Closure Implementation Plan

Phase I Decontamination and Deconstruction Project
Vernon, CA 90058

Prepared for

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Acronyms and Definitions

ACM	Asbestos Containing Materials
AHERA	Asbestos Hazard and Emergency Response Act
AIS	American Integrated Services, Inc.
SCAQMD	South Coast Air Quality Management
AST	Aboveground Storage Tank
BFFR	Blast Furnace Feed Room
BMP	Best Management Practice
CA	Corrective Action
CAC	Certified Asbestos Consultant
Cal/OSHA	State of California, Department of Industrial Relations, Division of Occupational Safety and Health
CCTV	Closed Circuit Television
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
Closure Plan	Closure Plan dated December, 2016
CRZ	Contamination Reduction Zone
Decon Station	Three Stage Decontamination Station
DOT	Department of Transportation (California?)
DTSC	Department of Toxic Substances Control
EPA	Environmental Protection Agency
Exide	Exide Technologies
EZ	Exclusion Zone
FEU	Full Enclosure Unit
GPM	Gallons per Minute
HASP	Health and Safety Plan
HEPA	High-Efficiency Particulate Air
HDPE	High-Density Polyethylene
HID	High Intensity Discharge
HWMU	Hazardous Waste Management Units
Inventory	Hazardous Material and Waste
CIP	Closure Implementation Plan
IS	Interim Status
JHA	Job Hazard Analysis
LBC	Lead Barrier Compound
LBP	Lead Based Paint
LDR	Land Disposal Restriction
MAC Baghouse	Donaldson manufactured baghouse
MDL	Method Detection Limits
MEP	Mechanical, Electrical and Plumbing
MSHA	Mine Safety and Health Administration

Neg Air	Negative Air Machine
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NIOSH	National Institute for Occupational Safety and Health
NPDES	National Pollutant Discharge Elimination System
OTA	Oxidation Tank Area
PA	Project Administrator
PCB	Polychlorinated Biphenyl
PE	Project Engineer
PEL	Permissible Exposure Limits
PEU	Portable Enclosure Unit
PM	Project Manager
POTW	Publicly Owned Treatment Works
PPE	Personal Protective Equipment
Project	Phase 1 Closure at Exide Facility
RACM	Regulated Asbestos Containing Material
RMPS	Raw Materials Processing System
RFFR	Reverb Furnace Feed Room
RWA	Regulated Work Area
SCAQMD	South Coast Air Quality Management District
SDS	Safety Data Sheet
Segment 1	West Buildings
Segment 2	East Buildings
Segment 3	Center Buildings
SHO	Safety and Health Officer
SOP	Sequence of Operations
SOW	Scope of Work
SSHO	Site Safety and Health Officer
STLC	Soluble Threshold Limit Concentration
Survey	Deconstruction Engineering Survey
SZ	Support Zone
TCLP	Toxicity Characteristic Leaching Procedure
TTLC	Total Threshold Limit Concentration
Unit	Regulated Interim Status hazardous waste units at the Exide Technologies facility in Vernon, California
UW	Universal Waste
WWTP	Wastewater Treatment Plant

1.0 Introduction and Background

1.1 General Information

Exide Technologies (Exide) intends to proceed with Phase I closure activities in accordance with the Department of Toxic Substance Control (DTSC) approved Exide Vernon Closure Plan dated December 8, 2016 (Closure Plan). Exide has contracted American Integrated Services, Inc. (AIS) to perform the scope of work (SOW) for the Phase I closure activities. This Closure Implementation Plan (CIP) is being prepared as required by the DTSC approved Closure Plan. In the event of any discrepancies between the CIP and the Closure Plan, they will be evaluated on a case-by-case basis and the Closure Plan shall be considered the controlling document in the absence of specific reason or evidence to the contrary. The Mitigation Monitoring and Reporting Program, adopted as part of CEQA compliance, includes mitigation measures and project conditions which will be incorporated into all activities as described in section 11.0 of this CIP. The DTSC and South Coast Air Quality Management District (SCAQMD) have oversight authority for the project and the DTSC shall have final approval of all aspects of the CIP.

1.2 Background

Following are highlights of the Phase I elements as described in the Closure Plan. Details of these activities are described more fully in subsequent sections of this CIP.

Notifications and Permits: Construction permits from and notifications to SCAQMD, Water Quality Control Board, Los Angeles County, City of Vernon, and Cal OSHA will be completed as required prior to the start of regulated work.

Access and Agency Coordination – Throughout the Phase 1 Closure Activities AIS will coordinate job activities, share schedules and provide access to the DTSC, the SCAQMD and their third party Monitor. Clear communications will be maintained with the agencies, their representatives and Monitor, Exide's employees and Exide's contractors.

Working Hours: AIS will perform this work on a four-day, 10-hour work schedule per week Monday through Thursdays. Proposed hours of operation will be 6:30 a.m. to 4:30 p.m.

Air Pollution Control Equipment: Exide will continue to operate air pollution control equipment as necessary to maintain negative pressure in the former North Yard manufacturing area (Total Enclosure Building) through de-skinning of the former buildings. Temporary enclosures with negative pressure will be utilized during closure of features outside the Total Enclosure Building. These measures, and others, are designed to reduce fugitive emissions and maintain compliance with applicable air quality standards during closure.

Inventory Removal: Hazardous material and waste stored/contained in the former IS units which is solid will be removed and sent off-site for disposal at a landfill or recycling at a secondary lead smelter. Re-melting of lead left in the kettles will not be performed. Instead, a gantry system will be used to move the kettles allowing for the mechanical removal of the remaining lead (see ***Attachment 1, Gantry and Kettle Handling***). Liquid remaining within units will be sent off-site for disposal or treated in the on-site Wastewater Treatment Plant (WWTP) and or temporary WWTP provided by AIS.

Unit Cleaning and Removal: All former IS tanks and miscellaneous units will be cleaned and removed by the completion of Phase 1, except for the Surface Impoundment/Storm water Pond, Pump Sump, Storm Water Management System, select sumps at topographic low points (maintained to collect Storm water runoff and excess water generated during the cleaning process) and the West Yard Truck Wash (maintained to clean vehicles before they leave the Site). The interior and exterior of units and ancillary equipment will be cleaned by HEPA vacuuming and/or pressure washing. Those former IS Units not removed during Phase 1 will be cleaned at the end of Phase 1 to remove accumulated sediment, but will remain operational for Phase 2 (for environmental management purposes only). At the end of Phase 2, these units will be re-cleaned and removed.

Disposition of Removed Equipment and Components: Removed equipment and ancillary components from the Units will be re-used at another Exide facility, recycled (scrap metal), or disposed of properly off-site. Equipment from the Units and ancillary components destined for disposal shall be cleaned to remove dust and dirt that could generate fugitive dust during handling, characterized for disposal purposes, containerized for shipping and sent to an appropriately permitted disposal facility. Units and components destined for reuse at another Exide facility will be cleaned to remove dust and dirt that could generate dust during handling and then containerized for shipping. Units, equipment and scrap metal destined for recycling shall attain a "Clean Debris Surface" as defined in the Alternative Cleaning Standards for Hazardous Debris (66268.45), or cleaned to an acceptable level for recycling as per the receiving centers waste acceptance criteria.

Building Deconstruction: The areas and buildings containing Units and the Finished Lead Building will be decontaminated by HEPA vacuuming and pressure washing. The interior and exterior roof, walls (both sides) and floor will be decontaminated. Concrete floors will be sampled. Following decontamination, the Reverb Furnace Feed Room, Blast Furnace Feed Room, RMPS Building, Smelter Building, Baghouse Building, Desulfurization Building will be gutted and deconstructed. Concrete walls, non-metallic debris and equipment pedestals that are not a monolithic pour with the structural slab will be characterized and recycled or disposed off-site. Metal debris will be cleaned and recycled or properly disposed of off-Site. Concrete floors will not be removed during Phase 1.

Air Monitoring: Ambient air monitoring will be performed by Exide daily (24 hours/day) during closure for lead and arsenic, as is currently done. Real-time particulate (dust) monitoring will be conducted by the Dust Mitigation Oversight Contractor (third party Monitor engaged by the DTSC and SCAQMD), during working hours downwind and potentially upwind of the work area to track and gage the trends in particulate dust generation as work progresses and, in accordance with the requirements in ***Attachment 14, Engineering Controls Plan and Attachment 15, Air Monitoring Plan***. AIS will conduct monitoring of their personnel and establish appropriate levels of personal protective equipment which comply with Cal OSHA standards.

Water Management: Storm water within the facility will be collected in the storm water management system (manholes, piping, sumps, trench drains, pumps, Surface Impoundment and curbing) during Phase 1 and 2. Depending on the timing of Corrective Action (CA) and receipt of all required permits and approvals for direct discharge of storm water, it may also be necessary to continue to collect and treat storm water after completion of Phase 2. Storm water will be treated in the existing WWTP or a temporary WWTP and discharged to the LA County Sanitation District until approval for direct discharge is received. Wastewater generated during closure, including storm water, will be treated in the on-site WWTP and discharged to the LA County Sanitation District according to the existing permit.

AIS will provide for rinseate collection and on-site processing. All generated wash water will be pumped via sump pumps or vacuum trucks for processing through the WWTP. All decontamination water will be collected at existing sumps and low points, removed with a pump as needed and placed directly into a Dewatering Container located within the enclosures or directly transferred to the WWTP or temporary WWTP for processing utilizing vacuum trucks with double contained hoses. Hoses outside of the vacuum truck may also be used to collect small quantities of liquids for transfer to the WWTP or temporary WWTP. Information regarding the Dewatering Container is provided in *Attachment 11, Dewatering Container.*

1.3 Purpose and Objective

The purpose and objective of the Closure Implementation Plan (previously defined as "CIP" in Section 1.1) is to provide relevant site procedures and protocols; general technical elements and approach; and specific means and methods to be followed in the implementation efforts and activities required to accomplish the Phase I Closure elements.

Soil, soil vapor and concrete sample data collected during the Closure Plan and RFI activities will be used as inputs to a site wide Health Risk Assessment (HRA). The HRA will be conducted consistent with agency guidelines, including all media samples to evaluate potential future risks with and without appropriate engineering and institutional controls.

Final Closure Performance Standards will be developed based upon data collected during the Closure and RFI sampling activities. The media standards will be risk-based and similar to the Corrective Measures Objectives (CMOs) developed for the Corrective Measure Study (CMS). Performance Standards will be based on planned future industrial uses and limited to complete exposure pathways and will be developed for all media including concrete to remain onsite.

1.4 Organization Chart

Section 1.4.1 summarizes the AIS organization and subcontractors. Section 1.4.2 summarizes the regulatory oversight and Exide contractor organization for the closure activities.

1.4.1 AIS Project Organization

Exide has contracted with American Integrated Services, Inc. (AIS) to perform the Phase 1 deconstruction and decommissioning activities.

AIS proposes to subcontract portions of the work with the following firms:

Safway Scaffolding – Scaffolding for Full Enclosure Unit (FEU) including HAKI roofing enclosure
CSI Electrical – Electrical engineering and power re-routing and disconnections
United Mechanical – Mechanical engineering and new duct installation
Sigma Engineering – Deconstruction engineering/survey
Mark Beamish Waterproofing – Crack sealing
Huntington Pacific – Paving/re-sealing as required

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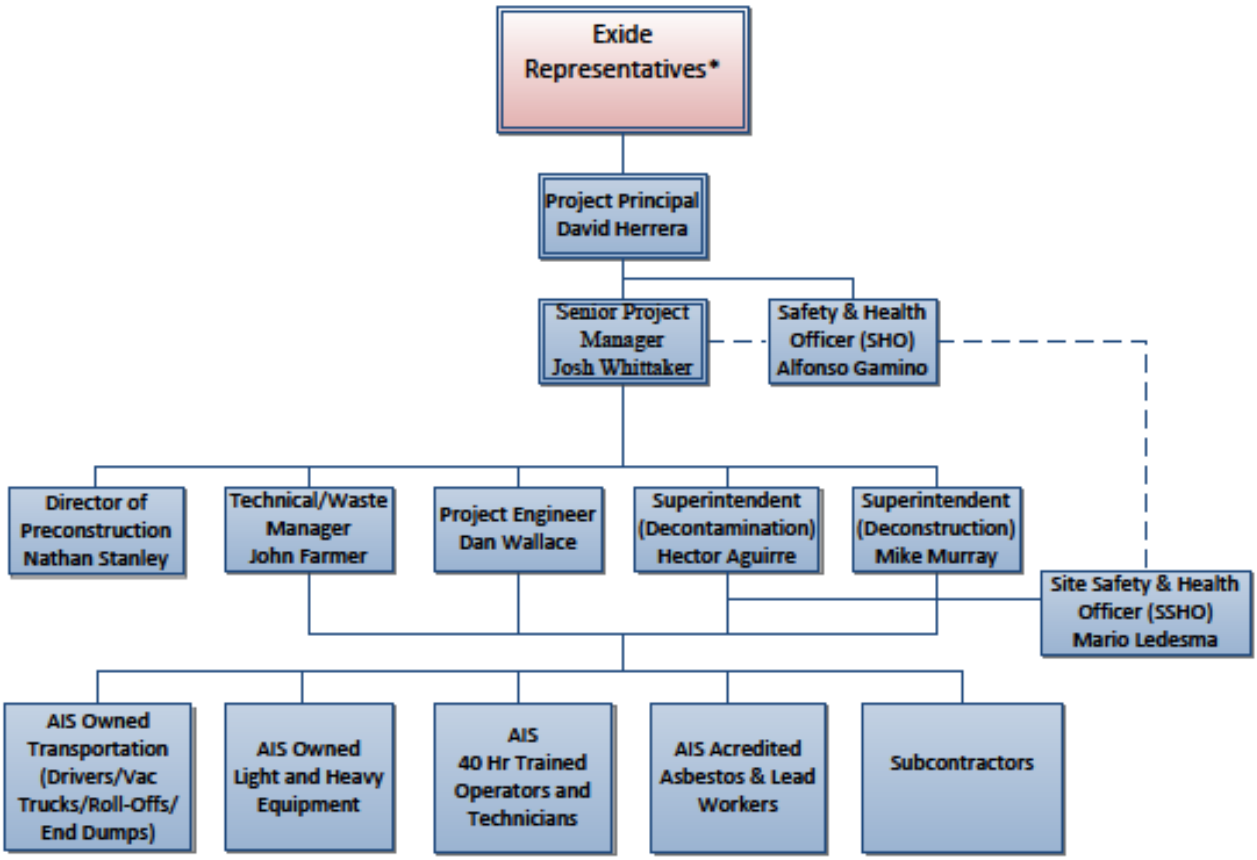
Figure 1.4.1 includes a summary of the AIS organization for performing the Phase 1 closure activities.

Figure 1.4.1 – Organization Chart



1.4.2 Regulatory Project Organization

The Department of Toxic Substances Control (DTSC) and South Coast Air Quality Management District (SCAQMD) have oversight authority for the project. DTSC will approve all aspects of the CIP. DTSC will be contracting a Third Party Quality Assurance (QA) Contractor who will ensure that all project work is performed in compliance with the DTSC-approval Closure Implementation Plan and Closure Plan. The Third Party QA Contractor will report directly to the DTSC and SCAQMD.

Figure 1 includes a summary of the regulatory organizations and their inter-relationship with each other and Exide, its deconstruction contractor (AIS), and the Resident Engineer, for the Phase 1 Closure activities. Exide will contract with a Resident Engineer to oversee Phase 1 closure activities as specified in the Closure Plan.

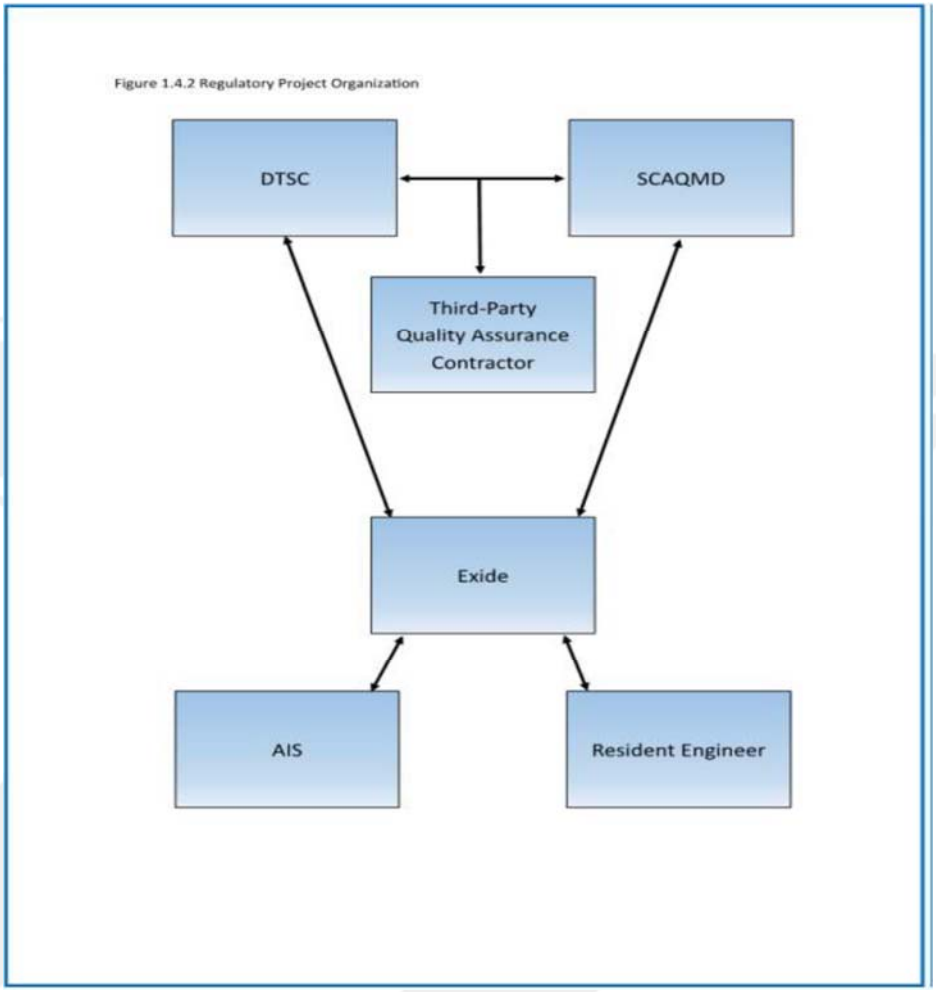
Resident Engineer

The Exide designated Resident Engineer will be a California Professional Engineer (Civil). The Resident Engineer will regularly be present at the facility during closure activities and will have designated field representatives present throughout Closure Plan implementation. Field personnel will be assigned as appropriate based on the Contractor's schedule and intensity of the work. The Resident Engineer's lead field representative will be the point of day to day contact during execution. Exide will provide office space for Resident Engineer personnel and equipment.

Resident Engineer, with the support of his/her designees, will be responsible for:

- Overseeing and documenting the Contractor's implementation of the Closure Plan;
- Daily field personnel management;
- Daily field document review and compilation;
- Attendance at site meetings and inspections;
- Review and approval of Contractor submittals;
- Assisting Exide with review of Contractor change orders that are contractual in nature;
- Review of Contractor invoices;
- Coordination with environmental regulatory agencies for review and approval of Closure Plan variations and amendments;
- Review and compilation of waste manifests and profiles, including landfill executed manifests. The manifests and profiles will be organized per RCRA Closure unit; and,
- Preparation of the Closure Certification Report.

Figure 1 – Regulatory Project Organization



2.0 Phase I General Requirement

2.1 General Technical Approach, Methodology and Protocols

The following section presents general technical elements that apply to AIS's Project which is defined as the implementation of Phase 1 Closure. The Project approach, methodology and protocols that encompass a means and method for approaching a group of units that will be handled in a similar manner. AIS has developed the CIP as a comprehensive document to implement elements and requirements of the Closure Plan and describe AIS's approach to accomplish the scope of work (SOW).

2.2 General SOW Requirements for Exide Phase I Project

AIS will perform the following activities, at a minimum to accomplish the general SOW:

- Prepare, submit for approval, implement, and maintain the CIP: Site-specific Health and Safety Plan (HASP) and a Deconstruction Engineering Survey;
- Procure all relevant permits and provide notifications to regulatory agencies;
- Mobilize to the project site all necessary equipment manpower and materials;
- Provide and maintain necessary temporary facilities and environmental controls;
- Manage traffic according to the attached Traffic Management Plan;
- Manage wastes according to the attached Waste Management Plan;
- Control discharge of excess storm water from the Site into the WWTP system with eventual discharge that meets current NPDES permit discharge standards to the POTW;
- Install and maintain storm water controls with best management practice (BMP) measures in active work areas;
- Inspect, document, and repair BMPs as necessary;
- Establish decontamination facilities to decontaminate steel scrap, vehicles, equipment, and containers removed from the Site work areas that are going off-site for proper disposal, recycle or re-use;
- Collect, sort, and recycle, or dispose of various types of scrap, debris, and trash located inside and adjacent to the structures proposed for deconstruction;
- Decommission above ground tank systems, sumps, sewers, electrical equipment, process piping, and related equipment associated with the structures proposed for deconstruction;
- Collect and relocate existing accumulations of waste;
- Decontaminate building walls, floors and roofs prior to deconstruction;
- Manage decontamination related water and wastes;
- Provide the required SCAQMD 10-day notification for asbestos abatement; remove and abate asbestos containing materials (ACM) and universal wastes that are known

to be present in the structures planned for deconstruction in Phase 1 and appropriately characterize, containerize and dispose of them;

- Deconstruct units, components and buildings;
- Decontaminate, size as necessary, and recycle scrap steel;
- Recycle or dispose of building deconstruction materials;
- Remove the hardened lead in the Smelter Building kettles using the existing overhead cranes and the approved Gantry system;
- Profile, transport and dispose of non-hazardous and hazardous waste debris associated with general housekeeping and decontamination and/or deconstruction activities per appropriate regulatory guidelines;
- Provide on-going daily reports for the duration of the Project and provide written communications as detailed in the attached Data Management Plan;
- Complete demobilization activities and provide documents to support Resident Engineer's preparation and submittal of a certification report.

These activities are detailed in CIP text subsections that follow.

2.3 Data Management, Documentation and Recordkeeping

An important element of the Project is managing the large amounts of data that will be collected at the Site on a daily basis. Based on our experience handling large complex projects of similar scope, we have assigned a Project Engineer (PE) and a Project Administrator (PA). A ***Data Management Plan (****Attachment 2)* has been prepared to ensure that AIS is compliant with the Project's data and reporting requirements.

2.4 Project Sequencing and Scheduling

AIS has developed a detailed schedule to ensure that the Project is performed in a highly efficient, logical and optimized manner. The AIS CIP ***Schedule***, *Attachment 3*, includes all anticipated CIP tasks and durations.

AIS's Project approach and baseline schedule is designed to:

- Safely isolate mechanical, electrical, and plumbing systems yet maintain maximum functionality;

- Perform work using a systematic approach, allowing for working multiple areas within each segment simultaneously;
- Maintain specific baghouse operations to ensure negative air containments;
- Ensure the continuous maintenance of full enclosure of each building segment with secondary dust controls throughout the Project;
- Ensure sufficient equipment and manpower for the Project timelines;
- Coordinate inspections for regulatory conformance for Hazardous Waste Management Units (HWMU's) as needed;
- Ensure the safety of the construction personnel and all others entering the Project as a part of the CIP; and,
- Complete the Project in accordance with this CIP and the Closure Plan.

Our approach will expedite the decontamination and deconstruction work for the Project. Integral to the timely completion of the Project milestones is a well-coordinated and functional decommissioning plan for the mechanical, electrical, and plumbing (MEP) systems. These details have been considered carefully within the preliminary project baseline schedule and applied to the inter-relationship of construction activities. To mitigate the risk of a schedule delay due to MEP Systems or unforeseen conditions, the AIS approach is to divide the work into isolated building groups.

The construction activities and durations were developed from past project experience, estimated quantities, preliminary estimates and applying reasonable production rates to determine the initial durations.

Extensive analysis has been performed on the project schedule and additional detailed planning, review of similar past project experience and research has been performed on the major critical activities such as the segmented full enclosure unit (FEU), tank decontamination, MEP system decommissioning, gutting, equipment removal and packaging, waste management, transportation, disposal, and deconstruction.

The general construction sequencing developed by AIS includes surveying, MEP system modifications, negative air enclosure construction, dry decontamination, floor sealing, wet decontamination, gutting, roof removal, siding removal, structural steel removal, applicable concrete wall removal, and area demobilization on a building by building basis.

As shown on the ***Schedule (Attachment 3)*** and in ***Figure 2*** on page 12, the sequence of the buildings is broken down into Segments 1, 2, and 3.The general sequence of building decontamination and deconstruction activities or segments for phase one proceed from the West, to the East, and end in the Center of the existing building. The CIP activities

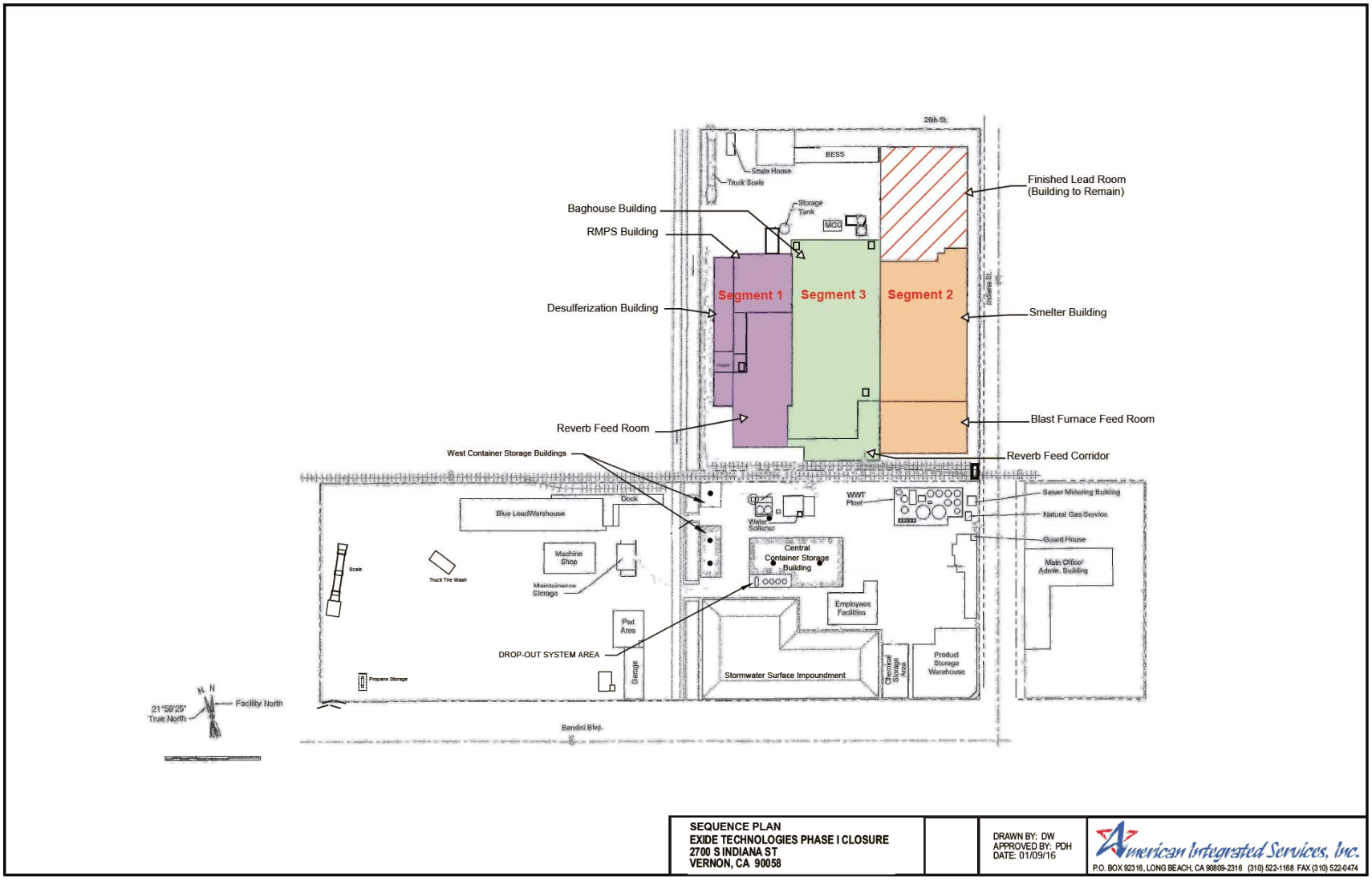
were broken down in this manner to allow for each Segment to be fully enclosed for the highly critical roof and siding removal. The West Segment (Segment 1) includes the RMPS, Desulfurization, and Reverb Feed Room Buildings (Upper and Lower). The East Segment (Segment 2) includes the Blast Feed Room and Smelter Building. The Center Segment (Segment 3) includes the Bag House and Corridor, as shown on *Figure 2 – Sequencing Plan*. In order to achieve our anticipated duration, AIS will use separate crews allowing for decontamination/gutting and deconstruction work to occur in multiple areas simultaneously. Decontamination and gutting will start on the West Segment, then move to the East, and finish in the Center. The deconstruction crews will only work in the areas fully enclosed and under an FEU, until such time as "clean status" is achieved. Once clean status is achieved, structural deconstruction will commence and these activities to the extent practical shall remain within the FEU's. The sequence for the areas outside of the FEU (example Oxidation Tank Area, Container Storage Areas, WWTP) are generally not on the critical path, and will be decontaminated and deconstructed as the Project progresses using portable enclosure units, as necessary.

AIS plans to utilize the existing-WWTP in conjunction with de-watering containers for most of the Phase 1 portion of the project. A temporary WWTP will be used in the latter stages of Phase 1 and a site specific plan will be developed in conjunction with Exide describing the components of this when needed.

2.5 Interim Status Unit Inspections

Active and inactive Interim Status Units are currently inspected by Exide using procedures from the facility's Part B Permit Application. Exide will continue the inspections at each interim status unit until the point that the unit has been physically removed from service. Throughout the project, AIS will provide access for all required on-going inspections by Exide, the DTSC, the SCAQMD and their third party Monitor.

Figure 2 – Sequencing Plan



3.0 Initial and Pre-Deconstruction Site Preparation Activities

3.1 Phase 1 Project Meetings

An initial Project kick off meeting will be held at the facility prior to the initiation of the work. The purpose of the meeting will be to discuss the proposed SOW and details regarding the date that fieldwork will be initiated; site access requirements; hours of operation; deliverables; locations of construction equipment; and, staging, cleaning and decontamination areas. Participants in the meeting should include all parties involved at the discretion of Exide Representatives.

Throughout the duration of the Project, AIS will attend weekly progress meetings. At each meeting, AIS will provide a Project Progress report for review and discussion.

3.2 Permits and Submittals

3.2.1 Asbestos/Demolition Permits and Notifications

The proposed scope of work will involve obtaining and complying with certain permits of local governing agencies. The following permits and/or notifications that may be required include the following:

- AIS will submit to the SCAQMD – Rule 1403 Form Notification of Demolition and or Asbestos Removal allowing for the 14 calendar day waiting period prior to implementation of asbestos abatement or deconstruction activities. AIS will coordinate with Exide as to the estimated project start and end date. AIS will also provide anticipated project work shifts to give AIS the flexibility for schedule needs should any unknown circumstances arise once deconstruction commences.
- Submit and retain SCAQMD permitted documentation for all HEPA filtered equipment utilized in the ACM abatement activities as well as negative air machines within the secondary containments; and HEPA-filtered vacuums and specialty equipment including Vector Loaders used during the decontamination process.
- Notify the State of California, Department of Industrial Relations – Division of Occupational Safety and Health (Cal/OSHA) per Title 8 CCR Section 5208 and temporary worksite notification per CAL/OSHA Form 183B for conducting asbestos-related work.
- Make notification to Cal/OSHA for conducting lead-related work and prepare all related required submittals throughout the Project.
- Make notification to Cal/OSHA with respect to performing elevated work activities in compliance with AIS Annual OSHA Demolition permit for work exceeding 30 feet.
- Apply for a Cal/OSHA Project Permit for building demolition greater than 36 feet in accordance with 8 CCR Section 341 (d)(3).

- Apply for a Cal/OSHA Annual Permit for scaffolding erection greater than 36 feet in accordance with 8 CCR Section 341 (d)(5)(B).
- Apply for a City of Vernon issued Demolition Permit.
- Apply for and obtain city of Vernon required permits for Electrical rerouting.
- Apply for a City of Vernon Encroachment Permit, if needed, during construction for sidewalk and/or street closure.
- Apply for a City of Vernon Environmental Health issued Hazardous Materials Closure Permit.
- Apply for a City of Vernon issued Temporary Membrane Structure Construction Permit as required by the Fire Department.
- Apply for a City of Vernon issued Plumbing Permit for WWTP modifications, as required, by the Building Department.
- Apply for permits, as needed for temporary power and temporary trailer facility.

3.2.2 Deconstruction Engineering Survey

AIS, in conjunction with SIGMA Engineering, has prepared a Deconstruction Engineering Survey (Survey) for the planned deconstruction of the main processing structures. SIGMA Engineering is a structural engineering firm and fully licensed in the State of California as required by Cal/ OSHA. The survey has taken into account the means and methods proposed by AIS for the Project decontamination and surgical deconstruction of the various building structures. The survey provides a detailed evaluation of the existing site conditions, elements and support that personnel need to perform the various activities to accomplish the SOW. Throughout the project duration, additional walks and surveys will be performed as needed. These evaluations will address safe decontamination and deconstruction procedures and will adequately assess the condition of framing, floors, walls and roofs during the deconstruction process. Ancillary features will also be evaluated such as overhead pipe racks, canopy areas, ASTs, and stacks. AIS has included this survey as *Attachment 4, Deconstruction Engineering Survey.* The sequence of deconstruction provided in ***Attachment 4*** is sequential removal of roof sheathing, purlins, roof trusses, wall sheathing, and wall girts, columns, and braces on a bay by bay basis. Segment 1 will be deconstructed from north to south. Segment 2 will be deconstructed from south to north. Segment 3 will be deconstructed from south to north.

All building components, including structural steel will be decontaminated within the HAKI enclosure. Based on final design from the AIS Structural Engineer and due to the high density of equipment, ducting, CP2 building and various improvements that are currently located outside of the respective corridor walls within the existing RMPS and Smelter buildings, following decontamination, AIS will leave the western wall of the Baghouse building along gridline N in place until Segment 3 at which time this wall will be removed outside of the FEU. Refer to *Attachment 4, Deconstruction Engineering Survey.*

In Segment 1, the eastern wall of the RMPS building and Reverb Feed Room (gridline N), which is the shared western wall of the baghouse building, will remain in-place after decontamination and deconstruction of Segment 1 and removed during Segment 3. The procedure to decontaminate and protect this wall and the baghouse building until Segment 3 decontamination is described in the following section.

Baghouse West Wall Deconstruction

Step 1 – During the first HAKI enclosure segment (Segment 1 – RMPS, Upper and Lower Feed Rooms): ***Attachment 13, Baghouse Wall Depictions, Figure 1a*** depicts the Segment 1 HAKI enclosure. The scaffold along the east side of the enclosure supports the HAKI enclosure and is indicated in blue. The shared wall between the RMPS Upper and Lower Feed Rooms and Baghouse building is shown in green and is also indicated as gridline N. While under the HAKI enclosure**,** the existing steel wall panels from the shared wall between RMPS, Upper and Lower Feed Room and the Baghouse buildings as well as the steel roof panels between the shared wall and the first column bay (see ***Attachment 13, Figure 1a – gridline M***) into the baghouse from the shared wall will be removed and decontaminated. This area is depicted as green portions in ***Attachment 13, Figure 1a***. The main structural column line for the Baghouse building is ***gridline M***.

Step 2 – During Segment 1: Decontaminate all horizontal girts (small steel elements that are attached horizontally along the building columns to support the wall panels), columns, concrete walls and roof beams. Ensure they meet the performance standard indicated in ***Attachment 12, Unit Disposition and Testing Requirement, Table 3.2*** for metal to be recycled. Remove steel elements that are acceptable to be removed at this time. ***Attachment 13, Figure 2*** shows what steel will remain after **Segment 1**. During this time, the scaffold shown in ***Attachment 13, Figure 1a*** is still in place.

Step 3 – During Segment 1: Install either the decontaminated panels or new siding to enclose the structure after cleaning. This will create a sealed wall and maintain negative pressure for the Baghouse building while work is being performed in the Smelter building and Blast Feed Room phase (**Segment 2**). During this time, the scaffold shown in ***Attachment 13, Figure 1a*** is still in place.

Step 4 – After Segment 1 demolition: Remove the HAKI enclosure from the footprint of the RMPS and Upper and Lower Feed Rooms including scaffolding as shown in ***Attachment 13 Figure 1a*** and build it on the East side of the Baghouse over the Smelter building and Blast Feed Room (**Segment 2**). The remaining decontaminated structural steel along the shared wall and the remaining roof beams along with reinstalled sheeting will be outside of a HAKI enclosure at this time.

Step 5 – Segment 2: Decontaminate and Deconstruct the Smelter Building and the Blast Feed Room, which is anticipated to take 9 months. During this time the decontaminated steel along the shared wall will remain outside of an enclosure.

Step 6 – After Smelter Building deconstruction: As a part of constructing the HAKI enclosure for the Baghouse building (**Segment 3**), erect a negative pressure barrier just west of ***gridline M*** (see ***Attachment 13, Figure 1b***). This will allow the maintenance of negative pressure in the Baghouse building while installing the west perimeter of the Baghouse building HAKI enclosure. To accomplish this step, scaffolding is installed approximately 1' west of ***gridline M*** that will continue through the entire Baghouse building from south to north (see ***Attachment 13, Figure 1b***). This scaffolding section will consist of two (2) rows of scaffolding running from south to north and will extend up to the underside of the existing Baghouse roof (see blue portions of ***Attachment 13, Figures 1b and 1c***). Once this scaffolding has been erected, AIS will install shrink wrap to the eastern side of the scaffolding and create a new negative pressure barrier for the Baghouse. This will now be the new "westernmost wall" of the Baghouse building.

Step 7 – During building of the Segment 3 HAKI enclosure: The remaining decontaminated structural steel making up the former shared wall and the baghouse roof between the former shared wall and the new "westernmost wall" of the Baghouse building will be removed with mechanical shears and cold cutting methods. A final section of scaffolding (step out depicted in brown in ***Attachment 13, Figure 1c*** will be installed within this area. ***Attachment 13, Figure 2*** shows the structural steel and a section of decontaminated concrete wall that will be removed in this process outside of a HAKI enclosure. All other structural steel associated with the Baghouse building will be removed within the HAKI enclosure under negative pressure.

All structural steel and concrete left outside of the containment building will have been decontaminated. Concrete will be tested with chips or core samples to make sure that it does not contain greater than 320 mg/kg lead (as described in **Section 11.2 of the Closure Plan.** Chip sampling is summarized in ***Table 3.5 of Attachment 12, Unit Disposition and Testing Requirements***). If the concrete wall does contain greater than 320 mg/kg lead following decontamination, the wall will be wrapped in plastic while it is left in place. During demolition, any portion of the concrete wall with greater than 320 mg/kg lead will be placed within a temporary enclosure with negative air pressure for either surface cleaning using milling or hydroblasting or the entire wall demolition.

During the deconstruction activities of the decontaminated concrete wall and structural steel outside of the enclosure, AIS will use wet methods to minimize the generation of dust, with the concrete being removed being kept damp. A continuous spray a water mist over the work area will be maintained using a firehose, dust box, or equivalent method. In addition, AIS will utilize hand held power washers to spray a fine mist directly on the items being deconstructed as a secondary direct means of dust suppression. AIS will monitor (utilizing real time dust monitors) upwind and downwind to verify dust suppression methods are sufficient.

No outside work will be performed when sustained winds exceed 12 MPH, or instantaneous wind gusts exceed 20 MPH. Also, work will be ceased if real time dust readings exceed:

- PM10 levels of 25 micrograms per cubic meter averaged over two hours, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM10 monitoring; and/or,
- PM10 levels of 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM10 monitoring.

Work will remain ceased until actual dust sample laboratory analysis for lead can be completed. Based upon those results, either additional dust suppression will be implemented to control nuisance dust with no hazardous components, or a full enclosure with negative air will be constructed if elevated metals are detected in the sample. The above described methods are in compliance with the approved **Closure Plan Sections 11.3.4 and 11.3.7 and *Attachment 14, Engineering Controls Plan, page 3-2.***

3.3 Health and Safety Requirements and Protocol

3.3.1 HASP

AIS prepared a written project-specific Health and Safety Plan (HASP) applicable for the work activities required to accomplish the SOW which complies with the requirements of OSHA Standards and Regulations contained in Title 29, Code of Federal Regulations, Parts 1910 and 1926 and Cal/OSHA Regulations 8 CCR Sub-Chapter 4, Construction Safety Orders and 8 CCR Sub-Chapter 7, General Industry Safety Orders. The HASP has been developed after review and consideration of all the Draft EIR comments and Final EIR responses in accordance with Section 18.0 of the Final Closure Plan and Mitigation Measure/ Project Condition of Approval No. 2 and to serve as a functional stand-alone document to be used by State and Federal agencies, onsite personnel and community members to verify that health and safety concerns associated with the above project are properly addressed. The HASP provides onsite management teams with detailed health and safety information to allow for efficient implementation. The site specific HASP will be available and communicated at the site where the work is being performed. The HASP is located in *Attachment 5, Health and Safety Plan.*

3.3.2 Hazard Identification and Control

A site-specific Job Hazard Analysis (JHA) will be completed for each task to be performed. The JHA will identify the work tasks required to perform each activity, along with potential health and safety hazards, and will recommend control measures for each work task. AIS

will require implementation of the JHAs as an on-site safety tool to identify on a task by task basis, the key steps, hazards and safety mitigation measures to protect our employees and on-site workers.

Workers will be briefed on the JHAs before doing the work and their input is solicited prior, during and after the performance of work to further identify the hazards posed and control measures required. In addition, a listing of the equipment to be used to perform the activity, inspection requirements and training requirements for the safe operation of the equipment listed will be identified.

AIS subcontractors will be required to provide JHAs specific to their scope of work on the Project for acceptance by AIS. Each subcontractor will submit Job Hazard Analysis (JHAs) for their field activities, as defined in their scope of work, along with their project-specific safety plan and procedures. Additions or changes in field activities, equipment, tools, or material used to perform work or hazards not addressed in existing JHAs will require either a new JHA to be prepared or an existing JHA to be revised.

3.3.3 Site Inspections

The SSHO or designee will perform daily walkthrough inspections of the job site to assess conditions. On a regular basis, the SSHO or designee will complete a full safety inspection of the Site using AIS's Field Audit Checklist. The completed checklists will be retained in the Project site safety file throughout the duration of the project.

3.3.4 Behavior-Based Safety

All Project Site AIS Project personnel will make a commitment to work safely and to look out for others on the job Site. Behavior Based Safety/Work Observation observers will be selected from the ranks of workers and trades persons.

Observation Checklists will be returned to the SSO or designee by the end of each day. Data from each Work Observation Checklist is to be compiled into and reviewed for trends, and a report measuring observed behaviors in terms of "% Safe" can be issued on a regular basis. The reports are to be discussed at the Safety Meetings, posted and made available at the Project site. The minimum required observations will be established based on the expected duration of the project and number of workers. Work observations are tracked by the SSO or designee.

3.3.5 Stop Work Authority

It is AIS policy that all site personnel have the authority, without fear of reprimand or retaliation, to:

- Immediately stop any work activity that presents a danger to the site team or the

public;

- Stop any work activity to clarify and or better understand the task; and
- Get involved, question, and rectify any situation or work activity that is identified as not being in compliance with the HASP or with broader AIS health and safety policies.

All Project site personnel are empowered to identify and correct unsafe acts, unsafe conditions, and near misses before they can cause an incident. If someone utilizes their Stop Work Authority, then work can only be restarted by the SSO, in concert with the Project Manager and Exide Representative.

3.3.6 Personal Monitoring

AIS will perform personal air monitoring in the work-breathing zone. The primary purpose of this monitoring is to quantify and to determine worker exposure to lead and asbestos (main constituents of concern) in order to dictate the appropriate level of employee protection needed on-site and to be in compliance with Cal/OSHA Title 8 Section 1532.1 "Lead in Construction Standard" and Cal/OSHA for asbestos, Title 8 CCR Section 5208. Personal air monitoring is discussed in the ***Health and Safety Plan, Attachment 5***.

3.3.7 PPE

To comply with subsection (g)(5) of 8 CCR 5192 the necessary engineering controls and the individual components of protective clothing and equipment will be assembled into a full protective ensemble that protects the worker from site-specific hazards and minimizes the hazards and drawbacks of the personal protective equipment (PPE) itself. AIS assumes the use of Level C PPE as a standard with a possible upgrade to B for specific tasks and or a downgrade to Level D based on monitoring results during the decontamination process. The level of protection provided by PPE selection will be upgraded or downgraded based upon a change in site conditions, air monitoring results, personnel monitoring or hazard assessment. The PM, in consultation with the SHO and SSHO will be responsible for the implementation of the AIS personal protective program and for deciding when and if an upgrade or downgrade in PPE is warranted.

Some indicators of the possible need for reassessment during this project are:

- Commencement of a new work phase that begins in a new area on the property.
- Change in job tasks during a work phase.
- When temperature extremes or individual medical considerations limit the effectiveness of PPE.
- Contaminants other than those previously identified are encountered.
- Change in ambient levels of contaminants.
- Change in work scope, which affects the degree of contact with contaminants.

3.4 Site Control and Traffic Management

As discussed in the HASP, site control and traffic management are essential to protect the public, the surrounding neighborhood and personnel working on-site.

Traffic management with planned truck routes are necessary to ensure compliance with the Closure Plan and for alleviating traffic congestion and roadway wear and to follow only designated travel paths and site roadways during Project activities. AIS prepared and has included the Project ***Traffic Management Plan,*** *Attachment 6.*

Site control measures will be implemented to protect the public and personnel working on-site. To insure all safety rules and plans are adhered to, site ingress and egress will be limited to authorized personnel and visitors only.

These measures include the following:

- Upon arrival to the Project site, all visitors will enter through a designated gate; be required to stop at security; sign in; and, check in at the AIS trailer for site specific orientation and instructions. All truck drivers will also be required to sign in; be briefed on site specific instructions; and, will be given printed driving route maps, with vehicle marking as applicable.

- As set forth in ***Attachment 14, Engineering Controls Plan***, the established speed limit of 5 mph will be required by all on-site personnel and visitors.

- Fences, guardrails and access devices, including ladders, stairways, warning signs, lighting and walking surfaces will be provided as needed and maintained throughout the project activities in accordance with Cal-OSHA Title 8, Construction Safety Orders and 29 CFR 1926.

- At each work area, three general work zones will be established, namely the Exclusion Zone (EZ), Contamination Reduction Zone (CRZ), and Support Zone (SZ). As the project progresses, the location and sizes of these zones may change. The EZ will be located only in those specific areas where potential for over exposure to the identified contaminants or hazards exists. Signs will be posted indicating limited access to the EZ. Project site personnel will be briefed on the locations and limits of each zone. As the size of the zones change, the delineators and signage will be moved and/or adjusted.

3.5 Sampling Support for Boring Locations

As outlined in the Closure Plan, AIS will provide sampling support for up to 310 boring locations. AIS anticipates that all boring locations will be performed by hand-auguring

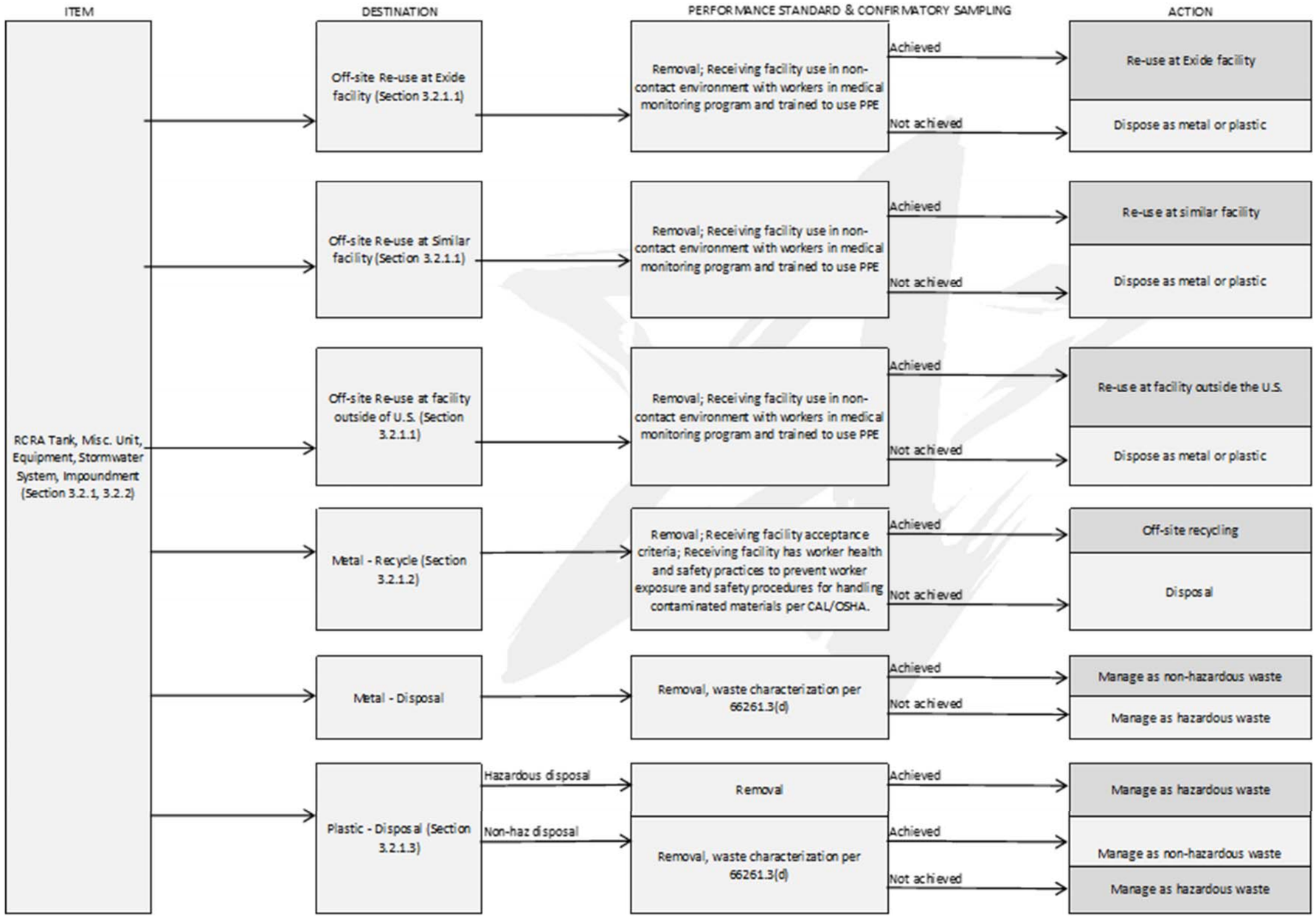
and/or low-profile drilling equipment, thus a portable enclosure unit can be utilized for all locations where the potential for dust generation exists. However, AIS assumes that any interior sampling will be conducted within an already established enclosure thus a portable unit will not be required. AIS will provide the hand auger kit, plastic sheeting, small tools and supplies for conducting the sampling effort, and also if not provided by others, can supply the geo-probe/roto-sonic drill rig. AIS assumes that Exide Representatives will handle the sample preparation, logging, and chain-of-custody documentation. All work such work will be conducted in compliance with site SCAQMD protocols as well as health and safety requirements. AIS will provide support for activities associated with 1) clearing the proposed sampling location, 2) surface removal, 3) hand auguring, 4) backfill, 5) restoration, and 6) waste handling.

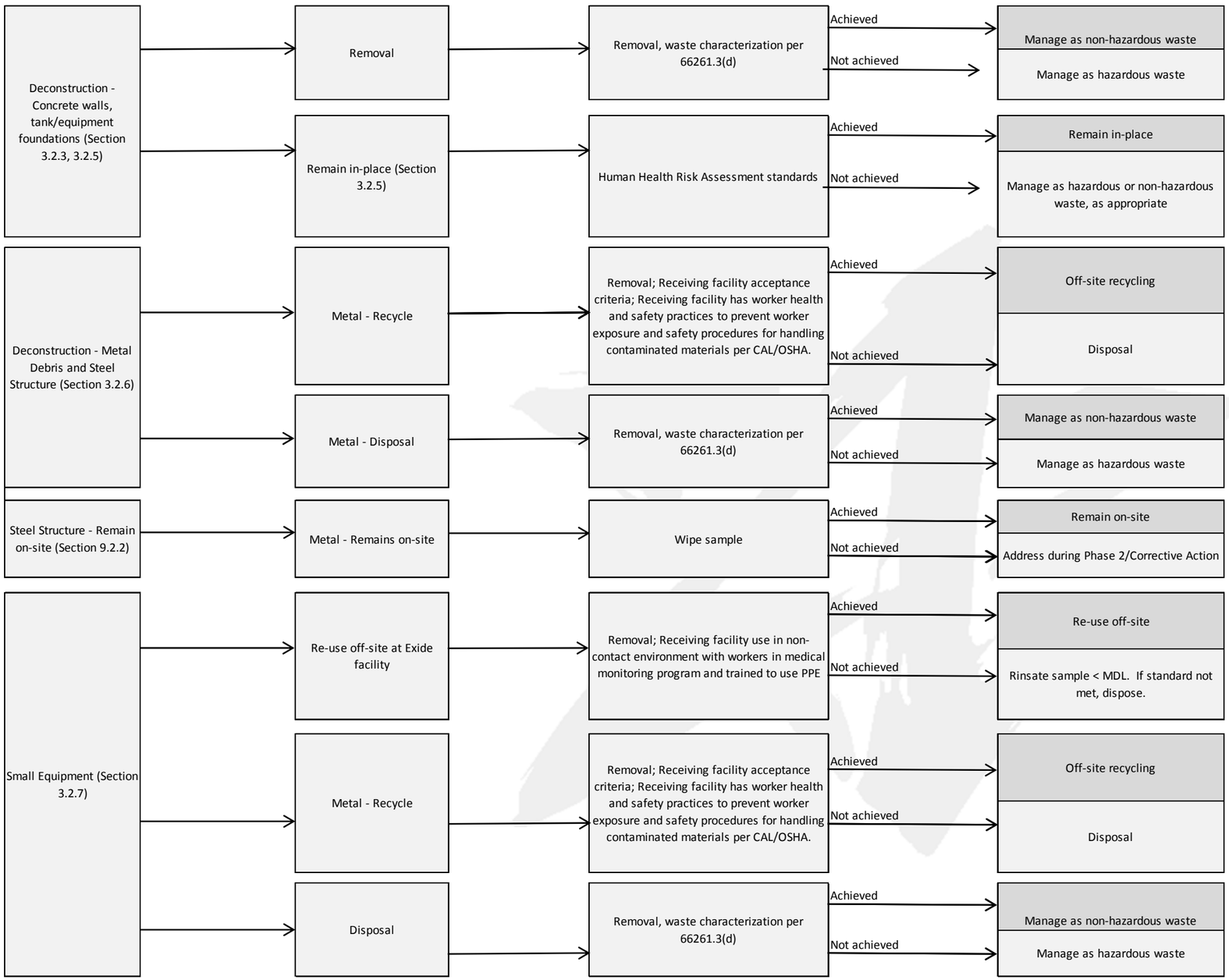
3.6 Debris and Waste Characterization, Handling and Management

Prior to and during completion of the decontamination and deconstruction activities, AIS will utilize the attached ***Waste Management Plan,*** *Attachment 7,* for the coordination of waste evaluation, disposal facility acceptance, off-site transportation and disposal of the various waste streams generated during site activities (i.e. visqueen sheathing, PPE, trash, construction debris, recycling, etc.). The plan provides guidance, direction and procedures for handling, managing the disposal of various waste types generated as a result of the Project activities; and presents responsibilities and procedures to be implemented by AIS with the control and the disposition of waste at the site.

Figure 3 presents a flow chart for waste disposition. This chart also included in ***Attachment 7, Waste Management Plan***.

Figure 3 – Waste Disposition Flow Chart





NOTE:

1. Exide may choose to reclean and resample materials/items not achieving standards or proceed with disposal.
2. MDL is Method Detection Limit
3. Clean Debris Surface is defined as 'The surface, when viewed without magnification, shall be free of all visible contaminated soil and hazardous waste except that residual staining from soil and waste consisting of light shadows, slight streaks, or minor discoloration, and soil and waste in crevices, cracks and pits shall be limited to no more than 5% of each square inch of surface area.'

4.0 Site Protocols, Procedures and Preparation Activities

4.1 Utility Location and Termination

As required in the Closure Plan, AIS will retain a utility locator, work with various engineers and conduct an inspection of the facility prior to the start of closure to identify active and inactive utilities and safety concerns. AIS will develop procedures for shutdowns and the sequence of utility termination with respect to the phases of work including building decontamination, gutting and deconstruction activities and maintaining utilities during activities which need them.

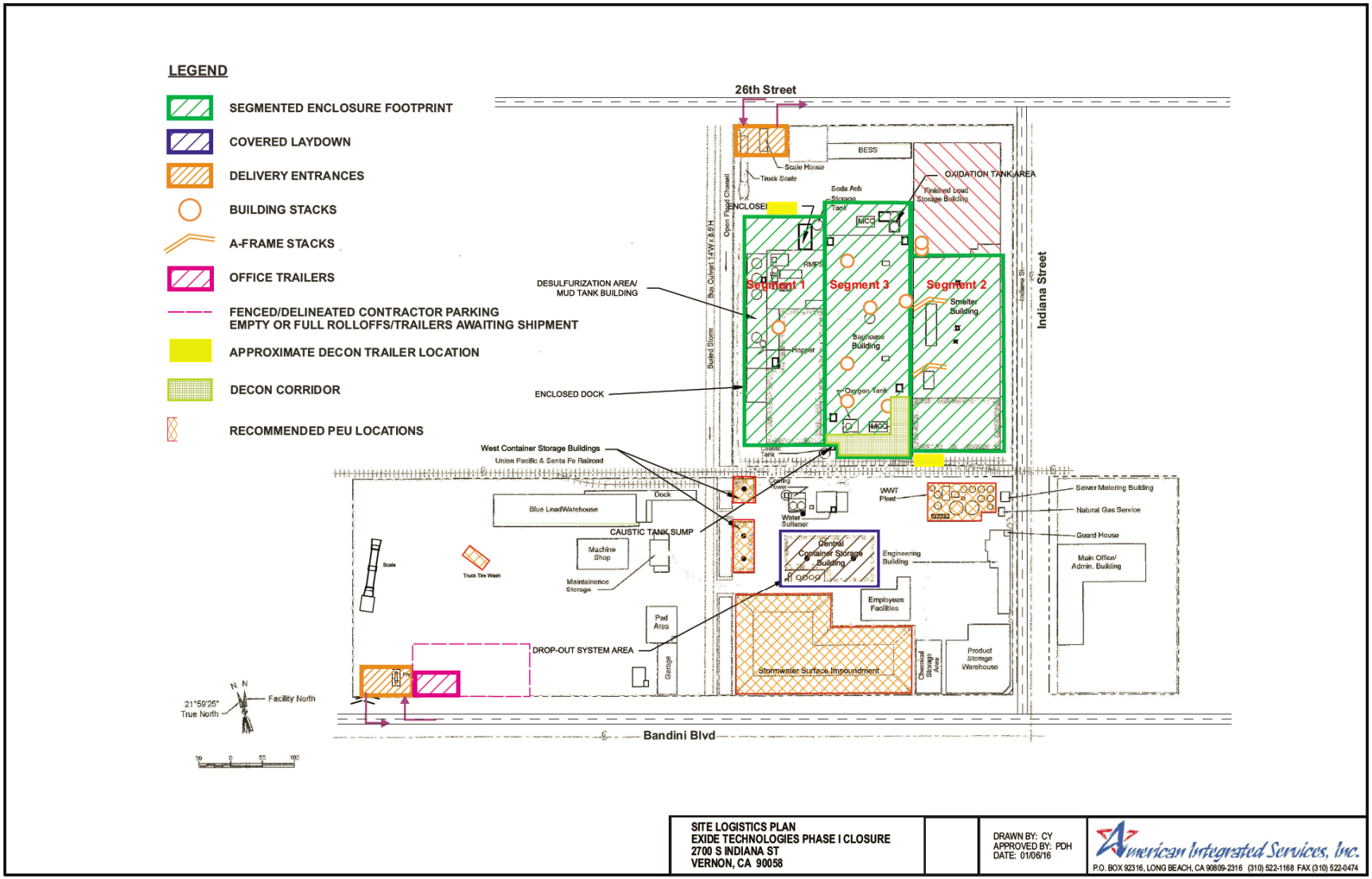
AIS will clear each decontamination and deconstruction area for utilities in accordance with the procedures developed in the applicable work plan including mechanical and electrical. In certain cases, and depending on the needs and requirements of the specific utility company, some of the utilities that are removed will need to be capped in the manner specified by the utility company.

4.2 Site Mobilization

Prior to initiating field work, AIS will establish a covered laydown area and a trailer storage area for field offices, temporary facilities, equipment and material staging. ***Figure 4, Site Logistics Plan*** *(see next page),* delineates the covered laydown area, trailer storage area and the delivery entrances. AIS will furnish and set up internal support facilities based on the anticipated and/or scheduled work efforts. Field support facilities will include portable toilets, hand wash stations, eyewash stations, and temporary storage units.

Once the areas are established, AIS will mobilize AIS designated field personnel; specialized decontamination equipment for surface cleaning activities; HEPA and/or liquid vacuum equipment (guzzlers, vacuum trucks, pumps, hoses) for the removal of generated rinseate for onsite processing; various equipment including thumbed excavators and shears, reach forklifts, boom lifts and skid steers with attachments for the deconstruction and removal of the existing structures.

Figure 4 – Site Logistics Plan



General Project equipment, at a minimum, will include:

- Excavators w/ grapple/sheer attachment/pulverizing attachments (2)
- Front End Loader (1)
- High Reach 12K Forklifts (1-2)
- Bobcats (2-3)
- Boom Lifts & Man Lifts (1-3)
- Pressure Washers (1-2)
- HEPA Vacuums (2-4)
- Vacuum Truck and/or Guzzler (1)
- Variety of Small Tools and Supplies (TBD)

Prior to commencing field work a pre-construction meeting will be held on-site to review all pertinent details of the Project CIP, Deconstruction Engineering Plan and the site specific HASP and JSAs. In addition, but not limited to, the following tasks will also be performed:

- Verify that all initial documentation as outlined in the Data Management, Documentation and Recordkeeping section is on-site as required.
- Verify protection of all utilities that are scheduled to remain throughout the areas.
- Ensure power and communication lines are de-energized (initial verification).
- Provide clearly defined regulated work areas, with at a minimum, delineation including tape, delineators, signage and sign in log and contact information.
- Ensure sufficient decontamination stations are within the regulated work area sizeable to handle the sections being removed. See ***Attachment 9, Decontamination Station.***
- Verify all BMPs are implemented including protection of drains and outlets, sufficient dust control measures and negative air enclosures as applicable.

4.3 Engineering Controls for Liquids

As specified in the Closure Plan, AIS will inspect concrete sumps for cracks and other areas where liquids could infiltrate. Cracks will be cleaned using a SCAQMD permitted HEPA vacuum. Epoxy resin will be applied to the bottom and interior sidewalls of concrete sumps with cracks, damage or exposed concrete. Wet decontamination of equipment within the floor and sump area will occur after a curing period.

4.3.1 Crack Filling

Located throughout the interiors and exteriors of the production facility are areas with cracks in the concrete and asphalt slabs that require filling to minimize water intrusion into the below sub-surface soils. As discussed in ***Attachment 14, Engineering Controls Plan,*** – Section 2.0 – Engineering Controls for Liquid Infiltration, AIS will conduct the cleaning of the cracks and then install a crack sealant to minimize water infiltration. As indicated above during the pre-construction activities, AIS will physically inspect the areas of concern and will demarcate these areas for cleaning with marking paint. Cleaning of the subject crack will be completed utilizing grinders with HEPA vacuum equipment utilizing standard vacuum hoses to open existing cracks. In addition, AIS will utilize Hepa Vacuums with crevice and gulper tools to clean after opened. AIS will fabricate a gulper tool which will be constructed of an aluminum housing with stationary point. As the gulper tool is worked over the crack, the point will help assist in the removal of fine particulates along the crack/joint. The point will not only remove particulate matter from the crack but they will also assist in the preparation of the crack and adjoining concrete surface (< ½-inch) on either side of the crack. This preparation will allow for better adhesion of the sealant to the crack during installation. Utilization of the gulper tool and housing will always be under vacuum and any particulates removed will be containerized in the HEPA vacuum filter system.

Vacuum canister particulates and HEPA filters will be consolidated in 6-mil poly bags for incorporation into the “lead” particulate waste stream to be handled at a minimum as a Non-RCRA Hazardous waste solids.

4.3.2 Sump Epoxy

Prior to construction, AIS will clean, inspect, and coat the various concrete sumps within and outside the main production facility. Sealing/coating of these sumps will be critical as accumulation points for wash water or “rinseate” generated from equipment and structure decontamination as well as deconstruction activities. Sealing units will also eliminate any possible infiltration into the surrounding sub-grade soils or other pathways.

Sump evaluation will include the initial Hepa-Vacuuming. Sump evaluation may also include the removal of the sump components for re-use or new equipment will be installed based on inspection and AIS final evaluation. Following inspection, if it is determined that a the sump has good integrity, AIS will coordinate the installation of the epoxy resin coating per the manufacturer’s recommendation. In accordance with ***Attachment 14, Engineering Controls Plan,*** sump epoxy will be applied after dry decontaminating and before pressure washing. If the integrity of the sump is such that installation of the epoxy resin cannot be completed, AIS will notify Exide and propose alternate means.

Once installed, the resin must be allowed to harden or cure for 24 hours. Resin installation will be completed with air temperatures greater than 55°F.

4.4 Air and Noise Monitoring and Dust Control

4.4.1 Air Monitoring

AIS will perform personnel air monitoring in the work-zone. The primary purpose of this monitoring is to quantify and to determine worker exposure to the Project's primary contaminants of concern, including lead and asbestos containing material (ACM) in order to dictate the appropriate level of employee protection needed on-site and to be in compliance with California Occupational Safety and Health Regulations (Cal/OSHA) Title 8 Section 1532.1 "Lead in Construction Standard" and Cal/OSHA standards for asbestos, Title 8 CCR Section 5208. These results will be reviewed daily and PPE modified or adjusted as needed.

4.4.2 Noise Monitoring

All mobile or stationary internal-combustion-engine powered equipment or machinery shall be equipped with suitable exhaust and air-intake silencers in proper working order in accordance with MM-NV-1 of the Mitigation Monitoring Reporting Program (MMRP).

To address MM-NV-1, a form has been created (Form 2-9 in ***Attachment 2, Data Management Plan***), will be used to log noise monitoring measurements. This form will be completed each time a new piece of noise generating equipment is delivered to the Facility and copies will be kept by AIS and the Resident Engineer.

Noise monitoring will be performed at locations representative of the two adjacent businesses, as discussed in section MM-NV-2 of the MMRP. Prior to the start of closure activities, a background (ambient) noise study will be conducted at the same locations. The noise measurement locations are:

- 3800-3840 East 26th Street (the closest business structure to the northwest) and
- 4010 East 26th Street (the closest business structure to the southeast).

If ambient noise levels measured during the background study are near or exceeding the threshold, a methodology to address the source of the noise levels will be developed. Also, background noise levels will be noted on the form to be utilized to record the noise monitoring data.

Form 2-10 (*in the **Data Management Plan, Attachment 2***) will be used for recording data to address MM-NV-2. Noise levels sustained over a 1 minute period will be monitored at these two business locations during Exide facility deconstruction activities. If measurements indicate that the maximum sustained noise level generated by the deconstruction equipment and activities at the Exide Facility exceeds 85 decibels (dBA)

for five minutes the contractor will change site activities to reduce the noise. Steps may include one or more of the following: 1) reduce the number and/or types of equipment operating simultaneously outside of the building; 2) erect partial sound barriers around the noisy equipment; 3) erect a temporary noise barrier along the property line between the Exide Facility and the adjacent industrial building; and/or 4) use quieter equipment or processes.

Since no deconstruction activities will occur between 10pm and 7am, no noise monitoring for residences will be performed.

4.4.3 Fugitive Dust Control Plan

4.4.3.1 General Methodology and Preventative Measures

AIS will employ preventative measures to minimize fugitive dust emissions during all project activities. Preventative dust control measures will consist of the use of negative pressure, water spray or misters, and will be implemented during performance of any activities that may generate fugitive dust. The use of negative air and water misting will be the main sources for dust control if any dust is observed or detected with the on-Site monitoring. AIS will regularly monitor the work zone to ensure that no large volumes of water from the dust control activities are pooling or ponding, which could create a work hazard. During the actual work of removing the dust, dirt, sediment accumulations or waste material, the material shall be kept wetted or vacuumed to mitigate fugitive emissions produced at the work surface. All materials cleaned up from this work will be collected and transported to a designated area inside the FEU for storage and disposal. Additionally, the liquid run off from areas that are wetted shall be contained or directed into drains so as not to allow the liquid run off to evaporate and cause a secondary means of dust to be released into the air.

Dust preventive/mitigation measures will be employed to control the emission of visible fugitive nuisance dust through the use of administrative, engineering, and physical controls that will include, but not be limited to the following:

- Use of the Site's permitted bag houses and negative pressure system;
- Wet surfaces with water;
- Apply dust suppressants, as applicable if needed;
- Minimize soil, road, and surface disturbances;
- Establish and maintain on-site speed limit not to exceed 5 MPH;
- Curtail outside work activities during high wind conditions (over 12 MPH sustained or instantaneous wind gusts exceed 20 MPH);
- Restrict traffic to designated roads and corridors as specified in Traffic Control Plan;
- Select alternative equipment;
- Control material drop heights during stockpiling, loading and unloading operations;
- Minimize and control material handling operations; and,

- Place trash/debris designated for off-sight disposal in covered containers/roll-off bins.

4.4.3.2 Means and Methods of Engineered Systems for Dust Control

In accordance with the ***Attachment 14, Engineering Controls Plan***, dust control during the mobilization, decontamination and deconstruction phases of the work is a high priority. In addition to the means and methods outlined in the aforementioned Dust Control General Methodology and Preventative Measures section, AIS will evaluate the effectiveness of the ongoing dust control measures and further employ the following devices on an ongoing and/or as needed basis.

On an as-needed basis, AIS can install a misting system that would be placed in the ancillary space between the existing vertical walls of the FEU and the exterior vertical walls of the buildings. This low pressure water misting system will consist of flex tubing and nozzle heads that will be affixed to the scaffolding within the FEU.

As needed, AIS can assemble several main control points for the misting system and will also introduce an air stream into the misting system to supplement the water.

AIS can assess the effectiveness of this system throughout the Project, and the same system may also be installed inside various locations of the RMPS, Baghouse and Smelter Building during decontamination and deconstruction activities. Installation of this system can be easily achieved within these structures utilizing existing structural members.

4.4.3.3 Means and Methods for Atmosphere Dust Control Measures

During some Project activities at the Vernon facility, there will be the need to cast a fine mist over a larger surface area or air volume. This predominately would be needed during the deconstruction phase of the project when AIS will be removing the “skeleton” of the structures and/or some concrete or block removal activities. As employed on several recent AIS deconstruction and soil remediation projects, a “Dust Boss” can be utilized to cast a fine mist over the work area to minimize dust generation. The unit is able to use low-volumes of water at a medium high pressure which will cast a very fine mist up to 200’; and, are completely mobile such that they can be located or relocated in the best possible position to support controlling dust. The device can also oscillate both horizontally and vertically and be regulated as to speed and volume to ensure that water is not being wasted or over-saturation/ponding is occurring and that the mist is not exiting the Project site or disrupting SCAQMD air monitoring stations.

4.5 Supplemental Dust Mitigation Measures

In accordance with ***Attachment 14, Engineering Controls Plan,*** and in response to adverse visual observations or dust monitoring results, AIS will implement and follow

supplemental dust mitigation actions until Exide and the Dust Mitigation Oversight Representative advises otherwise.

Supplemental dust mitigation actions/activities include the following, as indicated in ***Attachment 14, Engineering Controls Plan***,:

- All work outside of any Full Enclosure Unit that has the potential to generate lead or other toxic metals containing dust will cease. For the duration of the stop work order, negative air filtration units installed on enclosures will remain in operation and equipment utilized within the Full Enclosure Unit will remain in place.
- Immediately begin application of water on all paved areas.
- All on-site vehicle traffic outside of the FEU will be stopped.
- All overhead doors on a building within and its FEU will remain closed.
- Any other potential activities within any FEU that could be contributing to the increase in dust concentration will be stopped.
- Determine if there are any offsite activities that are being conducted by others that are contributing to the increase in dust concentration. If so, suspend all activities outside of the FEU that have the potential to generate dust containing lead and other toxic metals until additional dust mitigation has been implemented or the activity completed and the areas both on-site and off-site are cleaned.

The supplemental dust mitigation activities noted above will remain in effect until Exide and the Dust Mitigation Oversight representative determine the cause of the adverse readings and additional dust mitigation for the activity that caused the increase in dust concentration has been implemented. Work activities will resume using the procedures provided in ***Attachment 14, Section 3.6.2***.

If ambient air concentrations of lead or arsenic exceed the limits of SCAQMD Rule 1420.1(d)(1) and (d)(5), AIS will suspend closure activities and implement contingency measures as required by ***Attachment 14, Section 5.0***.

4.6 Storm Water Management/Best Management Practices (BMPs)

AIS will establish storm water BMPs at specific locations at the perimeter of the work zone to divert storm water run-on from entering the work areas, to prevent uncontrolled run-off from leaving active working piles or work zones, and to channel/divert storm water to the perimeter collection system, or existing collection points or sumps associated with the

storm water management system consisting of processing through the WWTP and discharging to the POTW. As indicated in Closure Plan Section 3.8, the existing stormwater management system, including manholes, piping, perimeter sumps and trench drains, pumps, the surface impoundment, and perimeter curbing, will continue to be operated per existing facility requirements including the Section 8 compliance terms of Stipulation & Order, Docket HWCA 2009-2208.

Storm water controls may consist of sand bags, gravel bags, berms and straw wattles. Storm water ponding or accumulations visible after significant storm events will be directed to sump collection areas based upon either site topography or diversion berms, then collected and transferred to the pre-existing storm water management system.

AIS will inspect and maintain all storm water controls on a weekly basis, and after each major storm event. A written record of this will be maintained on-site. Any damages to these controls will be repaired when they are observed.

Sand bags, gravel bags, straw wattles, temporary berms, or other similar BMPs will be placed around the buildings ingress/egress points to prevent storm water run-on from entering any building deconstruction areas or water run-off from exiting any work areas in an uncontrolled manner.

4.7 Water Management

AIS will provide for rinseate collection and on-site processing. All generated wash water will be pumped via sump pumps or vacuum trucks for processing through the WWTP. All decontamination water will be collected at existing sumps and low points, removed with a pump as needed and placed directly into a ***Dewatering Container (Attachment 11)*** located within the enclosures or directly transferred to the WWTP or temporary WWTP for processing utilizing vacuum trucks with double contained hoses. Hoses outside of the vacuum truck may also be used to collect small quantities of liquids for transfer to the WWTP or temporary WWTP.

Information regarding the ***Dewatering Container*** is provided in *Attachment 11.*

The existing WWTP will be used for wastewater treatment until the existing WWTP is removed from service. If needed, a Temporary WWTP will be installed prior to decommissioning of the existing WWTP. Additional detail on the Temporary WWTP will be provided separately. The WWTP will be decontaminated at the end of Phase 1 and will remain on-site for wastewater treatment after Phase 1.

4.8 Decontamination Area at Corridor

The Corridor inside the enclosure will be used for dry and wet decontamination of construction equipment, transport vehicles, scrap metal, process equipment, and other

deconstruction debris and vehicle loading and staging throughout Phase 1. Prior to this use, the Corridor floor will be HEPA vacuumed and cracks sealed per ***Attachment 14, Engineering Controls Plan***. In addition, a 2-inch layer of asphalt will be placed on the existing floor to create a stable and uniform work surface for decontamination activities. Decontamination liquid will be collected at the existing Unit 51, Truck Wash Sump, and will be transferred to a Dewatering Container, (***Attachment 11, Dewatering Container***) then the WWTP.

5.0 General Segmented Enclosure Methodology

The Closure Plan, as originally written, called for the construction of portable Negative Air Enclosures for roof and vertical wall panel decontamination and removal. This proposed method created a considerable amount of work being performed under "high risk" conditions for the Project, including AIS Technicians working on elevated roof structures with unknown stability, while being tied off and in appropriate fall protection at all times. AIS had concerns that placing workers and a negative air enclosure on the roof, as described in the Closure Plan increased the health and safety risk for the workers and the Project. To mitigate this concern, AIS identified a full enclosure system (HAKI system) and its design was submitted to the DTSC and SCAQMD on December 9, 2016. The USEPA has determined that the Facility is "no longer an affected source" under NESHAP because Exide cannot physically operate as a secondary lead smelter having permanently disabled the Blast and Reverberatory furnaces, which means that NESHAP requirements are not be part of the final Title V Permit.

The SCAQMD has issued a renewed Title V Permit to govern closure activities, including Exide's use of the HAKI system. Exide's closure activities will comply with the final Title V Permit.

As described in Exide's HAKI submittal (see *Attachment 8, FEU – HAKI Truss System*), which was conditionally approved by the DTSC on December 27, 2016 date, AIS will utilize a segmented full enclosure unit (FEU), which will be composed of a combination of conventional scaffolding for the walls and HAKI Truss System for the roof. The system is a truss system capable of spanning the entire width of the structure and will provide secondary enclosure by utilizing a track system within the trusses to place poly sheathing. See *Attachment 8* for additional detail for the FEU and the HAKI system. The thickness of the plastic used for the full enclosure will include (1) roof structure of 20-mil fire retardant plastic, and (2) wall structure of 14- mil fire retardant plastic. With a wind load rating of 75mph, this will withstand all anticipated wind gusts. AIS has performed work utilizing the above mentioned system on multiple projects throughout Southern California. Negative air machines and/or additional ducting from the existing baghouses will be added as necessary to maintain constant negative air pressure to continuously prevent a fugitive dust event. Duct modifications are provided in *Attachment 10, Duct Modification Plan.* The durability of the secondary containment will allow crews to safely dismantle or abate buildings enveloped by this system in most weather conditions and help prevent the possibility of work stoppage due to rain or dust emission. In addition, the enclosure structure will provide access points along the perimeter of the structure to all wall panels and provide extra tie off locations which will decrease

any cumbersome stretches of lanyards and allow safer and easier access for building decontamination.

As shown in *Attachment 8 FEU – HAKI Truss System*, a HAKI system FEU will be constructed at Segment 1 (West buildings). At this time the HAKI system will also be installed at the Corridor. Following work within Segment 1, a HAKI system FEU will be constructed at Segment 2 (East buildings). Following work within Segment 2, a HAKI system FEU will be constructed at Segment 3 (Center buildings). The Oxidation Tank Area and electrical systems north of the Baghouse Building will be removed prior to construction of Segment 3 using a portable enclosure unit.

To allow for the deconstruction of walls the FEU scaffolding walls will extend up and penetrate through the existing roof in the baghouse building. The roof penetration will be conducted within a temporary enclosure. The plastic sheeting on the scaffolding walls will be sealed to the adjacent roof outside the FEU. Any guy wire penetrations through the existing roof will occur after the FEU is operational, and will not require a temporary enclosure. The HAKI system will be anchored to the existing floor as shown in *Attachment 8, FEU – HAKI Truss System.*

As discussed in *Attachment 10, Duct Modification Plan,* the negative air pressure for the FEU will be monitored using existing and temporary monitoring devices. The proposed temporary monitoring device will meet SCAQMD requirements. Detail on the device will be provided separately.

In the event that there is a minor breach in the FEU during the Project the following contingency plan for minor repairs will be implemented:

- Maintain supply of repair materials onsite including: Poly Sheathing for walls, HAKI Roof Sheathing, Chemical Welding Supplies an specialty tools;
- Have designated trained repair person onsite daily that is familiar with HAKI and FEU systems;
- Complete inspection of temporary enclosure to identify defects;
- An additional plastic sheeting layer on areas of enclosure(s) requiring repair;
- Increased negative pressure for Total Enclosure Building and or temporary enclosure;
- Additional temporary enclosure cleaning with SCAQMD-permitted HEPA vacuum;
- Add water misting devices at work locations;
- Decrease threshold wind speed for outdoor work stoppage;
- Add wind speed threshold for work stoppage at temporary enclosures, including Total Enclosure Building in the process of deconstruction;

5.1 Roof Portion of the Segmented FEU

The enclosure system utilizes conventional scaffolding for walls and a HAKI Truss System for the roof portion. This system is a truss system capable of spanning the entire width

of each of the Segment's structures and will provide a secondary enclosure by utilizing a track system within the trusses to place poly sheathing.

5.1.1 Stacks and A Pipe Enclosure

5.1.1.1 Reverb A-Pipe

The Reverb A-pipe was replaced in 2014. Installation was not completed and the Reverb A-pipe has not been used. Windows will be cut into the Reverb A-pipe at both ends below the FEU roof, and a 6-mil poly sheeting will be placed inside the Reverb A-pipe at both ends to cap the ends of the Reverb A-pipe. The poly sheeting will be placed to both sides of the cut so the A-pipe remaining in-place will also be capped. The Reverb A-pipe will only be wrapped at each end. Then, a crane rigging crew will secure the crane and prepare to lift the Pipe. Once secured, the Reverb A-pipe will be cut at both ends. As allowed by the calculations in *Attachment 10, Duct Modification Plan*, a section of the roof of the FEU will be temporarily opened along the length of the Reverb A-pipe to allow the Reverb A-pipe to be lowered within the existing Segment 2 enclosure while negative pressure is maintained on the FEU. Calculations have been performed to verify sufficient negative air will be maintained during this activity. The crane will then safely lower the Reverb A-pipe down into the FEU where it will be decontaminated within the confines of the building and within the segmented enclosure. The roof sheathing will then be resealed by placing poly sheathing used for making the HAKI roof over the void created during the removal. These splicedin sections of sheathing will be chemically welded as per their manufacturer's recommendations. Decontamination will not occur prior to lowering the Reverb A-pipe into the building, since it was never used and because it extends above the maximum elevation of the FEU. This procedure is described in the ***Engineering Controls Plan, Attachment 14***. The changes result in not wrapping with a 6-mil poly sheathing due to the potential safety concern of placing workers within a crane basket for extended periods to wrap the stacks and the fact that the stacks will be lowered into the FEU for decontamination rather than being lowered to the ground outside of the negative pressure enclosure, which precludes the need for secondary containment provided by the proposed sleeve.

5.1.1.2 Blast A-pipe

The Blast A-Pipe will be enclosed by the Segment 2 FEU. It will be gross decontaminated in-place, then deconstructed using methods similar to other equipment/buildings. Final decontamination will be conducted after deconstruction.

5.1.1.3 Stacks

Prior to the baghouses stack removals, the top of each stack opening will be sealed and wrapped with 6-mil plastic. A window will be cut within the stack section below the roof line which will allow for placement of a 6 mil poly sheathing on the inside of the stack

above the cut locations to cap the bottom of the stack section. The poly sheeting will be placed on both sides of the cut so the stack section remaining in-place is capped also. The stack will be wrapped with poly sheeting at the top and bottom only. The crane rigging crew will secure the crane and prepare to lift. Once secured, the stack will be cut below the roof line. As allowed by the calculations in ***Attachment 10, Duct Modification Plan***, a small section the roof of the FEU will be opened to allow the stack to be lowered while negative pressure is maintained on the FEU. The crane will then safely lower the cut section of stack down into the FEU where it will be decontaminated within the confines of the building and within the segmented enclosure. Decontamination will not occur prior to lowering the stack into the building. This procedure is described in ***the Engineering Controls Plan, Attachment 14.*** The changes result in not wrapping with a 6-mil poly sheathing due to the potential safety concern of placing workers within a crane basket for extended periods to wrap the stacks and the fact the stacks will be lowered into the FEU for decontamination rather than being lowered to the ground outside of the negative pressure enclosure precludes the need for secondary containment provided by the proposed sleeve.

5.1.2 Segmented Enclosure for the North Yard Building

Interior doorways will be blocked and/or sealed off prior to the construction of the FEU. Once the segmented FEU is in place in the specific work area and the decontamination and deconstruction activities are initiated, AIS will establish interior critical barriers to allow for the movement of support equipment, roll-off container delivery, waste removal activities, and general work to be conducted within the areas without compromising the negative air environment.

During the course of the work, AIS will be required to seal off access ways, doorways, and nonstructural areas to maintain physical separation between the work areas. Access areas will be assessed and reconfigured as necessary to maintain proper negative air control and allow for decontamination and deconstruction activities to continue. Depending on the need and requirements of a given area, AIS will consider all facets in the subject work area and adjust as necessary. A high level coordination between work crews and support efforts will be critical to ensure methodical and well-coordinated efforts are utilized for successful implementation of comingled work activities.

5.1.3 Portable Enclosure Units (PEUs)

Work conducted outside of the FEU will be conducted in Portable Enclosure Units as required by ***Attachment 14, Engineering Controls Plan***. The PEUs will be constructed of aluminum scaffolding placed on heavy-duty caster wheels. The scaffolding assembly will then be fully covered with two layers of 6-mil poly sheathing and the access into the unit will double-layered and offset such that at no time will the interior of the unit have direct access to the exterior environment. Sheathing will extend to ground surface and will have sealable ports for negative air hoses machines to be installed during any work being

conducted within the unit. AIS anticipates engineering the units in such a way that the negative air unit will be affixed to the portable unit, creating a "self-contained" mobile device, thus increasing mobility and safety.

6.0 Decontamination Methodology/Standard Operating Procedure

Throughout the facility exists items scheduled for Decontamination, Deconstruction, Recycling and Reuse. To better understand the disposition intent, AIS has provided an updated version of Table 3.2 from the Closure Plan, as ***Attachment 12, Unit Disposition and Testing Requirements, Table 3.2,*** which provides Unit Disposition and Testing requirements for the Phase 1 Units.

6.1 Personnel Decontamination

A portable decontamination trailer will be placed at the entry of the (3) structures during each phase of work. The trailer will be self-contained and will have an entry room with lockers for change out, a shower room and a decontamination room. The unit will remain under negative pressure with Hepa-Filtration and all shower / rinse waters will be contained within a Dewatering Container for transfer to the WWTP for eventual treatment and discharge. For exterior non-regulated buildings, small decontamination areas will be constructed at the ingress/egress points of the deconstruction work zone to insure that media is not tracked beyond the deconstruction work zone boundaries. These decontamination areas will be constructed to contain wash water associated with shoe wet brushing and cleaning, along with receptacles for storage of spent PPE.

6.2 Equipment and Vehicle Decontamination

AIS will decontaminate all equipment and vehicles inside the FEU prior to exiting the building. Equipment such as fork lifts, front end loaders, and pumps used during inventory removal and cleaning activities will also be triple rinsed with a pressure washer until visually clean. All vehicles exiting the facility will be required to run through the on-site existing West Yard truck wash. This is consistent with Section 6.8 of the DTSC Closure Plan which states:

"Equipment such as fork lifts, front end loaders, and pumps used during inventory removal and cleaning activities will also be triple rinsed with a pressure washer. The goal for cleaning is visually clean."

The equipment that AIS will use on this project will include owned equipment (excavators, loader, skid steers, pressure washers, etc.) that is used exclusively on decontamination and deconstruction projects. AIS will also utilize a limited amount of rental equipment (heavy forklifts, reach lifts, cranes, etc.) that are obtained from construction rental yards. This is heavy industrial equipment which would neither be used nor re-used in sensitive work areas such as food processing facilities. As an extra measure of assurance, upon return of the rented equipment, AIS will send a letter to the company reminding them that the

equipment was used on a decontamination project and is not suitable for work in food processing or sensitive work areas.

6.3 General Decontamination Procedure, Means and Methods for Building Roof and Walls

On a daily basis, the AIS will perform inspections of all engineering controls including dust prevention/mitigation controls within the secondary containment and buildings, negative air enclosures, air monitoring systems, scaffolding, shoring/bracing, temporary fencing, containments, equipment, decontamination stations, trench plates, protections, and any delineators used for separating the work zone, BMPs, all hand tools, fall protections and reach lifts.

AIS will also inspect and verify that all interior components including equipment, piping, non-structural framing, tanks, process piping and hazardous waste units have been removed prior to structure dismantling. The AIS PE will prepare and document these inspections in the daily report as described in the Data Management Plan.

Once all interior components within an area have been decontaminated and removed, structure decontamination will begin from the roof down in reverse sequential order of construction. When possible AIS will utilize rated boom lifts to gain access to the roof portions of the structure so as to minimize workers requiring direct roof access. As shown in ***Attachment 4 Deconstruction Engineering Survey*** , AIS intends to begin removing roof panels from the ridge line in a panel by panel fashion working within one bay at a time downward towards the building wall as practical. If during the panel removal it is discovered that the sequencing will need to change, AIS will stop work and write up a new JHA for the day's work. The intent will be to allow for removal without having an overlap issue from the panels below. This will provide a more controlled approach for eliminating and or capturing dust and allow for vacuuming and wet wiping of each panel during the removal process while minimizing the potential for visible emissions. In addition, AIS will have an appropriately trained technician within a second lift whose only task will be to monitor for dust and if visible, mitigate by spraying additional water as needed during the removal process. This water will be sprayed from hand held power washing wands with specialty tips that will allow for atomizing the water with high pressure and producing low volume which will mitigate any visible dust and minimize water runoff on the working surfaces below.

Upon completion of roof panel removal, AIS Technicians will perform a second thorough wash and wipe down of all structural members within the roof framing system. Special attention shall be paid to all wedged sections of steel including truss pockets, points of connections at intersecting cross members, Truss webbing and the upper side of all steel girders and members. This wash down will be done utilizing high pressure low flow power washer wands and tips followed by a wiped down of all surfaces.

After the final wipe down within the overhead structural components, AIS will then proceed with the decontamination and removal of existing wall panels. This phase will be accomplished by utilizing hand labor in boom lifts to remove the existing bolts while capturing dust with a HEPA-Filtered Vacuum system. The panel will be held and then lowered to the ground for a final wet decontamination within a designated staging area in the building. The intent is to remove all panels possible from the existing scaffolding system.

6.4 General Pipe/Duct Cleaning

As part of the decontamination activities AIS will perform the cleaning of various process/conveyance piping and air handling ducting throughout the facility. The piping ranges from small diameter PVC to large diameter iron or stainless steel. The ducting is primarily associated with the air handling units (baghouses) interior in-take and scrubbing through the various baghouse units in support of the various on-site operations.

6.4.1 Piping Decontamination

Prior to decontamination of process piping, AIS will utilize the facilities piping diagrams and physical inspection to determine and then mark conveyance pipe runs that will be decontaminated. Once the pipe has been isolated, AIS will determine the low points along the pipe run to establish accumulation points whether associated with a specific tank or AIS will provide a temporary collection container (i.e., drum, tote) under points where pipes will be separated for removal to collect product and/or rinseate during the cleaning operation. With the line approved for cleaning, AIS will make the necessary cuts and/or removal of valves or elbows to allow for the introduction of the pressure washing nozzle. If cutting a pipe is required for access, AIS will utilize a non-sparking cutting tool such as a reverberating saw, cold chisel or hole saw depending on the size and composition of the pipe. With access and low point collection established, AIS will introduce a 3,000 psi jetting hose into the subject line. A 3,000 psi pressure washer (3k) provides several advantages when washing surfaces that are primarily impacted with particulate matter similar to the oily-residue that you see in foundry and steel mill facilities. AIS believes that 3,000 psi provides adequate pressure to remove surface particulates and provide a clean uniform surface while minimizing water usage. The proposed pressure washer and tips will utilize approximately 12 gallons per minute (gpm). AIS will perform a triple rinse of all removed pipe sections.

The jetting head will have a 360 degree rotation (whirly bird tip) and will be able to “self-progress” through the pipe. AIS will also utilize plumbers tape to assist in pulling the jetter nozzle and hose through the pipe as needed. Once the section of pipe is decontaminated, AIS personnel will move downline to the next section until the run is complete. All generated water will be collected at low-spots or at the end of the pipe run. AIS will supply the necessary totes or drums and/or vacuum truck for this activity. All generated rinseate will be sent for processing through the WWTP. If cleaning efforts described above do not provide a clean pipe then AIS will process the piping for disposal as applicable waste.

Due to the nature of the cleaning activities and the types of equipment utilized, AIS will not use this cleaning process for piping that is less than 2-inch in diameter. These lines will be emptied of residual fluids; however, AIS will only introduce water through these lines via gravity feed. These pipes will be marked and if previous contents were hazardous, they will be visually inspected and if not clean will be considered contaminated debris and will be profiled and disposed of as hazardous waste. The above procedures will be implemented for all process piping throughout the facility.

6.4.2 Ducting Decontamination

As with the approach for decontaminating process piping, AIS will utilize the same procedures for washing of the ducting throughout the facility. Ducting ranges in size from 12-inch to 48-inch in size depending which area of the facility the ducting served. All ducting will be assessed prior to cleaning, primarily to determine how much particulate matter exists in the section and how much gross removal will be required prior to pressure washing. Ducting may be washed in place or lowered to ground surface to be cleaned and the resulting rinseate will be collected.

AIS will first evaluate the duct for gross removal. If necessary, the removal of heavy solids will be conducted with HEPA style vacuum equipment by personnel utilizing man-lift and/or man-basket equipment. Solids will be containerized in drums, super-sacs, or bins for analytical testing and waste profiling for proper off-site disposal. Once the heavy residuals have been removed, AIS will then initiate the pressure washing of the duct interior. Ports or existing baffle openings will be utilized to gain access into the subject duct section. The high pressure nozzle placed on a rolling tray/cart centered per the diameter of the pipe will be passed through the duct ensure that the 360 degree rotating head washes all areas of the inside of the pipe. The resulting rinseate will be allowed to gravity flow downstream to a low-spot or to a location prepared by AIS. AIS will utilize flex hosing to direct rinseate from higher elevation to collections points at grade. Ducting whether horizontal or vertical will be cleaned in this manner until all sections throughout the facility are completed. AIS may also implement lowering the ducting to ground surface to perform the decontamination of the subject duct section. The ends of the ducts will be covered with plastic sheeting prior to lowering to the ground. AIS will provide for rinseate collection and on-site processing. All generated wash water will be pumped via sump pumps or vacuum trucks for processing through the WWTP. If cleaning efforts described above are deemed not to be sufficient, AIS will process this ducting as applicable for disposal according to waste stream.

Support utilities such as domestic water, fire water, natural gas, air, and electrical conduits will not be internally cleaned; however, these pipes/conduits will be externally cleaned as part of the surface decontamination activities and recycled or disposed of as applicable. Various other conveyance pipe sections supporting tank to tank or vessel to vessel will be decontaminated as part of the individual “item” decontamination activity.

6.5 Storage Tank Decontamination

Located throughout the site are numerous aboveground storage tanks (AST) utilized for the storage of process chemicals, byproducts, and storm water. The ASTs are constructed of polyethylene, steel, or stainless steel. Depending on the use of the specific AST, AIS will initiate the cleaning of the subject AST by first evaluating residual material still in the tank and the proper means and method for decontamination of the tank.

AIS will visually inspect the condition of the plastic tanks to determine cleaning and non-hazardous disposal versus the removal of gross solids and hazardous disposal. The interior of each plastic former IS tank, not destined for disposal as a hazardous waste, and all steel tanks will be triple rinsed with a pressure washer from top to bottom. The exterior of each former IS tank will be rinsed one time from top to bottom with a pressure washer. Piping, pumps, valves, and ancillary equipment will also be triple rinsed with a pressure washer from upstream to downstream. Rinse water will be collected in the bottom of the tank and the secondary containment area within which the tank is located. Plastic tanks being sent directly for disposal as a hazardous waste shall be cleaned inside and out with a single wash using a pressure washer. Once the ASTs have been cleaned, AIS will coordinate the removal of the subject AST from its current location based on scheduling needs of the Project. Tanks will be cut into manageable pieces and/or crushed onsite for offsite disposal or offsite recycling. Any AST taken to a local recycling facility will be issued a Certification of the Destruction.

If there exists several feet of sediment in the tanks above the side manway access lids, AIS will pressure wash the tank interiors down to that level; and once achieved, will initiate the cutting of the top of the tanks and continue to cut the tanks with a reverberating saw to 1' above the sediment line. This will allow removal of the sediment to be conducted in a safer environment where confined space entry will not be required. With the sediment accessible via man-way or open space, AIS will remove the media via an AIS guzzler unit. The removed sediment will be discharged into Dewatering Containers for analytical testing and eventual offsite disposal. Any water removed or decanted from this operation will be processed through the WWTP.

6.6 Recyclable Materials Decontamination

During the decontamination efforts of the Phase 1 Closure activities AIS superintendent will identify items intended for recycling and will mark by spraying a green "S" in a visible location on the item itself. These demarcated recyclable materials, specifically metal (i.e. steel components, steel plate, tin, and other metallic), will be cleaned such that the metal can be recycled at a local metal recycling facility. The subject item will be visually inspected and cleaned in compliance with the Closure Plan and will meet standards for the receiving recycling and/or disposal facility. This standard will apply to both non-painted and painted metal.

The acceptance criteria for a recycling facility is that the item in question is free from residual particles that would cause the item to be classified as a hazardous waste per 22 CCR 66261.3(d) testing for the chemical of concern and concentration evaluation against TTLC, STLC and/or TCLP analysis.

Recyclable metal that does not meet any of the above criteria will be subject to additional decontamination or considered a waste and disposed of at a licensed non-hazardous or hazardous waste facility. A listing of the approved and alternative disposal facilities is further detailed in ***Attachment 7 – Waste Management Plan***. AIS will coordinate the appropriate waste profiling and disposal acceptance and the proper packaging and load preparation of the item prior to exiting the Vernon plant en route to the designated approved disposal landfill.

6.7 Hazardous Components/Waste for Offsite Disposal

Within the facility exists components and/or waste products that will be considered a "hazardous" waste. The AIS superintendent will identify and mark these items with a "W" in red paint in a visible location on the item itself. These items will only be decontaminated of gross residual matter and packaged accordingly within the area specific containment.

Depending on the type of component, item, and/or media, AIS will coordinate the appropriate waste profiling and disposal acceptance and the proper packaging and load preparation of the item prior to exiting the Vernon plant en route to the designated approved disposal landfill. Packaging can consist of placing the material in any individual or combination of the following containers:

- 6-mil poly sheeting bags
- 55-gallon steel sealable drums (solids/liquids)
- 1-CY fiber boxes
- Steel sealable lined roll-off bins
- Lined End-dump style transports
- Vacuum truck transports for liquids

Waste classification will be determined prior to the handling and removal of the subject materials as to expedite the decontamination, removal, packaging, and removal for the project site.

6.8 Components for Reuse at another Exide facility

Within the facility exists equipment that will be decontaminated and packaged for shipment to another Exide facility. The item name and description and method of decontamination is outlined in ***Attachment 12, Unit Disposition and Testing Requirements, Table 3.2***. This equipment will be decontaminated by dry and/or wet

methods depending on the type of equipment to be removed. Equipment with electrical components may only get a dry decontamination efforts (HEPA vacuum or wet wipe) as opposed to pressure washing to ensure electrical circuitry is not damaged. These items will be verified with personnel from DTSC, Exide and AIS. The AIS superintendent will mark items with blue marking ribbon (surveyor type) in a visible area on the item itself.

Equipment such as forklifts, front end loaders, and pumps used during inventory removal and cleaning activities will also be triple rinsed with a pressure washer. Pressure washing will be completed under general pressure washing techniques. An evaluation of the subject equipment will be completed prior to introducing a pressurized water stream to ensure mechanical and/or insulator components do not become damaged or integrity is compromised. The goal for cleaning is visually clean.

Once the equipment has been properly decontaminated, the subject item will be wrapped with a single sheeting of 6-mil poly-sheeting and place in a sealed container or if being transported on an open carriage, the item will be double wrapped to reduce direct contact by anyone and eliminates direct exposure pathways.

6.9 Impacted Concrete

The removal of impacted concrete walls will be conducted with track mounted excavation equipment with concrete breaking or pulverizing attachment(s). Based on chip sampling or as directed by Exide, AIS will evaluate the subject location to be removed. AIS will choose the proper attachment most suitable for the removal of the subject concrete media. For concrete surfaces that are 8” or less in thickness, a pulverizer will be used to process the concrete media (i.e. vertical block/concrete walls). The pulverize unit is less intrusive coupled with a water misting program will allow AIS to remove this concrete with no dust generation. The concrete would be processed to approximately two feet square in size, thus allowing AIS better control when loading this material into waste transports. Based on the disposal characterization testing results of the concrete, AIS will facilitate waste profiling of the waste and gaining disposal facility approval. Based on the concentration of heavy metals and solubility concentrations of those metal(s), the correct disposal facility will be identified the waste stream. Once a waste profile is approved by the disposal facility, AIS will prepare the proper manifest as outlined in the Waste Manifest section of the Waste Management Plan.

6.10 Surface Scarification Method

The method for surface scarification is to utilize a fully-contained scarification device that can remove ¼-inch to ½-inch section of concrete through a scarification device with contained vacuum and HEPA filters that collect the scarification media and discharges the media into 32-gallon steel drums.

The Blastrac system consists of a Shot Blasting Unit that is a walk behind/self-propelled unit coupled with a fully contained Dust Containment Vacuum Unit that collects that scarified media under vacuum and HEPA filtration. The shot blasting unit features an integrated brake which helps maintain a consistent speed on flat surfaces, ramps and inclines. The speed can be adjusted to increase production or decrease to further scarify problem areas. The shot blast unit is attached to the dust containment unit which operates "dust free" and the resulting scarified surface area is free from any residual particulate matter. The unit is also powered electrically, therefore, internal combustion operation is not needed and no exhaust is generated. This operational system is effective in removing the upper concrete surface where contamination has been absorbed into the surface or where contaminates have settled into pitted and/or cracked surfaces. This system does not require the use of water; therefor, a water source, water collection, handling or treatment is not required as with the hydro-milling method.

General Operational Procedures include:

- Delineate the work area to be scarified and assess if an initial HEPA Vacuuming is required;
- Perform an initial HEPA vacuum over the surface area to remove heavy gross residual matter (as necessary);
- Setup Blastrac components and electrical connections;
- Proceed to scarify the surface area of concern by passing the Shot Blast System over the surface (adjusting the speed as necessary to achieve the desired removal depth);
- Monitor speed, effectiveness, and waste generation via on-board read-out;
- As accumulation drums fill, shut down system to remove full drums and replace with empty drums and manage drummed waste material per established waste characterization and disposal protocols;
- Continue the scarification process until the area of concern is completed;
- Once complete, decontaminate the system as needed to be relocation to another area or if demobilized from the facility.

The scarified surface is similar in nature to that of hydro-milling in that the concrete particles and loose aggregate from the unsound concrete matrix is removed. The surface is not smooth and the integrity of the underlying concrete and aggregate will dictate the condition of the scarified area.

6.11 Asbestos Abatement

As outlined in the Alta Environmental – Limited Hazardous Material Survey dated November 25, 2015 various asbestos containing material (ACM) exists at the facility that will require removal prior to deconstruction in that specific area. During the preconstruction phase of the work, AIS will utilize the survey documentation to tag those items/areas of concern so that as the schedule allows, the specific item will be abated, as

needed, throughout the course of the Project. With respect to ACM gaskets potentially located throughout the facility, AIS intends to leave the gasket intact by wrapping the potential ACM gasket containing valves and or unions and "snipping" the subject on either side, thus keeping the valve intact for eventual offsite disposal.

AIS will implement industry standard techniques in the removal, handling and disposal of Non-Friable Class 1 and Class 2 asbestos including but not limited to: roofing materials, drywall mud, flooring materials, insulation, wrap on electrical wiring, gaskets, felt paper, mechanical sealants, transite panels, linoleum floor sheathing, cloth-like wire insulation, various exhaust & pipe gaskets, fire doors, and ACM panel breakers.

NESHAPS Categories for Asbestos (used by Air Quality Management Districts for Renovation and Demolition)

Category I	Cat I Non-friable Asbestos Containing Material (ACM) refers to asbestos containing packing, gaskets, resilient floor covering, Galbestos, and asphalt roofing products containing more than 1% asbestos.
Category II	Cat II Non-friable Asbestos-Containing Material (ACM) is any material that is not Cat I that contains greater than 1% asbestos.

RACM "Regulated Asbestos-Containing Material." – Friable manufactured asbestos material (ACM) or a Category I non-friable ACM that has become friable OR a Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading OR Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations. RACM should be removed prior to renovation or demolition.

References for the ACM activities include, but are not limited OSHA, 29 Code of Federal Regulations (CFR) 1910 (General Industry) and 29 CFR 1926 (Construction Industry), Asbestos Hazard and Emergency Response Act (AHERA), and SCAQMD Rule 1403.

AIS will provide a "Competent Person" and workers (all of whom will be AHERA certified asbestos workers or supervisors) who shall complete the preparation, removal, and clean-up activities of the ACM on the Project.

OSHA notification is required for any asbestos abatement project and SCAQMD notification is required for any asbestos abatement project where asbestos containing material being removed exceeds 100 square feet. A NESHAP notification to the South Coast Air Quality Management District (SCAQMD) will be provided to Exide representatives for review then submitted at least 14 calendar days prior to the start of work. A courtesy OSHA notification shall be submitted to the appropriate OSHA office 24 hours prior to the start of the abatement.

Engineering Controls

All asbestos abatement activities will be performed within regulated areas and will include but not be limited to the use of amended water, HEPA vacuums, and proper ventilation with HEPA filtration. Where feasible, ACM will be removed intact by deconstruction (soft deconstruction) from the surrounding materials. ACM waste and debris will be promptly sealed in leak-tight containers (6-mil poly bags or 6-mil poly sheathing and tape wrapping) and properly labeled.

Signage and PPE

Warning signs pursuant to legal requirements will be posted at the entrance to the work area. All signage placed will be in both English and Spanish languages. ALL persons will don appropriate PPE before entering the asbestos abatement area(s) and wear this protective equipment while within the abatement area (s). Personal protective equipment will include NIOSH approved respirators, disposable coveralls (Tyveks), hoods, booties and cloth work gloves.

Respiratory protective equipment for removing the asbestos/lead will be NIOSH/MSHA approved "half face" dual cartridge negative pressure air purifying respirator equipped with HEPA filters.

ACM Decontamination Areas and Stations

A three stage decontamination "Decon" station will be erected to service all friable and non-friable work and will be sized to adequately accommodate the size of the work crew. At the beginning, and periodically during each work shift, the curtained doorways of the Decon station shall be inspected and if not found in proper condition; repaired immediately to the satisfaction of the SSHO.

Prior to entering the work area each person will don full Tyvek suits and respirator then perform a negative pressure test on it before entering the "dirty" room. The dirty room of the Decon station will open directly into the work area.

When exiting the work area each person will first gently take off the suit folding it down onto itself. Once removed, the Tyvek suit will be placed in the 6-mil poly bag inside the dirty room. Workers will decontaminate with HEPA-vacuums through the three (3) stage decontamination unit and respirators will be removed inside of the clean room.

At the end of each work shift the entire Decon area will be wet wiped and cleaned and all supplies, materials and equipment neatly stacked. All waste water collected during abatement activities and from decontamination of employees and equipment will be filtered through a 3-stage 0.5 micron microfiltration system per OSHA prior to transfer to the WWTP for treatment.

Daily, all visible accumulations of asbestos material and debris will be removed from within the abatement work area and handled as hazardous waste and the work area will be left in a debris free state for safe passage by others.

All asbestos dumpsters will be posted with appropriate asbestos warning signs and be kept locked at all times except when actually loading asbestos debris into them.

Specific Quantities of ACM for Removal and Handling

Amounts of ACM are approximated based on survey data provided by Alta Environmental dated 11/25/2015, other materials flooring, insulation, gaskets and roofing materials, and will immediately notify the owner before proceeding with abatement of any additional ACM.

ACM quantities are based on the provided 11/25/2015 survey report as follows:

Smelter Building

- 2nd floor mezzanine 200 SF of transite panels in laboratory
- 2nd floor mezzanine 800 SF of beige linoleum in the refine department
- Basement burner control units associated with kettles 1000 LF square gaskets
- Basement piping and burner gaskets 52
- 3 Fire doors
- Electrical panel, breakers and associated cloth wiring

Bag House Building

- Electrical panel, breakers and associated cloth wiring
- 3 Fire doors
- White silicon sealant around air ducts

Upper Reverb Feed Room

- Electrical panel, breakers and associated cloth wiring
- 2 Fire doors
- Cloth like gaskets 300 LF

Prior to requesting final visual clearance in the work area, AIS shall have finished any necessary decontamination, HEPA vacuuming and visually inspect all affected and/or abated areas. In general the Regulated Work Area (RWA) and/or the containment must first pass a visual clearance by AIS's on-site supervisor prior to requesting visual or air clearance from the Exide consultant.

Upon request by AIS, the Exide Certified Asbestos Consultant (CAC) will conduct a final visual clearance of the containment and the RWA in order to achieve final clearance.

Upon achieving visual inspection, one final air sample shall be collected from inside of the large containment for clearance.

Air clearance sampling shall be collected on 25 millimeter PCM cassettes for NIOSH 7400 analysis. Sufficient volume of air shall be collected from the containment. The sample shall be collected using high-flow air pumps calibrated @ 15 liters per minute. The analysis of the air filters shall follow the NIOSH 7400 "A" Counting Rule. The analytical results must meet the typical standards of industry of the Permissible Exposure Level (PEL) of less than 0.1 fibers/cc.

6.12 Debris Removal and Decontamination

Once the FEU is in place and electrical systems off-line, AIS will remove any general trash and debris located throughout the building area and proceed to HEPA vacuum any gross solids from within the work area for eventual consolidation for testing and offsite disposal. Personnel will then remove any universal waste items within these structures which consist of high Intensity-discharge (HID) bulbs, 4' and 8' fluorescent bulbs, PCB/non-PCB light ballast, oil containing equipment, CFC units, and other Universal Waste (UW) items. All UW items will be removed and packaged accordingly to the receiving facility packaging requirements and/or as previously presented. UW management is also discussed in ***Attachment 7, Waste Management Plan***. Accumulated trash, product, and gross particulate debris will be consolidated with like material and/or tested for proper off-site disposal. Item removal and decontamination will be conducted under the strict procedures for working at elevated heights as described in the AIS HASP and as dictated by OSHA.

Once removed, AIS will then initiate the pressure washing of the building's exterior and then proceed with the washing of the interior ceiling and walls of the subject structure. Pressure washing will be completed with a 3,000 psi pressure washer to remove any caked on solids that have not been removed through rain events. Boom and articulating man lift equipment will be used to facilitate the cleaning of the exterior and interior surface areas to minimize health and safety concerns with personnel using or standing on the roof for access. Once the exterior is completed, AIS personnel will then initiate the pressure washing of the underside of the roof structure, beginning with the underside of the roof panels and proceeding to the horizontal/vertical truss structures as well as vertical walls. Once completed, any vertical support beams and concrete encasements and concrete containment walls will then be pressure washed. Interior chain link fencing, miscellaneous equipment, shelving, control rooms, etc. will also be pressure washed. Care will be taken during pressure washing so as to not damage the FEUs constructed at each building unit.

The final phase of decontamination will be the pressure washing of the concrete slab, containment areas, sumps or trenches. All generated rinseate will be accumulated within

the structure and removed via vacuum truck for discharge to a Dewatering Container and the on-site WWTP system.

7. 0 Decommissioning

7.1 Means and Methods for Removal and Handling of Components Containing Hazardous Constituents/Materials

Located throughout the Project facility are various building components that are regulated under the Environmental Protection Agency (EPA), U.S. Code of Federal Regulations and Title 40. These items are defined as Universal Waste (UW) and require proper handling and waste management. In addition to these items various other waste streams will be generated as part of the decontamination and deconstruction activities of the Project facility. In response to the likelihood of encountering these waste streams. The means and methods for removal and handling of components and units that contain hazardous constituents/materials are presented in the ***Waste Management Plan (Attachment 7).*** These activities that will be completed during the Project decontamination and deconstruction activities.

7.1.1 Lead Based Paint (LBP)

As outlined in the Alta Environmental – Limited Hazardous Material Survey lead-based paint (LBP) exists in various locations throughout the facility that will require removal due to excess delamination or "peeling" prior to deconstruction or leaving a structure intact for future access by Exide. These areas, in particular, are located in the outer lying buildings including Container Storage Buildings. The underside of roof panels show excessive peeling and as such will be scraped and/or HEPA vacuumed to a point where the paint is adhered to the underlying substrate. Once removed, the remaining paint will be stabilized with non-leaded paint and/or compound to stabilize the existing surface. As a first step in decontamination, loose and flaky paint shall be initially removed by utilizing hand scraping methods. If needed, AIS may also elect to use a HEPA filtered vacuum for small areas (less than 10 sf) and to collect debris from hand scraping. Removed LBP chips will be properly containerized in 55-gallon drums or if excessive plastic sheathing is utilized during the LBP removal activities, the plastic and paint chips will be wrapped up, secured, labeled, and contained in a sealed roll-off container for offsite disposal. Workers will wear appropriate PPE and OSHA Personnel Exposure Monitoring will be performed during the Work as outlined in the site specific HASP.

Means, methods and procedures for LBP abatement will be performed at the various locations as follows. Prior to the stabilization of the loose and flakey paint, AIS will place barrier tape around the work area; post "Lead Work" warning signs leading into regulated work area; and, utilize a drop cloth consisting of a 6-mil poly sheathing while stabilizing the loose and flakey paint. The loose and flakey paint will be stabilized by the hand-scraping method which consists of the worker using a hand scraper to remove the loose

paint. The work area will be misted with water utilizing an airless/Hudson sprayer in order to keep dust levels down. Once the loose and flakey paint has been stabilized by the hand-scraping method an encapsulant will be applied to that area to lockdown and prevent further flaking. LBC (Lead Barrier Compound) will be used to encapsulate the stabilized areas and can be successfully applied to the proper thickness in one application with an airless sprayer or can also be applied by brush or roller. AIS may use both methods to apply the encapsulant.

7.1.2 Impacted Concrete

The removal of impacted concrete walls will be conducted with track mounted excavation equipment with concrete breaking or pulverizing attachment(s). Based on chip sampling or as directed by Exide, AIS will evaluate the subject location to be removed. AIS will choose the proper attachment most suitable for the removal of the subject concrete media. For concrete surfaces that are 8" or less in thickness, a pulverizer will be used to process the concrete media (i.e. vertical block/concrete walls). The pulverize unit is less intrusive coupled with a water misting program will allow AIS to remove this concrete with no dust generation. The concrete will be processed to approximately two feet square in size, thus allowing AIS better control when loading this material into waste transports. Based on the environmental testing results of the concrete, AIS will facilitate waste profiling of the waste and gaining disposal facility approval. Based on the concentration of heavy metals and solubility concentrations of those metal(s), the correct LDR will be applied to the waste stream. Once approved, AIS will prepare the proper manifest as outlined in the Waste Manifest section.

7.2 Electrical De-Energizing

Safely and efficiently de-energizing the electrical features of the Project has been identified by AIS as a top level risk factor. AIS understands that many electrical systems need to be kept "live" throughout portions of the Project. AIS through our electrical teaming partner, CSI, will survey and further study the Project electrical as-built, review field conditions, and assist in providing a sequence of operations (SOP) aligned with our baseline schedule that will allow the systematic shut down, rerouting and or safe- off of every project electrical piece of equipment throughout the project duration. AIS has already identified the most critical and non- critical electrical elements on the project during our review of the single line provided and site walks with our electrical engineer and electrician.

AIS will commence to de-energize all non-critical equipment; remove the equipment where applicable; and, generally seal (waterproof) any remaining conduit runs and electrical rooms to make sure water will never reach live equipment. After the initial safe off is complete, the process or SOP will be repeated on a building by building basis as the schedule progresses.

7.3 Mechanical Decommissioning

AIS will trace, shut down, and safe off all non-critical systems include air conditioning, exhaust fans, etc. The initial equipment remaining under power will be the baghouse systems, air handling systems and other critical systems that will be required for negative air. After the initial decommissioning, baghouse systems will then be shut down on a building by building basis with again the intent being to keep certain air handling equipment live until such time as it can be taken offline. AIS fully understands the importance of keeping certain systems live and we are balancing that effort against the need to complete decontamination within the certain building areas. Part of this effort will be to cut back contaminated ducting within certain areas to prevent cross contamination or blow back. *Attachment 10, Duct Modification Plan,* provides the sequence of air emission control equipment shutdown, and supporting calculations. In order to maintain negative air throughout the facility, AIS plans to install new (clean) ducting in certain rooms as needed.

The Closure Plan anticipated use of the MAC Baghouses and Torits through completion of decontamination and deconstruction of North Yard buildings. Due to conflicts between the MAC Baghouses and Segment 3 FEU installation, the Material Handling Baghouse will remain in operation as long as possible in lieu of the MAC Baghouses.

8.0 Deconstruction Methodology and Protocols

8.1 General Requirements for Deconstruction of Structures

Prior to mobilization, verification that all required clearances and shut downs have been obtained or performed include but not limited to:

- Obtain verification with written documentation that all electrical, gas, phone, security, water and fire suppression systems have been shut down, rerouted and or terminated at their points of connection that are within the building footprints.

- Review and confirm that within any designated structure or unit scheduled for deconstruction that all interior non-structural and or non-essential items have been removed, including at a minimum, the motors, controls, equipment, piping, fixtures, roof sheathing, wall sheathing and all items not considered an integral part of the structure.

- Throughout the deconstruction areas, existing trenches, pits and underground features may be encountered. These areas will be delineated so as to make them as visible as possible and protection will be placed over and/or around and fenced off as per OSHA requirements.

Specific items of concern to be addressed prior to and during all deconstruction activities include:

- Protect all utilities that are scheduled to remain throughout the areas.
- Ensure power and communication lines are de-energized and verified daily.
- Provide a clearly defined regulated work area (RWA) within each section of the building having deconstruction performed. This shall include at a minimum delineation including tape, delineators, signage and sign in log and contact information.
- Ensure sufficient decontamination stations are within the RWA sizeable to handle the amount of workers.
- Verify requirements, obtain permits as needed and notify applicable agencies regarding proposed activities.
- Verify all BMPs are implemented including protection of drains and outlets, sufficient dust control measures and negative air enclosures as applicable.
- Implement and comply with the Deconstruction Engineering Plan including disassembly points, sequencing and anticipated schedule for each structure. This plan will also identify potential staging areas within or adjacent to the structures, decontamination areas and load out zones. Refer to *Attachment 4, Deconstruction Engineering Survey*.

8.2 General Deconstruction Means and Methods

AIS's basic means and methods will consist of utilizing equipment including thumbed excavators and shears, Reach forklifts, boom lifts, skid steers with attachments and hand labor for the deconstruction and removal of the existing structures. Removed materials will be carefully lowered to the ground using multiple pieces of construction equipment as needed. Construction equipment and deconstruction cuts will be placed to minimize the potential for deconstructed sections to contact the FEU.

Additional methods and procedures will be conducted as follows:

- The AIS Site Superintendent-Deconstruction will perform daily inspections of all engineering controls including dust mitigation controls within the secondary containment and buildings, negative air enclosures, air monitoring systems, scaffolding, shoring and/or bracing, temporary fencing, delineations and any other

items used for separating the work site from all non-essential and or AIS personnel will occur. The AIS PE will include relevant documentation in the daily reports.

- Areas of proposed work will be reviewed daily prior to start of shift to discuss JHAs, plans, means and methods and address concerns with appropriate parties.

- Bracing will be placed at intersecting walls and areas as identified by structural engineer within approved drawing prior to start of roof removal or as identified within approved plan.

Structural deconstruction will begin from the roof down in reverse sequential order of construction. AIS will remove cross members between specific trusses scheduled for removal during that individual shift. The intent will be to only remove the cross members from within each bay that is scheduled for deconstruction for that particular day. At no point will AIS remove more cross members and or framing from within a truss bay than what trusses will be removed for that day. During the removal process, AIS will continue to vacuum any residual dust from bolted points of connection during disassembly. AIS will also utilize wet methods including wiping down and spraying water. This water will be sprayed from hand held power washing wands with specialty tips that will allow for atomizing the water with high pressure and low volume which will mitigate any visible dust and minimize water runoff on the working surfaces below.

AIS will continue the removal method described above based on the AIS prepared and Exide approved Engineering Deconstruction Survey until the entire roof framing system including trusses, cross members and framing have been removed and only wall framing remains.

Deconstruction of the remaining walls will proceed within the structure in a bay by bay fashion. It is anticipated that we will start at an agreed upon location at approximately the center of a given wall within a structure and work toward the corner. We will leave approximately 20’ of the corner section of wall in order to provide a shear connection for the remaining walls running perpendicular at intersecting walls. This deconstruction work will be done utilizing an excavator with a thumb or shear to relieve the attachment point located at each column while another excavator is holding on to it. Once a specific column is relieved of its point of connection, the second machine will then lower it in a controlled fashion to within the RWA and allow for additional cleaning and or further sizing for applicable disposal or recycling depending on waste stream. The above mentioned procedure will then be repeated within each structure until all roofs and walls have been removed, cleaned and processed for applicable recycling and or disposal.

Materials will be loaded out and hauled in certified DOT registered high / low side end dumps in order to maximize load weights and reduce trucking traffic to surrounding areas. All debris will be stockpiled within the various building footprints negative air enclosures and hauled off once we load materials into appropriate vessels utilizing reach forklifts,

skidsteers, excavators, and other heavy construction equipment within the FEU. For various areas outside of the FEU (Misc. sumps, container storage buildings, Waste Water Treatment Plant, etc.), AIS will utilize excavators, reach forklifts and heavy construction equipment to load out various waste streams to trucks for transportation and disposal adjacent to their applicable locations throughout the site. All trucks will be inspected during and after the loading process to ensure compliance with the truck inspection form and all vehicles shall exit through the onsite wheel wash.

No structural columns, members or trusses will be removed prior to completing a Daily Task Plan and accomplishing a site safety meeting held to determine potential hazards and or safety concerns for tasks to be completed. All precautions will be taken during the deconstruction to ensure proper PPE is being implemented. AIS will utilize an existing on-site water source and place a tee splitter and ball valve for additional dust control and fire watch purposes.

9.0 Means and Methods of Deconstruction for Specific Site Areas

9.1 Container Storage Areas - Units 1, 2, 3

9.1.1 Description

During the Phase 1 activities, the Container Storage areas will be used for storage of drums prior to off-site shipment. Descriptions, previous utilization and current status of the units follow.

Central Container Storage Building (Unit 1)
Unit 1 the Central Container Storage Building is a former IS regulated container storage area which was previously used for storage of spent lead acid batteries and drums of plant scrap. Waste containers (batteries and drums of battery plant scrap) represented primary containment and the floor of Unit 1 functions as secondary containment for the containers . Unit 1 has a concrete floor which slopes to spill collection sumps (Acid Collection Sumps 1 and 2) and piping, metal roof, and partial concrete walls on two sides. A roof over the structure prevents excessive stormwater accumulation in the secondary containment area.

West Container Storage Building #1 (Unit 2)
Unit 2, the West Container Storage Building #1 is a former IS regulated container storage area was used for storage of spent lead acid batteries and drums of plant scrap. Unit 2 is empty. Unit 2 provided secondary containment for the containers stored therein. Unit 2 has a concrete floor which slopes to spill collection sumps (Acid Collection Sumps 5 and 6) and piping, metal roof and partial concrete walls on three sides.

West Container Storage Building #2 (Unit 3)

Unit 2, the West Container Storage Building #2 is a former IS regulated container storage area used for storage of spent lead acid batteries and drums of plant scrap. Unit 3 is empty. Unit 3 provides secondary containment area for the containers stored therein. Unit 3 has a concrete floor which slopes to a spill collection sump (Acid Collection Sump 4) and piping, metal roof and partial concrete walls on three sides.

Acid Collection Sump 3 and Ancillary Sumps

Acid Collection Sump 3 is ancillary to former IS Units 1, 2, and 3 and previously used for management of acid spills and wash down water. Acid Collection Sumps 1, 2, 4, 5, and 6 at Units 1, 2 and 3 drain to Acid Collection Sump 3. A pump at Acid Collection Sump 3 used to transfer collected liquid via above ground piping to the Water Softener Building Sump, and then to the on-site Wastewater Treatment Plant. The Acid Collection Sumps 1 through 6 are concrete sumps with stainless steel liners.

Item Summary

Decontamination shall be complete when the performance criteria indicated in Attachment 12, Table 3.2 are met which may require analytical sampling.		
Unit	**Description**	**Contractor Scope of Work**
1	Central Container Storage Area	Decontaminate floor, wall and roof with HEPA vacuum. Pressure wash and decontaminate all equipment.
2	West Container Storage Bldg. #1	Decontaminate and pressure wash building using HEPA vacuum and pressure washer. Deconstruct walls, roof.
3	West Container Storage Bldg. #2	Decontaminate and pressure wash building using HEPA vacuum and pressure washer. Deconstruct walls, roof.
N/A	Ancillary Acid Collection Sumps	Acid Collection Sumps 1 through 6 will be closed by removing any standing liquid and decontaminating the sumps concurrent with floor decontamination and removal of the stainless steel liners for Units 1, 2 and 3.

Any required temporary WWTP will be located in Unit 1 during Phase 1.

9.1.2 Means, Methods and Sequencing

Temporary Full Enclosure Unit (FEU)

Construction of a temporary FEU on all sides of the subject structure and the exterior of the structure will then be shrouded with poly-sheathing in accordance with the ***Attachment 14, Engineering Controls Plan***, to create an enclosure that can then be put under negative pressure via portable SCAQMD permitted Negative Air (Neg-Air) machines (portable units separate from the existing baghouses utilized for negative air located within the Baghouse Building) for completion of the decontamination activities. The temporary FEU will be erected such that any generated pressure washing fluids and

particulate matter will be contained by the sheathing and then directed within the structure to an existing sump and/or low point. Air movement calculations will be completed to ensure the proper amount of the Neg-Air machine(s) are established for the planned scope of work. Neg-Air machines will be setup at specific location(s) around the work area or in one general location as needed. Once the decontamination activities are completed, the FEU sheathing will be removed and consolidated for off-site disposal.

Decontamination

Once the temporary FEU is in place and electrical systems off-line, AIS will first HEPA vacuum any gross solids from within the work area for eventual consolidation for testing and offsite disposal. Personnel will then remove any universal waste items which for these structures consist of high Intensity-discharge (HID) bulbs. These bulbs will be removed and packaged accordingly to the receiving packaging requirements and/or as outlined in Section 7.

AIS will then initiate the exterior cleaning of the roof of the Container Storage Areas. Pressure washing will be completed with a 3,000 psi pressure washer to remove any caked on solids. Once completed, AIS personnel will then initiate the pressure washing of the underside of the roof structure, beginning first the underside of the roof panels and then proceeding to the horizontal/vertical truss structures. Once completed, any vertical support beams and concrete encasements and concrete containment walls will then be pressure washed. The final phase of decontamination will be the pressure washing of the concrete slab and collection sump(s). All generated rinseate will be accumulated within the structure and removed via vacuum truck for discharge to a Dewatering Container and the on-site WWTP system.

During deconstruction activities, as required, all sumps will be pressure washed, the rinseate removed via vacuum truck and AIS personnel will remove the steel liner from within the sumps. AIS will assess the condition of the sump(s) with Exide Representatives with respect to supplemental liquid/solid removal and/or overall sump condition including cracks and potential entry points for future waters to penetrate beneath soils and make recommendations for repairs as needed. The DTSC shall have final approval authority.

9.2 Oxidation Tank Area

9.2.1 Description

The Oxidation Tank Area is a secondary containment area with concrete floor and walls. The Oxidation Tank Area does not have a roof. Units 24, 25 are located within the secondary containment area at the Oxidation Tank Area. The Oxidation Tank Area will be addressed prior to installation of the Segment 3 FEU.

North Oxidation Tank (Unit 24)
Former IS unit was used for storage of wastewater and sodium sulfate solution. Unit 24 is empty, except for residue. Unit 24 is a fiberglass, closed top tank located within the Oxidation Tank Area secondary containment.

South Oxidation Tank (Unit 25)
Former IS unit was used for storage of wastewater and sodium sulfate solution. Unit 25 is empty, except for residue. Unit 25 is a fiberglass, closed top tank located within the Oxidation Tank Area (OTA) secondary containment.

Item Summary

Decontamination shall be complete when the performance criteria indicated in Attachment 12, Table 3.2 are met which may require analytical sampling.		
Unit	**Description**	**Contractor Scope of Work**
24	North Oxidation Tank	Triple rinse interior and single rinse exterior. Process water through temp WWTP and discharge to POTW. Remove and load tank for disposal.
25	South Oxidation Tank	Triple rinse interior and single rinse exterior. Process water through temp WWTP and discharge to POTW. Remove and load tank for disposal.
N/A	Oxidation Tank Area	HEPA vacuum and pressure wash floors. Deconstruct concrete walls.

9.2.2 Means, Methods and Sequencing

9.2.2.1 Temporary FEU and Decontamination

A temporary FEU will be constructed as described in Section 9.1.2. Once in place the decontamination activities will commence. Once the decontamination activities are completed, the FEU sheathing will be removed and consolidated for off-site disposal and the erected scaffolding will be disassembled and moved to another location if needed.

With the intent to decontaminate and remove the ASTs for destruction, AIS will first initiate the exterior decontamination of the AST and supporting ancillary components (i.e. catwalk, piping, slabs and walls) utilizing a 3,000 psi pressure washer. Once cleaned, AIS will assess the support piping and access only those lines supporting the OTA operations for potential reuse. Pressure washing of these pipes will be done such that the generated rinseate is sent back into the subject tank. Once the lines are completed, AIS will then clean the AST beginning at the top of tank and continuing washing down the interior walls

of the tank to the tank floor. At this time AIS will begin extracting the rinseate from within the tank, finalizing the work by cleaning tank floor and removing the final wash rinseate via vacuum truck for processing through the Dewatering Container and the WWTP. Deconstruction activities are described in Section 9.2.2.2.

9.2.2.2 Removal or Disposal

With the OTA decontamination completed and based on the needs of Exide, AIS will coordinate the removal of the OTA system components deconstruction. Piping to be removed will be disassembled via manual means or with non-sparking reverberating cutting saw. Piping and other components will be rigged and lowered to the ground. Once all the supporting components have been removed, the AST will be deconstructed within the temporary FEU. The ASTs will be sized on-site and characterized.

The sized tanks will be loaded onto low-bed or end dump transports and taken directly to an appropriate disposal facility. A Certificate of Destruction or disposal receipt will be issued noting generator, tank size, composition, and destruction date.

Non-salvageable items will be removed in the same manner outlined above and staged, characterized and placed into scrap bins for consolidation and eventual destruction.

9.3 Mobile Equipment Wash Station

9.3.1 Description

Mobile Equipment Wash Station (Unit 35)
A former IS tank used for collection of wash water. Unit 35 is a stainless steel and concrete sump. Unit 35 is currently empty.

Item Summary

Decontamination shall be complete when the performance criteria indicated in Attachment 12, Table 3.2 are met which may require analytical sampling.		
Unit	**Description**	**Contractor Scope of Work**
35	Mobile Equipment Wash Station	HEPA vacuum and pressure wash area and remove stainless steel sump liner. Process wash water through temp WWTP and discharge to sanitary sewer

9.3.2 Means, Methods and Sequencing

Portable Enclosure Unit
AIS will construct a Portable Enclosure Unit (PEU) to be utilized for the decontamination of the Mobile Equipment Wash Station. The PEU will be connected to a Neg-Air machine during pressure washing and sump removal activities. Neg-Air machine will be supported

by a mobile generator during the work. Once the decontamination activities are completed, the PEU will be decontaminated for re-use at other locations throughout the facility.

Decontamination and Removal

AIS will first HEPA vacuum any gross solids from within the work area for eventual consolidation for testing and offsite disposal. Once completed, AIS will pressure wash the concrete surface starting up gradient of the sump with a 3,000 psi pressure washer to remove any residual surface solids. Supporting equipment such as stairs, pump, piping, concrete bumpers will also be rinsed and then removed and consolidated with other like materials. AIS will then begin extracting the rinseate from within the sump, finalizing the work by cleaning the sump and removing the stainless steel liner. AIS, DTSC and Exide Representatives will assess the condition of the sump with respect to supplemental liquid/solid removal and/or overall sump condition. DTSC will have final approval authority for sump decommissioning activities. AIS will install 100 LF of chain link fence to secure the area from future access.

9.4 Blast Furnace Feed Room

9.4.1 Description

Blast Furnace Feed Room (Unit 34)

Former IS containment building used for storage of blast furnace feed. Unit 34 is empty. Unit 34 has a reinforced concrete floor (with surficial asphalt layer), metal roof, and concrete and metal walls. A coke railcar unloading system, which is partially below grade, is located beneath the southeast corner of the Blast Furnace Feed Room (BFFR) building.

Item Summary

Decontamination shall be complete when the performance criteria indicated in Attachment 12, Table 3.2 are met which may require analytical sampling.		
Unit	**Description**	**Contractor Scope of Work**
34	Blast Furnace Feed Room Containment Building	HEPA vacuum and pressure wash floors, walls and roof. Process waste water through Dewatering Container and WWTP and discharge to POTW. Perform structural evaluation. Deconstruct building, steel structures and floor to grade.

9.4.2 Means, Methods and Sequencing

9.4.2.1 Decontamination Methodology

Since the BFFR is already within an FEU, AIS will initiate the interior decontamination as discussed in the General Decontamination Protocols. Extraneous items to be handled within the BFFR are several large areas of concrete that will have the surfaces decontaminated by HEPA vacuum, power washing, wipe down and if needed, will be sized into smaller more manageable pieces for loading and offsite transportation and disposal.

In addition to the "structure" pressure washing activities, AIS will also implement the intact baghouse ducting and hood decontamination. Decontamination of these air moving components will be implemented during the initial phases of the work such that as mechanical systems are altered and taken offline to allow for deconstruction activities, these elements will not have to be re-decontaminated during the removal process.

9.4.2.2 Deconstruction Methodology

As presented in the General Deconstruction Protocols, AIS will begin from the roof down in reverse sequential order of construction. AIS will remove cross members between specific trusses scheduled for removal during that individual shift. The intent will be to only remove the cross members from within each bay that is scheduled for deconstruction for that particular day. During the removal process, AIS will continue to vacuum any residual dust from bolted points of connection during disassembly. AIS will also utilize wet methods including wiping down and spraying water. This water will be sprayed from hand held power washing wands with specialty tips that will allow for atomizing the water with high pressure and low volume which will mitigate any visible dust and minimize water runoff on the working surfaces below.

AIS will continue the removal method described above until the entire roof framing system including trusses, cross members and framing have been removed and only wall framing (building skeleton) remains.

9.5 Baghouse Building and Units

9.5.1 Description

Buildings associated with baghouse activities and respective housed equipment include the main Baghouse Building, Dryer Baghouse, Reverb Baghouse, Soft Lead Baghouse, Blast Baghouse, Material Handling Baghouse and Hard Lead Baghouse, as well as the MAC Baghouses, and Torit Dust Collector. All housed equipment and buildings will be decontaminated and deconstructed. Emission control equipment decontamination and removal will be performed when gutting and interior cleaning of a building under pressure is substantially complete; except for those portions of the emission control equipment needed to maintain negative pressure.

Operation of the Soft Lead Baghouse, Hard Lead Baghouse, Material Handling Baghouse, the East and West MAC Baghouses, and MAPCO Scrubber will cease. The sequencing of ceasing operation of emission control equipment is provided in *Attachment 10, Duct Modification Plan*.

The (Main) Baghouse Building has a concrete floor, metal roof and metal walls. Former IS units 31 and 32 remain in place. Former units 22, 29, and 30 were previously decontaminated and demolished,. closure will be addressed in accordance with the approved Closure Plan.

Descriptions, previous utilization and current status associated units follow.

Rotary Kiln (Unit 69)
Former IS miscellaneous unit which processed reverb furnace feed material. The rotating drum portion of Unit 69 contains an estimated 4 CY of dry feed material that was in-process when plant operations were suspended. The conveyors into and out of the rotating drum portion of Unit 69 have already been cleaned to remove feed material since that was in-process when plant operations were suspended. Unit 69 is constructed of steel and is located in the Rotary Kiln enclosure within the Baghouse Building. The dryer baghouse was used to collect and manage air emissions from the rotary kiln and associated equipment.

North Flue Dust Slurry Tank (Unit 31)
Former IS tank used for storage of lead dust slurry. Unit 31 is a stainless steel, double walled, open top tank.

South Flue Dust Slurry Tank (Unit 32)
Former IS tank used for storage of lead dust slurry. Unit 32 is a stainless steel, double walled, open top tank.

Neptune Scrubber Sump
Ancillary sump Neptune Scrubber Sump is located in the Baghouse Building, is ancillary to former IS units 24 and 25, and is used for management of wastewater. Neptune Scrubber Sump is a concrete sump.

Baghouse Building Sumps
Ancillary sumps Baghouse Building Sump 1, Baghouse Building Sump 2, Baghouse Building Sump 3, Baghouse Building Tire Wash, and Neptune Scrubber Sump are located within the Baghouse Building.

Item Summary

Decontamination shall be complete when the performance criteria indicated in Attachment 12, Table 3.2 are met which may require analytical sampling.

Unit	Description	Contractor Scope of Work
22	East Equalization Tank	Decontaminate area.
23	West Equalization Tank	Decontaminate area.
29	Process Tank	Decontaminate with (Main) Baghouse Building.
30	Filtrate Tank	Decontaminate with (Main) Baghouse Building.
31	North Flue Dust Slurry Tank	Remove & transport solid residue. Triple rinse tank interior and single on exterior. Process water through WTPP.
32	South Flue Dust Slurry tank	Remove & transport liquids. Triple rinse tank interior and single on exterior. Process water through WTPP.
69	Rotary Kiln (Dry Feed)	Remove dry feed material. Pressure wash/ decontaminate unit. Load unit for transport and reuse at Muncie Facility. Process water through WWTP.
N/A	Neptune Scrubber Sump	Remove inventory/scrubber slurry and decontaminate the sump.
N/A	Baghouse Building Sumps 1, 2, 3	Remove sump contents and decontaminate the sumps concurrent with (Main) Baghouse Building floor decontamination.
N/A	Baghouse Tire Wash Sump	Remove sump contents and decontaminate the sumps concurrent with (Main) Baghouse Building floor decontamination.
N/A		Decontaminate, gut and deconstruct walls, and roof of building. Deconstruct buildings to grade. Process water through WWTP and discharge to POTW. Recycle steel.

9.5.2 Means, Methods and Sequencing

9.5.2.1 Decontamination Methodology

Decontamination of Baghouse Building and Baghouse Systems, Ducting, Units and Components

With the Baghouse Building contained within an FEU, AIS will initiate the interior decontamination as discussed in the General Decontamination Protocols in section 6.0 of this document. Although conducting the decontamination in accordance with the general AIS protocols (i.e. pressure washing from top to bottom, controlled removal of siding (deskinning), rinseate collection for on-site processing, and handling of exhaust stacks). Special care will be taken in the Baghouse Building to properly decontaminate these

structures to allow for the removal for re-use the various Baghouse and HEPA system components at another Exide facility. Once decontaminated, AIS will coordinate the removal and transportation of re-use items for eventual transportation to the Exide – Muncie facility. The remaining equipment will be removed and transported for off-site recycling as scrap metal or as hazardous waste.

In addition to the "structure" pressure washing activities, AIS will also implement the cleaning of the intact baghouse ducting system and hood decontamination, following the AIS general ducting Decontamination Protocols. This includes the baghouse systems that service the entire facility (RMPS, Baghouse, Smelter Buildings, and Finish Lead Building). Decontamination of the ducting will take place at elevated heights, thus motorized lifts will be utilized throughout the decontamination process. The subject ducting will be assessed for gross particulate matter as well as the proper washing techniques and spray nozzle application.

With respect to the on-going maintenance and change out of bag-house filtration components and filters, Exide personnel continue to conduct these operational activities during the project.. Once ready for decommissioning, AIS will provide a Temporary Enclosure for the confined space permitted decontamination of the Baghouse units and primary ducting. Confined space operations will be governed by the AIS health and safety program for personnel, equipment, and respiratory support. Removal of baghouse filters will be coordinated and once removed will be properly containerized (i.e. 6-mil poly bags) for analytical testing and waste characterization. Dust control misting will also be provided during the filter removal operations. With the filters removed from within the baghouse unit, but still within the FEU, AIS personnel will proceed to dry-decon or HEPA vacuum the interior of the unit of all horizontal and vertical surfaces. Wet decontamination is required. Once the subject baghouse unit is cleaned and cleared, AIS will arrange for portions of the unit requested for reuse (HEPA System) to be wrapped and sealed for transport. The remaining equipment will be removed and transported for off-site recycling as scrap metal.

Decontamination of Facility Stack Systems

AIS's general approach for the decontamination of the facility stack systems within the building and below the roof line will utilize existing hatches, prior openings and manways to access the interior of the existing stacks when possible. AIS will cut and/or grind along the existing welds of the panels that have been previously removed by facilities personnel and utilize these areas for cleaning access. In areas needed, AIS will utilize cold cut methods to open windows within the stacks at approximately 8' intervals or as needed for access. The intent will be to alternate opening locations so as to not have multiple openings above or below each other.

AIS will utilize the openings to gain access for inspections with articulating boom lifts with appropriate fall protections and/or from the existing stack platforms when possible. AIS

will inspect the interior of the stacks for residual materials and determine the methods and extent of cleaning required.

As described in ***Attachment 14, Engineering Controls Plan***, for stacks sections above the roof line, AIS will place 6-mil poly sheathing approximately 2' above the proposed cutline to seal off the entire inside of the stack section being removed. This will allow for the stack to be cut and lowered into the interior of the building for inspection and final cleaning within the negative air enclosure.

For areas below the roof line and once inspections have been performed and cleaning levels determined, AIS will begin the cleaning process from the top down and will utilize a dry HEPA-vacuum followed by a high pressure low volume power wash to remove all residual dust from within the stacks. Water will be collected at the base of stacks and vacuumed by a mini guzzler. Rinseate water will be placed within dewatering containers and transferred to the WWTP for on-site processing. Depending on the amount of residual surface particulate matter in the stacks and if deemed insignificant which can be removed by washing, AIS will forego the HEPA vacuuming of the stack interiors and proceed to pressure washing operations. Note: AIS may employ an alternative cleaning procedure which would include the lowering down of a spray nozzle device into the stack opening. The pressure washer device will be lowered from top to bottom of the stack allowing the spray nozzle bars emitting low volume and 3,000 psi high-pressure streams of water onto the stacks interior surface. This device will pass through the entire stack and once completed, the nozzle device, cable, wench, and centering assembly will be removed and relocated to the next stack. This activity will continue until all stacks are completed. AIS may still need to access certain stacks for manual cleaning due to interior impediments.

9.5.2.2 Deconstruction

Based on site walks and inspections by Sigma Engineering, the current construction and structural integrity of the Baghouse is not dependent on the adjacent RMPS and Smelter Buildings for its current East and West walls but rather has standalone moment frame construction with end fill non-structural framing between the buildings. This will allow for the RMPS and Smelter buildings to be removed in their entirety while leaving the Baghouse building in place for final deconstruction. Based on final design from the AIS Structural Engineer and due to the high density of equipment, ducting, CP2 building and various improvements that are currently located outside of the respective corridor walls within the existing RMPS and Smelter buildings, following decontamination, AIS will leave the western wall of the Baghouse building along gridline N in place until Segment 3 at which time this wall will be removed outside of the FEU. Refer to *Attachment 4, Deconstruction Engineering Survey.* Specific procedures for this process have been outlined within Section 3.2.2 of this Closure Implemenation Plan.

Deconstruction of Baghouse Building and Baghouse Systems, Ducting, Units and Components

As outlined in the General Deconstruction Protocols, AIS will begin from the roof down in reverse sequential order of construction. AIS will remove cross members between specific trusses scheduled for removal during that individual shift. The intent will be to only remove the cross members from within each bay that is scheduled for deconstruction for that particular day. During the removal process, AIS will continue to vacuum any residual dust from bolted points of connection during disassembly. AIS will also utilize wet methods including wiping down and spraying water. This water will be sprayed from hand held power washing wands with specialty tips that will allow for atomizing the water with high pressure and low volume which will mitigate any visible dust and minimize water runoff on the working surfaces below.

AIS will continue the removal method described above until the entire roof framing system including trusses, cross members and framing have been removed and only wall framing (building skeleton) remains.

Deconstruction of Facility Stack Systems

Our basic means and methods will consist of utilizing equipment including thumbed excavators and shears, reach forklifts, applicable cranes and hand labor for the deconstruction and removal of the existing stacks and supports.

Our procedures will include daily documented inspections of all engineering controls, including dust mitigation controls within the secondary containment and buildings; negative air enclosures, air monitoring systems, scaffolding, shoring, temporary fencing, delineations and any other items used for separating the work area from all non-essential and/or AIS personnel. In addition, the AIS Deconstruction Site Superintendent will walk areas of proposed work daily prior to the start of each shift to discuss JHAs, plans, means and methods and address concerns with appropriate parties. AIS will determine in the field the extent of roofing panels to remove prior to stack removal based on safety field walks and site conditions. Currently the A-Frame stacks will have the roofing panels in place so as to allow for safe access on the roof for cleaning and cutting. Other baghouse stacks may have roof panels removed around prior to their removals. This will still allow for the removals within a regulated negative air enclosure as described within the proposed Haki system.

The initial stack cuts will be below the structural framing and roof line. This will facilitate the upper portion of the stacks to be lowered in one piece down into the building to complete the decontamination. Lowering the stack into the building is preferred because it keeps the contaminated stack still located within the FEU, reducing the risk of a release. An appropriately sized crane will be utilized to safely complete these picks. Prior to cutting, AIS will cover all openings created during the cleaning process with 6-mil fire retardant poly sheathing. AIS will also place poly sheathing over the top section of the stack once all rigging has been hooked up for the craning process. This work will be

conducted below the roof line and within the FEU enclosure. AIS intends to lower each removed section back within the building footprint, such that the stack sections are handled within the FEU. This will also allow for a final inspection and decontamination, if needed, and processing for applicable disposal and/or recycling.

During all stack removal phases, AIS will utilize water for additional dust control. This water will be sprayed from a reach man lift staged adjacent to each section that is being removed. Water will be sprayed on the stack to ensure no visible emissions occur. AIS will continue this removal method described above until the entire stack has been removed.

For the Blast and Reverb Furnace "A Frame" exhaust systems, AIS will inspect the existing A Frame sections and place scaffolding as needed for safe access to the stacks. AIS will cut the stack and components in sizes appropriate for safe handling and lowering within the structure. AIS will utilize the existing structural framing within the Reverb Stack system to place scaffolding and negative air enclosure as needed to perform this work. The existing Blast A Frame section will have most of the stack and components within the Temporary Full Enclosure. For the section above the enclosure, AIS will utilize the same method as described within the stack removal procedures including sealing of ends and lowering within the negative air enclosure for cleaning and processing .

AIS will continue this removal method described above until the entire stack systems have been removed. AIS will load out and haul materials in certified DOT registered high / low side end dumps in order to maximize load weights and reduce trucking traffic to surrounding areas. We intend to stockpile full loads of debris within the building footprints with negative air enclosure. Once we have established stockpiles for full loads, we will load and transport for applicable handling.

9.6 Desulfurization Building

9.6.1 Description

The Desulfurization Area is enclosed within the Desulfurization Building. The building is also referred to as the Mud Tank Building. The Desulfurization Building has a concrete secondary containment area, metal roof and concrete and metal walls. Units 7, 8, 9, 10, former 64, former 65, and 67 and ancillary sump Mud Tank Area Sump 1 are located within the secondary containment area at the Desulfurization Building.

North Mud Tank (Unit 7)
Former IS tank used for storage of lead sulfate paste. Unit 7 is empty and may be used for decontamination water storage during closure. Unit 7 is a stainless steel, closed top tank.

Center Mud Tank (Unit 8)
Former IS tank used for storage of lead sulfate paste. Unit 8 contains paste and may be used for decontamination water storage during closure. Unit 8 is a stainless steel, closed top tank.

South Mud Tank (Unit 9)
Former IS tank used for storage of lead sulfate paste. Unit 9 is used for decontamination water storage prior to and during closure. Unit 9 is a stainless steel, closed top tank.

South Acid Storage Tank (Unit 10)
Former IS tank used for storage of sulfuric acid. Unit 10 currently contains discharge from the MAPCO Scrubber. Unit 10 is a polyethylene, closed top tank.

Acid Overflow Tank B (Unit 67)
Former IS tank used for storage of sulfuric acid. Unit 67 contains solid residue. Unit 67 is a polyethylene, closed top tank.

Once the tanks are closed by removal of inventory, cleaning of the interior and exterior of tank, and disposal of tanks offsite, the Desulfurization Building/Area, will be closed by decontaminating the floors, walls and roof.

Item Summary

Decontamination shall be complete when the performance criteria indicated in Attachment 12, Table 3.2 are met which may require analytical sampling.		
Unit	**Description**	**Contractor Scope of Work**
7	North Mud Tank	Triple rinse interior and single rinse exterior of tank. Process water through WWTP. Remove and recycle off-site.
8	Center Mud Tank	Remove paste. Triple rinse interior and single rinse exterior of tank. Process water through WWTP. Remove and recycle off-site.
9	South Mud Tank	Remove paste and liquid. Triple rinse interior and single rinse exterior of tank. Process water through WWTP. Remove and recycle off-site.
10	South Acid Storage Tank	Triple rinse interior and single rinse exterior of tank. Process water through WWTP. Remove and dispose.
64	North Acid Storage Tank #2 (tank previously demolished)	Decontaminate and wash floors and equipment. Process water through WWTP.
65	North Acid Storage Tank (tank previously demolished)	Decontaminate and wash floors and equipment. Process water through WWTP.

67	Acid Overflow Tank B	Tank empty with minor solids. Triple rinse interior and single exterior. Pressure wash and process water (1363 gal) through WWTP. Remove and load tank/dispose.
N/A	Desulfurization Building	Decontaminate floors, walls and roofs. Gut and deconstruct building to grade. Process water through WWTP. Recycle steel. Dispose concrete.

9.6.2 Means, Methods and Sequencing

9.6.2.1 Decontamination Methodology

Since the Desulfurization Building is already contained within an FEU, AIS will initiate the AST exterior and interior decontamination as previously detailed in the AIS General Tank Cleaning Protocols. With the intent to decontaminate and remove the ASTs for destruction, AIS will first initiate the exterior decontamination of the subject AST and supporting ancillary components (i.e. catwalks, piping, slabs and containment walls) utilizing a 3,000 psi pressure washer. Once cleaned, AIS will assess the support piping and access only those lines supporting the desulfurization operations. Pressure washing of these pipes will be done such that the generated rinseate is sent back into the subject tank. Once the supporting lines for potential re-use have been identified and all lines are completed, AIS will remove the un-needed lines. AIS will proceed by cleaning the interior of the AST beginning at the top and continuing by washing down the interior walls of the tank to the tank floor. AIS will begin extracting the rinseate from within the tank, finalizing the work by cleaning tank floor and removing the final wash rinseate via vacuum truck for processing at a Dewatering Container and the WWTP.

Equipment Removal or Destruction

Although Units 7, 8, and 9 are not intended for primary use in decontamination water processing, AIS is anticipating the Mud Tanks will be available for approximately five months prior to removal if the need arises to use for them for decon water storage.

Once the Mud Tanks and South Acid Tank are decontaminated AIS will coordinate the removal of the tanks and piping components for destruction. To ensure negative pressure will be maintained, the Mud Tanks (Units 7, 8, and 9) will be decontaminated in place.

Piping to be removed will be disassembled via manual means or with non-sparking reverberating cutting saws. Piping and other components will be rigged and lowered to the ground. Once all the supporting components have been removed, the decontaminated ASTs will be rigged, unbolted from their foundations and lifted out of the secondary containment area and placed directly on a low-bed transport

Shearing of the tanks will be done by heavy equipment and shearing equipment to cut the tank into manageable pieces. Once sectionalized into manageable pieces, AIS will coordinate the offsite recycling of the ASTs and support equipment to a local metal

recycling facility. A Certificate of Destruction will be issued noting Generator, tank size, composition and destruction date.

The South Acid Storage tank is a poly-tank and not slated for reuse. Once clean, AIS will utilize reverberating cutting equipment to cut this AST into manageable pieces that can be easy removed from the RPMS building and characterized and transported for appropriate off-Site disposal. Non-salvageable items will be decontaminated and removed in the same manner outlined above and characterized, staged and placed into scrap bins.

Decontamination of Desulfurization Building

With the Desulfurization Building already within the FEU, AIS will initiate the interior decontamination of the building structure including but not limited to the under side of the ceiling panels; roof truss structure; all vertical and horizontal supports, conduits, piping, ducting (not previously removed). This protocol will be implemented throughout the structure and will be coordinated with the deskinning of the structure as needed. Decontamination means and methods will follow those presented in the General Decontamination Procedures, Section 6.

9.6.3 Deconstruction Methodology

Since the Desulfurization Building is already within the FEU, AIS will initiate the deskinning and deconstruction of the Desulfurization Building following the General Deconstruction Means and Methods, Section 8.2.

Once the Desulfurization Building has been decontaminated and all items removed, portions of the secondary containment and tank pedestals will be removed using an excavator with pulverizing attachments and wet wall-saw techniques. Sections of the containment walls will be removed to allow for easier access during building deconstruction as well as limiting future water retention and/or particulate retention from occurring and reduce long term maintenance needs related to general airborne dust/solids removal.

9.7 RMPS Building

9.7.1 Description

The Raw Material Processing System “RMPS” Building consists of four sections: the unloading dock, the narrow section along the west side of the Reverb Furnace Feed Room, the main RMPS area, and the enclosed plastic trailer loading dock. The section along the west side of the Reverb Furnace Feed Room includes a main level, and a lower level which includes Unit 5, Battery Dump Bin Sump, and Unit 70, Oscillating Pan Feeder. The RMPS Building has two concrete secondary containment areas (the main area and the lower level), concrete floor, metal roof and concrete and metal walls. Former IS units 5, 6, 12, 13, 14, 40, 41, 42, 43, 44, 45, 66, 68, 70, 79, and 80 will be closed in accordance with the

Closure Plan. Former IS units 11, 26, 27, and 28 were previously decontaminated and demolished and closure will be completed in accordance with the Closure Plan.

The Soda Ash silo north of the RMPS Building, and the Caustic Tank south of the Reverb Furnace Feed Room will be decontaminated and deconstructed within temporary FEUs concurrent with Segment 1 activities.

Units

Battery Dump Bin Sump (Unit 5)
Former IS tank used to collect acid and wash water. Unit 5 is a double-walled stainless steel sump located in the lower level secondary containment area at the RMPS Building.

RMPS Floor Sump (Unit 6)
Former IS tank used to collect sodium sulfate solution and wash water. Unit 6 is a double-walled stainless steel sump located in the main secondary containment area at the RMPS Building.

Paste Thickening Unit (Santa Maria) (Unit 12)
Former IS regulated tank intended to contain lead sulfate paste. Unit 12 was never used to handle waste materials, being constructed during the facility shutdown in the fall of 2014 and to replace the former Santa Maria process system. Unit 12 is empty, constructed of stainless steel, and is an open top tank located in the main secondary containment area at the RMPS Building.

Sink/Float Separator (Unit 13)
Former IS tank which contained plastic and dilute sulfuric acid. Unit 13 is an empty stainless steel, open top tank located in the main secondary containment area at the RMPS Building.

Recycle Tank (Unit 14)
Former IS tank which contained dilute sulfuric acid. Unit 14 is an empty stainless steel, open top tank located in the main secondary containment area at the RMPS Building.

RMPS Hammer Mill (Unit 40)
Former IS miscellaneous unit which processed spent batteries. Unit 40 is empty and is constructed of stainless steel, located in the main secondary containment area at the RMPS Building.

Waste Acid Circulation Tank (Unit 41)
Former IS tank which contained sodium sulfate solution and dilute sulfuric acid. Unit 41 an empty stainless steel, open top tank located in the main secondary containment area at the RMPS Building.

East Elutriation Column (Unit 42)
Former IS miscellaneous unit which processed dilute sulfuric acid, plastic, rubber and lead metal. Unit 42 is an empty stainless steel piece of equipment and that is located in the main secondary containment area at the RMPS Building. Piping discharge to Unit 42 from the WWTP has been disconnected by Exide.

West Elutriation Column (Unit 43)
Former IS miscellaneous unit which processed dilute sulfuric acid, plastic, rubber and lead metal which is empty. Unit 43 is constructed of stainless steel and is located in the main secondary containment area at the RMPS Building.

WWTP Filter Press (Unit 44)
Former IS miscellaneous unit which processed lead carbonate paste and WWTP sludge. Unit 44 is located in the main secondary containment area at the RMPS Building.

RMPS Filter Press Unit B (Unit 45)
Former IS miscellaneous unit which processed lead carbonate paste. Unit 45 is empty and was partially decontaminated and deconstructed in preparation for replacement of the filter press when the decision to pursue closure occurred. Unit 45 is constructed of cast iron coated with acid resistant paint and is located in the main secondary containment area at the RMPS Building.

Acid Overflow Tank A (Unit 66)
Former IS regulated tank and was used for storage of sulfuric acid which is empty. Unit 66 is a polyethylene, closed top tank and is located in the main secondary containment area at the RMPS Building.

Clarifying Acid Filter Press (Unit 68)
Former IS miscellaneous unit which processed sulfuric acid. Unit 68 is empty, constructed of cast iron coated with acid resistant paint and is located in the main secondary containment area at the RMPS Building.

Oscillating Pan Feeder (Unit 70)
Former IS miscellaneous unit which processed spent batteries and lead-bearing plant scrap. Unit 70 contains ½ load of plastic chips. It is constructed of stainless steel and is located above the lower level secondary containment area at the RMPS Building.

Surge Tank (Unit 79)
Unit 79 is a polyethylene, closed top tank and located in the main secondary containment area at the RMPS Building.

Plastic Centrifuge #1 (Unit 80)

Former IS miscellaneous unit which separated plastic chips and rinse water. Unit 80 is empty, constructed of stainless steel and is located in the main secondary containment area at the RMPS Building.

Item Summary

Decontamination shall be complete when the performance criteria indicated in Attachment 12, Table 3.2 are met which may require analytical sampling.		
Unit	**Description**	**Contractor Scope of Work**
5	Battery Dump Bin Sump	Flush all liquid through WWTP for treatment and sewer discharge . Decontaminate unit and remove stainless steel liner.
6	RMPS Floor Sump	Flush all liquid through WWTP for treatment. . Decontaminate unit and remove stainless steel liner.
11	Overflow Tank (N/A)	Included in RMPS Building (tank already demolished).
12	Paste Thickening Unit (empty)	Decontaminate, single rinse inside and out since the Unit has never been used . Process water through WWTP. Transport to Exide facility in Indiana.
13	Sink/Float Separator (empty)	Decontaminate unit, triple rinse inside and single rinse outside. Process water through WWTP. Recycle tank.
14	Recycle Tank (empty)	Decontaminate unit, triple rinse inside and single rinse outside. Process water through WWTP. Recycle tank.
26	pH Adjustment Tank 1 (N/A)	Tank previously demolished. Decontaminate and wash floors.
27	pH Adjustment Tank 2 (N/A)	Tank previously demolished. Decontaminate and wash floors.
28	pH Adjustment Tank 3 (N/A)	Tank previously demolished. Decontaminate and wash floors.
40	RMPS Hammer Mill	Decontaminate and pressure wash unit. Process water through WWTP. Transport to Exide facility in Indiana.
41	Waste Acid Circulation Tank	Triple rinse interior and single rinse exterior. Process rinseate through WWTP and recycle tank off-site.
42	East Circulation Column	Pressure wash and decontaminate unit. Rinseate processed through WWTP. and recycle off-site
43	West Circulation Column	Pressure wash and decontaminate unit, rinseate through WWTP and load for recycle off-Site.

44	WWTP Filter Press	Remove any residual inventory and pressure wash unit. Process rinseate through WWTP and discharge and recycle tank off-site.
45	WWTP Filter Press Unit B	Pressure wash unit and process rinseate through WWTP . Recycle tank off-site.
66	Acid Overflow Tank A	Tank empty. Triple rinse interior and single rinse exterior by pressure washing processing rinseate through WWTP. Properly dispose of tank off-Site.
68	Clarifying Acid Filter Press	Pressure wash and process wash water through WWTP. Transport and recycle.
70	Oscillating Pan Feeder	Remove any remaining material in unit. Pressure wash and run water through WWTP, to prepare for recycling.
79	Surge Tank - poly (waste liquid)	Triple rinse interior and single rinse exterior with rinseate processed through WWTP. Transport to Exide's Indiana facility.
80	Plastic Centrifuge #1	Pressure wash and process rinseate in WWTP Recycle off-Site

9.7.2 Means, Methods and Sequencing

9.7.2.1 Decontamination

Since the RMPS Building will be enclosed within an FEU, AIS will initiate the interior decontamination as discussed in the General Decontamination Protocols. This will involve pressure washing from top to bottom, controlled removal of siding (deskinning),rinseate collection and processing in WWTP. Following decontamination, Unit 12 – Santa Maria Paste Thickener unit, Unit 79 Surge Tank, Unit 40 Hammer Mill will be packaged and transported for re-used at the Exide – Muncie facility.

Since the RMPS area is complex with many interconnected units, AIS will perform decontamination of various elements sequentially, working around access constraints. Once decontaminated, AIS will proceed to surgically remove these elements in order to gain access to other process units requiring decontamination. This removal will allow access for mobile equipment to facilitate dry and wet decontamination activities. This surgical operation will particularly be a requirement in the primary processing area where conveyors, process equipment, lines, supports, catwalks and stairs are intertwined. AIS will work from the outer perimeter of these areas inward to the center of the area, decontaminating and dismantling until the RMPS areas are gutted, facilitating the building structure cleaning. AIS will conduct the decontamination and removal of this equipment and supplemental supports using man/boom lift equipment as well as the existing overhead crane servicing this area.

In addition to the structural pressure washing activities, AIS will decontaminate the intact baghouse ducting and hood decontamination within this area. Decontamination of these air moving components will be conducted during the RMPS initial phases which include the alteration, shutdown of decontamination of mechanical systems. This equipment will be altered and then taken offline to allow for deconstruction activities and will not have to be decontaminated again for the removal process. Final decontamination criteria are specified in ***Attachment 12, Unit Disposition and Testing Requirements, Table 3.2***.

The final phase of decontamination of the RMBPs will be the pressure washing of the concrete slab, concrete supporting vertical columns, and collection sump(s). All generated rinseate will be accumulated within the structure and removed via vacuum truck for discharge to the onsite WWTP system. AIS will remove ½" of all contaminated concrete flooring within the entire Upper Feed Room using hydro-milling or bead blasting.

9.7.2.2 Deconstruction

As presented in the General Deconstruction Protocols, AIS will begin deconstruction from the roof down reversing the normal sequence of typical construction activities. AIS will remove cross members between specific trusses scheduled for removal during that individual shift. The intent will be to only remove the cross members from within each bay that is scheduled for deconstruction for that particular day. During the removal process, AIS will continue to vacuum any residual dust from bolted points of connection during disassembly. AIS will also utilize wet methods including wiping down and spraying water. This water will be sprayed from hand held power washing wands with specialty tips that will allow for atomizing the water with high pressure and low volume which will mitigate any visible dust and minimize water runoff on the working surfaces below.

AIS will continue the removal method described above until the entire roof framing system including trusses, cross members and framing have been removed and only wall framing (building skeleton) remains. AIS will then proceed with all wall framing removals in a bay by bay fashion.

9.8 Smelter Building

9.8.1 Description

The Smelter Building has a concrete floor, metal roof and concrete and metal walls. Units 36 and 37 are located on the main level of the Smelter Building. Receiving and refining kettles (Units 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101 and 102) are accessed from the main level of the Smelter Building and extend below the main level floor into a lower level referred to as the kettle gallery. Ancillary sumps North Kettle Gallery Sump, South Kettle Gallery Sump and Cooling Tower Return Sump are located within the lower level of the Smelter Building. Units 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102 are former IS miscellaneous units which processed lead product. Currently there are (5)

Kettles that will remain in place during the decontamination and deconstruction of the Smelter Building. Kettles ,4,7,B,E, and F. These kettles will be removed within the FEU under negative air pressure utilizing a Gantry Crane System as described within **Attachment 1, Gantry and Kettle Handling**, of this plan. The remaining kettles will be removed utilizing a combination of the existing overhead crane system and or a thumbed excavator for processing. This removal and processing will take place during the initial decontamination and deconstruction of the Smelter Building within the FEU.

The lighter kettles, Unit 89 (Kettle A), Unit 93 (Kettle G), Unit 94 (Kettle 1), Unit 95 (Kettle 2), Unit 96 (Kettle 3), Unit 98 (Kettle 5), Unit 99 (Kettle 6), Unit 101 (Kettle 8), and Unit 102 (Kettle 9) will be removed and considered for re-use at the Muncie, Indiana Exide facility. The conditions of these lighter kettles will be observed after removal from the furnace by crane. They will be entirely wrapped and shipped for re-use or recycling by Exide's Muncie, Indiana facility. The heavy kettles (Kettles B, E, F, 4 and 7) will be recycled by cutting up the steel kettle and mechanically removing the lead contained therein. The steel kettle will be recycled as scrap and the lead will be sent for re-use at the Muncie facility. In the event that any kettles (such as Kettle G and Kettle 3) cannot be removed with the existing cranes for transportation to Muncie, then they will be removed by the Gantry crane, cut up and recycled as described above. ***Table 3.2 of Attachment 12, Unit Disposition and Testing Requirements,*** including footnote 15, further describes this process.

Reverb Furnace (Unit 36)
Former IS miscellaneous unit which processed reverb furnace feed material. Unit 36 is constructed of brick and steel and is located in the Smelter Building. Unit 36 is empty, but, lead and slag may have accumulated between the steel frames which form the bottom of reverb-style furnaces.

Blast Furnace (Unit 37)
Former IS miscellaneous unit which processed blast furnace feed material. constructed of brick and steel and is located in the Smelter Building. The Blast Furnace is currently empty.

Smelter Building – Ancillary Sump Units

North Kettle Gallery Sump
This sump is a former IS unit used for management of wash down water constructed of concrete.

South Kettle Gallery Sump
The South Kettle sump is constructed of concrete and is used for management of wash down water.

Cooling Tower Return Sump
Cooling Tower Return Sump is a concrete sump.

Item Summary

Decontamination shall be complete when the performance criteria indicated in Attachment 12, Table 3.2 are met which may require analytical sampling.		
Unit	**Description**	**Contractor Scope of Work**
36	Reverb Furnace	Pressure wash and decontaminate unit. Remove furnace brick, sample and transport for disposal / recycling according to sample results. Brick, burners and feed screws for re-use. Re-use or recycle the metal structure.
37	Blast Furnace (Smelter Building)	Pressure wash and decontaminate unit. Dispose of brick. Re-use crucible. Recycle or recycle steel structure.
89	Receiving Kettle #A (lead product/ dispose of brick housing)	Pressure wash and decontaminate unit. Process water through WWTP. Use existing crane system to remove kettle kettle. Shrink wrap and load kettle onto transport vehicle. Transport and reuse inventory, and re-use or recycle kettle if not re-used at Exide's Muncie, IN Facility (See footnote 15 at end of Table 3.2 of Attachment 12). Recycle metallic housing materials if not re-used.
90	Receiving Kettle #B (lead product/ dispose of brick housing)	Pressure wash and decontaminate unit. Process water through WWTP. Remove the kettle using the Gantry system per Attachment 1 and use mechanical methods to cut the kettle into pieces so that inventory can be loaded into closed containers for transport for reuse at Exide's Muncie, IN Facility. Recycle the kettle and metallic housing materials locally.
91	Receiving Kettle #E (lead product/ dispose of brick housing)	Pressure wash and decontaminate unit. Process water through WWTP. Remove the kettle using the Gantry system per Attachment 1 and use mechanical methods to cut the kettle into pieces so that inventory can be loaded into closed containers for transport for reuse at Exide's Muncie, IN Facility. Recycle the kettle and metallic housing materials locally.
92	Receiving Kettle #F (lead product/ dispose of brick housing)	Pressure wash and decontaminate unit. Process water through WWTP. Remove the kettle using the Gantry system per Attachment 1 and use mechanical methods to cut the kettle into pieces so that inventory can be loaded into closed containers for transport for reuse at Exide's Muncie, IN Facility. Recycle the kettle and metallic housing materials locally.

93	Receiving Kettle #G (lead product/ dispose of brick housing)	Pressure wash and decontaminate unit. Process water through WWTP. Use existing crane system to remove kettle. Shrink wrap and load kettle onto transport vehicle. Transport and reuse inventory, and re-use or recycle kettle if not re-used at Exide's Muncie, IN facility (See footnote 15 at end of Table 3.2 of Attachment 12). Recycle metallic housing materials if not re-used.
94	Refining Kettle #1 (lead product/ dispose of brick housing)	Pressure wash and decontaminate unit. Process water through WWTP. Use existing crane system to remove kettle. Shrink wrap and load kettle onto transport vehicle. Transport and reuse inventory, and re-use or recycle kettle if not re-used at Exide's Muncie, IN Facility (See footnote 15 at end of Table 3.2 of Attachment 12). Recycle metallic housing materials if not re-used.
95	Refining Kettle #2 (lead product/ dispose of brick housing)	Pressure wash and decontaminate unit. Process water through WWTP. Use existing crane system to remove kettle. Shrink wrap and load kettle onto transport vehicle. Transport and reuse inventory, and re-use or recycle kettle if not re-used at Exide's Muncie, IN Facility (See footnote 15 at end of Table 3.2 of Attachment 12). Recycle metallic housing materials if not re-used.
96	Refining Kettle #3 (lead product/ dispose of brick housing)	Pressure wash and decontaminate unit. Process water through WWTP. Use existing crane system to remove kettle. Shrink wrap and load kettle onto transport vehicle. Transport and reuse inventory, and re-use or recycle kettle if not re-used at Exide's Muncie, IN Facility (See footnote 15 at end of Table 3.2 of Attachment 12). Recycle metallic housing materials If not re-used.
97	Refining Kettle #4 (lead product/ dispose of brick housing)	Pressure wash and decontaminate unit. Process water through WWTP. Remove the kettle using the Gantry system per Attachment 1 and use mechanical methods to cut the kettle into pieces so that inventory can be loaded into closed containers for transport for reuse at Exide's Muncie, IN Facility. Recycle the kettle and metalic housing materials locally.
98	Refining Kettle #5 (lead product/ dispose of brick housing)	Pressure wash and decontaminate unit. Process water through WWTP. Use existing crane system to remove kettle. Shrink wrap and load kettle onto transport vehicle. Transport and reuse inventory, and re-use or recycle kettle if not re-used at Exide's Muncie, IN Facility (See footnote 15 at end of Table

		3.2 of Attachment 12). Recycle mettalic housing materials if not re-used.
99	Refining Kettle #6 (possible lead product based on other kettles)	Pressure wash and decontaminate unit. Process water through WWTP. Use existing crane system to remove the kettle. Shrink wrap and load kettle onto transport vehicle. Transport and reuse inventory, and re-use or recycle kettle if not re-used at Exide's Muncie, IN Facility (See footnote 15 at end of Table 3.2 of Attachment 12). Recycle metallic housing materials if not re-used.
100	Refining Kettle #7 (lead product)	Pressure wash and decontaminate unit. Process water through WWTP. Remove the kettle using the Gantry system per Attachment 1 and use mechanical methods to cut the kettle into pieces so that inventory can be loaded into closed containers for transport for reuse at Exide's Muncie, IN Facility. Recycle the kettle and metallic housing materials locally.
101	Refining Kettle #8 (lead product)	Pressure wash and decontaminate unit. Process water through WWTP. Use existing crane system to remove kettle. Shrink wrap and load kettle onto transport vehicle. Transport and re-use inventory, and re-use or recycle kettle if not re-used at Exide's Muncie, IN Facility (See footnote 15 at end of Table 3.2 of Attachment 12). Recycle metallic housing materials if not re-used.
102	Refining Kettle #9 (lead product)	Pressure wash and decontaminate unit. Process water through WWTP. Use existing crane system to remove kettle. Shrink wrap and load kettle onto transport vehicle. Transport and reuse inventory, and re-use or recycle kettle if not re-used at Exide's Muncie, IN Facility (See footnote 15 at end of Table 3.2 of Attachment 12). Recycle metallic housing materials if not re-used.
N/A	Ancillary Sumps - North Kettle Gallery Sump	Remove inventory, decontaminate the sumps concurrent with Smelter Building floor decontamination.
N/A	Ancillary Sumps - South Kettle Gallery Sump	Remove inventory, decontaminate the sumps concurrent with Smelter Building floor decontamination.
N/A	Ancillary Sump – Cooling Tower Return Sump	Remove inventory, decontaminate the sumps concurrent with Smelter Building floor decontamination.

N/A	Smelter Building including lower level	Decontaminate, gut and deconstruct to grade.

NOTE: The Exide – Muncie facility will document the final disposition of each steel kettle vessel: put back into service, salvaged by repair or a disposition to recycle/scrap and the final destination of the scrap steel.

9.8.2 Means, Methods and Sequencing

9.8.2.1 Decontamination

With the Smelter Building already within the FEU, AIS will initiate the interior decontamination as discussed in the General Decontamination Protocols. Decontamination protocols will include pressure washing from top to bottom, controlled removal of siding (deskinning) and rinseate collection for on-site processing. As a part of this work special care will be taken in the Smelter Building to remove the five (5) kettles scheduled for reuse at other Exide locations Once the subject kettles are decontaminated, AIS will coordinate the dis-assembling, removal and proper packaging of the Kettles for transportation to the Exide – Muncie facility.

As part of the pre-project waste characterization activities, AIS will conduct laboratory testing to a establish waste profile and waste acceptance for the kettle brick. By establishing the waste profile prior to the decontamination activities, the removal, containerization and off-site transportation of the kettle brick can be coordinated and completed in such a manner that staging of this material in bins for extended periods of time can be avoided. Removal of the kettle brick will be completed under wet conditions by fine misting the surface and immediate air space within the kettle during brick removal. Bricks will be removed by hand or by mechanical equipment and loaded into a debris hopper for relocation to a central roll-off bin location. Bricks will be placed in lined roll-off containers for coordinated off-site disposal. AIS will also use the overhead crane system to facilitate the removal of the brick from the Kettle compartment and placement of the brick into roll-off bins.

Ducting and hood decontamination be completed as decontamination is commencing. During the decontamination of the Kettle floor and surrounding equipment AIS will selectively remove various support equipment from within the Smelter/Kettle area. Roller conveyor systems, support utilities, steel bollards, and various overhead infra structure (office areas) will be decontaminated and then removed to make additional space for equipment and personnel. AIS will supplement the surgical removal of equipment and supplemental supports utilizing man/boom lift equipment as well as the existing overhead crane that services the Kettle area. In addition to the ducting located above the Kettle deck, AIS will also decontaminate the ducting located in the motor control and utility corridor beneath the Kettle deck.

The ducting that runs throughout the "basement" area of the Smelter Building will be pressure washed and taken off-line in a systematic manner to expedites the continued decontamination and/or deconstruction activities. Once components located in the basement are disconnected, decontaminated and ready for removal from the basement, AIS will coordinate the extraction of these items utilizing the existing overhead Crane or smaller lifting devices such as a mobile crane or forklift. The subject item will be rigged appropriately using lifting eyes, chains or straps, which have been inspected and certified for the anticipated lifting capacity. AIS will utilize a lifting plan created for this specific activity. Once the item has been secured, the item will be lifted through the openings formerly occupied by the smelter kettles. Given the size of these openings and assessing the below grade equipment removal needs, AIS will plan for minimal deconstruction efforts to best facilitate clearing the basement and tunnel corridors. If the need arises, AIS will open the floors to the extent needed to safely access and remove items located within the basement.

Currently there are (7) Kettles that will remain in place during the decontamination and deconstruction of the Smelter Building. Kettles 3,4,7,B,E,F and G. These kettles will be removed within the FEU under negative air pressure utilizing a Gantry Crane System as described within ***Attachment 1, Gantry and Kettle Handling,*** of this plan. The remaining kettles will be removed utilizing a combination of the existing overhead crane system and or a thumbed excavator for processing. This removal and processing will take place during the initial decontamination and deconstruction of the Smelter Building within the FEU. Once the subject kettle has been removed, AIS will cover the "hole in the floor" by placing galvanized 20-gauge chain link fencing over the hole. The chain link netting will be affixed to a 1 ½-inch schedule 40 metal pipe which will be anchored into the concrete deck and temporary fencing will be placed around each opening and secured to the existing slab

AIS will conduct the decontamination pressure washing from top to bottom, controlled removal of siding (deskinning) and rinseate collection and on-site processing. During these activities, the Blast Furnace Crucible and the Reverb Furnace including burners and feed screws will be decontaminated and then removed for re-use at an Exide facility.

Smelter Building Furnace Stack

The existing Reverb and Blast furnace stacks and supporting system components will require extensive decontamination. In the he furnace stacks all interior brick lining, as well as the existing slag buildup on the furnace walls, will be removed during the decontamination process. Based upon conversations with Site personnel, and limited interior inspection, it appears that the existing liner bricks and buildup extend to just below the roof line.

Prior to the interior decontamination, AIS personnel will perform gross removal and HEPA vacuuming all of the exterior debris located around the furnace area. Once completed, personnel will then proceed to the furnace and supporting equipment cleaning activities. Brick removal will be done by handheld rivet busters, spade tip hammers, etc.. During the

removal process, technicians will utilize a misting system placed within the stack above all areas they are working to maintain a fog or mist of water at all times, effectively suppressing dust. All removed debris, interior buildup, brick and rinseate will be collected and properly containerized for reuse, eventual offsite disposal or on-site treatment at a Dewatering Container and the WWTP.

9.8.2.2 Deconstruction

As outlined in the General Deconstruction Protocols, AIS will conduct deconstruction from the roof down in reverse sequential order of typical construction. AIS will completely remove cross members between specific trusses scheduled for removal during that individual shift. The intent will be to only remove the cross members from within each bay that is scheduled for deconstruction for that particular day. During the removal process, AIS will continue to vacuum any residual dust from bolted points of connection during disassembly. AIS will also utilize wet methods including wiping down and spraying water. This water will be sprayed from hand held power washing wands with specialty tips that will allow for atomizing the water with high pressure and low volume which will mitigate any visible dust and minimize water runoff on the working surfaces below.

AIS will continue the removal method described above until the entire roof framing system including trusses, cross members and framing have been removed and only wall framing (building skeleton) remains. AIS will then proceed with all wall framing removals in a bay by bay fashion.

9.9 Waste Water Treat Plant - WWTP

9.9.1 Description

The Wastewater Treatment Plant will be one of the final areas to be decontaminated so that storm water and decontamination water generated during Phase 1 can be processed on-site. The existing Wastewater Treatment Plant (WWTP) is currently operating, and will continue to operate during Phase 1. Normal WWTP maintenance and repair activities will continue to be conducted by Exide during closure activities. The permit for discharge of treated effluent to the LA County Sanitation District will be maintained.

The WWTP has primary storage container and a secondary containment area with concrete floor and walls. Units 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 71, 72, 73, 74, 75, 76 and 77 are located within the secondary containment area at the WWTP.

Item Summary

Decontamination shall be complete when the performance criteria indicated in Attachment 12, Table 3.2 are met which may require analytical sampling.		
Unit	**Description**	**Contractor Scope of Work**
52	Equalization Tank #1	Process liquid through WWTP. Triple rinse interior, single rinse exterior and recycle tank (stainless steel).
53	Equalization Tank #2	Process liquid through WWTP Triple rinse interior, single rinse exterior and recycle tank (stainless steel).
54	Sludge Holding Tank – Polyethylene 34 CY sludge	Remove sludge by hand and properly dispose of offsite. Triple rinse tank interior, single rinse exterior and process waste water. Pull tank and ship to landfill.
55	Flocculation Tank	Process remaining liquid through WWTP. Triple rinse interior and single rinse exterior. Process wash water and remove/transport tank to Exide facility for reuse
56	WWTP Clarifier	Process liquid through temp WWTP. Triple rinse interior, single rinse exterior and decontaminate tank. Load tank and recycle offsite (stainless).
57	Reaction Tank #1 (Polyethylene)	Process liquid through temp WWTP. Triple rinse interior, single rinse exterior and decontaminate tank. Load tank and properly dispose of plastic.
58	Reaction Tank #2 (Polyethylene)	Process liquid through temp WWTP. Triple rinse interior, single rinse exterior and decontaminate tank. Load tank and properly dispose of plastic.
59	Reaction Tank #3 (Polyethylene)	Process liquid through temp WWTP. Triple rinse interior, single rinse exterior and decontaminate tank. Load tank and properly dispose of plastic.
60	Reaction Tank #4 (Polyethylene)	Process liquid through temp WWTP. Triple rinse interior, single rinse exterior and decontaminate tank. Load tank and properly dispose of plastic.
61	Reaction Tank #5 (Polyethylene)	Process liquid through temp WWTP. Triple rinse interior, single rinse exterior and decontaminate tank. Load tank and properly dispose of plastic.
62	WWTP Sump	Process liquid through temp WWTP. HEPA vacuum and decontaminate tank. Remove stainless steel liner.
63	WWTP Acid Storage Tank (Polyethylene)	Process liquid through WWTP and triple rinse tank/single rinse exterior, load and properly dispose of offsite.
71	#1 Sand Filter (closed top)	Remove media from tank by hand, sample and dispose or recycle properly off-Site. Triple rinse interior, single rinse exterior and remove. Transportation for and recycle off-site.

72	#2 Sand Filter (closed top)	Remove media from tank by hand, sample and dispose or recycle properly off-Site. Triple rinse interior, single rinse exterior and remove. Transportation for and recycle off-site.
73	#3 Sand Filter (closed top)	Remove media from tank by hand, sample and dispose or recycle properly off-Site. Triple rinse interior, single rinse exterior and remove. Transportation for and recycle off-site.
74	#4 Sand Filter (closed top)	Remove media from tank by hand, sample and dispose or recycle properly off-Site. Triple rinse interior, single rinse exterior and remove. Transportation for and recycle off-site.
75	#5 Sand Filter (closed top)	Remove media from tank by hand, sample and dispose or recycle properly off-Site. Triple rinse interior, single rinse exterior and remove. Transportation for and recycle off-site.
76	WWTP Recycled Acid Tank (Poly) (none)	Process any liquid through WWTP. Triple rinse interior, single rinse exterior and remove/load tank. Sample for appropriate waste disposal at applicable facility.
77	Sand Filter Feed Tank	Process liquid through WWTP. Triple rinse exterior, single rinse interior. Remove and load tank to landfill.
N/A	WWTP	Decontaminate, gut and deconstruct.

9.9.2 Means, Methods and Sequencing

9.9.2.1 Decontamination Methodology for Waste Water Treatment Plant (WWTP)

As previously noted, a PEU will be constructed for the WWTP.

Unit/Equipment Decontamination and Removal

Once a PEU is constructed around the WWTP, AIS will initiate equipment decontamination for those items to be salvaged and sent off to other Exide facilities. Unit 55 will be accessed and the interior and exterior cleaned per AST cleaning protocols. The removal of this tank will then be scheduled after which it will be loaded onto a transport vehicle destined for Exide's Missouri facility. This is the only WWTP tank scheduled for re-use.

AST Decontamination

The AST decontamination activities begin at the east side of the WWTP and proceed in a counter clockwise rotation. Exterior and interior decontamination will follow the AIS general decontamination procedures. The sand-filter tanks will be accessed for removal of the filter media present within each unit. The filter media will be removed by hand or the tanks will be cold-cut to allow for easier accessing by personnel. All lead infused filter

media will be placed in 55-gallon drums for transportation to Exide's Muncie Indiana facility. Tank 54 is constructed of polyethylene and contains sludge. AIS will utilize a reverberating saw to cut the tank above the sludge line to allow for better access for personnel and equipment to remove the contained material.

AIS will assess the "consistency" of solids within once the subject tank is opened. If solidification is required, three potential scenarios would apply: 1) the subject sludge is removed via AIS provided guzzler unit and placed into a Dewatering Container where any water will be decanted from the surface or vacuumed from the ancillary collection space beneath the floor of the bin. Once removed, the sludge will be a allowed to dry over several days; 2) a general absorbent, such as Ensorb Super absorbent would be placed into the sludge to help solidify the sludge (manually or slowly mixed by a mini-excavator); or 3) depending on the waste classification, other like dry or semi-dry waste may in incorporated into the Dewatering Container as referenced above. As with all solidification, prior to transportation, AIS will perform a paint filter test, and if/when the waste passes this test and is DOT compliant, the roll-off bin will be scheduled for offsite disposal. AIS does not plan on using any chemical reagents for solidification activities. Absorbent will be stored at the AIS project supply storage area and used as needed. AIS will include the SDS for the subject absorbent which will also be included in the SDS library for the site.

The remainder of the tanks will be cleaned following the previously described general decontamination protocols. These will also include conveyance piping, sumps and the entire WWTP containment area. Rinseate generated from the decontamination activities will be removed via vacuum truck and processed through the Dewatering Container and Temporary WWTP. As with all work on-site, AIS personnel will implement all necessary health and safety protocols.

9.9.2.2 Deconstruction Methodology

With the intent to decontaminate and dispose of all WWTP components except for Unit 55 – Floc Tank, AIS will coordinate the deconstruction of the WWTP facility. This will include sizing of all ASTs within the WWTP area. ASTs will = sized depending on tank composition; some will be "flattened" and then folded for eventual loading and destruction. Any support piping and racks will be properly sized via "shearing" technique. Once sectionalized into manageable pieces, AIS will coordinate loading of the debris for offsite metal recycling or disposal. Poly tanks will be cut into manageable pieces, via handsaw for characterization and recycling or disposal.

Once the WWTP has been decontaminated and fully deconstructed, the secondary containment wall will be removed via wet wall-saw technique. This technique will allow for the cutting of the wall along the concrete slab without generating dust. Removal of this secondary containment wall will keep future water retention and/or particulate

retention from occurring and reduce long term maintenance for general airborne dust/solids removal.

9.10 Reverb Feed Room, Lower/Upper and Corridor

9.10.1 Description

Reverb Furnace Feed Room (Unit 33)
A former IS containment building used for storage of reverb furnace feed. Unit 33 is empty. Unit 33 has a reinforced concrete floor and double-lined containment system with leak detection, metal roof, and concrete and metals walls. Soil sampling was performed prior to closure.

The Corridor portion (north-south and west-east sections) of Unit 33 will remain in use as a decontamination area during closure. Negative pressure for the Corridor will be maintained by re-ducting a portion of the capacity of the existing Torit and/or Material Storage Baghouses or using temporary emission control equipment. The Lower Feed Room and then the Corridor portions of the Reverb Feed Room will be deconstructed to grade.

The Truck Wash Sump (Unit 51)
A former IS tank (concrete sump) used to collect wash water within the Reverb Furnace Feed Room (Unit 33). Unit 51 contents will be removed prior to closure.

Item Summary

Decontamination shall be complete when the performance criteria indicated in Attachment 12, Table 3.2 are met which may require analytical sampling.		
Unit	**Description**	**Contractor Scope of Work**
33	Reverb Furnace Feed Room / Lower / Upper and Corridor	HEPA vacuum and pressure wash floor walls and roof. Process water. Mill concrete utilizing blasting or Hydro-Milling on floor and demo building and roof.
51	Truck Wash Sump (incl in Unit 33)	Remove any equipment. HEPA vacuum and pressure wash tank.
N/A	RMPS Building/ Upper Feed Room	Decontaminate, gut and deconstruct building.

9.10.2 Means, Methods and Sequencing

9.10.2.1 Decontamination Methodology

Since the Reverb Furnace Feed Room (RFFR) will be contained within an FEU, AIS will initiate the interior decontamination as discussed in the General Decontamination Protocols.

Other extraneous items to be decontaminated include front-end loading equipment currently parked within the Reverb work area. AIS will drain all operational fluids from the units, remove the batteries, decontaminate and dismember the loaders for metal recycling.

In addition to the "structure" pressure washing activities, AIS will decontaminate air ducting and hood assemblies. Decontamination of these air moving components will be implemented as mechanical systems are altered and taken offline to allow for deconstruction activities, that way these elements will not have to be re-decontaminated during the removal process.

The final phase of decontamination will be the pressure washing of the concrete slab, concrete supporting vertical columns, and collection sump(s). All generated rinseate will be accumulated within the structure and removed via vacuum truck for discharge to a Dewatering Container and the onsite WWTP system. AIS has assumed ½" concrete floor hydro-milling or blasting within the entire affected Upper, Lower and Corridor portions of the Reverb Furnace Feed Room.

9.10.2.2 Deconstruction Methodology

As outlined in the General Deconstruction Protocols, AIS will begin deconstruction from the roof down, reversing the order of typical construction. AIS will remove cross members between specific trusses scheduled for removal during that individual shift. The intent will be to only remove the cross members from within each bay that is scheduled for deconstruction for that particular day. During the removal process, AIS will continue to vacuum any residual dust from bolted points of connection during disassembly. AIS will also utilize wet methods including wiping down and spraying water. This water will be sprayed from hand held power washing wands with specialty tips that will allow for atomizing the water with high pressure and low volume which will mitigate any visible dust and minimize water runoff on the working surfaces below.

AIS will continue the removal method described above until the entire roof framing system including trusses, cross members and framing have been removed and only wall framing (building skeleton) remains. AIS will then proceed with all wall framing removals in a bay by bay fashion.

9.11 Baghouses

9.11.1 Means, Methods and Sequencing

9.11.1.1Decontamination Methodology

As previously presented, the Baghouses will be within an FEU and AIS will initiate decontamination operations utilizing the AIS General Decontamination Protocols. Decontamination of these air moving components will be implemented during the latter phases of the work as these mechanical systems are altered and taken off-line to allow for deconstruction activities. Decontamination of the ducting will take place at elevated heights, thus motorized lifts will be utilized throughout the decontamination process. The ducting will be assessed for gross particulate matter and at this time the proper washing techniques and spray nozzle application methods will be determined.

Exide personnel will maintain and remove the baghouses filtration components during the project and for continued filtering during closure operations. Once ready for decommissioning, AIS will provide for the confined space permitted decontamination of the Baghouse units and primary ducting (at ground level or subsurface). Confined space operations will be governed by the AIS site specific HASP for personnel, equipment, and respiratory support. Removal of baghouse filters will be coordinated. Once removed, filters will be properly containerized (i.e. 10-mil poly bags) for analytical testing and waste characterization. Dust control misting will be provided during the filter removal operations.

After the filters are removed from within the baghouse unit, AIS personnel will proceed to dry-decontaminate or HEPA vacuum the interior of the unit of all horizontal and vertical surfaces. Wet decontamination is not planned for those components that are slated for re-use at other Exide facilities. Remaining portions of the baghouse will be pressure washed. Once the each baghouse unit is cleaned, the scrap metal will be recycled or properly disposed of offsite. Larger openings that were associated with intake and exhaust ducting will also be sealed as part of this effort.

As described in the AIS General Approach for the Decontamination, for the baghouse stack systems, AIS will utilize existing hatches, prior openings and manways to access the interior of the stack when possible for the decontamination of the stacks within the structure below the roof line. AIS will cut and/or grind along the existing welds of the panels and utilize these areas for cleaning access. AIS will inspect the interior of the stacks for residual materials and determine the methods and extent of cleaning required. Once inspections have been performed and cleaning levels determined, AIS will begin the cleaning process from the top down and will utilize a dry HEPA-vacuum and/or a high pressure low volume power wash to remove all residual dust from within the stack. Water will be collected at the base of stack and vacuumed by a mini guzzler and directed to the WWTP for processing.

9.11.1.2 Deconstruction

The initial stack cut will be below the roof line. This will facilitate the upper portion of the stack to be lowered in one piece within the FEU down into the building by crane allowing for the completion of decontamination. Refer to Section 3.2.2 Deconstruction of Facility Stack Systems for stack removal details within this plan.

9.12 Finished Lead Building Decontamination

9.12.1 Means, Methods and Sequencing

9.12.1.1Decontamination Methodology

AIS conduct the interior decontamination of the Finished Lead building as previously outlined in the General Decontamination Procedures for Roofs and Walls. Since this structure is to remain on-site and not be deconstructed, AIS will pressure wash the interior of the structure starting beneath the ceiling roof panels and roof truss support structure, down the walls, and completing the work by pressure washing the floor. AIS will apply 3,000 psi decontamination wash to these areas if needed. Prior to decontamination, AIS will utilize articulating man-lifts to shroud the HID lamps in this structure to keep them from being exposed to water during the washing activities. Decontamination water will be directed and squeegeed to accumulation points on the floor for vacuuming and placement in drums, totes, or vacuum truck, eventually to be transported to a Dewatering Container and the WWTP.

Final Closure Plan Performance Standards will be developed for non-interim status structures using health risk based or indoor air sampling criteria in consultation with the DTSC.

9.13 Torit Dust Collector

9.13.1 Means, Methods and Sequencing

9.13.1.1 Decontamination

AIS will decontaminate the Torit Dust Collector Unit and Stacks utilizing the General Decontamination Protocols. A temporary enclosure unit will be erected and maintained during this work. Decontamination of these air moving components will be implemented during the latter phases of the work as they are taken offline to allow for deconstruction activities. Decontamination of the ducting will take place at elevated heights, thus motorized lifts will be utilized throughout the decontamination process. The ducting will be assessed for gross particulate matter and the proper washing techniques and spray nozzle application methods will be determined in advance.

Exide personnel will maintain and remove the baghouses filtration components during the project and for continued normal operations until the unit is no longer needed. Once ready for decommissioning, AIS will provide for the confined space permitted decontamination of the Baghouse units and primary ducting (at ground level or subsurface). Confined space operations will be governed by the AIS site specific HASP for personnel, equipment, and respiratory support. Removal of baghouse filters will be coordinated. Once removed, filters will be properly containerized (i.e. 10-mil poly bags) for analytical testing and waste characterization. Dust control misting will be provided during the filter removal operations.

After the filters are removed from within the baghouse unit, AIS personnel will proceed to dry-decontaminate or HEPA vacuum the interior of the unit of all horizontal and vertical surfaces. Wet decontamination is not planned for those components that are slated for re-use at other Exide facilities. Remaining portions of the baghouse will be pressure washed. Once the each baghouse unit is cleaned, the scrap metal will be recycled or properly disposed of offsite. Larger openings that were associated with intake and exhaust ducting will also be sealed as part of this effort.

9.14 Non-Regulated Building Structures

As specified in the Closure Plan, the non-Regulated building structures located throughout the facility will be addressed for exterior roof decontamination only. AIS has included the construction of a PEU which will be established primarily at building structures that require excessive LBP abatement and general dust/particulate and trash removal and pressure washing activities.

Once the PEU is in place and electrical systems off-line, AIS will then initiate the pressure washing of the building's exterior roof. AIS will capture rinse waters at designated low points and place within vacuum trucks for transfer to a Dewatering Container and the WWTP for treatment and disposal. Boom and articulating man lift equipment will be used to facilitate the cleaning of the exterior surface areas to minimize health and safety concerns with personnel using or standing on the roof for access.

9.15 Unit 103 Trailer Staging Area

9.15.1 Description

Trailer Staging Area (Unit 103)
A former IS container storage area was used for storage of trailers containing dry plastic chips. Unit 103 is empty and has asphalt paving.

Item Summary

Decontamination shall be complete when the performance criteria indicated in Attachment 12, Table 3.2 are met which may require analytical sampling.		
Unit	**Description**	**Contractor Scope of Work**
	Trailer Staging Area	HEPA vacuum and pressure wash floors. Process floor water through WWTP to POTW. Clean all equipment.

9.15.2 Means, Methods and Sequencing – Decontamination Methodology

The former Trailer Staging Area is now part of the facilities asphalt access/parking lot area. This area will be encapsulated by a PEU, as described in Section 8.3.1. AIS will HEPA vacuum any gross solids from within the former staging area. Any removed solids will be consolidated with other vacuum debris and properly characterized. Once completed, AIS will proceed with the pressure washing of the asphalt surface with a 3,000 psi pressure washer to remove any residue solids not removed during dry vacuuming. Rinseate water will be squeegeed to area collection locations for eventual processing at the WWTP.

9.16 Non-Regulated Area Decontamination, including Former WWTP/Concrete Yard System, Sumps

9.16.1 Description

The Concrete Yard System is the location of the former WWTP. Units 15, 16, 17, 18, 19, 20, 21, 38 and 39 underwent preliminary closure and were located within the Concrete Yard System. These were previously decontaminated and demolished; closure will be addressed in accordance with the approved Closure Plan.

50K Tank (Unit 15)
Previously decontaminated and demolished. Closure of Unit 15 will be completed as part of existing ground surface decontamination for the Concrete Yard System.

West Reaction Tank (Unit 16)
Previously decontaminated and demolished. Closure of Unit 16 will be completed as part of existing ground surface decontamination for the Concrete Yard System.

East Reaction Tank (Unit 17)
Previously decontaminated and demolished. Closure of Unit 17 will be completed as part of existing ground surface decontamination for the Concrete Yard System.

Pump Tank (Unit 18)

Previously decontaminated and demolished. Closure of Unit 18 will be completed as part of existing ground surface decontamination for the Concrete Yard System.

Sludge Tank (Unit 19)
Previously decontaminated and demolished. Closure of Unit 19 will be completed as part of existing ground surface decontamination for the Concrete Yard System.

Delta Stack Clarifier (Unit 20)
Previously decontaminated and demolished. Closure of Unit 20 will be completed as part of existing ground surface decontamination for the Concrete Yard System.

WWTP Area Sump (Unit 38)
Previously decontaminated and demolished. Closure of Unit 38 will be completed as part of existing ground surface decontamination for the Concrete Yard System.

WWTP Filter Press Sump (Unit 39)
Previously decontaminated and demolished. Closure of Unit 39 will be completed as part of existing ground surface decontamination for the Concrete Yard System.

Unregulated Area Decontamination
Site-wide unregulated areas which were not decontaminated during the aforementioned activities will be decontaminated.

Water Softener Building Sump
An ancillary sump used for management of wash down water. Water Softener Building Sump is a concrete sump.

Caustic Tank Sump
An ancillary sump used for management of wash down water. Caustic Tank Sump is a concrete sump with stainless steel liner.

Ancillary sump Railroad Sump
Ancillary to former IS units and used for management of storm water. Railroad Sump is a concrete sump.

Item Summary

Decontamination shall be complete when the performance criteria indicated in Attachment 12, Table 3.2 are met which may require analytical sampling.

Unit	Description	Contractor Scope of Work
15	50k Tank (tank previously demolished; just floors)	HEPA vacuum and pressure wash floors

16	West Reaction Tank (tank previously demolished; just floors)	HEPA vacuum and pressure wash floors
17	East Reaction Tank (tank previously demolished; just floors)	HEPA vacuum and pressure wash floors
18	Pump Tank (tank previously demolished; just floors)	HEPA vacuum and pressure wash floors
19	Sludge Tank (tank previously demolished; just floors)	HEPA vacuum and pressure wash floors
20	Delta Stack Flocculation (previously demolished; just floors)	HEPA vacuum and pressure wash floors
21	Delta Stack Clarifier (tank previously demolished; just floors)	HEPA vacuum and pressure wash floors
38	WWTP Area Sump (previously removed)	HEPA vacuum and pressure wash area
39	WWTP Filter Press Sump (previously removed)	HEPA vacuum and pressure wash area
N/A	Water Softener Building Sump	Decontaminating the sump concurrent with unregulated area decontamination
N/A	Caustic Tank Sump	Removal of stainless steel liner, and decontaminating the sump concurrent with unregulated area decontamination
N/A	Railroad Sump	Removing accumulated liquid, decontaminating the sump concurrent with unregulated area decontamination

9.16.2 Means, Methods and Sequencing – Decontamination Methodology in Former WWTP

In addition to the Non-Regulated building roofs requiring decontamination, various Former WWTP and system sumps and floors will have any residuals removal via HEPA vacuuming and/or pressure washing; rendering these locations decontaminated in accordance with the Closure Plan requirements. As discussed in previous sections, each area will be accessed for gross particulate removal and cleaning. Inspections of each of the areas detailed in the above table will be completed. Dry removal will be conducted with a HEPA vacuum and the removed solids will be containerized in 6-mil poly bags or 55-gallon open top drums. Once the area of concern has been vacuumed of any dry matter, AIS will then proceed with the high pressure washing of the surface in question. For contained areas such as tanks, sumps, or vaults, the interior of the subject unit will be

washed starting at the top of the unit, working down the walls and completing the work by cleaning the floor. Flat surfaces at grade will be cleaned within a PEU and the generated rinseate will be vacuumed via vacuum truck supporting the cleaning operation. All generated rinseate will be accumulated and/or directed to a common collection point for eventual discharge and processing at a Dewatering Container and the WWTP.

9.17 Storm Water System

9.17.1 Description

DTSC has indicated that the storm water system is ancillary to Unit 46. The storm water system will be cleaned prior to final closure of the Drop Out System.

9.17.2 Means, Methods and Sequencing - Decontamination Methodology

The current storm water collection system is currently fully functioning and operational. The system will be decontaminated prior to AIS exiting the project upon completion of the deconstruction activities. Decontamination of the collection system will involve the Closed Circuit Television (CCTV) evaluation of the system, jetting of the underground conveyance piping and pressure washing of containment sumps and manholes.

AIS will conduct a CCTV color video of the belowground system. The CCTV video device will be inserted at access points at sump and manhole locations. The video device will generate a high definition account of the interior of the piping, documenting grade changes and conditions. The recording devices with also give lineal footage from point A to point B such that if an area needs to be evaluated in the future, the surface concrete can be measured and marked for exact relocation for future repairs, if needed.

Where the CCTV shows areas of excessive solids buildup and if accessible, AIS will remove excessive solids via a Guzzler vacuum truck prior to jetting the underground lines. Any removed solids will be discharge into a Dewatering Container for decanting and/or consolidation with other like material. AIS will perform analytical testing on the sediment to properly characterize the material for offsite disposal.

Jetting of the underground piping will be conducted in the same manner as cleaning the process piping throughout the facility. AIS will insert the high-pressure jetting nozzle into the underground piping and will push the cleaning nozzle from access point to access point. The generated rinseate and any removed sediment will be removed from inline sumps and/or manhole locations. All removed water will be taken for processing at the WWTP.

9.18 Drop Out System

9.18.1 Description

The Drop out System is a secondary containment area with concrete floor and walls within the Central Container Storage Building (Unit 1). Units 46, 47, 48, 49 and 50 are located within the secondary containment area at the Drop out System.

Pump Sump (Unit 46)
Former IS tank used for storage of storm water and wash down water. Unit 46 is a double-walled stainless steel sump located in the secondary containment area at the Drop out System. Unit 46 will continue to remain operational for management of storm water runoff. The Unit 46 stainless steel liner will not be removed until Phase 2 Closure. Unit 46 will continue to operate after closure to continue management of storm water after Phase 1.

Settling Tank No. 1 (Unit 47)
Former IS tank used for storage of storm water and wash down water. Unit 47 is a polyethylene, open top tank located in the secondary containment area at the Drop out System.

Settling Tank No. 2 (Unit 48)
Former IS tank used for storage of storm water and wash down water. Unit 48 is a polyethylene, open top tank located in the secondary containment area at the Drop out System.

Settling Tank No. 3 (Unit 49)
Former IS tank used for storage of storm water and wash down water. Unit 49 is a polyethylene, open top tank located in the secondary containment area at the Drop out System

Settling Tank No. 4 (Unit 50)
Former IS tank used for storage of storm water and wash down water. Unit 50 is a polyethylene, open top tank located in the secondary containment area at the Drop out System.

The Drop out System area will be closed by decontaminating the secondary containment area floor and walls and deconstructing concrete walls.

Item Summary

Decontamination shall be complete when the performance criteria indicated in Attachment 12, Table 3.2 are met which may require analytical sampling.		
Unit	**Description**	**Contractor Scope of Work**
46	Pump Sump – Stainless Steel	Remove any solid contents concurrent with Drop Out System floor decontamination. Triple rinse interior. Leave in place
47	Settling Tank #1 - polyethylene	Decontaminate and pressure wash tank. Triple rinse interior, single rinse exterior. Process waste water through WWTP. Remove, load for offsite disposal.
48	Settling Tank #2 polyethylene	Decontaminate and pressure wash tank. Triple rinse interior, single rinse exterior. Process waste water through WWTP. Remove, load for offsite disposal.
49	Settling Tank #3 polyethylene	Decontaminate and pressure wash tank. Triple rinse interior, single rinse exterior. Process waste water through WWTP. Remove, load for disposal
50	Settling Tank #4 polyethylene	Decontaminate and pressure wash tank. Triple rinse interior, single rinse exterior. Process waste water through WWTP. Remove, load for disposal

9.18.2 Means, Methods and Sequencing - Decontamination Methodology

Secondary containment for the Drop out System will consist of a PEU as described in Section 8.3.1. Within the PEU, AIS will initiate the AST exterior and interior decontamination as previously outlined in the General Tank Cleaning Protocols. With the intent to decontaminate and remove the ASTs for destruction/disposal, AIS will first access the interior of the Settling Tanks to evaluate them for any residual sediments. If found to be present, AIS will initiate the exterior cleaning of the ASTs as well as drill pilot holes into the 6-inch header pipe to facilitate rinsing of the pipe interior back to the ASTs. Once completed, AIS will begin to pressure wash the ASTs interiors from the top down to the residual level in the tank if present. Note: if there exists several feet of sediment in the tanks above the side manway access lids, AIS will pressure wash the tank interiors down to that level; and once achieved, will initiate the cutting of the top of the tanks and continue to cut the tanks with a reverberating saw to 1-foot above the sediment line. This will allow removal of the sediment to be conducted in a safer environment where confined space entry will not be required. With the sediment accessible via man-way or open space, AIS will remove the media via an AIS guzzler unit. The removed sediment will be discharged into sealed roll-off bins for analytical testing and eventual offsite disposal. Any water removed or decanted from this operation will be processed through a Dewatering Container and the WWTP. Decontamination activities will also include supporting pumps, hoses, and piping. Once the ASTs and metal support rings have been removed, AIS will pressure wash the secondary containment and direct the water to the

collection sump where the rinseate will be removed, the sump pressure washed, and the resulting rinseate also processed through a Dewatering Container and the WWTP.

Since these ASTs will be destroyed and based on sediment and/or access constraints, AIS will consolidate the ASTs and PVC piping by using reverberating cutting equipment to cut the ASTs into manageable pieces that can be easy handled and disposed. A Certificate of Destruction will be issued noting generator, tank size and composition, piping and destruction date.

Non-salvageable metal items will be removed in the same manner outlined above and staged/placed into scrap bins with other metal debris for offsite recycling.

9.19 Surface Impoundment

9.19.1 Description

Storm water Surface Impoundment (Unit 78)
A lined surface impoundment with three sumps. The surface impoundment is constructed with a double-liner and leak detection system. The liner system is made up of (from top to bottom) a 60-mil HDPE geomembrane over-liner, a 110-mil geotextile fabric, a 40-mil HDPE geomembrane under-liner, and a 110-mil geotextile fabric.

Item Summary

Decontamination shall be complete when the performance criteria indicated in Attachment 12, Table 3.2 are met which may require analytical sampling.		
Unit	**Description**	**Contractor Scope of Work**
78	Storm water Surface Impoundment	Process leachate through WWTP.. Replace 4" sub pump. Remove sediment from impound by hand. Dispose of sediment and process wash water through WWTP. Decontaminate geo-synthetic liner. Repair geo-synthetics as needed.

9.19.2 Means, Methods and Sequencing - Decontamination Methodology

As stated in the Closure Plan, AIS will erect a mobile enclosure consisting of a portable enclosure unit for cleaning the Impoundment in sections. The PEU will consist of temporary scaffolding erected along the sides of the impoundment as well as strategic points within the impoundment basin to allow for spanning of the basin with poly-sheathing. Air movement calculations will be completed to ensure the proper amount of Neg-Air machine(s) are established for the planned scope of work. Neg-Air machines will be setup at specific location(s) around the work area or in one general location based on need. Once erected and operational, AIS will initiate surface cleaning of the liner to remove gross particulate matter and sediment.

Once the decontamination activities are completed, AIS will initiate the surface cleaning of the liner utilizing a 3,000 psi pressure washer starting from the top of slope and working down slope to the bottom of the basin. Pressure washing wands will be a minimum of 10' in length to reduce the amount of tracking across the basin slope. Personnel will traverse the basin in a parallel fashion from corner to corner. Generated rinseate will be squeegeed and/or gravity fed to the primary collection sump on the east end of the impoundment. As the sumps fills, AIS will remove the rinseate water via vacuum truck for eventual processing through a Dewatering Container and the WWTP.

AIS will take the necessary health and safety precautions for personnel working on the side slopes of the impoundment basin. Technicians will be outfitted with rubber boots with gripper style soles that will reduce the potential for slips on the wet HDPE liner. AIS may also employ tying off personnel via retractable lanyard to further assist the technicians working on the basin slopes. As previously discussed, tracking across the basin slopes and based on the time of year, the HDPE liner may be dry in the time the technicians return for another pass. This too will help reduce the potential of slips during the decontamination activities.

9.20 Unit 87 West Yard Truck Wash

9.20.1 Description

West Yard Truck Wash (Unit 87)
A former IS tank used for collection of wash water. Unit 87 is a concrete sump.

Item Summary

Decontamination shall be complete when the performance criteria indicated in Attachment 12, Table 3.2 are met which may require analytical sampling.		
Unit	**Description**	**Contractor Scope of Work**
87	West Yard Truck Wash	Process water through WWTP to POTW, Decontaminate surface. HEPA vacuum and pressure wash surfaces.

9.20.2 Means, Methods and Sequencing - Decontamination Methodology

AIS will construct a PEU to be utilized for the decontamination of the West Yard Truck wash. Once in place, AIS will decontaminate the exterior and interior of the Truck Wash canopy. Once completed, AIS will deconstruct the canopy and then facilitate the decontamination of the underlying collection sump. Portions of the steel grating will be removed to allow for access. AIS will first vacuum out any accumulated water to access the amount of sediment retained in the sump. If there is excessive sediment, AIS will utilize the in-house guzzler/vacuum truck for saturated sediment removal. This operation

will be completed under AIS's Confined Space Entry permit protocols. With permit in place, AIS personnel and equipment will enter the sump to commence the removal of the accumulated sediment. Sediment will be taken and discharged into a sealable roll-off bin for analytical testing. Once the bulk sediment is removed, personnel will proceed to pressure wash the walls and floor of the sump. All generated rinseate will be removed via vacuum truck and processed through a Dewatering Container and the WWTP. Once the sump has been decontaminated, the steel grates will be replaced and PEU disassembled.

9.21 North Yard – Temporary Fence

AIS will install up to 1,600 lineal feet of chain-link fence for installation in the North Yard to limit access to sumps and low areas (3-inch diameter); installation of new 2-inch diameter 9' long galvanized fence posts set in concrete; installation of new galvanized chain link fence netting; and, installation of tension wire across the bottom and top of the fence netting. AIS has included up to two 16' wide (2 x 8') swing gates for access in and out of the North Yard, if needed.

All concrete coring shall be performed within a negative air enclosure. In addition, AIS will provide continuous dust control during the wet-coring of the hardscape. AIS will also provide a HEPA-vacuum to vacuum up any cutting slurry. Hardscape cores will be placed along with the slurry into 55-gallon drum(s). Waste sampling and analysis will be performed.

Item Summary

Decontamination shall be complete when the performance criteria indicated in Attachment 12, Table 3.2 are met which may require analytical sampling.		
Unit	**Description**	**Contractor Scope of Work**
N/A	RMPS Building/ Upper Feed Room	Decontaminate, gut and deconstruct building to grade.

AIS will also install low-visibility wind screen on the temporary fencing. This barrier can provide a secondary wind barrier during high traffic periods and/or breezy conditions.. The wind screen will either be green or blue in color and secured to the fencing by grommets and wire.

10.0 Demobilization and Site Clean-up

Upon completion of the Phase I decontamination and deconstruction work activities, AIS will coordinate with DTSC and Exide representatives to perform a final walk through of the Project site and develop any punch list items that need to be completed prior to Project demobilization. This list will be documented so all parties can sign off when items have been completed to the satisfaction of Exide and DTSC Representatives. DTSC will have final approval authority.

During this time, AIS will begin to demobilize all personnel; documentation; materials; temporary facilities that were mobilized to the Project site including signs and barricades; and, light and heavy equipment. Any remaining areas that need to be further cordoned off for health and safety purposes will be also addressed at this time. AIS will be leave the site in good condition and free of any trash or debris.

11.0 Mitigation Monitoring Reporting Program

In connection with the Final Environmental Impact Report (FEIR) certified for the Closure Plan, DTSC approved a Mitigation Monitoring Reporting Program (MMRP) dated December 2016, which includes the mitigation measures and project conditions recommended in the FEIR. The Phase 1 closure activities will be performed in compliance with the mitigation measures and project conditions set forth in the MMRP.

The Contractor shall prepare annual diversion reports for all materials that are being recycled off-site and submit to the City of Vernon.Reports will be submitted June 1st of each year.