

**FINAL
AMENDED OFFSITE INTERIM REMEDIAL
MEASURES WORK PLAN (IRMW)**

Prepared by

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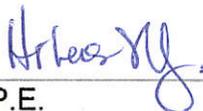


CERTIFICATION

FINAL AMENDED INTERIM REMEDIAL MEASURES WORK PLAN OFFSITE RESIDENTIAL AREAS ASSOCIATED WITH THE FORMER EXIDE BATTERY RECYCLING PLANT VERNON, CALIFORNIA

This Amended Interim Remedial Measures Work Plan (IRMW) was prepared by the California Environmental Protection Agency - Department of Toxic Substances Control (DTSC). This document and interpretations or conclusions presented herein are based upon data collected during Site visits, field sampling and monitoring, and information from published documents that are cited and listed in the references section. This report was prepared in accordance with currently accepted professional practices; no warranty, expressed or implied, is made.

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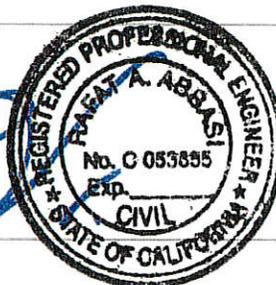
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ACRONYMS

AGC	Advanced GeoServices Corporation
<i>bgs</i>	<i>below ground surface</i>
BMP	best management practice
Cal-EPA	State of California Environmental Protection Agency
Cal/OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CDPH	California Department of Public Health
CEQA	California Environmental Quality Act
DTSC	Department of Toxic Substances Control
ENVIRON	ENVIRON International Corporation
Exide	Exide Technologies, Inc.
GSU	DTSC Geological Services Unit
HEPA	high efficiency particulate air
HERO	DTSC's Human and Ecological Risk Office
IC	Incident Commander
IRMW	Final Amended Offsite Interim Remedial Measures Work Plan
LOC	Letter of Completion
mg/kg	milligrams per kilogram
TERP	Transportation Emergency Response Plan
NPDES	National Pollution Discharge Elimination System
OEHHA	Office of Environmental Health Hazard Assessment
OSHA	United States Occupational Safety and Health Administration
Parsons	Parsons Corporation
ppm	parts per million
PIA	Preliminary Investigation Area
PSHEP	Project Safety, Health and Environmental Plan
PPP	Public Participation Plan
RCRA	Resource Conservation and Recovery Act
SCAQMD	South Coast Air Quality Management District
TSDF	treatment, storage, and disposal facility
TSP	total suspended particles
UCL	upper confidence limit
USA	Underground Services Alert
USEPA	United States Environmental Protection Agency
XRF	X-ray fluorescence
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter

1.0 Introduction and Background

DTSC has prepared this Amended Interim Remedial Measures Work Plan (IRMW) for the cleanup of lead-impacted soil at off-site sensitive land use properties i.e., residential properties, schools, parks, day care centers, and child care facilities within a 1.7-mile radius of the former Exide Facility, which is known as the Preliminary Investigation Area (PIA).

The former Exide facility is located at 2700 South Indiana Street in the City of Vernon, California (Figure 1). The property occupies approximately 15 acres and is bounded by South Indiana Street to the west, 26th Street to the north, Bandini Boulevard to the south, and industrial properties to the east. The facility is an industrial property formerly used for lead-acid battery recycling. Surrounding facilities are industrial.

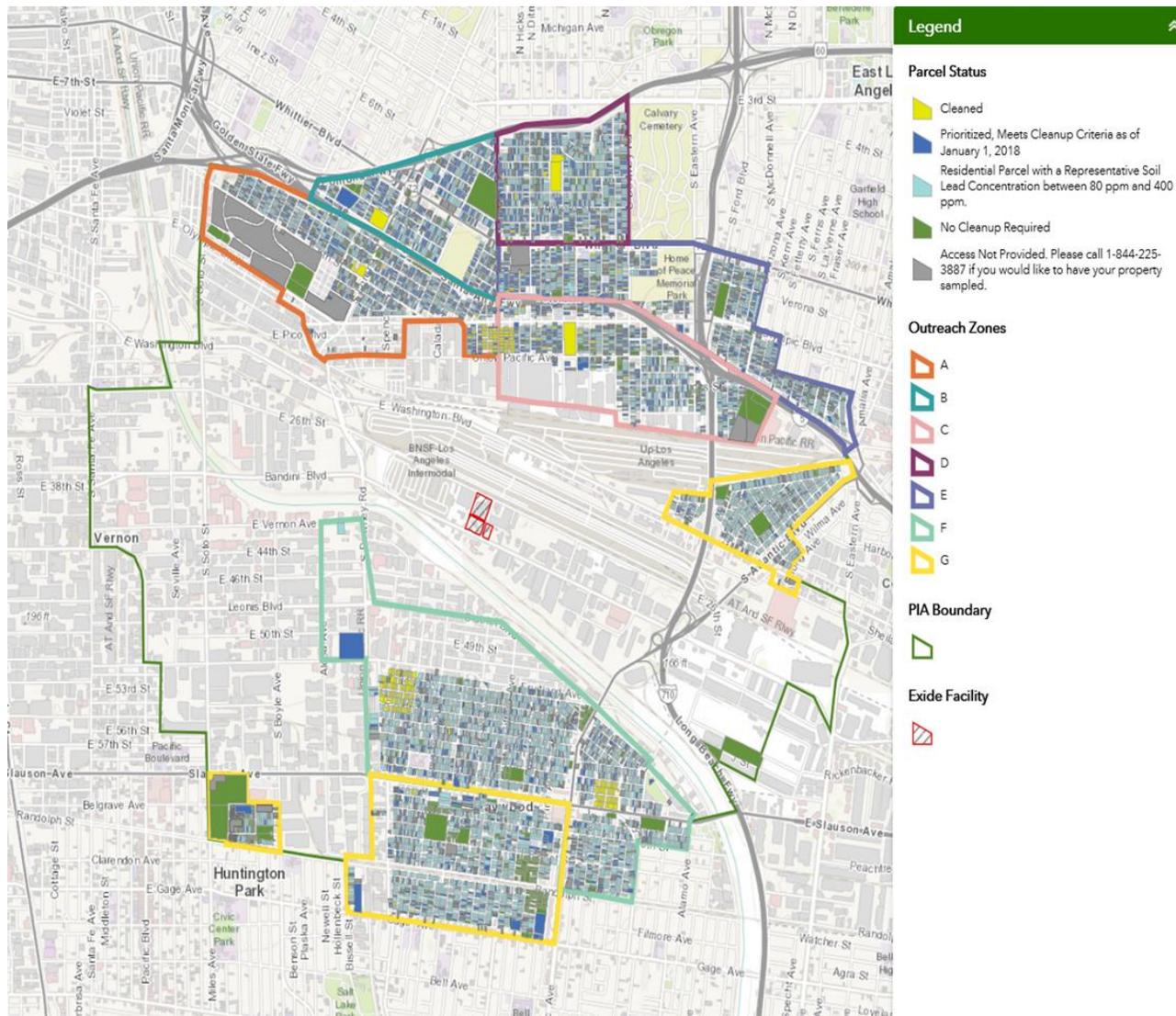


Figure 1

1.1 Purpose and Objective

The purpose of this IRMW is to provide guidelines for removing soil to meet the overall objective of protecting human health by reducing the soil lead concentration to below a representative soil lead concentration¹ of 80 mg/kg. This IRMW describes the soil excavation, soil management and disposal, and site restoration that will be performed at properties with a representative soil lead concentration greater than 80 ppm². To meet these objectives, the IRMW may be implemented now (under current conditions) or in the future. This IRMW sets forth the criteria under which DTSC will conduct further soil removal at sensitive land use properties within the PIA.

This IRMW is intended to apply to those properties with soil lead concentrations exceeding the cleanup level based on protection of human health. This IRMW will serve as a master work plan that can be customized as necessary with the following information for an individual property (or for a collective set of properties remediated concurrently):

- Soil characterization results and extent of contamination
- Permits
- Monitoring locations
- Truck entry and exit routes
- Special homeowners' requirements
- Equipment staging or laydown area
- Decontamination areas
- Other property-specific requirements necessary to implement the removal action

All of the above information will be addressed in a site-specific plan prepared for each property.

1.2 Background

In November 2015, Parsons Corporation (Parsons) developed a site-specific Offsite Interim Remedial Measures Workplan for the State of California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control (DTSC) for the purpose of implementing efforts to remove lead-impacted soil at 50 off-site residential and sensitive-use properties near the former Exide Technologies, Inc. (Exide) lead-acid battery recycling facility in Vernon, California. This Final Amended Offsite Interim Remedial Measures Work Plan (IRMW) revises and updates the November 2015 Offsite Interim Remedial Measures Work Plan to implement time critical removal actions (TCRAs) pursuant to the Carpenter-Presley-Tanner Hazardous Substance Account Act (HSAA) (Cal. Health & Saf. Code, § 25300 et seq.) and the Comprehensive

¹ A representative soil lead concentration is determined by the 95 percent upper confidence limit (UCL) of the mean lead concentration in soil.

² A representative soil lead concentration of 110 ppm is used for schools.

Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. § 9601 et seq.), for soil impacted by lead at additional off-site sensitive land use properties (i.e., residences, schools, parks, day care centers, and child care facilities) near the former Exide facility. The recommendations presented herein are to provide the removal action contractor with the approach for the successful implementation of removal activities within affected areas.

DTSC's evaluation of the sampling results collected to date suggests that the geographic distribution of soils that have been affected by releases from the former Exide facility extends approximately 1.3 to 1.7 miles radially from the facility into portions of the incorporated and/or unincorporated cities of Maywood, Boyle Heights, East Los Angeles, Commerce, Bell, and Huntington Park.

1.3 Previous Site Investigation Activities

The properties that will be remediated under this IRMW were investigated and characterized between 2014 and 2018. The investigations included the collection and analysis of soil samples at each of the properties in exposed areas with no hardscaping (e.g., concrete, asphalt, or structures). Soil samples were collected at approximately 15 locations per property in the zero (0) to three (3)-inch depth range. When using XRF, soil samples from the highest two locations were also scanned at three (3) to six (6), six (6) to 12 and 12 to 18 inches depths to determine lead concentrations in soil at various depths, and two soil samples from the sample locations with the highest results were sent for lead analysis at a certified laboratory for quality control. The laboratory sample results are used to verify the field XRF readings of lead in the surface soil. When laboratory-only sampling was conducted, two of the locations were also sampled at three (3) to six (6), six (6) to 12 and 12 to 18 inches depths. To determine the potential exposure concentrations, the representative soil lead concentration based on XRF readings or laboratory results was calculated for each property.

The sampling approach, findings, conclusions, and recommendations are presented in the property sampling reports. Soil samples collected during the course of the investigations were analyzed for lead using United States Environmental Protection Agency (USEPA) Method 6010. Results showed elevated soil lead concentrations at depths of up to 18 inches bgs. The exact depth of excavation is based on soil sampling results, which identify soils exceeding the representative soil lead concentration of 80 mg/kg, and therefore require response action.

The scope of this IRMW was developed based on these investigation results. A comprehensive list of the various investigations is included in the list of references.

1.4 Ongoing Investigation

DTSC will be overseeing additional investigation to identify additional properties within the PIA that have been impacted by emissions from the Exide Facility. As additional sampling results are received, DTSC will use the results to prioritize properties for

cleanup and will incorporate these properties into the property cleanup schedule. As of February 2018, 264 parcels in the PIA have been cleaned up under DTSC's Exide Cleanup Program, and 49 parcels in the PIA have been cleaned up under DTSC's Schools Program. Additionally, sampling at parks, private schools, and residential properties is ongoing.

1.5 Prioritization of Properties for Soil Removal

Soil sampling results will be used to identify sensitive land use properties that will be subject to soil removal activities. Soil removal activities outlined in this IRMW are designed to remove lead-impacted soil at properties exceeding a representative soil lead concentration of 80 mg/kg³ as documented in soil sampling investigation reports.

1.6 IRMW Implementation

DTSC will conduct the following activities to facilitate faster implementation of cleanup activities pursuant to this IRMW:

- DTSC will continue to utilize available data to establish the horizontal and vertical limits of excavation for each sensitive use property in the PIA. Additionally, soil sampling typically at eight (8) locations at will be performed around the time of pre-construction meeting to vertically delineate the extent of lead-impacted soil.
- DTSC will identify and retain qualified response action contractors.
- DTSC will obtain and execute an access agreement with individual property owners and coordinate work details and schedule with each owner.

Removal activities will occur in the following three stages and are detailed in the subsequent sections:

- Pre-excavation activities;
- Excavation and management of soil; and
- Property restoration.

1.7 Work Plan Organization

The removal activities consist of excavating, loading, transporting, and disposing of the soil from properties with representative soil lead concentrations exceeding 80 ppm³. After the removal action at each property, the property will be restored. This IRMW is organized as follows:

- **Section 1.0 – Introduction and Background** provides general information on the IRMW, including purpose and objectives, and previous investigations.
- **Section 2.0 – Pre-Excavation Activities** provide general information about

³ A representative soil lead concentration of 110 ppm is used for schools.

access requirements, documentation, and permitting

- **Section 3.0 - Excavation Activities and Management of Soils** provides information regarding excavation limits, confirmation sampling, soil profiling for disposal
- **Section 4.0 - Property Restoration and Closeout.** Provides information regarding property restoration, documentation and closing out response activities with a final letter of completion
- **Section 5.0 – Health and Safety.**

In addition to the sections described above, tables and figures are provided. Finally, the appendices for this report are described below:

- **Appendix A – Access Agreement** provides a copy of the standard access agreement used to gain access to each property at which this work will be completed.
- **Appendix B – DTSC Clean Fill Advisory** provides a copy of the Advisory that outlines the import soil sampling necessary to meet project objectives.
- **Appendix C – Project Health and Safety Plan** provides the documentation on how the work at the property will be conducted in a safe manner.
- **Appendix D –Transportation Plan** provides the plan by which materials will be transported to the appropriate landfill for disposal and includes a spill response/contingency plan for managing a spill if it were to occur.
- **Appendix E – Property Closeout Checklist** - provides the checklist by which the property will be released back to the owner with approval of the work granted via signature by the owner.

2.0 Pre-Excavation Activities

Prior to the start of removal activities on a property, representatives from DTSC and its contractor will meet with each property owner and, as appropriate, resident to describe the planned activities to be performed on the property. Topics to be discussed will include the following:

- Protection of property and yard fixtures;
- Determination of occupants;
- Preference for installation of landscape material; and
- Relocation needs.

Materials detailing the work being conducted will be provided, as will 24-hour toll free, bilingual, contact numbers for any questions or concerns that may arise while work is being planned, performed, and completed on the property.

2.1 Public Participation Activities

DTSC's Public Participation Plan for the Offsite Properties within the Exide Preliminary Investigation Area (including any modifications, amendments, or addenda thereto subsequently approved by DTSC) (PPP) will be followed to provide members of the public with site information and appropriate opportunities for public comment.

Throughout the project, interested parties will be able to review project documents at the DTSC's website for the project:

<http://www.dtsc.ca.gov/HazardousWaste/Projects/UpdateExideSuspension.cfm>.

DTSC or its contractor will provide the residents with a factsheet describing the work to be performed. The factsheet includes a 24-hour toll-free bilingual (English and Spanish) hotline for residents or immediate neighbors to call if any questions or concerns arise during the work. The hotline will be answered by a bilingual representative who will collect caller information and distribute the request to the correct entity. The hotline will be answered in person during business hours (8 a.m. to 5 p.m. Monday through Friday) and will be able to receive voicemail during off hours. If an emergency situation arises and must be addressed immediately, the response action contractor will report to the property to address the issue. If it is not an emergency, the issue will be addressed during business hours. The hotline will be available during the construction activities subject to this IRMW.

During construction activities, a sign will be placed at the front of the property. DTSC had agreed to take additional steps associated with signage as part of Rule 1466 compliance. The sign will display the following information and will be visible from the street nearest the excavation activities:

TO REPORT ANY DUST LEAVING THE SITE PLEASE CALL DTSC'S HOTLINE AT 1-844-225-3887 OR THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AT 1-800-CUT-SMOG

2.2 Property Access

To perform soil sampling and removal activities, DTSC or its response action contractor will solicit property access from the property owner. Appendix A presents a sample access agreement. Diligent efforts will be made to obtain access. No work will be performed without a signed access agreement.

2.3 Initial and Pre-Excavation Meetings

Prior to the start of removal activities on a property, representatives from DTSC and the response action contractor will meet with each property owner (and tenant, with owner approval) to describe the soil sampling results as well as the removal and restoration activities to be performed on the property. Topics to be discussed will include protection of property and yard fixtures, need for relocation of occupants, determination of the home occupants (both human and animal), and post-response action restoration, including obtaining approval for the installation of the landscaping option selected by the property owner. Pre-construction confirmation sampling will be conducted during or around the time of pre-construction meetings. See also section 3.1.1.

2.4 Property Photo Documentation

Before soil is removed from the identified properties, the location will be photographed and, at the discretion of the response action contractor, video logged. The photographs will document the existing condition of the properties and will document the condition of the proposed work area and adjacent structures prior to work activities. Photographs will be taken with a digital camera and will be correlated to a map that displays the position and direction from which each photograph was taken. Photographs will be taken when the excavations have been completed and will document the depth that is achieved. If obstructions prevent an excavation to progress as documented in the design plans, a photograph will be taken to document the obstructions. Photographs will also be taken after restoration has been completed.

2.5 Permitting, Certifications, and Notifications

All cleanup activities will be conducted in accordance with applicable local, state, and federal regulations. All necessary permits for removal activities, excavation, and transportation will be obtained prior to the response action. The permits will be kept on site and will be made available for inspection during working hours. The anticipated permits may include, but are not necessarily limited to, the following:

- Grading and Drainage
- Encroachment
- Lane Closure (Traffic Control)

Equipment to be used for the work will be permitted in accordance with SCAQMD Rules 203, 403, and 1466.

2.5.1 Notifications and clearance for excavation

Prior to initiating excavation activities, Underground Service Alert (USA) will be notified at least 48 hours prior to initiating excavation activities in accordance with Article 6 - Excavations in California Occupational Safety and Health Administration's Construction Safety Orders.

In the event other wastes or materials are encountered, the response contractor will notify DTSC and a case-by-case determination on whether to proceed will be made. Additional permits may be necessary through the City or County for removal of these items.

2.5.2 Field Certification

The response action contractor will be required to comply with all applicable federal, state, and local laws and regulations, including any applicable provisions of the Occupational Safety and Health Act of 1970 (29 U.S.C. 651 et seq.), the California State Plan approved under section 18 of the Occupational Safety and Health Act of 1970 (29 C.F.R. § 1952.7), all applicable Cal/OSHA regulations outlined in California Code of Regulations, title 8, section 5160 et seq. (General Industry and Construction Safety Orders, Hazardous Substances and Processes), all applicable regulations of the United States Occupational Safety and Health Administration (OSHA) outlined in Code of Federal Regulations, title 29, parts 1910 (Occupational Safety and Health Standards) and 1926 (Safety and Health Standards for Construction). Personnel performing the work will be Hazardous Waste Operations and Emergency Response (HAZWOPER) trained and certified. (California Code of Regulations, title 8, sections 5192, 5198; Code of Federal Regulations, title 29, section 1910.120.)

2.6 Property Preparation and Control Measures

Prior to the start of removal activities on a property, DTSC and the Contractor representatives will meet with the property owner and, if appropriate, tenant to describe the planned activities to be performed on the property. Topics to be discussed will include: overall process of cleanup, health and safety monitoring, validation/confirmation of property and yard features, confirmation sampling, relocation, interior cleaning, and other related information.

2.6.1 Security and Control

During all property preparation, removal, and restoration activities, procedures will be implemented to ensure site safety, security, and control to protect residents from exposure and existing property features from damage. These procedures will include safe working distances, warning tape, manual digging, and temporary fencing and barriers. At the daily completion of work, and as necessary during the course of work, driveways and sidewalks on the property will be cleaned using HEPA-certified vacuums. If wet cleanup is necessary (e.g., power spray), the water will be collected in a manner

that prevents sediment from entering stormwater inlets or other structures.

During all cleanup activities, site access will be restricted to authorized personnel only. During non-working hours, access will be controlled via secured temporary fencing (rigidly-erected orange safety fencing or temporary chain link fence paneling) that will be placed, as needed, along the edges of excavation to restrict access to the excavation areas. The work area will be kept clean of any contractor generated waste material. All contractor-generated waste material will be consolidated and removed from each property daily. Contractor-generated waste **will not** be disposed of in solid waste containers at the property.

Excavation operations and activities will stay a minimum of six (6) inches away from gas and water lines that feed the property from the street. Therefore, these lines will not be exposed. This will minimize the potential impact to these utilities as well as potential associated repairs to these lines. If the response action contractor causes any damage to public or private utilities within the properties being remediated, the damage will be addressed at the contractor's expense, with no expense to the property owner and/or DTSC.

The potential intrusion of fugitive dust into the residential structures will be minimized by using the dust suppression techniques discussed in Section 3.9 and by requesting that all residence windows and doors be closed before excavation activities begin. If windows are kept open by the owners, open windows will be sealed with plastic sheets prior to the start of any excavation activity. All soil excavation work or work that may generate dust will cease until all residence windows and doors are closed. DTSC Field Operations staff will conduct reconnaissance during mobilization activities and direct the contractor about sealing the openings, windows, ventilators etc.

2.6.2 Relocation and Compensation

The residents may remain on the property or relocate during the excavation activities. Relocation guidelines and options are presented in the *DTSC Temporary Relocation and Compensation Implementation Plan* (DTSC, March 2018). Relocation is not necessary, but DTSC will offer it if the residents choose to relocate. Temporary relocation assistance will be offered to the residents who choose to relocate. Residents who choose to relocate will be compensated for eligible temporary relocation expenses incurred during soil excavation and removal activities, such as eligible lodging, meals, incidentals and documented pet care expenses (e.g., kennel, or pet friendly hotel fees), not to exceed \$1,000 per residential unit (not per resident).

During the initial and pre-construction meetings, DTSC and the Contractor will discuss relocation options with the residents. Residents (owners or tenants) for whom the soil excavation and removal on their property will take longer than one (1) business day to complete, are eligible for relocation while excavation of lead contaminated soil is occurring at the property. Residents have the following options for relocation:

- Stay with family and friends;
- Lodging using an online hospitality service;
- A hotel of their choice; or
- A hotel provided by DTSC.

If the resident elects to stay with family and friends, DTSC will not reimburse the resident for lodging during the temporary relocation period. However, the resident may be reimbursed for eligible meals and incidentals.

If the resident chooses to stay at a local hotel selected from a list of hotels provided by DTSC, hotel lodging costs and fees incurred during the temporary relocation period would be paid for directly by DTSC, with no out of pocket cost for the resident.

If the resident elects to stay at a hotel of their choice, DTSC will reimburse the resident for actual, documented hotel lodging costs and fees not to exceed the federal Government Services Administration's per diem rate for lodging in the Los Angeles Area—a maximum of \$158 per night, plus any applicable taxes, parking fees, and hotel charges for rollaway beds. Any additional lodging fees incurred by the resident, including, but not limited to, fees incurred by the resident for more than standard room rates or for damages to hotel property do not qualify for reimbursement.

All resident(s) who select relocation will be reimbursed for eligible meal expenses in accordance with the State of California's per diem rate for state employees and USEPA guidelines for temporary relocation. The per diem rate for meals for State of California employees is \$41 per day - \$7 for breakfast, \$11 for lunch, and \$23 for dinner. Adults and children 12 years of age and older will receive the full per diem of \$41 per day. Children younger than 12 years of age will receive half (1/2) of the per diem (\$20.50 per day).

Incidental expenses include fees for transportation during relocation (e.g., mileage, gas, taxi, or public transportation), and shall not exceed the State of California incidental rates of a maximum of \$5 per day in state travel.

If the resident elects not to relocate during excavation activities and elects to remain at their residence, they may stay home while cleanup activities are occurring as long as doors, windows, and vents are closed while lead-impacted soil is excavated and removed. As a further precaution, the contractor will seal open ground floor windows and vents with plastic sheeting. All cleanup work will be conducted in full compliance with Project Health and Safety Plans, including monitoring to ensure that dust control measures are effective. DTSC will also offer a fan or a ventless air cooling system to use on a temporary basis until the windows can be opened again following excavation work if the temperature rises above 80 degrees or upon request.

2.7 Mobilization

The preliminary stages of project mobilization consist of the following tasks associated with preparing for the removal action. The general sequence of preliminary work is

outlined below.

- Notify Underground Service Alert (USA) at least 48 hours prior to initiating excavation activities, in accordance with the California Occupational Safety and Health Administration's (Cal/OSHA) Construction Safety Orders, Excavations (Cal. Code Regs., tit. 8, §§ 1539-1547), to identify all proximal underground utilities. Each utility will be conspicuously marked.
- Mobilize a third-party geophysical contractor to the property to mark utilities in and around excavation areas.
- The response action contractor will mobilize necessary equipment and supplies to the property and prepare for the response action. The contractor will conduct work between 7:00 am to 4:00 pm, Monday through Friday, unless a different schedule is both allowed by the local jurisdiction and arranged with DTSC and the owner.
- Mobilize temporary facilities and utilities, such as portable toilets and hand-washing stations, as needed. Portable toilets shall be locked at the end of each work shift.
- Install temporary fencing around the excavation boundary within the area of excavation, and place erosion control materials as outlined in Section 3.4.
- Identify and clearly delineate the work zones, including the exclusion, decontamination, and support zones. The exclusion zone will include all areas of excavation, the contaminated soil staging area, and the truck loading area. The decontamination zone will be located immediately adjacent to the exclusion zone to decontaminate personnel, equipment, and vehicles as they exit the exclusion zone. The support zone will be located within the designated work area, but it will be outside the exclusion and decontamination zone. The support zone will be used to temporarily store equipment, vehicles, and clean soil, as well as to accommodate project personnel.
- Position all health and safety equipment and supplies, along with decontamination materials, for use when needed.
- Implement other property-specific precautionary measures, as necessary, which may include temporary relocation of residents in accordance with DTSC's Temporary Relocation and Compensation Implementation Plan, Exide Preliminary Investigation Area (including any modifications, amendments, or addenda thereto subsequently approved by DTSC).

3.0 Excavation Activities and Management of Soils

Areas will typically be excavated to a maximum of 18 inches bgs. The excavated areas will be based on the concentrations of lead found in the soils and the accessibility of such soils for removal. Soil removal depths will range from 6 inches to 18 inches bgs.

As necessary, hand excavation will be conducted close to existing structures, utilities, mature trees, or other areas that would be difficult to excavate around or that could be damaged by equipment. Soil will not be removed beneath or inside structures, roads, sidewalks, brick patios, driveways, or other inaccessible or permanent features.

Excavations adjacent to houses, garages, outbuildings, driveways, sidewalks, structural perimeter walls and fences and patios will be benched in six (6)-inch layers to the full removal depth, as necessary. No soil removal activities will occur under decks or other areas inaccessible by residents. If a planter is not structurally sound, the planter will be removed with concurrence of the property owner. Small shrubs and other plantings (excluding trees and mature shrubs) will be removed and disposed offsite with property owner concurrence.

3.1 Excavation Limits

For all properties, soil removal will extend to the depth interval at which the representative soil concentration is less than 80 mg/kg or to a maximum depth of 18 inches. The horizontal and vertical limits of removal will be established based on the soil lead results (see section 3.1.1) including initial soil sampling and pre-construction confirmation sampling to determine those portions of the property that require soil removal to satisfy the above criteria. The vertical limits of removal will not exceed 18 inches.

3.1.1 Confirmation Sampling and Draft Excavation Plan

Prior to conducting a pre-construction meeting, a draft excavation plan will be prepared by the contractor. The draft excavation plan will establish a preliminary boundary of excavation and identify the applicability of property specific permits, if any.

Confirmation sample locations will be established based on the site characterization soil sampling results. To expedite the cleanup process, confirmation samples will be collected prior to excavation. During the pre-construction meeting, pre-excavation samples will be collected from up to eight (8) locations generally from four (4) boreholes in the front yard and four (4) boreholes in the back yard. Soil samples will be collected from 0 to 12 and 12 to 18 inches below ground surface (bgs). A discrete sample at the 12-inch interval will be analyzed. A representative soil lead concentration at the 12-inch interval will be calculated. If the soil lead concentration exceeds 80 ppm, a discrete soil sample at the 18-inch interval will be analyzed and a representative soil lead concentration calculated.

The depth meeting the representative soil lead concentration of 80 ppm will be used to

establish the appropriate excavation depth. The discrete samples submitted for laboratory analysis will be analyzed using U.S. EPA method 6010B with laboratory Turn Around Time (TAT) of 1 week, 72 hours or 24 hours, adjusted based on direction provided by DTSC field operations. The laboratory samples will confirm and establish the boundaries of the excavation before beginning the excavation activities. Lateral extent of excavation will be determined on a case by case basis with DTSC's approval. Excavation will not be extended beyond 18 inches bgs.

Samples will not be collected from drip zones or areas where the excavation may be obstructed to 12 or 18 inches bgs. Sample locations and the number of samples collected may be adjusted based on direction provided by DTSC.

The draft excavation plan will be revised and finalized based on the results of the confirmation sampling and will be submitted to DTSC for approval before implementation.

3.1.2 Sample Designation

Each confirmation soil sample will have a unique identification code to indicate the property identification and where and at what depth a sample was collected. Procedures generally consistent with the sample designations previously used during the investigation of the properties will be used for confirmation samples.

3.1.3 Post-Cleanup Evaluation

The purpose of post-cleanup evaluation is to assess the residual lead concentrations throughout the entire site. All data from soil remaining at the site will be used. Data collected from site characterization and pre-excavation confirmation sampling will be combined with backfill data for post-cleanup evaluation. Clean soil with lead concentrations meeting DTSC backfill criteria will be used.

Post-cleanup confirmation samples will be collected at the bottom surface of the excavation at a maximum depth of 18 inches bgs. If obstructions (i.e., tree or shrub roots, irrigation lines, proximity to a structure) prevent excavation to advance to the planned depth of 12 or 18 inches bgs, a confirmation sample will be collected from the bottom of the excavation. The confirmation samples will be collected at the bottom of excavation and will be submitted for laboratory analysis using U.S. EPA method 6010B.

3.1.4 Site Clearing and Debris Removal

If personal items are still present in areas of the property to be excavated at the time the property is scheduled to be cleaned and the resident (property owner or tenant) did not request DTSC's assistance in removing the items during the initial or preconstruction meeting, the following may occur:

- (1) DTSC may, with the resident's written permission, move the items to another area of the property. The cost incurred by DTSC in moving the personal items to

another area of the property will be deducted from the compensation check paid to the property owner for replacement landscaping. If the cost is more than the compensation allowance, the owner will be required to remove their personal items before any mobilization can occur.

(2) DTSC may attempt to work around the inaccessible area(s); or

(3) DTSC may notify the resident or property owner that a cleanup cannot occur until the resident or property owner removes those personal items.

To safeguard the residents, owner and tenants, DTSC, and DTSC's contractor(s), photos will be taken of concrete driveways, decorative tile, existing damage at the property, etc. prior to the start of construction. The location of sprinklers and the irrigation system will be documented and flagged. In addition, photos will be taken of the personal items moved by the contractor(s) with the resident's or property owner's written permission. Any other damage caused by the contractor(s) will be fixed by the contractor(s).

Prior to beginning soil excavation, the excavation zones will be cleared of obstructing features and vegetation.

Established trees and shrubs will not be removed. Small shrubs and other planting less than four (4) feet in height will be removed and disposed of with the property owner's concurrence. The areas within the biological root zone of trees or established shrubs (dripline) will be excavated to a maximum depth of 6 inches to preserve the integrity and survivability of the trees and shrubs. The pre-existing planted areas will be measured prior to soil excavation to determine the appropriate compensation for replacement landscaping.

3.2 Equipment

Excavations will be conducted using small construction equipment and/or hand tools. Potential equipment to be used is listed below:

- Mini-excavators and/or Bobcats for excavation and loading
- A walk-behind compactor for soil compaction
- A water buffalo or water from the residence for dust suppression and soil compaction efforts
- A street sweeper attachment (with a filter to be changed out when necessary) for the Bobcat to keep the project area and access roads clean
- A high-efficiency particulate air (HEPA) vacuum for during and post-response action cleanup activities
- Trucks for exporting contaminated soil (appropriately secured to eliminate dust), and importing clean backfill soil
- Other hand-held equipment based on occasional field needs for areas not accessible by equipment
- Instrumentation for monitoring

At the completion of the workday, construction equipment will typically be parked on the property, although, on occasion, it may be parked on a public street.

3.3 Shoring and Setbacks

As necessary, hand excavations will be conducted close to existing structures, utilities, mature trees, or other areas that would be difficult to excavate around or that could be damaged by equipment. Soil will not be removed beneath or inside structures, roads, sidewalks, brick patios, driveways, or other inaccessible or permanent features. Excavations against houses, garages, outbuildings, driveways, sidewalks, structural perimeter walls and fences and patios will be benched in six-inch steps to the full removal depth, as necessary. No soil removal activities will occur under decks or other areas inaccessible by residents. If a planter is not structurally sound, the planter will be removed with permission of the property owner. Small shrubs and other plantings (excluding trees and mature shrubs) will be removed and disposed offsite with property owner concurrence.

3.4 Erosion Control

The erosion control activities to be implemented during response are to prevent surface runoff from entering or exiting the work area. Note that coverage under the state's National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Activities and an associated Stormwater Pollution Prevention Plan will not be required by the State Water Resources Control Board for the implementation of this IRMW because the initial size of the areas of disturbance is less than one acre. If response activities extend into the rainy season, waterproof covers will be placed over storm drains for temporary protection. Berms will be placed around the excavation area (i.e., sand bags) to prevent run-off from and run-on into the excavation area, thereby minimizing the amount of contaminated wastewater to be handled. These measures will be evaluated daily during active response activities to ensure that they function properly. To prevent sediment from leaving the work area during soil-disturbing activities, multiple erosion control best management practices (BMPs) will be used. These BMPs may include hay bales and/or silt socks/fence for the perimeter of the property, as needed. In addition, inlet control devices (including a combination of filter fabric and sandbags) will be used in case of rain. Proposed erosion control devices will be shared with DTSC for review and approval.

The following procedures will be used:

- Monitor the weather forecast very closely. When heavy rain is forecast, halt the response activities.
- Conduct the excavation in small sections so that, if rain begins to fall, the exposed excavation can be covered immediately to keep water out of the excavation.
- Use proper procedures to ensure that wet soil (mud) is not tracked offsite on the tires of trucks used for soil transportation. The procedure may include placing

plastic sheeting at the loading area.

- Use plastic sheeting extensively to ensure that the area of excavation is protected from rain during off hours and during sudden heavy rain. Manage wastewater in accordance with the procedures described in Section 3.5.

In general, except for dust control measures, the excavation will be kept dry to ensure that no wastewater is generated, no environmental concerns arise, and the excavation can be backfilled promptly.

3.5 Wastewater Management

To prevent fugitive dust during construction, the excavation areas will be sprayed with a mist of water prior to removal as discussed in Section 3.9. The amount of water will not saturate the soils, and no runoff is expected during this operation. Although they are not anticipated to be needed to prevent offsite migration of soil, silt socks (compost-filled fabric tubes), silt fences, or similar measures will be installed along the perimeter of the excavations in the direction of surface water runoff flow. If necessary during loading, water will be sprayed while the transport vehicle is located on a decontamination area consisting of plastic sheeting and a water collection point.

All water used for loading and/or decontamination will be captured and transported to an offsite facility licensed to handle this waste for treatment and disposal, or it will be used as dust suppression on waste that will be hauled offsite for disposal. Following construction, dry decontamination methods (e.g., shovels to remove any fallen soil or brushes to loosen caked-on soil, followed by HEPA vacuuming) are anticipated to be used on transport trucks and on excavation equipment. No impact to water quality is anticipated.

Water absorption materials will be provided to capture all water and prevent runoff from leaving the property. This runoff includes any leaks in hoses or stormwater from a rain event that may occur during construction. As previously mentioned, all captured water will be transported to an offsite facility licensed to handle this waste for treatment and disposal, or it will be used as dust suppression on waste to be hauled offsite for disposal.

3.6 Excavation Area Safety and Security

Prior to initiating excavation activities, USA will be notified at least 48 hours prior to initiating excavation activities in accordance with Article 6 - Excavations in California Occupational Safety and Health Administration's Construction Safety Orders.

Access to the areas to be remediated may require an encroachment permit (blocking sidewalk access) and/or traffic control permit (lane closures) from the city in which the work will be conducted. During the remedial work, property entry and exits will be controlled through the creation of work zones. An exclusion zone, contamination reduction zone (decontamination zone), and support zones, as well as the staging area (collectively known as the work zones), will be established within the area in which

remedial activities will occur. During all remedial activities, property access will be restricted to authorized personnel only. During non-working hours, access will be controlled via secured temporary orange safety fencing that will be placed, as needed, along the edges of excavation to restrict access to the excavation areas. The work area will be maintained clean of any contractor-generated waste material. The contractor will consolidate and remove all contractor-generated waste material from each property daily at the contractor's expense. Contractor-generated waste will not be disposed in soil waste containers.

The average property will have an area of 200 square yards and excavation volumes of 33, 67, or 100 bank cubic yards at 6-, 12-, or 18-inch excavation depths, respectively. All excavated soil will be managed as outlined in Section 3.7 below and as required by DTSC.

3.7 Management of Excavated Soil

Excavated soil will be stored on-site and will be placed in Super Sacks on top of plastic sheeting to reduce potential contamination of underlying soil. Excavated soil will be handled in compliance with specific requirements associated with Rule 1466 as appropriate. The Super Sacks will be covered with plastic sheeting to control dust and reduce infiltration of any rainwater in accordance with BMPs.

Super Sacks will be maintained in areas that minimize access inconvenience to residences. Once the soil has been classified for disposal, the soil will be acceptable for off-site disposal. Excavated soil will be loaded onto trucks or bins for off-haul and disposal.

3.7.1 Waste Profiling Plan

Excavated soil will require sampling for waste characterization and profiling for disposal. Waste characterization will generally consist of analyses for metals (lead, arsenic, cadmium, copper, antimony, and zinc) in soil using EPA Method 6010B and solubility analyses including Toxicity Characteristic Leaching Procedure (TCLP) and Soluble Threshold Limit Concentration (STLC) at a State of California Environmental Laboratory Accreditation Program (ELAP) certified laboratory.

As discussed in section 3.1.1, the upper interval of confirmation samples will be placed in a clean plastic bucket and homogenized to produce one sample for waste characterization. The sample will be submitted for analyses at a certified off-site Environmental Laboratory Accreditation Program (ELAP) with a 48 to 72-hour TAT for waste profiling. The results will be used to identify an appropriate off-site disposal facility. This procedure will be followed for each property unless otherwise agreed to by DTSC staff. The contractor will be responsible for sharing the analytical results and facilitating other necessary coordination with the disposal facility to ensure that impacted soil is transported on time and transported to appropriate disposal facility.

3.7.2 Disposal of Excavated Soil

Based on the waste characterization and prior to removal work at that property, the disposal facility will be identified, and DTSC will be notified before the soil is transported to the disposal facility.

The treatment, storage, and disposal facility (TSDF) for the soils is expected to be either the La Paz County landfill in Parker, Arizona, or the Waste Management Kettleman Hills Facility in Kettleman City, California. Both facilities are permitted for the acceptance of lead-impacted nonhazardous, non-Resource Conservation and Recovery Act (RCRA) hazardous and RCRA hazardous waste. All non-RCRA and RCRA hazardous waste will be transported under Uniform Hazardous Waste Manifest. All nonhazardous waste will be transported under a Bill of Lading or Nonhazardous Manifest. Nonhazardous waste may also be handled at local landfills, including the Azusa Landfill in Azusa, California; or the Waste Management Simi Valley Landfill in Simi Valley, California.

After loading and decontamination, the trucks/roll-offs will proceed directly to the disposal facility. All necessary precautions will be taken to prevent track-out from trucks or roll-off bins. The vehicles will undergo dry decontamination (e.g., shovels to remove any fallen soil and brushes to loosen caked-on soil, followed by HEPA vacuuming), as necessary. Following the transport vehicle's departure, residual soils will be removed from the decontamination area using the techniques described above. In addition, all loading operations will be conducted atop plastic sheeting to avoid the potential spread of impacted waste.

Transport vehicle departure will be scheduled when the transport vehicle has reached its limit of weight or volume. Actual times for departure will be determined in the field. Excavated soil will be transported to a disposal facility in accordance with the Transportation Plan (Appendix D).

A TERP will also be prepared and submitted to DTSC for review and approval. This plan will describe the specific route(s) proposed for transportation of soils to/from the residential areas.

The TERP requires the following mitigation measures:

- The contracted trucking company hauling the soils to the disposal facility must be licensed in California to transport hazardous waste if the waste is characterized as such.
- Operator (driver) training:
 - The operator will receive education on the characteristics of the waste being transported.
 - The operator will ensure that the hazardous waste manifest, including the waste characterization, is present in the cab of the truck at all times.
 - The operator will perform a pre-travel inspection of the vehicle and a safety check on the emergency equipment included with the vehicle.

- The operator will be trained to notify the correct authorities in case of an accidental waste spill during transport to the disposal facility.
- The operator will be trained for emergency response.
- Notification to California Highway Patrol; the Incident Commander (IC).
- Notification to Caltrans:
 - Caltrans will take the lead to ensure proper cleanup. Caltrans will determine which qualified operator will perform the cleanup depending upon conditions, identification and hazard assessment, containment, and cleanup.
- Spill handling performed by Caltrans or qualified contractor:
 - Safe approach
 - Isolation and containment
 - Notifications
 - Identification and hazard assessment
 - Cleanup and disposal

If a spill occurs at the property, the response action contractor will be prepared to respond in a safe and efficient manner specific to the spill situation. Procedures established in the Spill Response Plan will be used for handling of spills, whether they be onsite spills or spills occurring during transportation. The provisions of the Spill Response Plan (Appendix D) will be strictly followed in order to ensure the continued protection of the public and the environment.

3.8 Decontamination Procedures

To prevent transfer of contamination offsite or residual contamination from being left onsite by construction equipment and personnel, decontamination procedures have been developed in the Project Safety, Health and Environmental Plan (PSHEP, Appendix C) prepared for this removal action. These procedures are summarized as follows:

- Before excavated waste is loaded into trucks, plastic sheeting will be placed on the ground or asphalt so that spilled waste cannot contact the ground surface. Trucks may be rolled back and forth to allow area property owners access to driveways/streets. In these cases, the plastic should be rolled back to the sidewalk so that the truck tires don't roll over spilled soil and deposit it into the gutter/street. When loading is complete, debris will be placed in the appropriate container for proper disposal, and the plastic sheeting will be folded and disposed daily in accordance with the procedures for disposal of excavation waste, above.
- All equipment wheels/tires will be cleaned over plastic sheeting by means of shovels and stiff-bristled brooms or brushes until they are fully cleaned. When cleaning is complete, debris will be placed in the appropriate container for proper disposal, and the plastic sheeting will be folded and disposed.
- A HEPA-certified vacuum will be used on hardscape areas where residual impacts may be present following the removal actions. A HEPA vacuum will be used on any spilt soils as necessary.
- Personal protective equipment will be removed and discarded in the contamination

reduction zone in accordance with the procedures for disposal of excavation waste, above.

- Reusable items such as work boots will be decontaminated using the following two-stage process:
 - HEPA vacuum boots, if necessary.
 - Wash the items in a detergent solution with a stiff-bristled brush and rinsing them with clean water.
 - Distribute the rinsate water over contaminated soil (to be exported) for dust control.

The decontamination containers will be clearly marked and will identify the wash and rinse containers to be used. To avoid potential cross contamination, rinse water will only be applied to waste that will be offloaded for disposal; it will not be applied to any of the open excavations.

3.9 Dust Suppression and Control

Dust control measures will be implemented during excavation and soil-moving activities as required by the Health and Safety Plan (Appendix C). Excavation equipment will be stored so that it does not generate fugitive dust immediately after completion of work. Immediately after completion of the work and prior to exiting the property, excavation equipment will be decontaminated by a HEPA vacuum equipped with a filter rated by the manufacturer to achieve 99.97 percent capture efficiency for 0.3-micron particles.

The largest potential source of dust and emissions during the work will be the excavation and handling of waste during soil removal. As discussed in Section 3.8, dry decontamination techniques will be used on transport trucks, and HEPA vacuuming will be used as needed. Excavation equipment will be stored so that it does not generate fugitive dust immediately after completion of work. Immediately after completion of the work and prior to exiting the property, excavation equipment will be decontaminated by wet wash or by a HEPA vacuum equipped with a filter rated by the manufacturer to achieve 99.97% capture efficiency for 0.3-micron particles.

3.9.1 SCAQMD Requirements

To comply with the SCAQMD rules and the PSHEP (Appendix C), dust control measures will be implemented during response activities. The planned excavation areas are expected to require simple control measures to mitigate fugitive dust. The required dust control measures include, without limitation:

- Spray of water.
- Spray of water amended with environmentally safe additives (e.g., Simple Green, Envirotech Vapor Suppression, or equivalent), which meet applicable specifications, criteria, or tests required by any federal, state, or local agency or any applicable law, rule, or regulation and are used in sufficient concentration and application frequency to maintain a stabilized surface and no less than what

is specified by the manufacturer.

- Application of chemical foams, if necessary.
- Coverage with plastic sheeting of any surface excavations that are left overnight.
- Application of water directly to the active excavation prior to soil disturbance.
- Application of water during truck loading operations, as appropriate.
- Prompt application of water to excavation, loading, or unloading operations upon any observance of dust.
- Control of dust during operation of trucks by not allowing waste to be dropped from heights above the top rail of the truck body.
- Cessation of earth-moving activities if the wind speed is greater than 15 miles per hour (mph) averaged over a 15-minute period or instantaneous wind speeds exceed 25 mph.
- Regular inspection of all rear gate seals and locking mechanisms on waste transport vehicles to prevent spillage and dust production.
- HEPA-vacuuming of trucks before they leave the loading areas to prevent the deposition of waste.
- Clean up of all spilled soil waste within the loading area and work areas including, following each day's construction activities, use of a HEPA vacuum in all areas to remove any residual soils from non- excavation areas.
- To prevent leaking, use of polyethylene sheeting to line all transport vehicles used for offsite transport of waste, placement of sufficient sheeting material in the transport vehicle to allow the contractor to cover and wrap the waste within the vehicle, and installation of secured, strapped-down covers to prevent fugitive lead dust during transport to the disposal facility.
- At the end of each working day, all soil must be secured in Flexible Intermediate Bulk Containers (FIBC), such as Super Sacks[®], and must be completely covered with plastic sheeting.

Based on the amended SCAQMD Rule 1466, TCRAs, with some exceptions, are exempt from the Rule 1466 requirements. However, the exemption is conditioned on DTSC's compliance with numerous measures outlined in this IRMW, including measures regarding signage, dust control, and dust monitoring. The various provisions of these rules are required by the PSHEP and applicable federal, state, and local laws, including Title 8 of the California Code of Regulations. Special considerations will be applied during earth-moving operations (excavation, contaminated soil loading, and unloading of clean soil). Dust monitoring will be conducted with dust meters (i.e., Dust Trak model 8530 or model 8532 dust meters or equivalent) as a means of documenting concentrations of airborne dust. Dust readings will be recorded on property-specific dust monitoring forms or in the field logbook.

The equipment proposed for the property work will be maintained properly so that exhaust emissions will be within acceptable standards. If necessary, the tires of soil transport trucks will be washed in order to prevent tracking of soil that would increase in fugitive dust levels outside the property perimeters.

3.9.2 Dust Suppression Techniques

A rule of “no visible dust” will be applied to all aspects of the work that involve impacted soils and fill placement. To control the possible generation and migration of dust during the excavation and handling of waste, the following procedures will be implemented:

- Apply water directly to the active excavation prior to soil disturbance. Also apply water during the truck loading operations, as appropriate.
- Promptly apply water to excavation, loading, or unloading operations upon any observance of dust.
- Control dust during operation of trucks by not allowing waste to be dropped from heights above the top rail of the truck body.
- For days on which wind speeds exceed 20 mph, cease work and immediately secure or cover excavation areas and soils in a manner that does not generate fugitive lead dust.
- Regularly inspect all rear gate seals and locking mechanisms on waste transport vehicles in order to prevent spillage and dust production.
- HEPA-vacuum the trucks before they leave the loading areas to prevent the deposition of waste.
- Clean up all spilled soil waste within the loading area and work areas. Following each day’s construction activities, the response action contractor will HEPA-vacuum all areas to remove any residual soils from non-excavation areas.
- To prevent leaking, use polyethylene sheeting to line all transport vehicles used for offsite transport of waste. Place sufficient sheeting material in the transport vehicle to allow the contractor to cover and wrap the waste within the vehicle. The contractor will install secured, strapped-down covers to prevent fugitive lead dust during transport to the disposal facility.

To ensure compliance with the project performance standards, air monitoring will be conducted as described below.

3.9.3 Monitoring Plan

Air monitoring will be performed during soil removal and placement activities to ensure that there is no fugitive dust from the impacted soils or fill materials. Real-time particulate monitors and personal air monitors (PAMs) will be used during the operations as detailed below.

3.9.4 Real-Time Particulate Monitors

Particulate dust monitors measure the total dust in the air. Three particulate dust monitors will be set up daily at each property:

- One monitor will be placed downwind of the excavation area to monitor the effects of the work.
- One monitor will be placed upwind of the excavation to monitor dust coming

- from sources unrelated to the work.
- One third monitor will be placed at the homes' closest entryway to excavation to identify particulates near the work area.

The response action contractor will use Dust Trak model 8530 or model 8532 to measure total suspended particles (TSP) in the air. These monitors measure aerosol particulates corresponding to particulate matter up to 10 microns in diameter (PM10). Monitors will be placed each day prior to soil disturbance or placement activities, and the levels relative to the area-specific action level will be reviewed hourly during the work. Dust levels will also be monitored during excavation and loading activities at the Site perimeters. If the monitoring data at the Site perimeters indicates that dust levels are beyond the SCAQMD limit of 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) above background, then additional engineering control measures (listed below) will be implemented to reduce the dust level. This concentration will be greater than the upwind monitor reading that measures the ambient (i.e., nonwork-related) conditions. If the downwind or entryway monitor shows a level exceeding the action level, the upwind monitor will be checked to see if there is an upwind source for the increased dust level, DTSC will be informed, and the monitor will be checked again in 10 minutes to determine whether the level has dropped below the action level. If it has not, work will be decreased, and the dust suppression techniques will be correspondingly increased (as described in Section 3.9.2) as needed to lower the dust levels below the action level. Although dust monitoring will not be conducted during a significant rain event, dust meters will be protected in place in the event of a sudden shower. Dust meters can be encapsulated in plastic, if necessary, ensuring no obstructions to the flow of the meter.

3.9.5 Personal Air Monitors

In addition to the three dust monitors described above, during disturbance of lead-impacted soils, a Gilian GilAir-5 model (or comparable) personal air monitor (PAM) will be co-located with a dust monitor at each location during the excavation work. The PAM cassettes will be analyzed for lead content at an offsite laboratory after completion of the excavation work. The findings will be reviewed and documented. The date, start time, end time, and air flow will be recorded on the cassette for analysis.

3.9.6 Supplemental Environmental Controls

Other environmental controls may be required if conditions change at the property. Response actions will be conducted in a very proactive manner in order to identify unforeseen conditions and develop appropriate engineered measures to improve those conditions. If unforeseen conditions are identified, work will be transitioned to another portion of the property where these conditions will not affect the ongoing operations.

3.9.7 Traffic Control

Vehicle traffic around the excavation areas is expected to be moderate. To ensure safe and uninterrupted traffic flow, extreme caution will be exercised while the vehicles are

being staged and/or entering and exiting the work area. During soil hauling periods, traffic into and out of the area will be planned to optimize traffic flow. The trucks' entry into and exit from the work sites will be facilitated by flagmen (as necessary), with due consideration for the traffic hazards associated with nearby businesses and pedestrian traffic in the response action area.

Excavated waste and backfill will be transported via surface streets following the DTSC-approved Transportation Plan (Appendix D) directly to the offsite disposal facility.

Construction vehicular traffic will be controlled to ensure that activities are performed safely and efficiently. On-site workers will remain cognizant of the nature of this work within residential neighborhoods and will perform work in a safe manner. Speed limits will be established and implemented by signs and flagmen, as necessary, to minimize dust generation and maintain a safe environment for workers and local residents, including children. All trucks hauling excavated or backfill soil will be tarped during transportation.

4.0 Property Restoration & Close out

Backfilling operations will begin after excavation activities are completed. Fill will be placed into the excavation in 6-inch lifts and structural fill compacted to a minimum of 90% of the maximum dry density as determined by ASTM D-1557. The compaction reports will be included in the Letter of Completion. The surface of the fill will be graded in accordance with the Grading and Drainage Plan for each property. The ground surface will be graded to match existing grades at the edge of the excavation.

4.1 Restoration Plan

Each property will be restored to the approved depth as illustrated in the property-specific Excavation/Grading Plan and Restoration Plan signed by the owners. For excavations that are 12 inches or deeper, structural soil fill material will be used to achieve backfill grades to within 6 inches of final grade. Fill material will contain enough organic and mineral content to support planting. Structural fill, unlike a pure sand fill material, contains enough fines to prevent accelerated drainage of water, and as such it is a satisfactory support for topsoil. The depth of topsoil provided will be dependent on the depth of the excavation and the restoration option that is selected. For excavations that are six (6)-inch in depth, only topsoil will be used to backfill the entire excavation.

Soil samples of any fill materials will be collected prior to use and will be submitted by the response action contractor for laboratory analysis. The sampling procedures will follow DTSC's *Information Advisory for Clean Imported Fill Material*, dated October 2001 (Appendix B). Sample analysis results will be shared with DTSC and will be compared to the DTSC Residential Screening Values for approval. Soil fill materials will be free from roots and other organic matter, as well as trash, debris, and stones larger than 3 inches in any dimension. Soil fill materials (including topsoil if only topsoil is used) will be placed in loose, 8-inch lifts and will be lightly compacted by mechanical methods.

Topsoil material will be a natural, friable soil with enough organic content and nutrients to sustain grass growth, and it will be free of trash or other deleterious debris. The maximum particle size will be 3/4 inch, and rocks larger than 1/8 inch will not exceed 5% of the total weight. The topsoil will be screened, as required, so that the maximum particle size is not exceeded. Topsoil samples will be collected prior to use and will be submitted for laboratory analysis, and the results will be compared to the DTSC Residential Screening Values and evaluated to verify they contain the appropriate soil nutrients and organic content. The topsoil must be free of total petroleum hydrocarbons, volatile and semivolatile organic compounds, asbestos, polychlorinated biphenyls, pesticides, and herbicides. Topsoil materials will be placed to an approximately 6-inch depth over the structural soil fill material or unexcavated soils. After the topsoil is placed, it will be tilled to a depth of 2 inches for acceptance of sod. If the homeowner selects mulch or decomposed granite as the final grade at the property, the topsoil will be lightly compacted to allow for the placement of the mulch.

All fill replacement areas and areas disturbed by soil removal operations will be uniformly smooth graded to mimic the pre-excavation grades, except as necessary to permit adequate drainage (with the notification and acceptance of the property owner).

Grade control will be performed to confirm the appropriate grades and to make modifications, as necessary.

If the homeowner prefers replacement sod, a sod that tolerates the local climate conditions will be provided. The topsoil will be moistened before the sod is laid. The sod will be laid tightly together with no open joints visible and no overlapping. End joints will be staggered by a minimum of 12 inches. To ensure a good bond between sod and soil, the sod will be rolled using rollers not exceeding 100 pounds or using suitable wooden or metal tampers. Sod will be watered immediately after installation to a saturation depth of approximately 3 inches. It will be the responsibility of the individual home owners to maintain and water new sod after installation. In general, new sod should be watered twice a day for a 15- to 20-minute duration.

4.2 Closeout

Before the response action contractor leaves a property, a final closeout meeting will be conducted with the property owner to address punch list items that might remain after the response action activities. The meeting will resolve any outstanding issues related to the work that was performed. After the meeting is complete, the property owner will be asked to sign a property closeout checklist (Appendix E) to document that the remedial activities are complete and that the property owner is satisfied with the resolution of any outstanding issues. The meetings will be attended by a Contractor Representative and DTSC Field Operations and Public Participation staff.

4.3 Interior Cleaning

Following soil removal and restoration, DTSC will offer the residents the opportunity to

have the interior living spaces (i.e., living rooms, dining rooms, bathrooms, bedrooms) of their residences cleaned by a professional interior cleaning service, in accordance with DTSC's Temporary Relocation and Compensation Implementation Plan (including any modifications, amendments, or addenda thereto subsequently approved by DTSC). Professional interior cleaning services will include HEPA-vacuuming the floors, carpets, upholstery, and drapes in interior living spaces with a HEPA vacuum cleaner, followed by a wet wipe cleaning of hard surfaces in interior living spaces where applicable. The professional interior cleaning service will work directly with the resident to schedule the cleaning.

4.4 Letter of Completion

A letter of completion (LOC) will be prepared for each property and submitted to DTSC for review and approval following the completion of removal activities at that property. The LOC will document the removal activities that were completed at the property and will be used to document residual impacts remaining in subsurface soil, if any. The LOC will provide an overview of the project and will include the following:

- **Pre-Excavation Activities**
 - Documentation of project activities, sample locations, analytical results for lead, findings, and recommendations
 - Signed access agreements
- **Excavation and Management of Soil**
 - Tables presenting results from XRF and fixed laboratory analyses of soil samples
 - Figures that illustrate the work areas and sample locations
 - Preparation of a photographic chronology of the project to be included as an attachment to the report
 - Laboratory data reports
- **Property Restoration and Closeout**
 - Signed Property Closeout Checklist

5.0 Health and Safety Plan

The Health and Safety Plan (HSP) (Appendix C) establishes prudent health and safety guidelines to minimize the risk of occupational accidents and exposure to hazardous substances associated with environmental sampling and removal of potentially contaminated soil and construction debris materials. The HSP, in conjunction with the Transportation Plan (Appendix D), provides emergency incidence response guidelines and contacts in the event of an accident or a hazardous exposure. The HSP includes include the following:

- Planned property activities
- Property health and safety characterization
- Physical hazards
- Characterization of waste
- Hazard evaluation of waste
- Responsibilities of key personnel

The contractor must prepare and submit for review a HSP developed specifically for this project and will be used to establish minimum onsite and offsite safety requirements, as well as policies and procedures adequate to protect on-site workers, the public, and the environment from the predicted hazards. All contractors involved in the removal, transport, and handling of impacted waste will be required to abide by these minimum requirements. As indicated in the HSP, if unanticipated conditions occur at the property, the plan will be modified accordingly.

Modified Level D personal protective equipment will be required for project activities unless health and safety monitoring shows otherwise. If monitoring indicates a potential issue or exposure, then engineering controls or personal protective equipment may be necessary to protect workers and/or the surrounding community.

Chemical exposure to lead in soil for on-site workers is anticipated to be of low risk for this project. Dust generation as part of the response activities will be prevented with proper dust control measures (i.e. wetting of soil, slow excavation activities, etc.). As such exposure due to inhalation is of minimal concern. Dust suppression, and ambient and personnel air monitoring will be conducted as specified in Section 3.9. Exposure due to ingestion may pose a risk, which can be easily mitigated by proper use of Level D PPE. Hands and shoes may come in direct contact with potentially contaminated soil. Therefore, workers will be required to wear steel toed work boots, latex gloves, high visibility vests, and hard hats as part of their Level D PPE. Handling of soil, soil samples, sampling equipment, and any other equipment that comes in contact with soil is only allowed while wearing latex gloves, or work gloves over latex gloves. Whenever a task necessitating the use of PPE is completed, the latex gloves will be discarded with wastes generated at the property and hand washing will be required. Additionally, to prevent track-out off-site, work boots will be decontaminated by brushing off any loose soil on site, and washing the boots with water.

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Appendix B – DTSC Clean Fill Advisory

Appendix C – Project Health and Safety Plan

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Appendix E – Property Closeout Checklist

APPENDIX A
ACCESS AGREEMENT



Department of Toxic Substances Control

Matthew Rodriguez
Secretary for
Environmental Protection

Barbara A. Lee, Director
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806

Edmund G. Brown Jr.
Governor

PROPERTY OWNER CONSENT FOR ACCESS TO PROPERTY

Property Address:

Street Address

City

State

Zip Code

Property Owner
Name:

Mailing Address (if
different than above):

Home Phone No.:

Cell Phone No.:

Email Address:

Identity Confirmation (check one):

- Driver's License
- California State Identification (ID) Card
- Other (type): _____

I, the "Property Owner," by virtue of my ownership of the real property identified above, and any structures located on the real property (collectively referred to as the "Property), hereby grant continued access to the Property to the Department of Toxic Substances Control (DTSC), its officers, employees, and authorized representatives, including consultants and contractors, for any or all of the following activities related to DTSC's investigation and cleanup of lead contaminated soils in areas surrounding the former Exide Technologies facility located in Vernon, California:

- Remedial investigation, including but not limited to boring through soil; soil sampling, sampling of exterior paint on structures; and sampling of paint chips or flakes found at or on the Property.

- *Removal and Remedial Action, including but not limited to: removal of grass or other landscaping located above soils; soils movement and excavation; placement of soil/ground covering material; and any other activities necessary for remediation of hazardous substances from the Property.*
- *Restoration and monitoring work, including but not limited to backfilling excavated areas with clean soil; replacement of grass or other landscaping; cleaning activity such as sweeping or washing of exterior areas, and HEPA-filter vacuuming of floors and wiping of surfaces in buildings.*

I understand that DTSC needs to obtain access from the legal Property Owner prior to taking any action on the Property. I further understand and acknowledge that my signature below authorizes access to the Property as described in this agreement, and does not affect any other right I hold.

I acknowledge that all actions by DTSC are undertaken pursuant to its response and enforcement responsibilities under the Carpenter-Presley-Tanner Hazardous Substances Account Act, California Health and Safety Code section 25300 et seq. DTSC shall ensure that its officers, employees, authorized representatives, consultants, and contractors comply with applicable federal, state, and local laws.

I understand that DTSC will not charge me for costs incurred by DTSC or its consultants and contractors for any of the activities described in this agreement.

DTSC will protect the confidentiality of personal information provided on this access agreement to the extent authorized by law. Protected information may include the name(s) and telephone number of the property owner and of any other persons who reside at the Property; and the specific street address and Assessor's Parcel Number (APN) of the Property.

DTSC agrees to provide at least two (2) business days advance notice to the undersigned before beginning activities on the Property. DTSC will work with the property owner to coordinate mutually agreeable dates and times for all activities. DTSC agrees to make available to the property owner copies of analytical results and reports obtained from sampling taken on the Property.

I certify that I am the legal owner or authorized agent of the owner of the Property, indicated above, and that I have authority to grant such access. This written permission is given voluntarily, on behalf of myself and all other co-owners of this property, with knowledge of my right to refuse and without threats or promises of any kind. This access is effective on the date of my execution of this agreement, set forth below. This grant of Property access shall terminate upon DTSC's completion of the activities described in this agreement.

Signature (Please sign in ink)

Date

Please mail this signed document to:

**Attention: DTSC – Exide Cleanup Team
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, CA 95826**

Questions? Please call 844-225-3887



Matthew Rodriguez
Secretary for
Environmental Protection



Department of Toxic Substances Control

Barbara A. Lee, Director
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806



Edmund G. Brown Jr.
Governor

CONSENTIMIENTO PARA ACCESO A LA PROPIEDAD (PROPIETARIO)

Dirección de la
Propiedad:

Calle

Ciudad

Estado

Código Postal

Nombre del
Propietario:

Dirección de Correo
(Si es diferente):

Teléfono en Casa.:

Numero de Celular.:

Correo Electrónico:

Confirmación de identidad (Uno):

- Licencia de Conducir
 Tarjeta de Identificación de California (ID)
 Otro (tipo): _____

Yo, el "Dueño de la Propiedad", en virtud de mi estatus como propietario de los bienes propietarios identificados anteriormente, y cualquier estructura ubicada en bienes propietarios (colectivamente denominada la "Propiedad"), otorgo el acceso continuo a la Propiedad al Departamento de Tóxicos (DTSC por sus siglas en inglés), sus funcionarios, empleados y representantes autorizados, incluyendo consultores y contratistas, para cualquiera de las siguientes actividades relacionadas con la investigación de DTSC y limpieza de suelos contaminados con plomo en áreas cercanas a la antigua instalación de Exide Technologies ubicada en Vernon, California:

- *Investigación correctiva, incluyendo pero no limitado a taladrar a través del suelo; Muestreo de suelo, muestreo de pintura exterior sobre estructuras; Y el muestreo de astillas de pintura o copos encontrados en o en la propiedad.*
- *Remoción y Acción Remedial, incluyendo pero no limitado a: remoción de césped u otros paisajes ubicados sobre los suelos; Movimiento y excavación de suelos; Colocación de suelo / material de cobertura del suelo; Y cualquier otra actividad necesaria para la remediación de sustancias peligrosas de la propiedad.*
- *Trabajos de restauración y monitoreo, incluyendo pero no limitado a relleno de áreas excavadas con suelo limpio; Reemplazo de césped u otro tipo de paisajismo; Actividad de limpieza como el barrido o lavado de áreas exteriores, y filtro HEPA de aspiración de pisos y limpieza de superficies en edificios.*

Entiendo que DTSC necesita obtener acceso del propietario legal de la propiedad antes de tomar cualquier acción en la propiedad. Además, entiendo y reconozco que mi firma a continuación autoriza el acceso a la Propiedad tal como se describe en este acuerdo, y no afecta a ningún otro derecho que tengo.

Reconozco que todas las acciones de DTSC se llevan a cabo conforme a sus responsabilidades de respuesta y ejecución de la Ley de Contabilidad de Sustancias Peligrosas, Carpenter-Presley-Tanner, El Código de Salud y Seguridad de California sección 25300 et seq. DTSC se asegurará de que sus funcionarios, empleados, representantes autorizados, consultores y contratistas cumplan con las leyes federales, estatales y locales aplicables.

Entiendo que DTSC no me cobrará por los costos incurridos por DTSC o sus consultores y contratistas durante cualquier actividad descrita en este acuerdo.

DTSC protegerá la confidencialidad de la información personal proporcionada en este acuerdo de acceso en la medida autorizada por la ley. La información protegida puede incluir el nombre y número de teléfono del propietario y de cualquier otra persona que resida en la propiedad; Y la dirección de la calle específica y el número de parcela del Asesor (APN) de la propiedad.

DTSC se compromete a proporcionarle por lo menos dos (2) días de aviso al abajo firmante, antes de comenzar las actividades en la Propiedad. DTSC trabajará con el dueño de la propiedad para coordinar las fechas y los horarios más indicados para llevar a cabo las actividades. DTSC le proporcionara al propietario copias de los resultados analíticos e informes obtenidos del muestreo tomado sobre la Propiedad.

Al firmar abajo, certifico que soy el dueño legal o el agente autorizado del dueño de la propiedad, indicada arriba, y que tengo autoridad para conceder este acceso. Este permiso por escrito se da voluntariamente, en nombre de mí mismo y todos los demás copropietarios de esta propiedad, con conocimiento de mi derecho a rechazar y sin amenazas ni promesas de ningún tipo. Este acceso es efectivo en la fecha de la ejecución de este acuerdo, que se establece a continuación. Esta concesión de acceso a la Propiedad terminará cuando DTSC complete las actividades descritas en este acuerdo.

Firma (Escribe con una pluma)

Fecha

Por favor envíe este documento firmado:

Attention: DTSC – Exide Cleanup Team
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, CA 95826

Preguntas? Llame al: 844-225-3887

APPENDIX B
DTSC CLEAN FILL ADVISORY

Information Advisory

Clean Imported Fill Material



October 2001

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

It is DTSC's mission to restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality, by regulating hazardous waste, conducting and overseeing cleanups, and developing and promoting pollution prevention.

State of California



California
Environmental
Protection Agency



Executive Summary

This fact sheet has been prepared to ensure that inappropriate fill material is not introduced onto sensitive land use properties under the oversight of the DTSC or applicable regulatory authorities. Sensitive land use properties include those that contain facilities such as hospitals, homes, day care centers, and schools. This document only focuses on human health concerns and ecological issues are not addressed.

It identifies those types of land use activities that may be appropriate when determining whether a site may be used as a fill material source area. It also provides guidelines for the appropriate types of analyses that should be performed relative to the former land use, and for the number of samples that should be collected and analyzed based on the estimated volume of fill material that will need to be used. The information provided in this fact sheet is not regulatory in nature, rather is to be used as a guide, and in most situations the final decision as to the acceptability of fill material for a sensitive land use property is made on a case-by-case basis by the appropriate regulatory agency.

Introduction

The use of imported fill material has recently come under scrutiny because of the instances where contaminated soil has been brought onto an otherwise clean site. However, there are currently no established standards in the statutes or regulations that address environmental requirements for imported fill material. Therefore, the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) has prepared this fact sheet to identify procedures that can be used to minimize the possibility of introducing contaminated soil onto a site that requires imported fill material. Such sites include those that are undergoing site remediation, corrective action, and closure activities overseen by DTSC or the appropriate regulatory agency. These procedures may also apply to construction projects that will result in sensitive land uses. The intent of this fact sheet is to protect people who live on or otherwise use a sensitive land use property. By using this fact sheet as a guide, the reader will minimize the chance of introducing fill material that may result in potential risk to human health or the environment at some future time.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website at www.dtsc.ca.gov.

Overview

Both natural and manmade fill materials are used for a variety of purposes. Fill material properties are commonly controlled to meet the necessary site specific engineering specifications. Because most sites requiring fill material are located in or near urban areas, the fill materials are often obtained from construction projects that generate an excess of soil, and from demolition debris (asphalt, broken concrete, etc.). However, materials from those types of sites may or may not be appropriate, depending on the proposed use of the fill, and the quality of the assessment and/or mitigation measures, if necessary. Therefore, unless material from construction projects can be demonstrated to be free of contami-

nation and/or appropriate for the proposed use, the use of that material as fill should be avoided.

Selecting Fill Material

In general, the fill source area should be located in nonindustrial areas, and not from sites undergoing an environmental cleanup. Nonindustrial sites include those that were previously undeveloped, or used solely for residential or agricultural purposes. If the source is from an agricultural area, care should be taken to insure that the fill does not include former agricultural waste process byproducts such as manure or other decomposed organic material. Undesirable sources of fill material include industrial and/or commercial sites where hazardous ma-

Potential Contaminants Based on the Fill Source Area

Fill Source:	Target Compounds
Land near to an existing freeway	Lead (EPA methods 6010B or 7471A), PAHs (EPA method 8310)
Land near a mining area or rock quarry	Heavy Metals (EPA methods 6010B and 7471A), asbestos (polarized light microscopy), pH
Agricultural land	Pesticides (Organochlorine Pesticides: EPA method 8081A or 8080A; Organophosphorus Pesticides: EPA method 8141A; Chlorinated Herbicides: EPA method 8151A), heavy metals (EPA methods 6010B and 7471A)
Residential/acceptable commercial land	VOCs (EPA method 8021 or 8260B, as appropriate and combined with collection by EPA Method 5035), semi-VOCs (EPA method 8270C), TPH (modified EPA method 8015), PCBs (EPA method 8082 or 8080A), heavy metals including lead (EPA methods 6010B and 7471A), asbestos (OSHA Method ID-191)

**The recommended analyses should be performed in accordance with USEPA SW-846 methods (1996). Other possible analyses include Hexavalent Chromium: EPA method 7199*

Recommended Fill Material Sampling Schedule

Area of Individual Borrow Area	Sampling Requirements
2 acres or less	Minimum of 4 samples
2 to 4 acres	Minimum of 1 sample every 1/2 acre
4 to 10 acres	Minimum of 8 samples
Greater than 10 acres	Minimum of 8 locations with 4 subsamples per location
Volume of Borrow Area Stockpile	Samples per Volume
Up to 1,000 cubic yards	1 sample per 250 cubic yards
1,000 to 5,000 cubic yards	4 samples for first 1000 cubic yards + 1 sample per each additional 500 cubic yards
Greater than 5,000 cubic yards	12 samples for first 5,000 cubic yards + 1 sample per each additional 1,000 cubic yards

terials were used, handled or stored as part of the business operations, or unpaved parking areas where petroleum hydrocarbons could have been spilled or leaked into the soil. Undesirable commercial sites include former gasoline service stations, retail strip malls that contained dry cleaners or photographic processing facilities, paint stores, auto repair and/or painting facilities. Undesirable industrial facilities include metal processing shops, manufacturing facilities, aerospace facilities, oil refineries, waste treatment plants, etc. Alternatives to using fill from construction sites include the use of fill material obtained from a commercial supplier of fill material or from soil pits in rural or suburban areas. However, care should be taken to ensure that those materials are also uncontaminated.

Documentation and Analysis

In order to minimize the potential of introducing contaminated fill material onto a site, it is necessary

to verify through documentation that the fill source is appropriate and/or to have the fill material analyzed for potential contaminants based on the location and history of the source area. Fill documentation should include detailed information on the previous use of the land from where the fill is taken, whether an environmental site assessment was performed and its findings, and the results of any testing performed. It is recommended that any such documentation should be signed by an appropriately licensed (CA-registered) individual. If such documentation is not available or is inadequate, samples of the fill material should be chemically analyzed. Analysis of the fill material should be based on the source of the fill and knowledge of the prior land use.

Detectable amounts of compounds of concern within the fill material should be evaluated for risk in accordance with the DTSC Preliminary Endangerment Assessment (PEA) Guidance Manual. If

metal analyses are performed, only those metals (CAM 17 / Title 22) to which risk levels have been assigned need to be evaluated. At present, the DTSC is working to establish California Screening Levels (CSL) to determine whether some compounds of concern pose a risk. Until such time as these CSL values are established, DTSC recommends that the DTSC PEA Guidance Manual or an equivalent process be referenced. This guidance may include the Regional Water Quality Control Board's (RWQCB) guidelines for reuse of non-hazardous petroleum hydrocarbon contaminated soil as applied to Total Petroleum Hydrocarbons (TPH) only. The RWQCB guidelines should not be used for volatile organic compounds (VOCs) or semi-volatile organic compounds (SVOCS). In addition, a standard laboratory data package, including a summary of the QA/QC (Quality Assurance/Quality Control) sample results should also accompany all analytical reports.

When possible, representative samples should be collected at the borrow area while the potential fill material is still in place, and analyzed prior to removal from the borrow area. In addition to performing the appropriate analyses of the fill material, an appropriate number of samples should also be determined based on the approximate volume or area of soil to be used as fill material. The table above can be used as a guide to determine the number of samples needed to adequately characterize the fill material when sampled at the borrow site.

Alternative Sampling

A Phase I or PEA may be conducted prior to sampling to determine whether the borrow area may have been impacted by previous activities on the property. After the property has been evaluated, any sampling that may be required can be determined during a meeting with DTSC or appropriate regulatory agency. However, if it is not possible to analyze the fill material at the borrow area or determine that it is appropriate for use via a Phase I or PEA, it is recommended that one (1) sample per truckload be collected and analyzed for all com-

pounds of concern to ensure that the imported soil is uncontaminated and acceptable. (See chart on Potential Contaminants Based on the Fill Source Area for appropriate analyses). This sampling frequency may be modified upon consultation with the DTSC or appropriate regulatory agency if all of the fill material is derived from a common borrow area. However, fill material that is not characterized at the borrow area will need to be stockpiled either on or off-site until the analyses have been completed. In addition, should contaminants exceeding acceptance criteria be identified in the stockpiled fill material, that material will be deemed unacceptable and new fill material will need to be obtained, sampled and analyzed. Therefore, the DTSC recommends that all sampling and analyses should be completed prior to delivery to the site to ensure the soil is free of contamination, and to eliminate unnecessary transportation charges for unacceptable fill material.

Composite sampling for fill material characterization may or may not be appropriate, depending on quality and homogeneity of source/borrow area, and compounds of concern. Compositing samples for volatile and semivolatile constituents is not acceptable. Composite sampling for heavy metals, pesticides, herbicides or PAH's from unanalyzed stockpiled soil is also unacceptable, unless it is stockpiled at the borrow area and originates from the same source area. In addition, if samples are composited, they should be from the same soil layer, and not from different soil layers.

When very large volumes of fill material are anticipated, or when larger areas are being considered as borrow areas, the DTSC recommends that a Phase I or PEA be conducted on the area to ensure that the borrow area has not been impacted by previous activities on the property. After the property has been evaluated, any sampling that may be required can be determined during a meeting with the DTSC.

For further information, call Richard Coffman, Ph.D., R.G., at (818) 551-2175.

APPENDIX C
PROJECT SAFETY, HEALTH AND ENVIRONMENTAL PLAN

Exide Off-site Remediation Health and Safety Plan

Prepared for:



California Environmental Protection Agency
Department of Toxic Substances Control
6119 E Washington Blvd. #120
Commerce, CA 90040

Prepared by:



National Engineering & Consulting Group
15 Hammond Suite 309
Irvine, CA 92618

March 13, 2018

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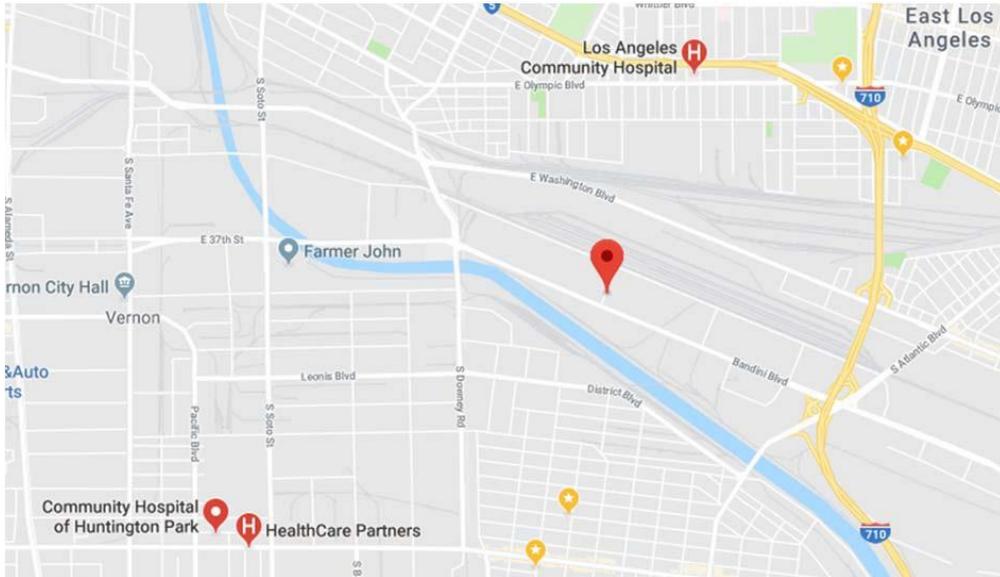
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Appendix A - Rule 1466 Compliance Matrix for TCRA Exide

1.0 Nearest Hospital Information

1.1 Hospital Route (To Be Designated by Crew Daily)



1.2 Hospital Information

There are multiple hospitals in the vicinity of the project. For properties north of the Los Angeles River, Los Angeles Community Hospital will be the primary facility. For Properties south of the Los Angeles River, Community Hospital of Huntington Park will serve as the primary hospital. The route will vary based on the operating location of individual field crews. Daily safety briefings will include a discussion of the primary hospital and the optimal way to reach that location. A property specific hospital route shall be developed and distributed on site prior to commencing remediation activities. For the four facilities the subject of this remediation project, the designated Hospitals are listed below:

North of Los Angeles River
Site: PIA-01076 1432 South McBride Ave, Commerce, CA
Site: S0002-MAOF 4457 Telegraph Road, Los Angeles, CA
Los Angeles Community Hospital
4081 East Olympic Blvd. Los Angeles, CA 90023
(323) 267-0477

South of Los Angeles River
Site: S0008-Maywood Christian School 3759 East 57th St, Maywood, CA
Site: D0284- Tejena Family Day Care 3700 57th St, Maywood, CA
Community Hospital of Huntington Park
2623 Slauson Ave, Huntington Park, CA 90255
(323) 583-1931

2.0 Emergency Contact Information

Contact	Phone Number
Police	911
PARAMEDICS	911
FIRE	911
SPILL	911
POISON CONTROL	1-800-222-1222
CONTRACTOR EMERGENCY CONTACT	1-949-668-0606

In case of injury call 911 immediately

3.0 Introduction

National Engineering and Consulting Group Inc. (NEC) has prepared this Health and Safety Plan (HASP) for soil cleanup activities to be conducted in the preliminary investigation area (PIA) around the former Exide Technologies Facility (Site). The information provided in HASP is intended to establish emergency and safety procedures for the work to be completed and is intended exclusively for the Department of Toxic Substances Control (DTSC). This HASP does not constitute a standard, specification, or regulation. The professional services to be provided shall be performed in accordance with practices generally accepted by health and safety professionals practicing in this field. No other warranty, either expressed or implied, is made.

The PIA area of the Site consists of multiple residential properties within a 1.7-mile radius around the Site. This HASP covers soil excavation activity using mechanical and

hand tools, soil sample collection, and X-ray Fluorescence (XRF) analysis of potentially lead contaminated media.

All work conducted on this project will be carried out in compliance with this HASP and NEC's health and safety standards, and the Occupational Safety and Health Administration's Hazardous Waste Operations and Emergency Response regulation. Changes in the scope of work or introduction of new hazards shall require revision of the HASP.

4.0 Site Description

The former Exide Technologies Facility is located at 2700 South Indiana Street in Vernon California. The Site occupies approximately 15 acres. The site is bound by South Indiana Street to the west, 26th Street to the north, Bandini Boulevard to the south, and industrial properties to the east.

The properties in this cleanup action are located within a 1.7-mile radius surrounding the Site.

A lead recycling facility operated at the Site from 1922 until March 2014. Exide Technologies acquired the facility in 2000. Previous operations at the Site included: battery breaking; smelting; lead refining; storage and handling of batteries, finished lead product, and other materials associated with recycling operations. Multiple factors contributed to the dispersion of lead-impacted airborne particulates. These include: uncontrolled chemical processing; inadequate maintenance and repair of the containment building; air releases from stacks; releases from spills at the Site and from trucks transporting to and from the Site; releases from storm water containment and other liquid containments; and inadequate dust control, among others.

5.0 Scope of Work

NEC's scope of work shall include:

- ✓ Removal, transport, and disposal of subsurface contaminated soil up to a depth of 18 inches from the original ground surface.
- ✓ Collecting and analyzing on-site soil samples via X-ray Fluorescence.
- ✓ Collecting soil samples for offsite laboratory analysis.
- ✓ Backfilling excavated areas back to grade.
- ✓ Restoring any features back to preconstruction conditions

All excavation and removal work will be conducted with minimal intrusion and hand tools shall be used when necessary.

6.0 Organizational Structure and Responsibilities

In compliance with California Code of Regulations, Title 8, Section 5192 "Hazardous Waste Operations and Emergency Response," the following individuals are assigned specific responsibilities and lines of communication for the duration of this project. All Employees and workers on this project are expected to maintain vigilance at all times to ensure that the work is conducted in a safe and efficient manner.

6.1 Corporate Health and Safety Officer

Carlos C. Bejar will serve as NEC Health and Safety Officer and has the responsibility and authority to oversee the development of this site Health and Safety Plan and to audit the equipment and training of involved personnel to implement the Work Plan. They or their designated representative have the discretionary authority to immediately suspend work until further notice.

6.2 Project Manager

Gary DellaVecchia is the designated Project Manager for all operations on this project. He is responsible for administration of the project activities. His duties include project planning, communications, and coordination.

6.3 Project Supervisor

Monther Taifour is the designated Project Supervisor for this project and is responsible for verification and overall compliance with this Health and Safety Plan. His duties include:

- ✓ Onsite determination of appropriate level of PPE.
- ✓ Site surveillance, hazard identification, and health risk analysis.
- ✓ Implementation of procedures and programs to eliminate risk to site personnel.
- ✓ Implementation of site control measures.
- ✓ Conducting daily Health and Safety meetings.
- ✓ Instructing all site personnel in the terms and conditions of this Health and Safety Plan.

Mr. Taifour will be designated as the project contact and will have his mobile telephone available to all concerned on a 24-hour basis.

6.4 Site Health and Safety Officer

The Site Health and Safety Officer reports directly to the Project supervisor. Through the Project Supervisor, the Site Health and Safety Officer also reports to the Health and Safety Officer and Project Manager. NEC will assign the Health and Safety officer prior to start of field activities.

6.5 Project Lead Personnel

Project Lead Personnel are responsible for the organization and direction of select technicians and laborers to accomplish certain project tasks. They report to the project supervisor who assigns personnel and schedules the work to be done on a day to day basis.

6.6 Tailgate Health and Safety Meeting

Before daily work begins on the Site all involved field personnel will be briefed on this Health and Safety Plan. These meetings will focus on potential hazards present at the Site and the safety and health procedures specific to this project. The meeting may include:

- ✓ Project Introduction and Orientation.
- ✓ Characteristics and Potential Hazards on the Site.
- ✓ PPE
- ✓ Emergency Response and Hospital Routes.
- ✓ General Site-Specific Safety Concepts.

7.0 Project Hazards and Control Measures

As per California Code of Regulations, Title 8, Section 5192 "Hazardous Waste Operations and Emergency Response," all site personnel shall be aware of the nature, level, and degree of exposure likely as a result of participation in the work described in the Scope of Work. All personnel shall be made aware of these conditions before entering the project site.

7.1 Hazards and Site Characterization

Below is a list of possible hazards on the project:

7.1.1 Physical Hazards

Physical hazards for this project include working around homes and residential streets and the use of hand tools such as shovels, hand augers and XRF analyzer equipment.

Other physical hazards include slips, trips, and falls; heat stress; and vehicular traffic. Head, eye, ear, and foot injuries are possible and will be avoided by the mandatory use of level D PPE.

Potable drinking water will be provided to ensure that employees stay hydrated. At all times, there shall be sufficient quantities of pure and cool potable water, i.e. enough to provide at least 1 quart per employee per hour per shift.

A designated person shall be assigned to ensure:

- ✓ All containers are refilled when they fall below 50%.
- ✓ There are enough disposable cups and cup dispensers to make sure enough cups are available for each worker and cups remain clean until used.
- ✓ All workers know the location of water whenever the location changes.
- ✓ Remind workers to drink water frequently.

7.1.2 Chemical Hazards and Hazardous Materials Anticipated

Based on historical site use and previous investigations the chemical of concern that is most likely to be encountered during this scope of work is inorganic lead. It is possible that workers may encounter hazardous levels of lead during soil sampling, excavation activities, and handling of soil borings. Therefore, the potential exposure routes are dermal contact with potentially impacted soil, inhalation, and ingestion.

To reduce the potential for contact with hazardous materials, personal protective equipment will be used. At minimum level D PPE will be utilized by all Site personnel. Level D will include at minimum: disposable nitrile gloves, face shield or ANSI 2000 protective eye glasses, reflective safety vest, hard hat when overhead hazards exist, and steel toe boots. Long sleeve shirts or T-shirts are mandatory.

7.1.3 Biological Hazards

Several biological hazards may exist on the Site. Black widow spiders can be found in many dry dark covered areas in the Western United States. Black widow spider bites feel like a pin prick followed by a dull, numbing pain affecting the extremities and large skeletal muscles. **No effective first-aid treatment for black widow bites exist and victims must be immediately taken to the care of a physician.** As with black widow bites, any person bitten by a snake will seek immediate medical attention. Another biological hazard is Ticks. Ticks are vectors of many diseases and poisonings. Symptoms of tick bites include: anorexia, lethargy, muscle weakness, irregular movement of the eyes, and ascending flaccid paralysis. Ticks are best removed by slowly withdrawing the arthropod with forceps.

Another likely biological hazard is dog bites. Dog bites can lead to injury and nerve damage. Dog bites can also lead to infection placing the victim at risk of severe illness or death. As the project involves working in residences, it is very important to follow the listed precautions to prevent dog bites:

- ✓ If a dog is present do not enter without speaking to the property owner first.
- ✓ Have the property owner put the dog inside the house. Having the dog tied or being told by the owner that the dog is friendly is not sufficient.
- ✓ Do not approach unfamiliar dogs.
- ✓ Remain motionless when approached by an unfamiliar dog. DO NOT run, panic, or make loud noises. Avoid direct eye contact with the dog.
- ✓ Do not pet a dog without allowing it to see and sniff you first.
- ✓ Do not disturb a dog that is sleeping, eating, or caring for puppies.
- ✓ Immediately let the site supervisor know about any stray dogs that are behaving strangely.

If bitten by a dog get to a safe place and wash wounds. Seek immediate medical attention if the wound is serious.

7.1.4 Electrical Hazards

During the activities to be performed in this project personnel may come into close proximity to electrical lines, panels, or other wiring and electrical equipment. When working around electrically energized wiring, equipment, or panels the potential for electrical shock, fires, and burns can be minimized with proper practices.

As a precaution, all electrical circuits will be treated as live. At least 48 hours prior to the start of activities Underground Service Alert shall be contacted to identify and mark all proximal underground utilities. Areas within approximately six (6) inches of underground utilities will not be disturbed.

7.1.5 Overhead Utility Hazards

Minimum safe distances from energized overhead high-voltage lines shall be maintained in compliance with requirements of California Code of Regulations, Title 8, Section 2946.

General clearance required is summarized in the below table

Nominal voltage (Phase to Phase)		Minimum Required Clearance (Feet)
600.....	50,000	6
over 50,000.....	345,000	10
over 345,000....	750,000	16
over 750,000....	1,000,000	20

Clearance Requirement for boom-type lifting or hoisting equipment is summarized in the below table:

Nominal voltage (Phase to Phase)		Minimum Required Clearance (Feet)
600.....	50,000	10
over 50,000....	75,000	11
over 75,000....	125,000	13
over 125,000....	175,000	15
over 175,000....	250,000	17
over 250,000....	370,000	21
over 370,000....	550,000	27
over 550,000....	1,000,000	42

7.1.6 Underground utility Hazards

At least 48 hours prior to the start of any digging activities, Underground Service Alert shall be contacted to identify and mark all proximal underground utilities. Along with the DigAlert inspection of the property, a visual site survey will be conducted to include inspection of any overhead hazards and access constraints and any underground utilities or hazards that are identifiable by means of pavement cuts, drains, etc. The DigAlert survey, the visual inspection, and utility maps from previous work will be used to identify potential underground hazards. Areas within approximately six (6) inches of underground utilities will not be disturbed. As necessary, hand excavation will be conducted close to existing structures, utilities, mature trees, or other areas that would be difficult to excavate around or that could be damaged by equipment. Soil will not be removed beneath or inside structures, roads, sidewalks, brick patios, driveways, or other inaccessible or permanent features. On private properties, an underground geophysical survey maybe required. Hand digging and potholing maybe used to uncover underground utilities on private properties if authorized by the project manager. An actual geophysical survey shall be conducted if excavation is more than 18 inches.

7.1.7 Traffic Hazards

During the project, it is expected that some activities will be conducted in high-traffic areas, such as roadways or parking lots. A safe zone, based on the property-specific traffic plan, will be established and clearly marked to delineate the work area. The safe zone will be established using signs and cones that will caution drivers and prevent unauthorized vehicles from entering the work zone. Site personnel will wear high-visibility safety vests and use caution when exiting the work area and entering traffic.

If in pedestrian areas caution tape will be used to delineate the work zone and prevent unauthorized members of the public from entering the area. If necessary, alternative walkways outside the work area will be established using cones and caution tape and signs will be placed to direct foot traffic to the alternative walkway.

7.1.8 Noise Hazards

Noise hazards are not expected to occur except possibly during the operation of heavy equipment in the project. During the operation of heavy equipment hearing protection in the form of ear plugs, or equivalent, will be made available nearby. A properly calibrated sound level meter or personal noise dosimetry shall be used to determine noise levels. Measurements will be collected and/or evaluated by a Certified Industrial Hygienist. If measurements indicate 8-hour time-weighted average (TWA) exposure levels over the 85-dBA action level, hearing protection in the form of ear plugs, or equivalent, will be made available nearby any noisy areas. All NEC employees and subcontractors must wear hearing protection (approved by a Certified Industrial Hygienist) if noise levels exceed the Cal-OSHA PEL of 85 dBA during an 8-hour work day or if a sound impulse exceeds 140 dBA. In addition, a Hearing Conservation Program will be provided and followed as required by 8 CCR Article 105. The hearing protection must reduce employee exposures to an 8-hour permissible exposure limit (PEL) of 85 dBA as required by Title 8 CCR Article 105. Hearing protection types will be approved by a CIH. If the noise meter is not available on the subject site and normal conversion is impeded by noise levels, personnel of NEC and its subcontractors will wear hearing protection until such time that the noise levels are properly evaluated and determined to be safe.

7.1.9 Solar Radiation Hazards

Exposure to ultraviolet rays (UV) from the sun can cause damage to skin. The guidelines established by the American Conference of Governmental Industrial Hygienists (ACGIH) shall be followed. All personnel will be required to apply sunscreen designed to protect exposed areas of skin. In addition, wearing hats that help provide

protection from the sun is recommended.

7.1.10 X-Ray Fluorescence (Ionizing Radiation)

X-Ray Fluorescence sampling shall only be conducted by trained personnel. The XRF unit shall be stored in the accompanying portable case when not in use. The XRF will not be pointed at any individual when in use.

7.2 Control Measures

7.2.1 Engineering and Designing to Eliminate or Minimize Hazards

The first step in minimizing job related hazards is selecting appropriate safety features. Design must also include fail-safes and provide redundancy using backup components.

7.2.2 Guarding the Hazard

Hazards that cannot be eliminated by design must be reduced to an acceptable risk level by safety guards or isolation devices that render the hazards inactive.

7.2.3 Providing Warnings

Hazards that cannot be totally eliminated by design or guarding are controlled through using a warning or alarm device.

In order to minimize tracking soil off of the Site into public roadways, trucks removing soil from the exclusion zone will drive over plastic sheeting while being filled with excavation soil. Water will not be used on the tires as this could increase the retention of dirt tracked off-site. Heavy duty brushes will be used to scrape tires clean instead. The exclusion zone shall be the area immediately surrounding the work area. The contamination reduction zone will be the area where oversight will be conducted to ensure soils are removed safely and according to prescribed workplans. The support zone will be the area outside of the workzone limited to those who do not have the training, authorization, or PPE to safely enter the other two zones.

7.2.4 Providing Special Procedures or Training

When design, guarding, or warnings cannot eliminate hazards, contractors must develop procedures, training, and audits to ensure safe completion of work. Training cannot be substituted for hazard elimination when life-threatening hazards are present.

The project has a comprehensive health & safety training program tailored to the client requirements and scope of work. All office-based employees or field employees who spend a significant portion of their time in an office or trailer must receive specialized office training consisting of proper lifting techniques, ergonomics, housekeeping, common office hazards, waste management and office emergencies. All projects should be associated with a NEC office, and the Office Health & Safety Plan should be reviewed for additional information. All personnel and on-site workers shall have completed the OSHA 40 hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training and have a current 8 hour refresher training. All lead staff shall have completed the HAZWOPER Supervisor training. At least one staff member present shall have CPR/First Aid, excavation, and trenching safety certification.

All personnel shall be listed in the Training-Medical Records spreadsheet, which will identify the training requirements and expiration dates for applicable certifications. Safety training for project personnel will be based primarily on their work activities and corresponding exposure to hazardous substances and health hazards. The NEC Corporate Safety and Health Program (CSHP) and applicable sections will be used as a reference for determining the minimum training requirements based on the project scope of work.

<u>Applicable</u>	<u>Corporate Safety and Health Program Section/Topic</u>
Yes No	CSHP-1 Medical Qualification and Surveillance
Yes No	CSHP-2 First Aid - list all site personnel in the Training-Medical spreadsheet that will be a first responder due to the insufficient response time of EMS personnel. See Section 6.9 of the PSHEP for additional information on first responders.
Yes No	CSHP-3 Ergonomics
Yes No	CSHP-4 Concrete and Masonry Construction
Yes No	CSHP-5 Field and Office Facilities
Yes No	CSHP-6 Personal Protective Equipment
Yes No	CSHP-7 Hearing Conservation – list all site personnel in the Training-Medical spreadsheet that will be exposed to noise at levels greater than 85 decibels over an 8 hour time period, which require annual training and audiograms. Include the work activities generating the noise in Section 4.11.6 of this PSHEP.
Yes No	CSHP-8 Respiratory Protection – list all site personnel in the Training-Medical spreadsheet that will have a theoretical potential exposure to contaminants above a permissible exposure limit (PEL) based on known soil or water analysis results, or when there is known contamination with no exposure data. Personnel are required to have annual training, medical clearance and a fit test in order to wear a respirator.
Yes No	CSHP-9 Air Monitoring – complete Exhibit 6-1 that identifies chemicals of concern, air monitoring equipment, action levels (based on OSHA PELs) and corresponding PPE/Action Taken.
Yes No	CSHP-10 Hazard Communication
Yes No	CSHP-11 Emergency Procedures
Yes No	CSHP-12 Fire Protection
Yes No	CSHP-13 Hazardous Waste Operations – list all site personnel in the Training-Medical spreadsheet that will be engaged in hazardous substance removal or other activities that expose or potentially

Exide Off-site Remediation Health and Safety Plan
expose them to hazardous substances or health hazards (such as entering an exclusion zone), which are required to receive appropriate training as required by 29 CFR 1910.120, including, but not limited to, initial 40-hour, 8-hour Supervisor and annual 8-hour refresher training.

Yes **No** CSHP-14 Process Safety Management

Yes **No** CSHP-15 Confined Space - list all site personnel in the Training-Medical spreadsheet that will be involved with confined spaces, which will require proof of training.

Yes No CSHP-16 Signs, Barricades and Traffic Control

Construction equipment may be used during the execution of the scope of work and shall conform to the following conditions:

- ✓ Only authorized and trained personnel shall operate equipment. All tools and equipment shall be maintained in good condition and inspected daily.
- ✓ Workers shall report all tools or equipment not working properly.
- ✓ Damaged tools or equipment shall be removed from service and tagged "DO NOT USE".
- ✓ Appropriate associated PPE shall be used when using tools.
- ✓ Employees shall not work under vehicles supported by jacks or chain hoists without protective blockings that will prevent injury if jacks or hoists should fail.

It is not expected that employees will need to use ladders while completing the scope of work for this project. Falls from ladders are one of the leading causes of occupational fatalities and injuries. If necessary all operation of portable ladders shall comply with California Code of Regulations, Title 8, Section 3276. Including and not limited to:

- ✓ Read and follow all labels and markings on the ladder.
- ✓ Always inspect ladders before use. If a ladder is found to be damaged it must be removed and tagged until repaired or discarded.
- ✓ Always maintain 3 points of contact on the ladder when climbing (two hands and a foot or two feet and a hand). Always face the ladder when climbing and keep your body near the middle of the step.
- ✓ Use a ladder only on a stable level surface.
- ✓ Do not move or shift a ladder with a person or equipment on the ladder.
- ✓ An extension or straight ladder must extend at least 3 feet above the point of support. The 4 to 1 rule shall be used when placing the ladder: for every four feet of height, move the base of the ladder one foot away from the wall.
- ✓ A ladder placed in any location where it can be displaced by other activities must be secured or a barricade must be erected to keep traffic away from the ladder.
- ✓ Do not exceed the maximum load rating of a ladder. Remember to include

weight of any tools or equipment.

Duty Rating	Ladder Type	Working Load (lbs)
Special Duty	IAA	375
Extra Heavy-Duty	IA	300
Heavy-Duty	I	250
Medium-Duty	II	225
Light-Duty	III	200

7.2.5 Perimeter Dust Monitoring and Dust Control

To ensure proper compliance with South Coast Air Quality Management District, air monitoring will be performed during soil removal and placement activities to ensure that there is no fugitive dust from the impacted soils or fill materials. Real-time particulate monitors and personal air monitors (PAMs) will be used during the operations as detailed in the subsequent sections.

Particulate dust monitors measure the total dust in the air. Three particulate dust monitors will be set up daily at each property:

- One monitor will be placed downwind of the excavation area to monitor the effects of the work;
- One monitor will be placed upwind of the excavation to monitor dust coming from sources unrelated to the work; and
- A third monitor will be placed at the property's closest entryway to excavation to identify particulates near the work area.

Dust Trak model 8530 or model 8532 dust meter or equivalent aerosol monitors shall be used measure total suspended particles (TSP) in the air. These monitors measure aerosol particulates corresponding to particulate matter up to 10 microns in diameter (PM10).

Monitors will be placed each day prior to soil disturbance or placement activities, and the levels relative to the area-specific action level will be reviewed hourly during the work. The action level will be the SCAQMD's standard for PM10, which is 50 $\mu\text{g}/\text{m}^3$ of PM10 when determined by simultaneous sampling, as the difference between upwind and downwind samples collected. This concentration will be greater than the upwind monitor reading that measures the ambient (i.e., non- work-related) conditions. If the downwind or entryway monitor shows a level exceeding the action level, the upwind monitor will be checked to see if there is an upwind source for the increased dust level. The monitor will be checked again in 10 minutes to determine whether the level has dropped below

the action level. If it has not, work will be decreased and the dust suppression techniques will be correspondingly increased as needed to lower the dust levels below the action level. Although dust monitoring will not be conducted during a significant rain event, dust meters will be protected in place in the event of a sudden shower.

In addition to the three dust monitors described above, during disturbance of lead-impacted soils, a Gilian GilAir-5 model (or comparable) personal air monitoring (PAM) will be co-located with a dust monitor at each location during the excavation work. The PAM cassettes will be analyzed for lead content at an offsite laboratory after completion of the excavation work. The findings will be reviewed and documented. The date, start time, end time, and air flow will be recorded on the cassette for analysis.

Work proposed for this project requires disturbance of soil up to an 18-inch depth. Strict dust control measures shall be used to eliminate air transport of lead contaminated soil. To ensure proper dust control and compliance with SCAQMD Rule 1466 the following dust control measures shall be implemented:

Based on the amended SCAQMD Rule 1466, TCRA's, with some exceptions, are exempt from the Rule 1466 requirements. See specific requirements in Appendix A that includes Rule 1466 Compliance matrix prepared based on July 7, 2017 of the Rule and approved based on amended December 1, 2017 version. The following subsection have been agreed upon between DTSC and SCAQMD:

Rule 1466. (e)(4)(E)

- Supersacks are covered properly by a 10-mil-thick plastic sheeting that overlaps on sides a minimum of 24 inches and anchored and secured at the end of working day, if necessary.

Rule 1466. (e)(4)(F)

- Contractor conducts daily visual inspection of all covered supersacks and inspections are recorded.

Rule 1466. (e)(8)

- Excavation activities are ceased when the instantaneous wind speed exceeded 25 mph or wind speed averaged over 15 minutes exceeded 15 mph.

Rule 1466. (d)(1)

- A minimum of 1-foot freeboard atop of soil inside supersack is required.

Rule 1466. (K)(4)

- Excavated soil is directly loaded to bins, supersacks or trucks. No soil stockpiles are generated on the site. (Due to the small size of residential properties, direct loading of soil onto trucks is not possible.)
- When loading, supersacks lowered into truck's bed until reached less than 1 foot above bottom of truck bed.
- Supersacks are kept inaccessible to unauthorized persons at all times and secured and surrounded by a construction fence when they are not used

During construction activities, a sign will be placed at the front of the property. DTSC had agreed to take additional steps associated with signage as part of Rule 1466 compliance. The sign will display the following information and will be visible from the street nearest the excavation activities:

TO REPORT ANY DUST LEAVING THE SITE PLEASE CALL DTSC'S HOTLINE AT 1-844-225-3887 OR THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AT 1-800-CUT-SMOG

7.2.6 Breathing Zone Monitoring

In addition to the perimeter monitoring specified, NEC will implement worker exposure monitoring initially and periodically during soil excavation activities to assess worker exposure to lead. The breathing zone monitoring should be conducted within one foot of the workers mouth to accurately assess the exposure of the worker. During disturbance of lead-impacted soils, a Gilian GilAir-5 model (or comparable) personal air monitoring (PAM) will be used to assess worker exposure to lead. The PAM cassettes will be analyzed for lead content at an offsite laboratory after completion of the excavation work. The findings will be reviewed and documented. The date, start time, end time, and air flow will be recorded on the cassette for analysis. All air samples will be submitted to an AIHA certified laboratory under proper chain-of-custody procedures. Results shall be analyzed and be available for review within 5 to 10 business days.

If Sampling results indicate that employee exposure is greater than the Cal-OSHA level for lead (30 micrograms per cubic meter) the Site Health and Safety officer will stop work and modify work procedures and/or PPE levels to reduce lead exposure.

If Cal-OSHA action levels of lead are detected then biological monitoring requirements and other provisions of California Code of Regulations, Title 8, Section 1532 shall be implemented before further work proceeds. Until re-sampling confirms that exposure levels have been appropriately reduced.

7.2.7 Medical Monitoring

It is believed that significant worker lead exposure is highly unlikely. Should air

Exide Off-site Remediation Health and Safety Plan monitoring become necessary and it is determined that exposure is at or above the Cal-OSHA action level for lead then the medical monitoring requirements stabled by California Code of Regulations, Title 8, Section 1532.1 will be enacted.

Regardless of the medical monitoring requirements of Cal-OSHA and the results of personnel monitoring, all NEC employees assigned to conduct field operations will receive a baseline Blood lead and Zinc Protoporphyrin levels exam prior to starting work on the project. At the time of termination from their activities on the project employees may receive a similar exam.

7.2.8 Heat Stress Monitoring

The Climate at the PIA of the Site is characterized by warm summers and mild winters. Given ambient air temperatures in the area workers may experience varying degrees of heat stress if precautions are not taken. All site personnel shall follow the standards set by California Code of Regulations, Title 8, Section 3395, Heat Illness Prevention.

If ambient air temperatures reach 80°F or higher at least one area of shade shall be maintained. The amount of shade shall be enough to accommodate the number of employees present. The shaded area will be located as close as possible to the work area. Employees will be allowed and encouraged to take preventative cool-down rest in the in the shaded area.

If ambient air temperatures reach 95°F or higher High Heat Procedures shall be implemented and at least one of the following observation methods shall be used to monitor employees for signs of heat illness:

- ✓ One supervisor or designated person to observe groups of 20 or fewer employees
- ✓ Mandatory buddy system
- ✓ Regular communication with a sole designated employee by radio or cellular phone.

7.2.9 Heat Stress Emergency Response

To ensure proper emergency response to heat illness the subsequent measures will be followed:

- ✓ The first line of defense against heat illness is proper communication and observation of all employees at the work site.
- ✓ All site personnel shall be made aware of first aid measures and how medical emergency services will be provided.

- ✓ If a supervisor observes, or any employee reports, any signs of heat illness the supervisor shall take immediate action commensurate with the severity of the illness.
- ✓ If an employee exhibits any signs of heat illness, they shall be monitored and shall not be left alone or sent home without being offered onsite first aid and or emergency medical services.
- ✓ In the event of an emergency a designated employee shall provide clear and precise directions to emergency responders.

7.2.10 Heat Stress Training

All project personnel will be trained to recognize the several forms of heat stress and associated symptoms:

- ✓ Heat Rash: A skin condition caused by blocked sweat ducts and trapped sweat beneath the skin that can happen due to continuous exposure to hot or humid air. The condition is characterized by a localized red skin rash and reduced sweating.
 - ✓ Heat Cramps: a type of heat illness that can be caused by loss of large amounts of salt and water and inadequate consumption of fluids or electrolytes. Usually associated with cramping in the abdomen, arms, and calves. If an employee is suffering from heat cramps they should lie in a cool place and be given cool water or electrolyte solution such as a sports drink.
 - ✓ Heat Exhaustion: a form of shock that can be brought on by the loss of water and electrolytes and sweating. Symptoms usually include nausea, dizziness, irritability, headache, and high body temperature.
- Heat Stroke: also known as sun stroke, a severe heat illness. Symptoms include a body temperature greater than 104°F, confusion, red dry or damp skin, headache, and dizziness. Complications due to heat stroke may include seizures, rhabdomyolysis, or kidney failure. Heat stroke is a true medical emergency.

7.2.11 Illumination

It is anticipated that all work performed on this project will be done during normal daylight hours therefore no additional illumination equipment is expected to be used.

7.2.12 Personal Protective Equipment

The last line of defense to protect workers from injury is the use of personal protective equipment(PPE), such as hard hats, gloves, eye protection, and other protective equipment. Bulky, cumbersome, and heavy, personal protective equipment is often discarded or not used, rendering PPE ineffective without proper controls.

Only level D PPE is anticipated to be used in this project. Level D PPE consists of disposable nitrile gloves, face shield or ANSI 2000 protective eye glasses; reflective

safety vest; hard hat; and steel toe boots. Also for this project PPE will include suitable full work pants and a long sleeve shirt. When site workers are performing tasks that contact high level of lead-contaminated soil, the Site Health and Safety officer will decide if disposal Tyvek coveralls shall be used.

Eyewash kits will be available at all times.

8.0 Decontamination Procedures

All decontamination procedures shall comply with California Code of Regulations, Title 8, Section 5192, including decontamination of tools and workers.

Decontamination will occur at the designated and labeled decontamination zone in each property. Tools shall be cleaned by washing in plastic bins containing phosphate-free soap solution and water. Dedicated brushes and towels for tool cleaning shall also be provided.

Personnel leaving the work area must at a minimum wash their hands and face and disposable gloves must be disposed of onsite. A decontamination station for footwear shall be established within the work area. Boots shall be decontaminated before leaving the work area by first HEPA vacuuming if necessary then washing in a detergent solution with a stiff-bristled brush and rinsing with clean water. The decontamination containers shall be clearly labeled to identify the wash and rinse.

All waste water generated from decontamination will be temporarily containerized in DOT-approved 55-gallon steel drums or equivalent. All waste water will be disposed of at proper facilities following analytical profiling of the waste.

All solid wastes from decontamination and site activities will be temporarily containerized in DOT-approved 55-gallon steel drums or equivalent. All solid waste will be disposed of at proper facilities following analytical profiling of the waste.

9.0 Emergency Response

All site personnel will be trained in the Site characteristics, procedures, work plan, and Health and Safety Plan. All personnel will be vigilant and aware over the work that is being done around them as well as their own assigned task. All personnel are expected to report any anomalous conditions to supervisors.

9.1 Pre-Emergency Planning

Daily Health and Safety meetings will be conducted by the Site Health and Safety Officer. At each daily "tailgate" meeting the topics discussed and personnel in attendance shall be recorded on a form designed for this purpose.

9.2 Emergency Equipment

At minimum, the work area shall have:

- ✓ Dry Chemical Fire Extinguisher
- ✓ First Aid Kit
- ✓ Cellular Telephone
- ✓ Eyewash kit

9.3 Emergency Evacuation

In the event that the area must be evacuated all personnel will move off site to a pre-designated meeting zone. Emergency response teams will be notified by phoning 911. No one will re-enter the Site prior to approval from the Site Safety Officer.

9.4 Emergency Response Procedures

In case of emergency or hazardous situations individuals who observe the situation shall immediately notify the site supervisor. Response actions will be taken based on the emergency situation.

9.4.1 Fire

Fires are to be extinguished with Site fire extinguishers. The area surrounding the fire will be evacuated and the fire department will be contacted.

9.4.2 Gas or Fume Release

In the event of gas or other fumes release, employees are to evacuate the site and notify the proper authorities.

9.4.3 Hazardous Substance Release

If a hazardous substance is released all personnel will evacuate the area. Emergency response personnel shall be contacted for appropriate site response.

9.4.4 Personnel Injury

In the event of personnel injury or exposure, first aid shall be administered and 911 will be contacted.

10.0 Amendments

This HASP can be amended based on hazards encountered in the field and physical field condition.

Appendix A

Rule 1466 Compliance Matrix for Exide

South Coast Air Quality Management District Rule 1466 Compliance Matrix¹	
Provision of Rule 1466	Required Actions For Compliance with Rule 1466 Requirements
Rule 1466 requires notifications prior to beginning all earth-moving activities and when ambient PM ₁₀ dust concentration limits are exceeded.	Submit all Rule 1466 notifications to Rule1466@aqmd.gov . SCAQMD is working on a web notification tool that will be available shortly.
(k)(4) Earth-moving activities consisting only of excavation activities of soil with applicable toxic air contaminant(s) of less than 500 cubic yards, directly loaded into a truck or bin for transport, shall be exempt from all requirements except: paragraphs (e)(2) through (e)(8), paragraph (e)(11), and subdivisions (f), (h), and (i). The owner or operator or designating agency may use an alternative to directly load into a truck or bin for transport that meets the objectives and effectiveness of directly loading soil, where the objective and effectiveness is stated in Appendix 2. Use of alternative measure must be submitted and approved by the Executive Officer as specified under subdivision (j).	<p>Requirements for approved alternative</p> <p>The cumulative volume of soil excavated at contiguous properties may not exceed 500 cubic yards.</p> <p>Soil removed will be stockpiled on top of plastic sheeting adjacent to excavation areas and transferred to a haul truck expeditiously. As the lead-impacted soil is excavated, it will be loaded directly into a haul truck or into one cubic yard Super Sack and then into a haul truck.</p> <p>Super Sacks will be only used to transfer soil from the yard(s) to haul trucks; they will be emptied into the haul truck. The height of the drop will be minimized to ensure that there is no visible dust during the process. A freeboard of 1 foot is maintained above the top of the soil in the Super Sacks. Since the soil is wet, the potential for the generation of fugitive dust will be minimized. Furthermore, the following additional Health and Safety measures must be implemented during the excavation activities to ensure no dust will be generated:</p> <ul style="list-style-type: none"> • Water will be sprayed on the soil to minimize fugitive dust. • Dust monitoring will be conducted daily to ensure that so that no dust will be generated. <p>Signage must be posted similar to Rule 403 and Rule 1466 requirements, which include posting the SCAQMD's complaint hotline. The signage may read:</p> <p style="text-align: center;">TO REPORT ANY DUST LEAVING THE SITE, PLEASE CALL [DTSC CONTACT] OR THE</p>

¹ Paragraph 5, Subtask 2, of this Contract provides that the Contractor shall comply with the provisions of SCAQMD Rule 1466. This Exhibits, setting forth applicable requirements of Rule 1466, is provided for the convenience of the Contractor. In the event of a discrepancy between this Matrix and any provision of Rule 1466, Rule 1466 governs.

South Coast Air Quality Management District Rule 1466 Compliance Matrix¹	
Provision of Rule 1466	Required Actions For Compliance with Rule 1466 Requirements
	<p style="text-align: center;">SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AT 1-800-CUT SMOG.</p> <p>The sign will be placed at the front of the property that will display appropriate contact information and a toll-free hotline for additional information. From 8:00 a.m. to 5:00 p.m., the hotline will be answered by a bilingual representative who will collect caller information and forward the inquiry to the appropriate DTSC representative. During non-business hours, calls to the hotline will be directed to voicemail, which is checked daily during normal business hours. In the event of an emergency, residents, the hotline staff, or a contractor may call the Office of Emergency Services at (800) 852-7550.</p> <p>The Contractor must comply with SCAQMD Rule 403(d)(1)(A), which states:</p> <p style="padding-left: 40px;">No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that the dust remains visible in the atmosphere beyond the property line of the emission source.</p>
<p>(e)(2) An owner or operator conducting earth-moving activities shall:</p> <p style="padding-left: 20px;">(A) Adequately wet to the depth of earth-moving activity and allow time for penetration; and</p> <p style="padding-left: 20px;">(B) Adequately wet at frequencies to prevent the generation of visible dust plumes.</p>	<p>The Contractor must fully comply with this provision.</p> <p>The Contractor will comply with all requirements of the TCRA Implementation Plan and the IRMW, including dust suppression measures and health and safety requirements, without limitation:</p> <ul style="list-style-type: none"> • Spray of water • Spray of water amended with environmentally safe additives (e.g., Simple Green, Envirotech Vapor Suppression, or equivalent) • Application of chemical foams <p>To control the possible generation and migration of dust during the excavation and handling of waste, the Contractor will implement the following procedures:</p>

South Coast Air Quality Management District Rule 1466 Compliance Matrix¹	
Provision of Rule 1466	Required Actions For Compliance with Rule 1466 Requirements
	<ul style="list-style-type: none"> • Apply water directly to the active excavation prior to soil disturbance. Also apply water during the truck loading operations, as appropriate. • Promptly apply water to excavation, loading, or unloading operations upon any observance of dust. • Control dust during operation of trucks by not allowing waste to be dropped from heights above the top rail of the truck body. • For days on which wind speeds exceed 20 mph, cease work and immediately secure or cover excavation areas and soils in a manner that does not generate fugitive lead dust. • Regularly inspect all rear gate seals and locking mechanisms on waste transport vehicles in order to prevent spillage and dust production. • HEPA-vacuum the trucks before they leave the loading areas to prevent the deposition of waste. • Clean up all spilled soil waste within the loading area and work areas. Following each day's construction activities, the contractor uses HEPA-vacuum in all areas to remove any residual soils from non- excavation areas. • To prevent leaking, use polyethylene sheeting to line all transport vehicles used for offsite transport of waste. Place sufficient sheeting material in the transport vehicle to allow the contractor to cover and wrap the waste within the vehicle. The contractor installs secured, strapped-down covers to prevent fugitive lead dust during transport to the disposal facility. To ensure compliance with the project performance standards, air monitoring is conducted. <p>Additives must meet applicable specifications, criteria, or tests required by any federal, state, or local agency or any applicable law, rule, or regulation and are used in sufficient concentration and application frequency to maintain a stabilized surface and no less than what is specified by the manufacturer.</p> <p>The Contractor must cease earth-moving activities if the wind speed is greater than 15 miles per hour</p>

South Coast Air Quality Management District Rule 1466 Compliance Matrix¹	
Provision of Rule 1466	Required Actions For Compliance with Rule 1466 Requirements
	<p>(mph) averaged over a 15-minute period or instantaneous wind speeds exceed 25 mph.</p> <p>The Contractor must include these requirements in the required Health and Safety Plan and must implement them during the field operation.</p>
<p>(e)(3) An owner or operator that is moving vehicles on, within, or off a site where earthmoving activities are occurring shall:</p> <ul style="list-style-type: none"> (A) Post signs at all entrances of the site to designate the speed limit as 15 miles per hour; (B) Stabilize the surface of all vehicular traffic and parking areas by applying gravel, paving, or dust suppressant; (C) Not allow track-out to extend beyond 25 feet of the property line. Remove any track-out each day using a vacuum equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles; (D) Clean the soil from the exterior of trucks, trailers, and tires prior to the truck leaving the site; and (E) The owner or operator shall utilize at least one of the measures listed in clause (e)(3)(E)(i) through (e)(3)(E)(iv) at each vehicle egress from the site to a paved public road: <ul style="list-style-type: none"> (i) Install a pad consisting of washed gravel (minimum-size: one inch), maintained in a clean condition, to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long; (ii) Pave the surface extending at least 100 feet from the property line and at least 20 feet wide; (iii) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipes, or grates) at least 24 feet long and 10 feet wide; or 	<p>The Contractor must fully comply with this provision.</p> <p>During construction activities, the sign displaying a toll-free hotline information will be placed at the front of the property and will be visible from the street nearest the excavation activities.</p> <p>Speed limits must be established and implemented by signs and flagmen, as necessary, to minimize dust generation and maintain a safe environment for workers and local residents, including children.</p> <p>During loading, all necessary precautions must be taken to prevent track-out from trucks or roll-off bins. The vehicles must undergo dry decontamination (e.g., shovels to remove any fallen soil and brushes to loosen caked-on soil, followed by HEPA vacuuming), as necessary. Following the transport vehicle's departure, residual soils must be removed from the decontamination area using the techniques described in the row above. In addition, all loading operations must be conducted atop plastic sheeting to avoid the potential spread of impacted waste.</p> <p>After loading and decontamination, the trucks must proceed directly to the disposal facility. All necessary precautions must be taken to prevent track-out from trucks or roll-off bins. The vehicles must undergo dry decontamination (e.g., shovels to remove any fallen soil and brushes to loosen caked-on soil, followed by HEPA vacuuming), as necessary.</p> <p>If necessary, the tires of soil transport trucks must be washed prior to the truck leaving the vicinity in order to prevent tracking of soil that would increase in fugitive dust levels outside the site perimeters.</p>

South Coast Air Quality Management District Rule 1466 Compliance Matrix¹	
Provision of Rule 1466	Required Actions For Compliance with Rule 1466 Requirements
<p>(iv) Install and utilize a wheel washing system to remove soil from tires and vehicle undercarriages.</p>	<p>A decontamination station must be established on site to prevent any contamination from migrating offsite.</p> <p>Before excavated waste is loaded into trucks, plastic sheeting must be placed on the ground or asphalt so that spilled waste cannot contact the ground surface.</p> <p>Trucks must be rolled back and forth to allow area property owners access to driveways/streets. In these cases, the plastic will be rolled back to the sidewalk so that the truck tires do not roll over spilled soil and deposit it into the gutter/street. When loading is complete, debris will be placed in the appropriate container for proper disposal, and the plastic sheeting will be folded and disposed daily.</p> <p>All equipment wheels/tires must be cleaned over plastic sheeting by means of shovels and stiff-bristled brooms or brushes until they are fully cleaned.</p> <p>When cleaning is complete, debris must be placed in the appropriate container for proper disposal, and the plastic sheeting are folded and disposed.</p> <p>A HEPA-certified vacuum must be used on hardscape areas where residual impacts may be present following the removal actions. A HEPA vacuum must be used on any spilt soils as necessary.</p> <p>Immediately after completion of the work and prior to exiting the property, excavation equipment must be decontaminated by wet wash or by a HEPA vacuum equipped with a filter rated by the manufacturer to achieve 99.97 percent capture efficiency for 0.3- micron particles.</p> <p>The Contractor must take preventative measures to minimize the need for decontamination of trucks.</p>
<p>(e)(4) An owner or operator conducting earth-moving activities that result in the development of stockpiles of any soil with applicable toxic air contaminants shall:</p>	<p>The Contractor must fully comply with this provision.</p> <p>The Contractor must include in the required Health and Safety Plan that the required plastic sheeting will be 10-millimeter-thick and overlaps a minimum</p>

South Coast Air Quality Management District Rule 1466 Compliance Matrix¹	
Provision of Rule 1466	Required Actions For Compliance with Rule 1466 Requirements
<p>(A) Segregate non-contaminated stockpiles from stockpiles with applicable toxic air contaminants and label with “SCAQMD Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants Applicable Soil”;</p> <p>(B) Maintain stockpiles to avoid steep sides or faces that exceed the angle of repose;</p> <p>(C) Not create a stockpile that is more than 400 cubic yards of soil and greater in height than the perimeter fencing and windscreen;</p> <p>(D) Apply dust suppressant to stockpiles;</p> <p>(E) At the end of each working day, either chemically stabilize and/or completely cover with 10-millimeter-thick plastic sheeting that overlaps a minimum of 24 inches. The plastic sheeting shall be anchored and secured so that no portion of the soil is exposed to the atmosphere; and</p> <p>(F) Daily, inspect stabilized or covered stockpiles. For a stabilized stockpile, such inspections shall include a demonstration of stabilization by one or more of the applicable test methods contained in SCAQMD Rule 403 Fugitive Dust Implementation Handbook. For a covered stockpile, such inspections shall include a visual inspection of all seams and plastic cover surfaces. Immediately re-stabilize or repair any holes, tears, or any other potential sources of fugitive toxic air contaminant emissions.</p>	<p>of 24 inches. The plastic sheeting must be anchored and will be secured so that no portion of the soil will be exposed to the atmosphere.</p> <p>The Contractor must include in the required Health and Safety Plan that inspection will occur daily and repairs will occur immediately.</p> <p>The Contractor must implement these requirements during field operation.</p> <p>Note: Rule 1466 (e)(4)(A)-(C) is applicable if there are stockpiles created.</p> <p>Almost all of the soil that will be removed will be contaminated with lead. Therefore, no segregation will be necessary.</p> <p>No stockpiles, as defined in Rule 1466(c)(17), will be maintained at the properties.</p> <p>The Contractor will apply dust suppressants to the excavated soil. (See Dust Suppression Techniques referenced in response to section (e)(2) above.)</p> <p>At the end of each working day, all soil must be secured in Super Sacks, and must be completely covered with plastic sheeting. If Super Sacks are not loaded into a truck that day, they must be secured with the construction fence around them and must be loaded the following day.</p> <p>The Contractor Contract Manager must inspect covered Super Sacks.</p>
<p>(e)(5) An owner or operator conducting truck loading activities of soil containing applicable toxic air contaminant(s) shall:</p> <p>(A) Apply dust suppressant to material prior to loading;</p> <p>(B) Empty the loader bucket slowly so that no dust plumes are generated;</p>	<p>The Contractor must fully comply with this provision.</p> <p>The Contractor will not conduct truck unloading activities of soil containing toxic air contaminants. The Contractor will not transport soil by truck within a site.</p> <p>Dust suppressant must be applied to material prior to loading, any loader bucket utilized must be emptied slowly so that no dust plumes will be</p>

South Coast Air Quality Management District Rule 1466 Compliance Matrix¹	
Provision of Rule 1466	Required Actions For Compliance with Rule 1466 Requirements
<p>(C) Minimize the drop height from the loader bucket;</p> <p>(D) Maintain at least six inches of space between the soil and the top of the truck bed while transporting within a site; and</p> <p>(E) Completely tarp the truck and trailer prior to leaving the site.</p>	<p>generated, drop height from the loader bucket must be minimized, and the truck and trailer must be completely tarped prior to leaving the site. (See Dust Suppression Techniques referenced in response to section (e)(2) above.)</p>
<p>(e)(6) An owner or operator conducting truck unloading activities of soil containing applicable toxic air contaminants shall:</p> <p>(A) Apply dust suppressant to material prior to unloading; and</p> <p>(B) Empty the trailer slowly so that no dust plumes are generated.</p>	<p>The Contractor must fully comply with this provision.</p> <p>The Contractor will not conduct truck unloading activities of soil containing toxic air contaminants.</p>
<p>(e)(7) The owner or operator shall immediately remove any spilled soil containing applicable toxic air contaminant(s).</p>	<p>The Contractor must fully comply with this provision.</p> <p>The Contractor must remove any spilled soil containing applicable toxic air contaminants. (See discussion at section (e)(3) above.)</p>
<p>(e)(8) The owner or operator shall cease earth-moving activities if the wind speed is greater than 15 miles per hour (mph) averaged over a 15-minute period or instantaneous wind speeds exceed 25 mph.</p>	<p>The Contractor must fully comply with this provision.</p> <p>The Contractor must stop all earth-moving activities if the wind speed is greater than 15 miles per hour (mph) averaged over a 15-minute period or instantaneous wind speeds exceed 25 mph. The Contractor must stop all work if the wind speed reaches 20 mph.</p> <p>The Contractor must include these requirements in the required Health and Safety Plan and must implement them during the field operation.</p>
<p>(e)(11) An owner or operator that is conducting earth-moving activities of soil with applicable toxic air contaminant(s) at a school, early education center, joint use agreement property, or adjacent athletic area shall:</p> <p>(A) Only conduct earth-moving activities at a school or early education center outside of the hours between 7:30 a.m. and 4:30</p>	<p>The Contractor must fully comply with this provision.</p> <p>All soil that is excavated must be loaded directly into Super Sacks or haul trucks and removed from the site during the excavation day or, on occasion, the following day (maximum 1 day).</p> <p>Super Sacks will not be sealed and they will not be used for transporting soil. Super Sacks will only</p>

South Coast Air Quality Management District Rule 1466 Compliance Matrix¹	
Provision of Rule 1466	Required Actions For Compliance with Rule 1466 Requirements
<p>p.m. on days when the school or early education center is in session;</p> <p>(B) Not conduct earth-moving activities at a school, early education center, joint use agreement property, or adjacent athletic area if there is a school or early education center sponsored activity or youth organized sports at that site;</p> <p>(C) Handle excavated soils with applicable toxic air contaminants by:</p> <ul style="list-style-type: none"> (i) Immediately placing soil in a leak-tight container whereby any contained solids or liquids are prevented from escaping or spilling out; (ii) Directly loading soil in trucks, applying dust suppressant, and covering prior to transporting; or (iii) Stockpiling pursuant to paragraph (e)(4), in a fenced area that is not accessible to the general public, and locked when not in use; and <p>(D) Within five (5) days of its excavation, remove all soil with applicable toxic air contaminants from the site.</p>	<p>be used to transfer soil from the yard(s) and will be emptied into the truck. The height of the drop must be minimized to ensure that there is no visible dust during the process. When not in use, Super Sacks must be secured and must be surrounded by construction fence.</p> <p>The Contractor must include securing Super Sacks using temporary post-driven fencing as requirements in the required Health and Safety Plan.</p>
<p>(f)(1) At least 72 hours and no more than 30 days prior to conducting any earth-moving activities on any site meeting the applicability requirements of subdivision (b), the owner or operator shall electronically notify the Executive Officer, using a format approved by the Executive Officer, of the intent to conduct any earth-moving activities. Notifications shall include the following requirements:</p> <ul style="list-style-type: none"> (A) Name, address, telephone number, and e-mail address of the owner or operator; (B) Name, telephone number, and e-mail address of the on-site dust control supervisor; (C) Project name and, if applicable, the project identification number from the designating agency; 	<p>The Contractor must fully comply with this provision.</p> <p>SCAQMD is in the process of developing their online Rule 1466 notification form. The Contractor will comply with SCAQMD's instruction to submit Notification via email to Rule1466@aqmd.gov.</p>

South Coast Air Quality Management District Rule 1466 Compliance Matrix¹	
Provision of Rule 1466	Required Actions For Compliance with Rule 1466 Requirements
<p>(D) Project location (address and/or coordinates);</p> <p>(E) Identify whether the site is a school, early education center, joint use agreement property, or adjacent athletic area;</p> <p>(F) A map indicating the specific location(s) of each earth-moving activity and the concentrations of the applicable toxic air contaminant(s) and location of PM10 monitors;</p> <p>(G) A description of the earth-moving activities, estimated volume of soil with applicable toxic air contaminant(s), and a schedule that includes the anticipated start and completion dates of earth-moving activities;</p> <p>(H) Current and/or previous type of operation(s) and use(s) at the site; and</p> <p>(I) Applicable Exemption (s)</p> <p>(J) Whether the notice is a revised notification.</p> <p>(2) Notifications Updates</p> <p>Notification pursuant to paragraph (f)(1) shall be updated when any of the following conditions arise:</p> <p>(A) Earlier Start Date</p> <p style="padding-left: 40px;">A change in the start date of any earth-moving activity to an earlier date shall be reported to the SCAQMD no later than 72 hours before any earth-moving activities begin.</p> <p>(B) Later Start Date</p> <p style="padding-left: 40px;">A delay in the start date of any earth-moving activity shall be reported to the SCAQMD as soon as the information becomes available, but no later than the original start date</p> <p>(C) Change in Exemption Status</p> <p style="padding-left: 40px;">Any change(s) in exemption status pursuant to subdivision (k) shall be reported to the SCAQMD as soon as the</p>	

South Coast Air Quality Management District Rule 1466 Compliance Matrix¹	
Provision of Rule 1466	Required Actions For Compliance with Rule 1466 Requirements
<p>information becomes available, but no later than 48 hours after the information becomes available.</p> <p>(3) Within 72 hours of an exceedance of the PM10 emission limit specified in subdivision (d), the owner or operator of a site meeting the applicability requirements of subdivision (b) shall electronically notify the Executive Officer, using a format approved by the Executive Officer, of the exceedance and shall include the following information:</p> <ul style="list-style-type: none"> (A) Name, address, telephone number, and e-mail address of the owner/operator; (B) Name, telephone number, and e-mail address of the on-site dust control supervisor; (C) Project name and, if applicable, the project identification number from the designating agency; (D) Project Location (address and/or coordinates); (E) PM10 monitoring results, including result, date and time of exceedance(s), 12 hours before first exceedance, and 12 hours after last exceedance; (F) Earth-moving activities occurring at the date and time of exceedance(s); and (G) Dust control measure(s) taken to mitigate fugitive dust. 	
<p>(h) The owner or operator shall maintain records for a period of not less than three years and shall make such records available to the Executive Officer upon request. At a minimum, records shall be maintained daily and shall include:</p> <ul style="list-style-type: none"> (1) Inspection of all covered stockpiles containing soils with applicable toxic air contaminants; (2) Results of wind and PM10 monitoring, including instrument make and model; settings; configuration; and calibration, correction, and correlation factors, maintenance, operator 	<p>The Contractor must fully comply with this provision.</p> <p>The Contractor must conduct visual inspection of all covered Super Sacks.</p> <p>The Contractor and DTSC must retain records for a minimum of three years.</p>

South Coast Air Quality Management District Rule 1466 Compliance Matrix¹	
Provision of Rule 1466	Required Actions For Compliance with Rule 1466 Requirements
<p>training, and daily instrument performance check records for all monitoring instruments;</p> <p>(3) Earth-moving activities conducted and the corresponding volume of soil with applicable toxic air contaminant;</p> <p>(4) Names and business addresses of the transporting and receiving facilities, and a copy of the shipping manifest; and</p> <p>(5) Complaints called in, including the name of complainant and contact information, date and time, earth- moving activities occurring at the date and time, complaint, and action taken to mitigate the source of the complaint.</p>	

APPENDIX D
TRANSPORTATION PLAN

FINAL
TRANSPORTATION PLAN FOR THE
REMOVAL ACTION (CLEANUP) PLAN
OFFSITE PROPERTIES WITHIN THE EXIDE PRELIMINARY
INVESTIGATION AREA

Prepared for



Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, CA 95826

Prepared by:

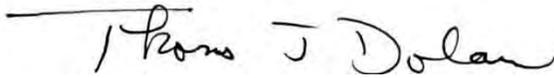


June 2017

REMOVAL ACTION PLAN (CLEANUP PLAN)
PROPERTIES WITHIN THE EXIDE PRELIMINARY INVESTIGATION AREA

On behalf of the Department of Toxic Substances Control, URS Corporation has reviewed this Removal Action Plan (Cleanup Plan) for offsite properties within the Exide Preliminary Investigation Area.

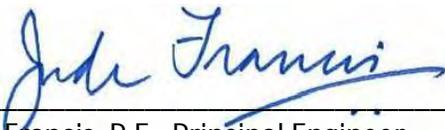
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ACRONYMS AND ABBREVIATIONS

AL	Action Level
Cal-EPA	California Environmental Protection Agency
CCR	California Code of Regulations
CFR	Code of Federal Regulations
COC	chain-of-custody
CDPH	State of California Health and Human Services Agency Department of Public Health
DL	detection limit
DTSC	Department of Toxic Substances Control
ELAP	Environmental Laboratory Accreditation Program
EPA	Environmental Protection Agency
ft	feet
ft ²	square feet
HASP	Health and Safety Plan
HUD	Department of Housing and Urban Development
IMWP	Interim Measures Work plan
LAC	Los Angeles County
LBP	lead-based paint
mg/kg	milligrams per kilogram
mg/cm ²	milligrams per square centimeter
NIST	National Institute of Standards and Technology
OEHHA	Office of Environmental Health Hazard Assessment
OSHA	Occupational Safety and Health Administration
PIA	Preliminary Investigation Area
POC	point of contact
QA/QC	Quality Assurance/Quality Control
SI	Site Investigation
SOW	scope of work
SCAQMD	South Coast Air Quality Management District
USA	Underground Services Alert
XRF	X-ray fluorescence

1.0 INTRODUCTION AND BACKGROUND

This document is the Transportation Plan for the Removal Action Cleanup Plan (Cleanup Plan) for Off-Site Properties within the Exide Preliminary Investigation Area (PIA). It is based, in part, on the Draft Transportation Plan for the Exide Off-Site Interim Remedial Measures Work Plan (Parsons, November 2015) and a subsequent revision to that document (URS, October 2016). The Cleanup is being undertaken by the State of California Environmental Protection Agency (Cal/EPA), Department of Toxic Substances Control (DTSC) for the remediation of lead-impacted properties located in the area around the former Exide Facility, in Vernon, California.

The DTSC has developed site-specific guidance to aid in preparation of the Cleanup Plan (URS, December 15, 2016) that describes the work efforts for conducting soil removal at sensitive land use properties within the PIA. The methods presented in the Cleanup Plan provide the remediation team with the approach for the successful implementation of remedial activities within affected areas.

1.1 PURPOSE AND OBJECTIVES

This document outlines the approach for the transportation and offsite disposal of materials from remediated properties within the PIA to the appropriate disposal facility from the remediation activities. The objective of this Transportation Plan is to minimize potential impacts to the surrounding community and/or the environment during the remediation, transportation and disposal of impacted materials during the remediation.

1.2 SUMMARY OF REMOVAL ACTION

The selected removal activities consist of excavation, loading, transport and disposal of materials from properties impacted with lead in the vicinity of the former Exide Facility. After the removal action, each property will be restored by the remediation contractor (contractor) in accordance with the Cleanup Plan (2017).

The average property will generate approximately 67 cubic yards of soil and other debris for disposal at the La Paz County Landfill in Parker, Arizona, South Yuma County Landfill in Yuma, Arizona, the Waste Management Kettleman Hills Facility in Kettleman City, California, the Chiquita Canyon Landfill in Los Angeles County, California or the Simi Valley Landfill in Ventura County, California. Each removal action will include, but may not be limited to, the following tasks, additional details of which are provided in the Cleanup Plan:

- PRE-EXCAVATION ACTIVITIES
 - Permits, Documentation, and Notifications
 - Utilities
 - Site preparation and control measures
 - Site Security and Control

- Public Participation
- EXCAVATION ACTIVITIES
 - Excavation Limits
 - Site Clearing and Debris Removal
 - Equipment
 - Shoring and Setbacks
 - Excavation Procedures and Progression
 - Surveying Activities
- DUST CONTROL
 - Dust Suppression Techniques
- AIR MONITORING
 - Real-Time Particulate Monitors
 - Personal Air Monitors
- EROSION AND RUNOFF CONTROL
- CONFIRMATION SAMPLING
- WASTE MANAGEMENT
 - Clearing and Debris Removal
 - Soil management, Stockpiling and profiling
 - Load Checking
 - Transportation
- BACKFILL AND RESTORATION
 - Borrow Source evaluation
 - Site Restoration Activities

1.3 REMEDIAL GOALS

The soil cleanup criterion is outlined in the Cleanup Plan (2017) for all properties where cleanup action occurs. Soil removal will extend to the depth interval where the post-removal risk evaluation indicates a 95% upper confidence limit (UCL) of 80 mg/kg or to a maximum depth of 18 inches. Properties with residual concentrations of lead above the representative soil lead concentration of 80 mg/kg at 18 inches will require further evaluation on a case-by-case basis.

2.0 OFFSITE TRANSPORTATION

This section presents measures and information that will minimize the potential health, safety, and environmental risks associated with the offsite transport of material generated during remediation. These include:

- Characteristics of material to be transported
- Destination of waste material
- Decontamination methods
- Mode of Transportation
- Route of Transport
- Traffic control and loading procedures
- Recordkeeping

Health and safety and contingency/spill response planning are provided in subsequent sections to this section.

2.1 CHARACTERISTICS OF MATERIAL TO BE TRANSPORTED

Up to approximately 67 cubic yards of lead-impacted soil and debris per property will be generated during remediation. Depending on the material profile from each property, the soil requiring offsite disposal may include a combination of:

- RCRA-regulated, hazardous lead-impacted soil
- Non-RCRA hazardous waste lead-impacted soil (i.e., California hazardous)
- Soil impacted with total extractable metals above remedial goals but below hazardous waste disposal criteria

DTSC estimates that over 95% of the properties sampled in the PIA will contain lead-impacted soils which exceed the target cleanup goal of 80 mg/kg.

2.2 DESTINATION OF WASTE MATERIAL

Up to approximately 67 cubic yards of soil and debris per property will be removed and disposed of at one or more of the landfills listed below.

The removal activities at the properties will consist of removal of vegetation and soils in the top 18" (maximum), and restoration with clean soil, top soil, and ground cover. The decontamination will consist of the following:

- 1) All small vegetation in contact with impacted soil will be removed. All asphalt and concrete will be left in-place. Upon completion of excavation activities, any debris and soils will be placed in covered container for proper disposal.

- 2) Trees and shrubs over 4 feet in height will be protected in place and the top 6" of soil around the roots of the trees will be hand excavated. This soil will be placed with other impacted materials scheduled for off-site transport and disposal. Excavated soil at each of the properties may consist of the following:
- Non-hazardous soil that may be disposed of at a Class III local landfill (Chiquita Canyon Landfill, Simi Valley Landfill) or at La Paz Landfill or South Yuma Landfill. This category is expected to comprise the majority of the soils for transport and disposal. However, profiling of excavated soils in situ will determine the actual nature and class of the material for disposal purposes.
 - Non-RCRA hazardous soil that will be transported to La Paz Landfill, South Yuma Landfill, or to the Kettleman Hills Facility. This category is expected to comprise less than the majority of the soils for transport and disposal.
 - RCRA hazardous soil that will be disposed of at the Waste Management Kettleman Hills Facility. Such soil is expected to comprise a minor part of the transportation and disposal effort.
- 3) It is anticipated that up to 7 truckloads of hazardous and impacted materials will be removed at each property. Most material is targeted for direct excavation and loading in to bins/truck, but, temporary stockpiling and storage of material under controlled conditions may become necessary based on the circumstances of individual property cleanup.

Contact information for Landfills

La Paz Landfill

26999 Hwy 95, Mile Post 128
Parker, AZ 85344
(928) 916-1253

Waste Management Kettleman Hills Facility

35251 Skyline Road
Kettleman City, CA 93239
(559) 309-7688

Waste Management Simi Valley

2801 Madera Road
Simi Valley, CA 93065
(805) 579-7267
(559) 834-9151: Special Disposal Unit

Chiquita Canyon Sanitary Landfill

29201 Henry Mayo Dr
Castaic, CA 91384
(661) 257-3655
(661) 388-3013 - Sales

South Yuma County Landfill

19536 South Avenue 1 E

Yuma, AZ 85365

(928) 341-9300

(619) 520-4429 - Sales

2.3 DECONTAMINATION METHODS

In order to prevent transfer of contamination off-site or residual contamination from being left on a property by construction equipment and personnel, decontamination procedures will be developed in the Project Health and Safety Plan prepared for this removal action. These procedures are summarized below:

- Prior to loading excavated materials into trucks, plastic sheeting will be placed on the ground or asphalt such that any spilled material will be prevented from contacting the ground surface. Upon completion of loading, any debris will be placed in the appropriate container for proper disposal and the plastic sheeting will be folded and disposed.
- All equipment wheels/tires will be cleaned over plastic sheeting by means of shovels and stiff-bristled brooms or brushes until they are fully cleaned. Upon completion of cleaning, any debris will be placed in the appropriate container for proper disposal and the plastic sheeting will be folded and disposed.
- Personal Protective Equipment, such as disposable protective gear, if used, will be removed and discarded in the contamination reduction zone (decontamination zone). In order to decontaminate reusable items such as work boots, a two-stage decontamination process will be used. This process will include washing in a detergent solution with a stiff-bristled brush and rinsing with clean water. The rinsate water will be distributed over contaminated soil (to be exported) for dust control purposes.

The decontamination containers will be clearly marked, identifying the first (wash) and subsequent, second (rinse) and third (final rinse) containers to be used. Rinse water will be applied to materials that will be off-loaded for disposal only and will not be applied to any of the open excavations to avoid potential cross-contamination.

Transportation equipment will be decontaminated before leaving the each property. An equipment decontamination area will be established to support the soil remediation. The equipment decontamination area will be used to rinse adhering soil and dust from heavy equipment before leaving the each property. All rinsate from the equipment decontamination will be self-contained within the decontamination area and will not be discharged onto unimpacted areas. The rinsate from the equipment decontamination area will be characterized for proper handling. Water may be used for dust suppression in remediation areas. Entrance/exit pathways will be routinely inspected and cleaned with a mechanical broom sweeper to remove visibly accumulated dust and sediment.

2.4 MODE OF TRANSPORTATION

All materials transported from individual properties in the PIA to an in-State Class I, Class II or Class III disposal facility will be transported by 18-cubic-yard (23-ton) end-dump trucks or other trucks. Trucks will be covered with a well-secured tarp, and the transporters will possess a valid hazardous waste transporter license. All transport vehicles will be inspected prior to use to ensure that each vehicle is safe for highway travel. In addition, after loading the trucks will be inspected to ensure that they are properly tarped and the appropriate Department of Transportation placard is on the vehicle before leaving each property.

All hazardous materials will be transported from the PIA by a registered hazardous waste transporter. The contact information for transporters will be provided through the contractor.

2.5 ROUTE OF TRANSPORT

Materials transported by truck to an in-state Class I, Class II, or Class III disposal facility will travel over public roads and highways in the greater Los Angeles Region of California. As previously mentioned, non-hazardous materials will be transported to a Class III local landfill (Chiquita Canyon Landfill in Castaic, CA or Simi Valley Landfill in Simi Valley, CA). All hazardous materials will be transported to the Waste Management Kettleman Hills Facility in Kettleman City, CA. All non-RCRA hazardous materials will be transported to either Waste Management Kettleman Hills Facility in Kettleman City, CA, to La, to La Paz, Arizona, or to South Yuma, Arizona, based on availability and logistics. The routes that the trucks travel over will be partly residential, due to the nature of the properties that will be cleaned up. Traffic routes will be designed to follow designated truck routes to the extent feasible (Figure 1-2) in order to limit impacts to residences in the various jurisdictions where remediation is to take place. These are Maywood, Boyle Heights, East Los Angeles (unincorporated Los Angeles County), City of Commerce, Bell, Vernon and Huntington Park. Truck routes will be designed to minimize the volume of trucks that pass sensitive areas, such as schools and hospitals. Because of the large number of addresses, each property or cluster of properties will have a different route to the disposal facility. The following are the directions to each of disposal facilities from a point within the PIA. Due to the size of the PIA, it is recognized that some routes will begin at freeway entrances on I-5 or SR-60 instead of I-710.

Directions to the Waste Management Kettleman Hills Facility

Enter I-710 (North)

Enter I-5 (North) toward Sacramento

Exit I-5 at CA 41 West

Take CA 41 West to Skyline Road

Turn right (North) on Skyline Road

Arrive at destination (35251 Skyline Road, Kettleman City, CA 93239)

Directions to the La Paz Landfill

Enter I-710 (North)

Follow I-10 E to CA 177 N in Riverside County. Take exit 192 from I-10 E
Continue onto CA 62 E
Continue onto S. California Ave

Directions to the South Yuma Landfill Facility

Enter 1-710 (North) to CA-60 East
Follow CA-60 E to I-10 East
I-10E to CA-86 South
CA-86 S to CA-78 East
CA-78 E to CA-111 South
CA-111 S to 1-8 East
I-8 E to Avenue 3 E South
Avenue 3 E S to E County 19 Street West
E County 17 Street W to Avenue 1 E South
Arrive at South Yuma Landfill (destination on right)

Directions to Chiquita Canyon Landfill in northwestern Los Angeles County

Enter I-710 (North) to I-5 North
Follow I-5 North to CA 126 West
Follow CA 126 West for 2.9 miles
Turn right arrive at Chiquita Canyon Landfill

Directions to Simi Valley Landfill in eastern Ventura County

Enter I-710 (North) to I-5 North
Follow I-5 North to CA 118 West
Exit CA 118 West at Madera Road S
Turn left onto View Land Drive

The one-way trip from the PIA to the Waste Management Kettleman Hills Facility is estimated to take approximately 3 hours (Figure 2). The one-way trip from the PIA to the La Paz Landfill is estimated to take approximately 4.5 hours (Figure 3). The one-way trip from the PIA to the South Yuma Landfill Facility is estimated to take 5 hours (Figure 4). Specific travel times and routing may vary depending on weather, traffic conditions and other factors. It is expected that these routes will allow each vehicle to make at least one trip per day.

The one-way trip from the PIA to the Chiquita and Simi Valley Landfills is estimated to take approximately 1.5 hours (Figure 5 and 6). It is expected that this route will allow each vehicle to make one trip to and from the PIA.

2.6 TRAFFIC CONTROL AND LOADING PROCEDURES

Trucks will park in the street adjacent to each property as it is cleaned up and soil may be put into sacks and/or be loaded directly onto the transport trucks. If allowed by local jurisdictions, trucks may be parked on-street overnight to minimize trips. No other off-site staging of trucks is anticipated for this remedial effort. Stockpiling of materials may occur on each individual property until sufficient quantity is available for export.

After loading is complete, the trucks will be tarped, cleaned of any loose debris and inspected for the appropriate placarding. It is anticipated that trucks will follow approved routes and will not travel over routes that have been specifically excluded (if any) by local jurisdictions. DTSC's cleanup contractor will develop a Traffic Management Plan (TMP) that will be submitted to each of the local jurisdictions within the PIA to assure concurrence with the selection of routes to access individual properties and planned work hours and days. Flag men will be used as required by cities as part of the TMP. Before leaving each property the appropriate manifests will be completed.

In accordance with PDF Trans-1 of the EIR the Traffic Management Plan shall include mechanisms to provide regularly updated information as needed. Develop a temporary traffic control plan that includes elements such as the following:

- All transport vehicles used for offsite transport of soils shall use strapped-down covers to prevent materials from leaving the truck during transport.
- Identify designated truck routes in each jurisdiction and direct truck traffic to those routes;
- Identify all bike paths and all transit facilities, such as bus stops, where cleanup activities are anticipated and request that local jurisdictions properly sign the temporary detour of a bikeway and that affected transit providers use their normal methods to inform system users of possible temporary stop relocation;
- Identify streets where vehicles over a specified weight are prohibited, other than for direct, local access;
- Identify travel time restrictions for cleanup traffic, including trucks, to avoid peak travel periods;
- Provide flagmen to temporarily control pedestrian and vehicular traffic adjacent to properties during departure and arrival of trucks, and during periods of equipment movement;
- Install protective devices and traffic controls (such as barricades, cones, lights, warning beacons, warning signs) along sidewalks at individual properties during cleanup or during any crossing into the public right of way;
- Provide protective barriers on a property's perimeter where excavation will extend to the sidewalk;
- Provide signage directing pedestrians to alternate access in locations where cleanup activities extend into the sidewalk;

- Schedule truck deliveries so that deliveries are consolidated at individual properties to the extent feasible;
- Leave equipment on-site overnight to the extent feasible;
- Actively promote carpooling and transit use among workers;
- Consolidate staging areas for equipment to the maximum extent feasible; and
- Consolidate parking areas for workers and provide transportation to and from worksites (if beyond walking distance).

In accordance with PDF Trans-2 of the EIR coordinate routes and times with local jurisdictions to avoid use of routes affected by local streets or infrastructure maintenance or expansion projects.

In accordance with PDF Trans-3 of the EIR coordinate with school authorities and operators of daycares to schedule cleanup of these properties, if necessary, during times when students/children are not present, such as scheduled breaks, and to inform them of planned cleanup of properties in the immediate vicinity of these uses when they are in session.

The transporters will be registered hazardous waste transporters and will be appropriately trained and experienced drivers. The majority of transport trucks will leave the PIA between the hours of 9:00 a.m. and 3:30 p.m. No lane closures are anticipated.

It is anticipated that lead-impacted soil will be transported to a permitted disposal facility as non-hazardous, non-RCRA hazardous or RCRA hazardous waste. All transportation activities will be performed in strict compliance with all regulations and ordinances.

Statutory requirements governing hazardous waste transportation in California are contained in Division 20, Chapter 6.5, Article 6.5, Article 6.6, and Article 13 of the California Health and Safety Code (Health & Saf. Code). Regulations adopted pursuant to these statutes are found in, Division 4.5, Chapter 13, and Chapter 29 of the California Code of Regulations, title 22. (Cal. Code Regs., tit. 22). Hazardous waste transporters must comply with the California Vehicle Code, CHP Regulations (Cal. Code Regs., tit. 13); the California State Fire Marshal Regulations (Cal. Code Regs., tit. 19); United States Department of Transportation (DOT) Hazardous Waste Transporter Requirements Regulations, Title 49, Code of Federal Regulations (49 Code of Federal Regulations); and U.S. Environmental Protection Agency (U.S. EPA) Regulations, Title 40 Code of Federal Regulations. In addition, hazardous waste transporters must comply with the Health & Safety Code and Cal. Code Regs., tit. 22 which are administered by DTSC.

Transportation equipment will be chosen to safely transport the expected volumes of soil, taking into consideration the types of roads to be traveled and their loading capacity. Routine truck maintenance and repairs will be performed at the contractor's premises prior to picking up waste materials from each property within the PIA. The contractor will be required to cleanup, to the satisfaction of DTSC, any spills resulting from maintenance of the trucks or due to road accidents during the operation of this project. Trucks used to transport materials to and from the PIA will be inspected by the remediation oversight contractor, its subcontractors and DTSC to

ensure that the placarding is done in compliance with local, state, and federal requirements.

Trucks used for transportation of contaminated soil and debris will remain on clean areas, to the extent possible, to minimize the need to decontaminate the truck tires. During loading, dust and odor emissions will be monitored and mitigated as necessary. The transporting trucks will be equipped to fully cover all soil and debris during transportation. At a minimum, the soil and debris will be tightly covered by a heavy tarp.

2.7 RECORDKEEPING

For soil transported to a Class I or Class II disposal facility, the driver will carry a Hazardous Waste Manifest to the disposal facility. DTSC's contractor will also maintain copies of manifests as well as a log listing the date and time of truck loading, type of material, weight of load, and vehicle identification for each load of material transported by truck. Drivers will operate their vehicles and respond to emergencies in accordance with the registered waste transporter's Transportation Safety Plan and /or the attached spill response plan (Attachment A).

For soil transported to a Class III disposal facility, the driver will carry a Non-Hazardous Waste Manifest or Bill of Lading to the disposal facility. DTSC's contractor will maintain copies of the manifests/bills of lading as well as a log listing the date and time of truck loading, type of material, weight of load, and vehicle identification for each load of material transported. Drivers will operate their vehicles and respond to emergencies in accordance with the registered waste transporter's Transportation Safety Plan and/or the attached spill response plan.

3.0 HEALTH AND SAFETY

The Project Health and Safety Plan being utilized for this project is presented in Appendix E of the RAP (URS, 2016). The Health and Safety Plan will be used to establish minimum on- and off-site safety requirements, policies and procedures adequate to protect workers, the public, and the environment from the predicted hazards. All cleanup contractors and subcontractors involved in removal, transport, and handling of impacted material will be required to abide by these minimum requirements and to develop site-specific subcontractor safety plans to address potential hazards associated with these tasks. As indicated in the Health and Safety Plan, in the event that unanticipated conditions occur at individual properties, the plan will be modified accordingly.

Level D will be required for project activities unless health and safety monitoring shows otherwise. Then engineering controls or personal protective equipment may be necessary to protect workers, residences and the surrounding community.

During soil removal and any intrusive work, air monitoring will initially be conducted to establish background levels. Once remedial or intrusive activities begin, monitoring will continue daily during work hours as detailed in the Cleanup Plan (URS, 2017).

Personnel at individual properties within the PIA will have access to respirators with the appropriate cartridges for dust. Cartridges will be P-100 type cartridges as required by OSHA. Note that respiratory protection will only be implemented after engineering controls have proven ineffective in reducing the potential risk to life and health. These measures can include additional water spray, plastic sheeting, etc.

4.0 CONTINGENCY/SPILL RESPONSE PLAN

In the event of a spill, the contractor will be prepared to respond in a safe and efficient manner, specific to the particular spill situation. Procedures established in the Spill Response Plan (Attachment A) will be used for handling of spills, whether they are on-site spills or spills occurring during transportation. The Spill Response Plan in Attachment A addresses handling of on-site spills. Because safety and protection of the public and the environment are of major concern, the first consideration is that of public safety and environmental protection. The provisions of the Spill Response Plan will be strictly adhered to, in order to ensure continued protection of the public safety and the environment.

Table 1 provides a listing of the local, state and federal environmental health agencies and emergency response agencies along the transportation haul routes.

For contaminated material spilled onto the ground surface along a transportation route, cleanup would probably consist of sweeping the contaminated soil for transportation to a disposal facility. All cleanup work will be done in accordance with the Project Health and Safety Plan and in cooperation with interested state and local agencies. For accidental releases of contaminated material in or near a stream, river, or lake, the same general response procedures will apply, with particular emphasis on preventing the release of the spilled waste material into the water body. In the event of an actual release of contaminated material into a body of water, all work will be coordinated with state and local agencies to select practical and appropriate cleanup methods based on specific circumstances of the release.

5.0 REFERENCES

Parsons, Draft Transportation Plan Exide *Offsite Interim Remedial Measure*, November 2015, revised by URS October 2016.

URS, *Draft Remedial Action (Cleanup) Plan, Offsite Properties within the Exide Preliminary Investigation Area (RAP)*, December 15, 2016.

ESA PCR , *Draft Environmental Impact Report for the Draft Remedial Action (Cleanup) Plan, Offsite Properties within the Exide Preliminary Investigation Area*, December 2016.

TABLE

Table 1
Environmental Health Agencies and Emergency Response Agencies for
Truck Transportation

To: Landfills in Arizona

*From: Various Sites Located in the Preliminary Investigation Area surrounding the Former
Exide Facility, Vernon, California*

National

National Response Center: (800) 424 - 8802

State of California

California Emergency
Management Agency: (800) 852 - 7550 (within California)
(916) 845 - 8911 (outside California)

California Counties

Los Angeles County Environmental Health
(888) 700-9995

San Bernardino County Environmental Health Services
(760) 243-8141

Riverside County Environmental Health Services
(951) 358-5316

State of Arizona

Arizona Department of Environmental Quality
(602) 771-2330 or (800) 234-5677

Arizona Counties

La Paz County Environmental Health Department
(928) 669-1100

Yuma County Environmental Health Services Division
(928) 317-4584

Local Emergency

Fire, Police, and Ambulance 911

Table 1 (Cont'd)
Environmental Health Agencies and Emergency Response Agencies for
Truck Transportation

To: Landfills in California

*From: Various Sites Located in the Preliminary Investigation Area surrounding the Former
Exide Facility, Vernon, California*

National

National Response Center: (800) 424 - 8802

State of California

California Emergency
Management Agency: (800) 852 - 7550 (within California)
(916) 845 - 8911 (outside California)

California Counties

Los Angeles County Environmental Health
(888)700-9995

Kern County Environmental Health Division
(661) 862-8740

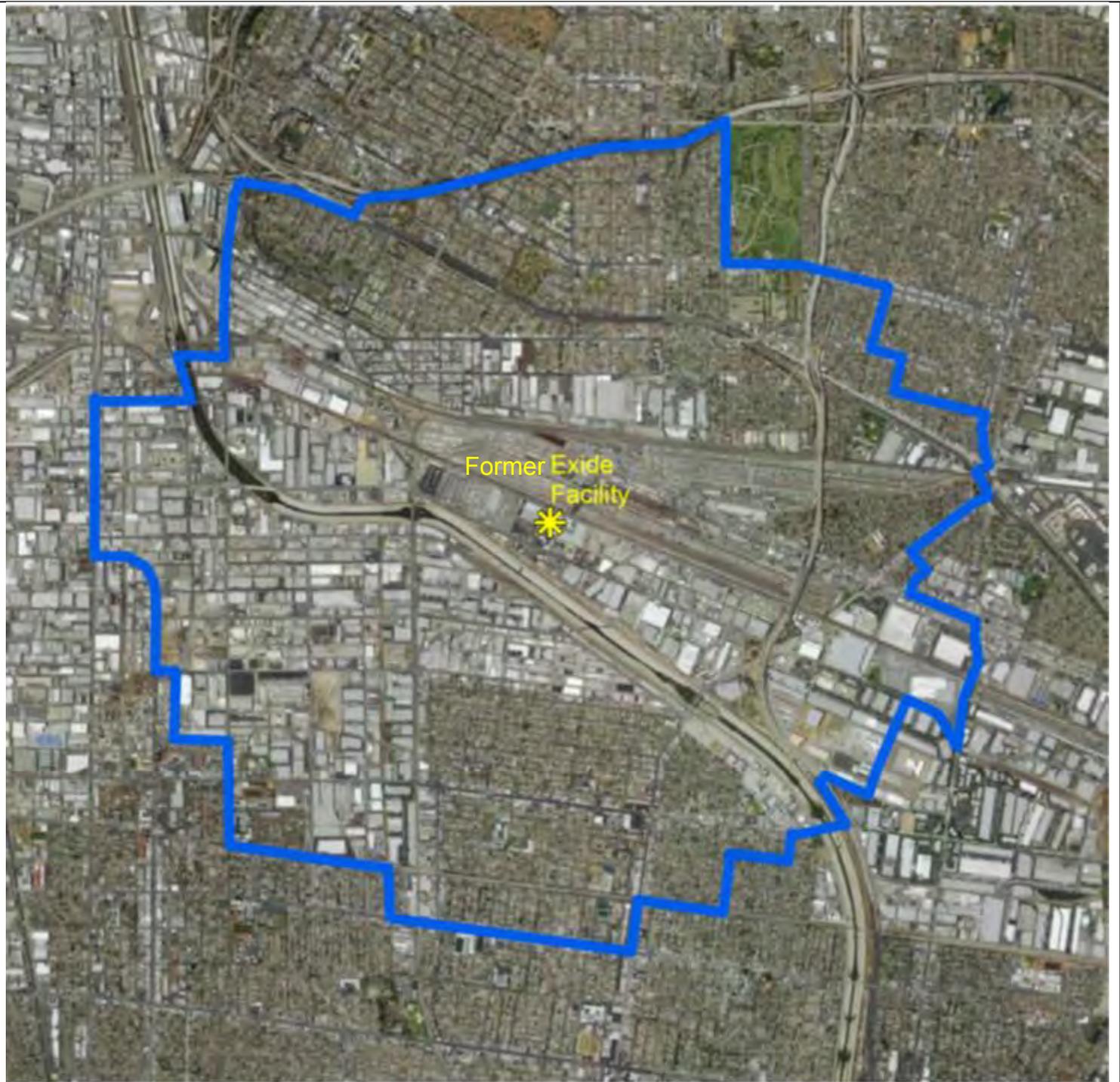
Kings County Environmental Health Services
(559) -584-1411

Ventura County Environmental Health Division
(805) 654-2813

Local Emergency

Fire, Police, and Ambulance 911

FIGURES



-  Exide Facility
-  Primary Investigation Area

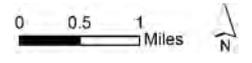
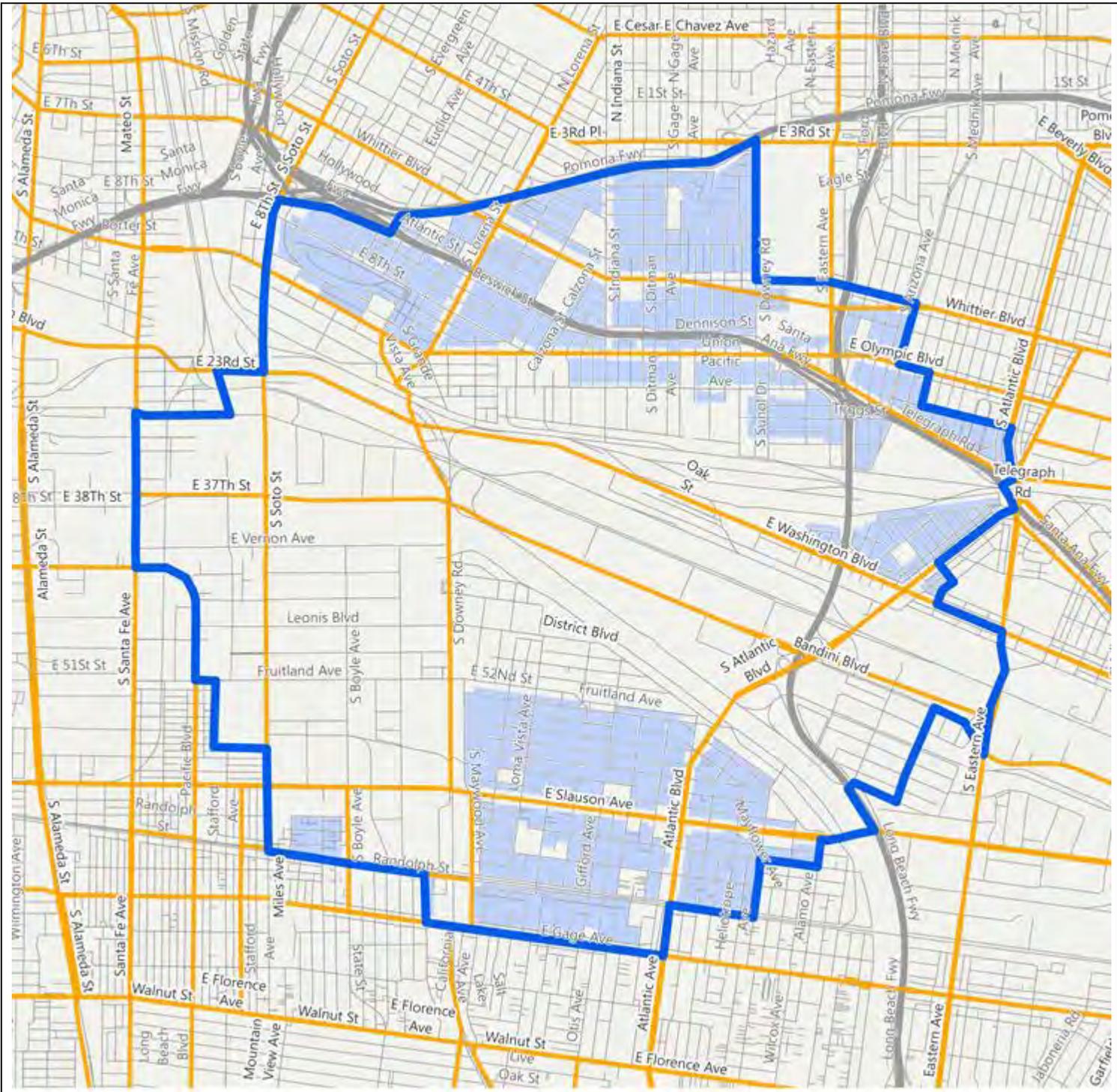


FIGURE 1-1
Exide Off-Site Primary Investigation Area



- PIA
- Truck Routes
- Primary Residential Areas

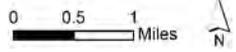
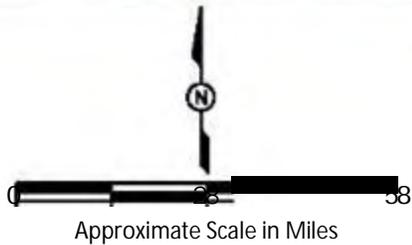
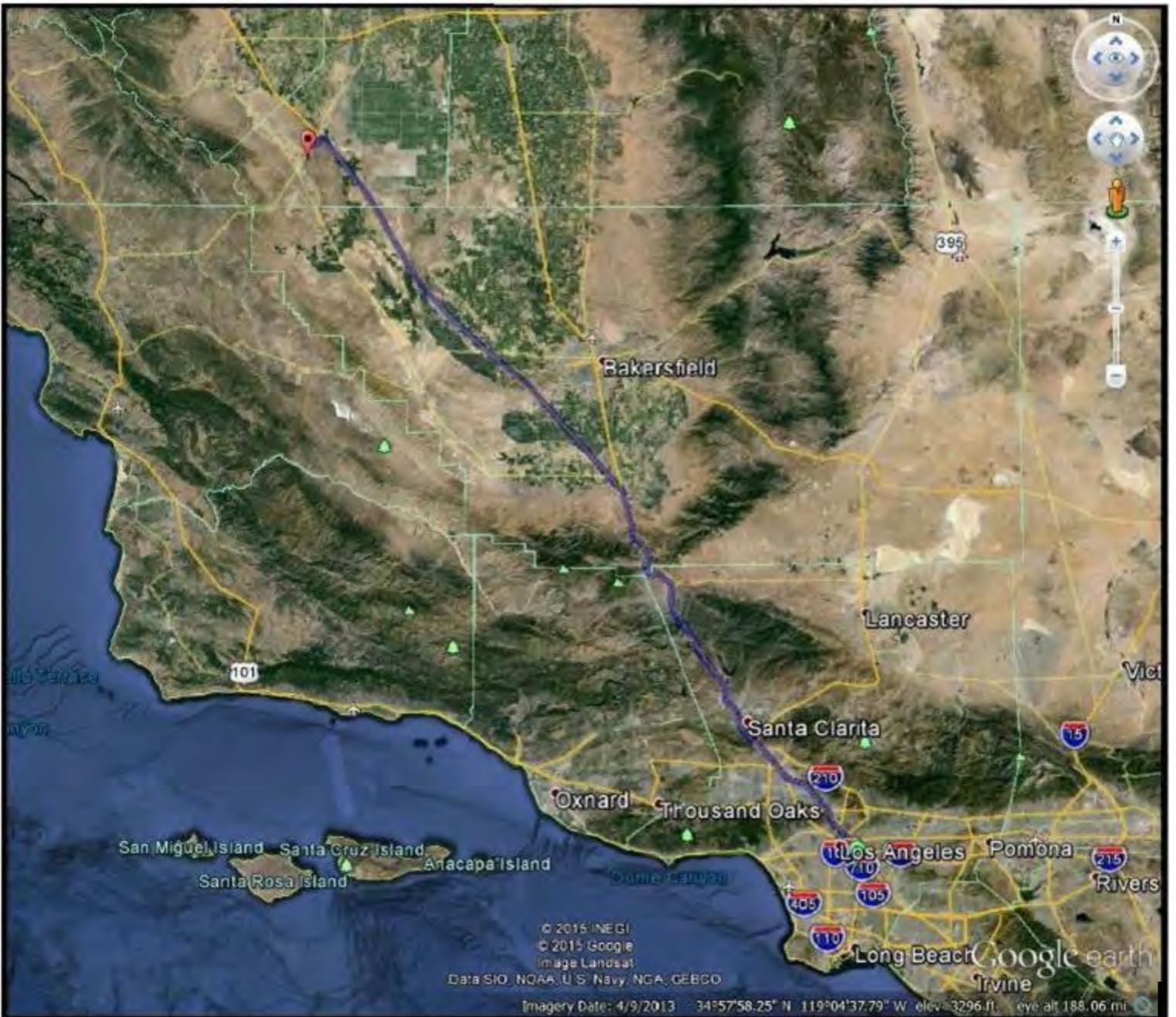


FIGURE 1-2
Truck Routes in Vicinity of Exide Off-Site Primary Investigation Area



WM Kettleman Hills Facility

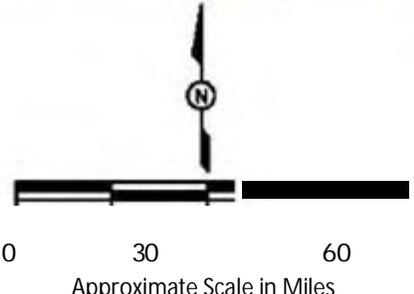
1. Enter the I-5 North
2. Follow the I-5 North to CA- 41 South
3. Continue onto CA-41 South
4. Turn left onto Skyline Road
5. Turn right onto Old State Highway
6. Arrive at WM Kettleman Hills Facility

Truck Route Map - Directions to the
 WM Kettleman Hills Facility

CLIENT: Department of Toxic Substances Control

LOCATION: Former Exide Technologies Offsite Areas

Figure
 2

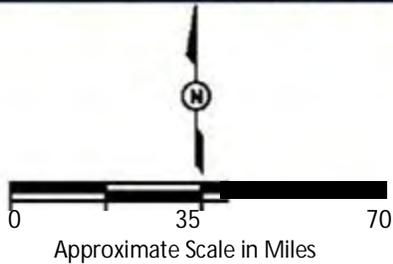


TruckRouteMap-Directionstothe LaPaz Landfill

CLIENT:	Department of Toxic Substances Control
LOCATION:	Former Exide Technologies Offsite Areas

LA PAZ LANDFILL FACILITY

1. Enter 1-710 (North) to 1-10 East
2. Follow 1-10 E to CA-177 North
3. CA-177 onto CA-62 East
4. Continue onto CA-62 E
5. Continue onto S. California
6. Arrive at Landfill Road and S. California

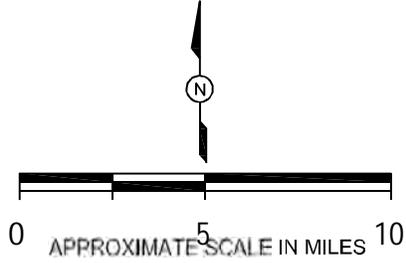
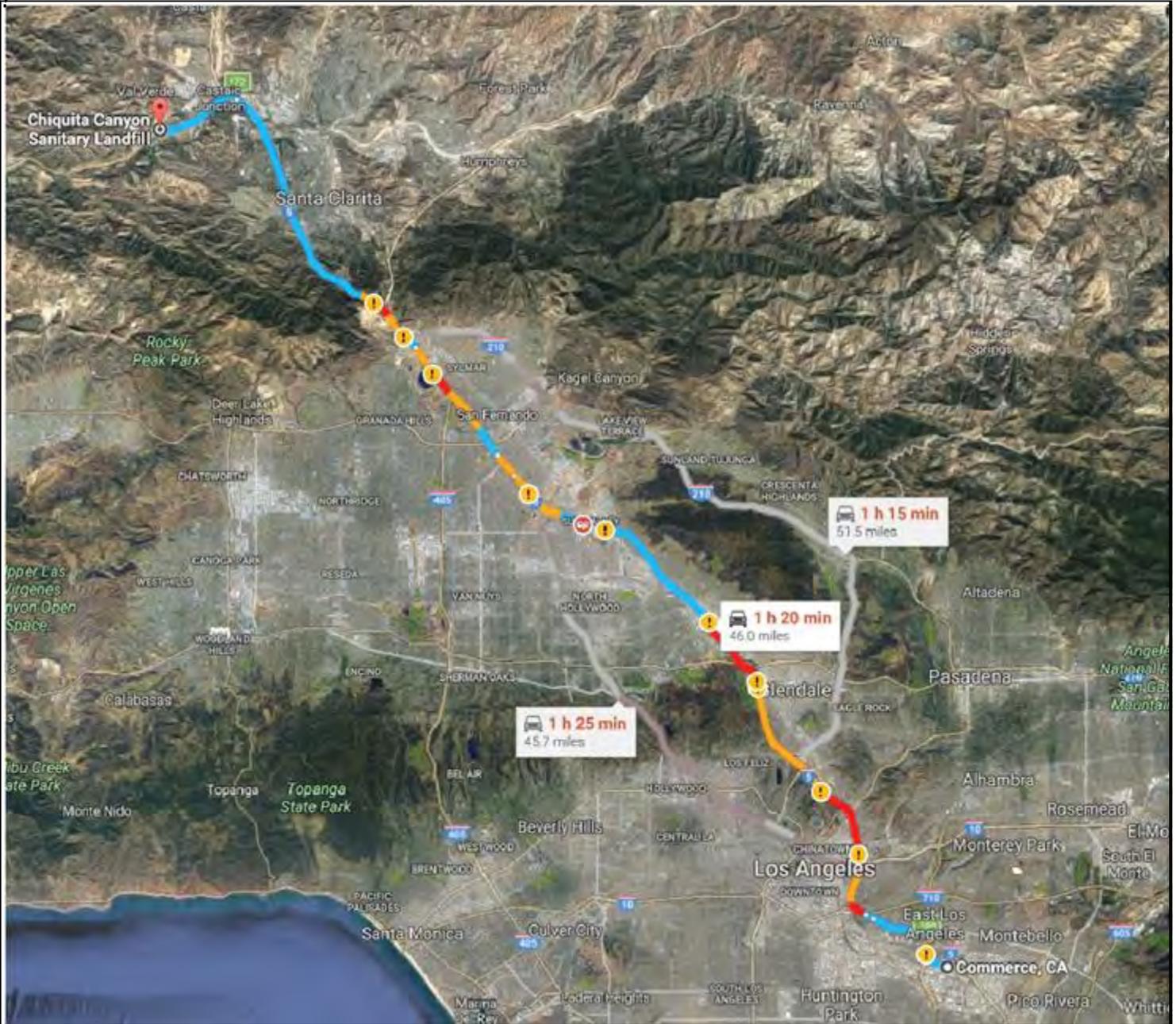


SOUTH YUMA LANDFILL FACILITY

1. Enter I-710 (South) to CA-60 East
 2. Follow CA-60 E to I-10 East
 3. I-10 E to CA 86 South
 4. CA-86 to CA-78 East
 5. CA-78 E to CA-111 South
 6. CA-111 S to I-8 East
 7. I-8 East to Avenue 3 E South
 8. Avenue 3 E S to E County 19 Street West
 9. E County 17 Street W to Avenue 1 E South
- Arrive at South Yuma Landfill

Truck Route Map - Directions to the South Yuma Landfill	
CLIENT: Department of Toxic Substances Control	
LOCATION: Fonner Exide Technologies Offsite Areas	
	Figure 4

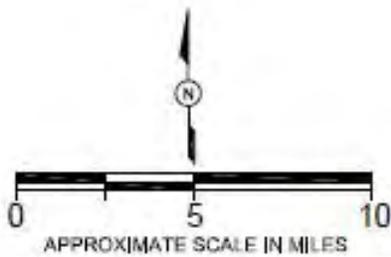
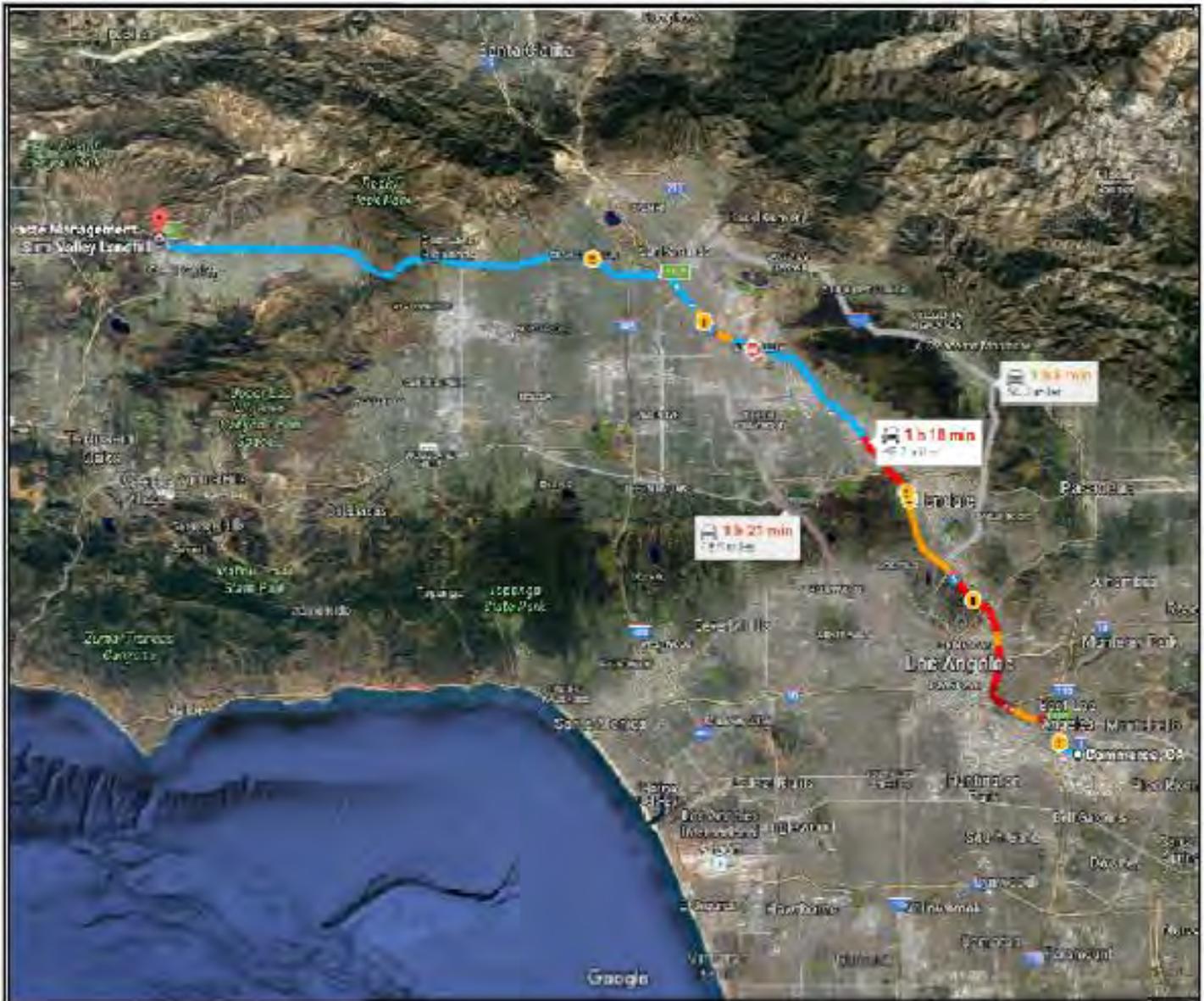
CLIENT



CHIQUITA CANYON LANDFILL

1. Enter I-710 (North) to I-5 North
2. Follow I-5 North to CA 126 West
3. Follow CA 126 West for 2.9 miles
4. Turn right arrive at Chiquita Canyon Landfill

Truck Route Map - Directions to the Chiquita Canyon Landfill	
Department of Toxic Substances Control	
Technologies Offsite Areas	
	FIGURE: 5



SIMI VALLEY LANDFILL

1. Enter I-710 (North) to I-5 North
2. Follow I-5 North to CA 118 West
3. Exit CA 118 West at Madera Road S
4. Turn left onto View Land Drive

Truck Route Map - Directions to the Simi Valley Landfill

CLIENT: Department of Toxic Substances Control

LOCATION: Former Exide Technologies Offsite Areas

FIGURE:

6

ATTACHMENT A
SPILL RESPONSE AND CONTINGENCY PLAN

SPILL RESPONSE AND CONTINGENCY PLAN

This Plan outlines procedures that will be followed in the event of a spill and/or releases, including spill control, containment, and clean-up of releases of hazardous materials and substances. All personnel handling hazardous waste on-site will have the appropriate OSHA Hazardous Waste training and medical clearance as outlined in the Site Specific Health and Safety Plan.

PROCEDURES FOR SPILL CONTROL/CLEAN-UP AND CONTAINMENT OF RELEASES OF HAZARDOUS SUBSTANCES OR MATERIALS

In the event of a spill or accidental release, the appropriate measures will be taken to confine the spill to the immediate area, and to prevent any migration off-site. Figure 1 provides a general outline for spill response. The following steps will be taken when discovering or encountering chemical release or spills:

- Evacuate the spill area and the site to ensure the safety of all personnel.
- Contain and/or clean up the release/spill. For large spills within the City of Los Angeles, contact the Los Angeles Fire Department (LAFD); or Los Angeles County Fire Department (LACFD) for areas outside the City of Los Angeles.
- Notify responsible project personnel, including the Cleanup Contractor's and DTSC's Project Managers (PMs), and affected agencies.
- Complete Spill Data Worksheet and Cleanup Contractor's Incident Report Form.

Because removal measures are to take place in various cities, the appropriate Fire Department responsible for each individual residence cannot be identified in the plan. The appropriate Fire Department will be identified along with other pertinent information such as the lead analyses results, areas requiring excavation, and transportation routes in the work plan amendment for each property. Spill or releases requiring the LAFD or LACFD are not anticipated during remediation activities. However, if the spill cannot be contained by the contractor with on-site resources, then the Site Health and Safety Officer (SHSO) will notify the appropriate LAFD or LACFD immediately. The SHSO will verify with the LAFD or LACFD the relevant on-site information. The cleanup contractor's PM will contact the appropriate project emergency response personnel, including DTSC and agency personnel. The SHSO will have the responsibility of:

- Contacting the cleanup contractor PM;
- Confirming spill information;
- Identifying necessary spill response personnel and resources;
- Obtaining all necessary MSDSs; and
- Completing the Spill Data Worksheet and Contractor's Incident Report Form.

1.1.1 On-Site Spills

For on-site spills, it is imperative that the spill be confined to the site, and to prevent migration off-site. Spills will be cleaned up immediately using available on-site resources if it is safe to do so. Particular attention will be made to storm sewer locations and other drainage sites. Absorbent material, including booms, absorbent pads, and tools will be used to clean-up small spills. Larger spills of any oil or oil product spill, will be contained and/or recovered using mechanical skimmers, sorbants (booms, pads, sweeps, rolls, pillows) and adsorbents (pom-pom) or collected by vacuum trucks.

Table 1 provides a general initial response actions in the event of a discovery of an on-site spill. Once the spill is contained, any contaminated material, including disposable spill equipment (booms, socks, etc.) will be packaged and properly disposed.

1.2 CONTAMINATED/HAZARDOUS SOIL/WATER RELEASES

Trucks transporting contaminated soils and/or may be involved in an accident on roads and public and private properties potentially expose the public to contaminated soils/water. In the event of an accident, the operator of the truck will notify the CHP and other emergency response agencies, and Cleanup Contractor's PM. The Cleanup Contractor's PM will notify DTSC PM and appropriate environmental agencies.

1.3 RUPTURE OF PIPELINES

Undocumented gas, oil, and other utility lines may be ruptured/broken during trenching, excavation, and other remedial activities, resulting in emergency response situations. The Cleanup Contractor will provide hazardous waste response services to mitigate the situation.

1.4 UNDERGROUND STORAGE TANKS

Underground storage tanks (USTs) or cisterns may be found during excavation, and other remedial activities. If an undocumented UST is encountered, appropriate project personnel, including DTSC personnel will be notified. USTs will be removed by the Remediation Contractor in accordance with regulatory requirements upon receipt of approval from DTSC PM and agency notification. The following activities will occur upon the encounter of a UST:

- On-site personnel will immediately stop work and notify cleanup contractor's PM;
- Cleanup contractor's PM will notify DTSC's PM and any required regulatory agencies; If removal is required, cleanup contractor's PM will notify the lead regulatory agency (contact the Los Angeles County Environmental Health Department (EHD)). A representative from the Los Angeles County EHD will inspect the site. The cleanup contractor's PM will do the following:

- Contact the EHD (**888-700-9995**) and give them the site address so they can determine if the site is registered with the Los Angeles County EHD. ,
- Complete the UST Closure Authorization Form (<http://www.ladpw.org/general/forms/download/268.pdf>) and pay the fee to obtain UST removal permit, at this time, EHD will provide a list of agencies which they need to contact, such as the local fire department; and
- Call the EHD field inspector to schedule UST removal (must be notified at least 48 hours prior to scheduled removal). For UST removal, the Los Angeles County EHD will be involved.
- The cleanup contractor's PM and the DTSC PM, and the inspector from the leading regulatory agency will determine the appropriate course of action;
- DTSC will request the services of the cleanup Contractor or other contractor to perform the tank removal work; and
- Cleanup Contractor will notify the Executive Officer or designee at the Los Angeles County Air Pollution Control District at least 24 hours prior to commencing excavation of UST or transfer piping which have stored or transferred VOC, name of the company performing the excavation, and the application number listed in this mitigation plan.

The Remediation Contractor will be responsible for the following tasks:

- Acquisition of all necessary permits from leading regulatory agency, APCD, and CAL/OSHA. These permits will include the UST Removal Permit from the Los Angeles County, Department of Public Works, the De-gassing Permit from the APCD (if needed), and an Excavation Permit from CAL/OSHA;
- Follow up site-specific health and safety plan requirements for management of the UST;
- Accessing the tank(s) which includes excavation and uncovering of the UST;
- Monitoring of combustible gasses and oxygen content using a combustible gas detector and a photo ionization detector;
- Removal and disposal of any residual liquid or sludge in the tank(s) at an appropriate regulated facility;
- Removal of any VOC-affected soil, and decontamination and degassing of the tank(s) and associated pipe work (cleaning);

- Disconnecting, dismantling, and removing the tank and associated pipe work from the excavation site (for tank abandonment by removal);
- Backfilling of the tank(s) with an inert solid such as cement or grout, if the tank is to be abandoned in-place;
- Disposal of the rinse water and sludge generated from cleaning of the tank (s) and associated piping at an appropriate regulated facility;
- Arrangement for the proper disposal of the tank(s) contents and affected soil; and
- Backfilling the tank excavation(s), if necessary.

VOC-affected soils generated during removal activities will be handled in accordance with all local, state and federal requirements.

The Cleanup Contractor will provide all necessary information for the UST closure report to DTSC as soon as possible, but no more than 3 days after the tank closure work is completed. This information must include the site name and address, the number of UST removed, the volume of UST, the content of the tank, a scaled site plan showing the tank and soil sample locations, and brief description of site activities. Any laboratory analytical reports, chain of custody forms, and waste manifests must also be submitted to DTSC. The Cleanup Contractor will prepare and submit a closure report to the leading UST removal agency (Los Angeles County EHD). The Los Angeles County Fire Department may require a copy of the closure report as part of their records.

Following completion of the work, on the final day of the tank removal, the Cleanup Contractor shall provide DTSC with the tank cleaning certification and certificate of disposal form for each UST. The tank cleaning certification form(s) will be submitted to the leading UST removal agency as part of the closure report.

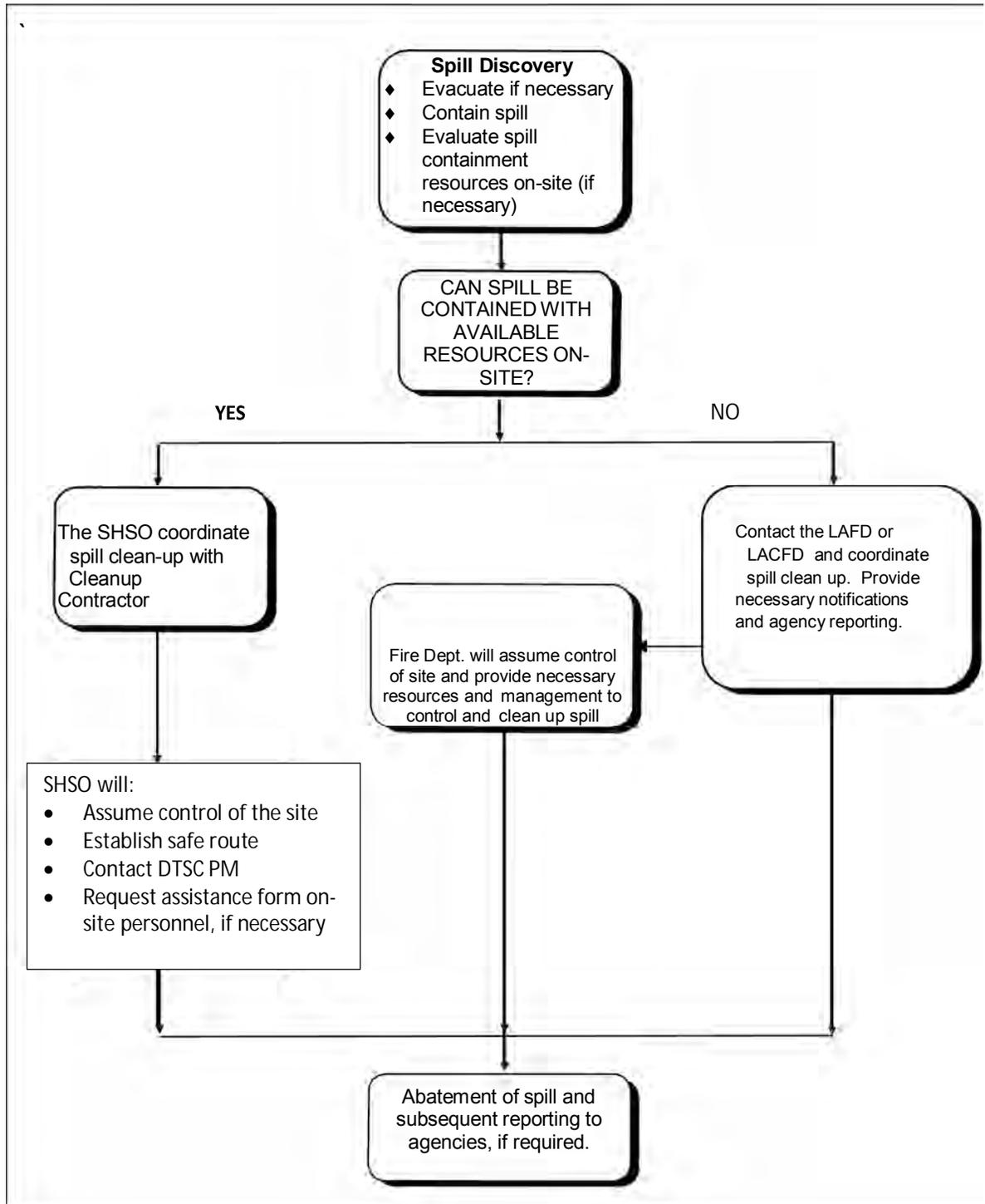


Figure 1
Initial Spill Response Actions
Multiple residences impacted by Exide operations

Table 1
On-Site Spill Response Actions

Action	Notes
<p>1. Stop the product flow at the closest container, valve, and/or pump (if it can be accomplished safely.). If applicable, activate emergency shut down switches. Determine if available resources are sufficient to control the spill.</p>	<p>Act quickly to secure pumps, close valves, etc. Do not enter any spill site to accomplish the shutdown. Stay upwind and upgradient of the spill.</p>
<p>2. Alert personnel within the immediate area, and notify appropriate Contractor and DTSC personnel If necessary, perform the following tasks:</p> <ul style="list-style-type: none"> ◆ Have nonessential personnel evacuate to the area <u>upgradient and upwind</u> and report to the designated safe refuge site. ◆ If there are trucks in the loading area or waiting to load, have the drivers remove their vehicles to a safe location outside the loading area, if it is safe to move the vehicles. ◆ Prevent any vehicles (other than emergency support services) from entering the area. 	<p>This action is to prevent any inadvertent action from compounding the situation. The SHSO at the safe refuge will account for all persons at the facility (those at the meeting place, those working to control the discharge, and those unaccounted for).</p>
<p>3. The PM will make appropriate notification to the agencies. Expedite notification if the spill may enter any sewer, storm drain, or waterway.</p>	<p>It is critical that notification be made immediately to ensure the safety of personnel and obtain additional resources as quickly as possible to control and minimize the discharge.</p>
<p>4. Isolate the discharge spill area and shut off ignition sources, if it can be accomplished safely.</p> <ul style="list-style-type: none"> ◆ For flowing fuel spills, without entering the spill area, build a dike in front of the spill using absorbents, dirt or sand. ◆ For puddled spills, place absorbent pads on top of the spill without entering the spill area. ◆ If fuel has reached a drainage ditch, extend several sorbent booms downstream across the ditch and/or build several dirt dams. ◆ Use sorbent to soak up fuel. ◆ Properly containerize used materials for disposal. <p>For small fires use a fire extinguisher to control/extinguish the fire if it can be accomplished safely. Stand by to assist emergency personnel if requested.</p>	<p>If applicable, control pumps, vehicles and other electrical sources. Ensure that no one is smoking near the discharge/spill site. Do not resume fuel operations until cleared to do so by a Fire Department Official.</p>

1.6 SPILL REPORTING

Spill reporting and post-response evaluation procedures must be conducted through formal documentation and follow-up investigation to identify the cause/source of the accident. Response procedures will be reviewed as part of post-response evaluation.

A Spill Data Worksheet and an Incident Report will be prepared by the SHSO following a spill response. The SHSO will submit these reports to Cleanup Contractor PM. The PM will review and submit it to DTSC PM. The report will contain, at a minimum, the following information:

- Time and date of incident;
- Incident description;
- Material and quantity spilled (for spills incidents);
- Initiation of emergency response;
- Description of the response(s), including a field sketch; and
- Caller notifications (Fire Department, Police, etc.).

1.7 POST-RESPONSE EVALUATION

Following completion of the Incident Report Form, the SHSO will prepare a Lessons Learned Report. The report will contain the following information and data:

- Time and date incident started and ended;
- Description of incident;
- Description of activating emergency response;
- Problems encountered during incident;
- Summary of post-incident activities, including any unusual actions or other events of interest; and
- Remarks and lessons learned.

The Lessons Learned Report will also include comments and input from the contractor and DTSC. If necessary, this Plan will be modified or revised based on recommendations from the Lessons Learned Report.

SPILL DATA WORKSHEET

Site Name: _____ Date: _____

Name of Person Completing Form: _____

Signature: _____

Provide the following information, with the fullest detail possible. Where estimating information, explain any limitations on the information provided and describe how the information was derived.

- 1) Date, Time, and Duration of Release/Discovery of Release:
- 2) Discovered by (Name, Title, and Affiliation):
- 3) Material(s) Released (Attach MSDS if available):
- 4) Quantity Released:
- 5) Source of Release:
- 6) Medium into Which Release Occurred (e.g., air, soil, solid surface, water) (Describe):
- 7) Location of Release (both geographic location and boundaries):
- 8) Circumstances under which spill/release occurred (what happened):
- 9) Any Injuries or Damage:
- 10) Response Measures, including Timing (e.g., containment, exposure protection or warnings, cleanup):
- 11) Weather Conditions (as they may affect spill response):

APPENDIX E
PROPERTY CLOSEOUT CHECKLIST



Matthew Rodriguez
Secretary for
Environmental Protection



Department of Toxic Substances Control

Barbara A. Lee, Director
8800 Cal Center Drive
Sacramento, California 95826-3200



Edmund G. Brown Jr.
Governor

Project: DTSC EXIDE RESIDENTIAL CLEANUP

Primary APN: _____

Contractor: _____

Address: _____

Property ID: _____

Date: _____

PROJECT CLOSEOUT CHECKLIST

Field Supervisor/Inspector of Record will complete this form (as applicable) and transmit to the Property Owner with his/her recommendation to accept and sign as a Notice of Completion.

ITEM	VERIFICATION	
	DATE	INITIALS
1. Access Agreement Obtained / Approved		
2. Initial Communication with Property Owner		
3. Received Guidance on Final Surface Completion (sod, mulch, etc.)		
4. Description of Remedial Activities to Owner		
5. Geophysical Clearance of Property		
6. Photo Documentation		
7. Implementation of Remedial Activities		
8. Description of Remediation Activities Conducted		
9. Confirmation Data Communicated		
10. Site Restoration Approved by Property Owner		
11. Landscaping Approved by Property Owner		
12. Final HEPA Cleaning of Hardscape		
13. Interior Cleaning		
14. Compensation for Landscape, Relocation, etc. Provided		
15. Other Requirements Punch List Items from Owner (Specify)		
a.		
b.		
c.		

Date Transmitted: _____

Field Project Supervisor Printed Name: _____

Field Project Supervisor Signature: _____

Date Transmitted: _____

Property Owner Printed Name: _____

Property Owner Signature: _____