established, the potential for erosion and sedimentation will be minor.

5.4 Noise Control

North CAMU operations are expected to occur during daytime hours and will be contained within the Site boundary; therefore, no special noise controls are needed. However, noise levels for equipment used at the Facility will comply with applicable Occupational Safety and Health Administration (OSHA) requirements as described in each contractor's Health and Safety Plan (to be prepared prior to the start of work at the Site).

5.5 Odor Control, Air Monitoring and Dust Suppression

Odorous constituents are not expected to be an issue based upon the types of Class 2 wastes that are approved for acceptance at the North CAMU. Ambient air monitoring will be performed as described in the Air Monitoring Plan (included as Appendix H to the Final Closure Plan) and each contractor's health and safety plan, which will be prepared prior to the start of work at the Site. A Dust Control Plan has also been prepared for the North CAMU is included as Appendix I to the Final Closure Plan.



5.6 Site Security

Unauthorized personnel will not be permitted in or near the North CAMU. The North CAMU will not be open to the public at any time. Site security will be provided by the existing fencing around the FOP. A security guard is currently contracted for the FOP when the FOP is not staffed [during the closure process].

To minimize the possibility that wildlife or unauthorized individuals will enter the North CAMU, a six-foot high fence, with a lockable entrance gate, will be installed around the North CAMU or entire FOP perimeter following final closure activities. The fence will reduce the possibility for large wildlife or unauthorized individuals to enter the North CAMU area and potentially damage liners, interfere with operations, come in contact with waste materials, or track waste materials outside of the North CAMU area.

During active operations, the Construction Manager designee the entrance to the Site or the North CAMU will stop each vehicle or person to determine whether they are permitted in the North CAMU area. At other times the gate to the FOP will be locked.

All Site security elements are included in the periodic inspections discussed in Section 6.0 and the Final Closure Plan.

5.7 Fire Protection and Emergency Measures

Only Class 2 Non-Hazardous waste which are non-flammable and non-combustible will be placed in the North CAMU and as such fire hazards are believed to be minimal. A Contingency Plan for the North CAMU has been prepared and is included as Appendix J to the Final Closure Plan.



6.0 INSPECTIONS AND MONITORING

6.1 Active North CAMU Operations Site Inspections and Monitoring

During active operations, the North CAMU will be inspected a minimum of weekly and after each significant storm event to detect evidence of the following:

- Deterioration, malfunction, or improper operation of surface water control features;
- Erosion of North CAMU cap or berms;
- The presence of leachate in and proper functioning of leachate collection and removal systems;
- Procedures followed by operations and maintenance staff; and
- The condition of the operating equipment, including earth moving equipment, alarms and pumps.

An inspection check form with explanations of observations made will document each of these weekly inspections and become part of the North CAMU records. In addition, inspections of the security system (existing fences, gates, locks, etc.), emergency equipment, communications equipment, and alarm system for the LCS will be conducted weekly during active operations. These areas are described in the following subsections and documented on the North CAMU Inspection Form (Inspection Form), which is included in Attachment A of this O&M Plan. If, during a periodic inspection, damage, deterioration, or malfunction of any of the systems, components, or facilities is observed, steps shall be initiated to rectify the situation. Site personnel, or their designated contractor, will perform minor maintenance activities as described in this O&M Plan. Maintenance and repair actions will be documented on the Repair Report Form included in Attachment A of this O&M Plan.

6.1.1 General CL2LF CAMU Conditions and Operating Conditions

The following will be inspected weekly and noted on the Inspection Form:

- Signs of erosion, obstructions or ponding on the exterior berm slopes and on temporary water control systems, including ditches and culverts;
- Condition of heavy and support equipment, including signs of leaks or other items requiring maintenance;
- Access road conditions (potholes, washouts, ponding, or other deterioration);
- Inventory and condition of emergency and communications equipment (all should be available, stocked, and functioning);
- Conditions of any tanks used on-Site for fuel or other material storage; and
- Conditions of existing fences, locks, gates, and signs (i.e. note any missing items, damage, or signs of tampering).



The on-Site access road will be inspected and maintained so that routine inspections can be performed. Any potholes or washouts, or excessive “washboarding” of the road will be repaired and the road will be graded, as needed.

6.1.2 Final Cover

The existing final cover and any temporary cover will be inspected by walking the North CAMU to confirm positive drainage from the cover to the perimeter drainage features and assess the condition of the cover. Any subsidence that significantly alters drainage from the cover will be corrected. Any areas that allow water to pond on the cover will be backfilled and revegetated. The inspector will look for evidence of erosion, subsidence, ponded water, animal burrows, cracks along the cover, and loss of soil. Any excessive erosion will be identified and corrected. Erosion over large areas will be backfilled and revegetated. The following should be noted on the inspection form:

- Rills, gullies and crevices 6 inches or deeper in the vegetative soil layer;
- Cover settling or subsidence that affects surface water runoff;
- Reworked surfaces and areas with sparse or eroded vegetation in excess of 100 square feet cumulatively;
- Brush, trees or similar invasive vegetation with tap roots growing in areas not designated for this type of vegetation;
- Evidence of burrowing or other cover disturbance by burrowing animals; and
- Effectiveness of storm water drainage features.

The vegetative surface will be mowed after initial establishment of the planted species. Mowing is assumed to occur twice a year. Any areas with rills and gullies greater than 6 inches in depth will be filled with soil and the vegetation re-established. Settlement, subsidence, or displacement of the North CAMU will be corrected. Temporary erosion and sediment control measures will be employed on steep slopes to enhance restoration of the restored surfaces.

6.1.3 Leachate Collection and Conveyance System

The following should be inspected and noted on the inspection form for the LCS and conveyance system:

- Leachate levels in the enclosed collection sumps;
- All exposed piping, conduit, and other facilities for apparent wear, damage or leakage;
- Alarm and auto-dialer system receiving power;
- Alarm system in working order; and
- Auto-dialer system in working order.



6.2 Post-Closure Inspections, Maintenance and Monitoring

Post-closure inspections, maintenance and monitoring are included in the Final Closure Plan, to which this document is an appendix.



7.0 EQUIPMENT

The following section describes the general types of equipment to be used at the North CAMU, the functions this equipment performs and equipment maintenance requirements. All equipment and tools used in the performance of the work are subject to the approval of the Construction Manager before work is started.

7.1 Heavy Equipment

Heavy equipment available for day-to-day operations of the disposal area may consist of bulldozer, earth moving equipment, waste or soil compactors (as needed), drum rollers, and a water truck, as well as other equipment as needed. When major repairs to heavy equipment are needed, the North CAMU operator or contractors will make additional equipment of similar size and function available. All heavy equipment shall be fitted with fully enclosed cabs.

7.2 Support Equipment

In addition to the required heavy equipment, miscellaneous pickups, and/or other light utility vehicles, as well as various portable water pumps, instruments, and safety and training equipment will be on-Site as necessary. Pickup trucks shall be used to haul North CAMU personnel within the Site to conduct Site duties. A portable pump shall be used for pumping stormwater from excavations and from ponded areas, if needed.

North CAMU support equipment includes mobile and portable equipment used in operating and maintaining the North CAMU. The support equipment may include:

- Trucks (dump, pickup, etc.);
- Portable pumps;
- Portable generator;
- Portable air compressor;
- Temporary light fixtures;
- Roll off containers;
- Tankers;
- Fuel storage tank;
- CQA/testing equipment; and
- Health and safety equipment.

7.3 Stationary Operating Equipment and Tools

Stationary operating equipment will include the equipment installed at the North CAMU during construction, such as:



- Leachate pumps and controls;
- Electrical equipment;
- Contact storm water storage and treatment tanks (if needed);
- Emergency power generating equipment;
- Piping; and
- Water hoses.

7.4 Equipment Maintenance Requirements

Maintenance is necessary to keep equipment in a condition that assures continuous proper operation of the assigned functions. Maintenance can be divided into three basic categories:

- Preventive Maintenance – routine work that can be accomplished with minimal or no downtime of equipment. These tasks include routine inspections, lubrication and adjustments.
- Corrective Maintenance – the non-routine repair work that may require some equipment downtime. These tasks include changing belts and replacing work bearings and brushes, etc.
- Major Overhauls – large jobs that usually require extensive downtime. These tasks can involve considerable expenditures of money and may require additional labor.

The heavy equipment maintenance program can be divided into two major categories:

- Equipment maintenance and repair to be performed by the heavy equipment suppliers; and
- Maintenance activities to be performed by North CAMU operator and/or maintenance personnel.

Maintenance must also be performed on the support and stationary equipment. The frequency and extent of maintenance will be as recommended by the manufacturer.

Each piece of mechanical equipment on the Site, from personal exposure meters to heavy equipment, will be inspected routinely. All emergency equipment will be regularly inspected to assure that it is present, functional and decontaminated. Whenever a problem is discovered with equipment necessary for safe North CAMU operations, operations will be curtailed until a satisfactory repair or replacement can be put in place.



8.0 PERSONNEL AND TRAINING

The Site personnel will include, at a minimum, a Site manager and/or supervisor (Exide representative or designated Contractor Construction Manager), equipment operators, and laborers.

8.1 Personnel

8.1.1 Site Manager

The Site manager (SM) will be responsible for all activities at the FOP and will be the designated contact person for regulatory compliance matters. The SM or his designated alternate will provide on-Site management of the facility operations and will be responsible for day to day operations with applicable regulatory requirements and this O&M Plan. The SM or designated alternate will provide adequate staffing to operate the facility in accordance with applicable regulatory requirements and this O&M Plan. The SM or his designated alternate will be responsible for inspection and/or maintenance of all equipment and operating systems required for the North CAMU operations and closure activities.

The SM or designated alternate must be an experienced personnel manager, who is familiar with and has the aptitude to implement operational aspects of waste disposal operations including knowledge of relevant regulations and permit requirements, and safe management practices.

Direct operation and maintenance activities, as described throughout this report, are the responsibility of the SM. The major responsibilities of the SM during operation of the North CAMU include the following:

- Operate and coordinate all disposal of waste into the North CAMU;
- Ensure that all applicable health and safety protocols are followed in accordance with the approved plan;
- Ensure that all personnel are properly trained for North CAMU operations;
- Maintain records of methods of placement within the North CAMU;
- Ensure waste is placed in accordance with procedures described in this O&M Plan;
- Divert storm water away from waste material within the North CAMU to the extent practical, and appropriately manage contact stormwater;
- Maintain records of applicable inspections outlined in this O&M Plan;
- Perform any corrective measures required as a result of these inspections;
- Perform routine maintenance on equipment;
- Attain all required record survey information;
- Control potential traffic congestion at the North CAMU; and
- Maintain Site dust and erosion control throughout the duration of North CAMU operations.



8.1.2 Equipment Operators

Equipment operators will operate vehicles and heavy equipment associated with North CAMU operations and closure in a safe manner to achieve functions necessary for operation and closure of the FOP. Duties may include spreading waste and final cover materials, maintaining access roads, establishing and maintaining stormwater drainage, and placement of soils.

8.1.3 Laborers

Site laborers will have responsibilities as directed by the SM or the designated alternate. These duties may include dust control, inspection and maintenance of gates, perimeter fencing, and other duties as necessary.

8.2 Personnel Training

The SM will be responsible for training operators and laborers on the requirements of this North CAMU O&M Plan, the Contingency Plan, and other items as needed. Documentation of on-Site training will be maintained.

Personnel are trained on

- Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment,
- Key parameters for waste feed (i.e., waste hauling vehicles) cut-off systems,
- Communications or alarm systems,
- Response to fires or explosions,
- Response to groundwater contamination incidents, and
- Shutdown of operations procedures.

Personnel are fully trained on all relevant O&M and safety procedures within six months after the date of their employment or appointment to a new position. Personnel who have not yet been fully trained do not work in unsupervised positions until they have received all necessary training. Exide maintains records at the facility which include each employee's name, job description, the amount of both introductory and continuing training necessary for the position, and the current status of the employee's training.

The training program covering the North CAMU's O&M and safety procedures is reviewed annually. All North CAMU personnel are required to participate in the review. Documentation of on-site training will be maintained at the Site.

8.3 Worker Safety Programs

Operations at the North CAMU will comply with the health and safety procedures established by the contractor's Site-specific Health and Safety Plan. Each contractor will be responsible for developing a



Site-specific health and safety plan in accordance with Exide internal requirements as well as applicable regulatory requirements. Exide will use appropriately trained personnel to operate and maintain the North CAMU. Each contractor will be responsible for providing required health and safety training to their personnel and providing appropriate documentation to Exide. All contractors working at the Site will also attend a health and safety orientation provided by an Exide representative prior to beginning work at the Site.

APPENDIX A
INSPECTION AND MAINTENANCE FORMS

**INSPECTION FORM
EXIDE FRISCO NORTH CAMU**

Date: _____ Type of Inspection (Storm, Monthly, Quarterly or Semi-Annual): _____

Inspector(s): _____

Signature(s): _____

Instructions: For any items that require maintenance, submit this form and notify the Exide representative of any recommended actions. Schedule remedial actions complete the **REPAIR REPORT FORM** when complete.

Facility Component	Inspection Item	Inspection Frequency				Condition		Notes or Recommended Repairs
		Storm	Monthly	Quarterly	Semi-Annually	Acceptable	Maintenance Needed	
General Conditions	Exterior Berm Slopes and Surface Water Control Systems including Ditches and Culverts							
	Access Road on Berm							
	Signs, Security Fence and Gates							
	Benchmarks							
Final Cover	Surface erosion, rills, gullies, and crevasses; minor cover settling or subsidence							

Facility Component	Inspection Item	Inspection Frequency				Condition		Notes or Recommended Repairs
		Storm	Monthly	Quarterly	Semi-Annually	Acceptable	Maintenance Needed	
	Major Cover Settlement							
	Water on landfill surface							
	Sparse or Eroded Vegetation							
	Invasive Vegetation							
	Cover Disturbance by Burrowing Animals							
	Grass							
Surface Water Management	Ditches							
	Erosion and Sediment Control Devices							
	Culverts and Conveyance Pipes							
	Grass							
	Surface Water Drainage							
Leachate Collection Conveyance	Pumps and Pump House							

Facility Component	Inspection Item	Inspection Frequency				Condition		Notes or Recommended Repairs
		Storm	Monthly	Quarterly	Semi-Annually	Acceptable	Maintenance Needed	
System	Collection Sumps							
	Exposed Piping, Conduit, and Appurtenances							
	Riser Cracked							
	Alarm system and auto-dialer system							
Groundwater Monitoring System	Protective Casing							
	Locks							
	Ground Surface Seal							
	Accumulation of Surface Water							
	Concrete Pad and Bollards							

REPAIR REPORT FORM
EXIDE TECHNOLOGIES FRISCO RECYCLING CENTER

Inspector(s): _____

Signature(s): _____

Instructions: Note the problem(s) identified during the inspection, date the problem(s) was identified, actions performed to address the problem(s), date the problem(s) was addressed, and date the problem(s) was fully addressed.

Deficiency	Date Identified	Action Taken	Date Addressed	Date Completed

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Africa	+ 27 11 254 4800
Asia	+ 852 2562 3658
Australasia	+ 61 3 8862 3500
Europe	+ 356 21 42 30 20
North America	+ 1 800 275 3281
South America	+ 56 2 2616 2000

solutions@golder.com
www.golder.com

Golder Associates Inc.
14950 Heathrow Forest Parkway, Suite 280
Houston, TX 77032 USA
Tel: (281) 821-6868
Fax: (281) 821-6870



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