



# Soil Management Plan

**Gehr Industries Facility  
7400 East Slauson Avenue  
Commerce, California**

**Prepared for:**  
Gehr Development Corporation  
7400 East Slauson Avenue  
Commerce, California 90040

**Prepared by:**  
Ardent Environmental Group, Inc.  
1827 Capital Street, Suite 103  
Corona, California 92880

April 3, 2017  
Project No. 100876001





April 3, 2017  
Project No. 100876001

Mr. Alfred M. Somekh  
Gehr Development Corporation  
7400 East Slauson Avenue  
Commerce, California 90040

Subject: Soil Management Plan  
Gehr Industries Facility  
7400 East Slauson Avenue  
Commerce, California

Dear Mr. Somekh:

Ardent Environmental Group, Inc. (Ardent) has prepared this Soil Management Plan (SMP) to provide procedures and criteria to guide environmental issues that may potentially be encountered during excavation activities at the property located at 7400 East Slauson Avenue in the city of Commerce, California (site). The site is currently occupied by Gehr Industries Inc. (also known as Gehr Development Corporation [Gehr]) for packaging and distributing insulated wire products. The site was formerly used by Baker Oil Tools to manufacture oil field equipment. Due to these historical activities, residual contaminants, including volatile organic compounds (VOCs), have been reported in shallow soils at the site. Although these residual contaminants have been proven not to pose a threat to human health, a Land Use Covenant (LUC) was recorded restricting land use for industrial and commercial purposes. The LUC requires that a SMP be prepared and implemented as part of soil disturbances.

We appreciate the opportunity to provide service on this project. Should you have any questions or comments, please contact me at your convenience.

Sincerely,  
**Ardent Environmental Group, Inc.**

  
Kasia Edlund  
Senior Staff Geologist

  
Paul A. Roberts, P.G.  
Principal Geologist



PAR/KE/nw

Distribution: (1) Addressee (electronic copy)

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## **1 INTRODUCTION**

This Soil Management Plan (SMP) has been prepared to provide procedures and criteria to guide environmental issues that may potentially be encountered during excavation activities at the property located at 7400 East Slauson Avenue in the city of Commerce, California (referred to herein as the “site,” or “subject property;” Figure 1).

The site is currently occupied by Gehr Industries Inc. (also known as Gehr Development Corporation [Gehr]) for packaging and distributing insulated wire products. Gehr also leases portions of the site to other businesses whose operations include importing and distribution, furniture making and storage, and mechanical repair of commercial trucks. Historically, the site was used by Baker Oil Tools to manufacture oil field equipment. Previous investigations completed at the site under the direction and oversight of the California Regional Water Quality Control Board, Los Angeles Region (RWQCB), identified residual contaminants including volatile organic compounds (VOCs), namely tetrachloroethylene (PCE) and trichloroethene (TCE). Based on these studies, it was determined that the residual VOCs do not pose a human health risk through dermal contact or indoor vapor intrusion and that the residual contaminants would naturally attenuate over time. As part of the closure activities, the RWQCB required that a Land Use Covenant (LUC) be recorded restricting land use for commercial/industrial purposes. The LUC states that a SMP must be prepared and implemented during future soil disturbances.

HarBro Inc. (HarBro), a general contractor, has been retained to install a utility pipeline at the site. Ardent has prepared this SMP, as per the LUC, to properly manage known and unknown environmental features that might be encountered. Although the SMP will be used during the utility installation, this plan can also be used during other future excavation activities.

## **2 BACKGROUND**

The following presents a brief description of the historical and current land uses, chemicals of concern, previous investigations, and proposed activities. A more detailed description of these activities can be found in the LUC dated August 16, 2012, and other documents on the State Water Resource Control Board (SWRCB) GeoTracker website.

## **2.1 Historical and Current Land Uses**

From at least the early-1950s through 1982, the site was used by Baker Oil Tools to manufacture oil field equipment. Former manufacturing operations included the use of clarifiers, three dry wells, sumps, underground storage tanks (USTs), degreasers, paint spray booths, and machine shops. These former features typically use VOCs such as chlorinated solvents, which represent a potential environmental concern to the site.

Gehr currently owns and occupies the site for packaging and distributing insulated wire products. Previously, Gehr manufactured the wire products at the site. Gehr also leases portions of the site to other commercial tenants whose activities include importing and distribution, furniture making and storage, and mechanical repair of large trucks. Based on the current site uses, there is a low likelihood that the current occupants represent a significant environmental concern, or have used chlorinated solvents.

## **2.2 Previous Investigations**

Several subsurface investigations have been conducted at the site since 2002, under the direction and oversight of the RWQCB, during which soil, soil vapor, and groundwater samples were collected throughout the site. Initial investigations indicated elevated concentrations of VOCs, namely PCE, TCE and 1,1-dichloroethene (1,1-DCE), were detected in groundwater. By 2004, low concentrations of these VOCs were detected in soil below both industrial and residential EPA Region 9 Preliminary Remediation Goals. Low concentrations of these VOCs were detected in groundwater, however, further characterization of the extent of groundwater contamination was necessary. Low concentrations of VOCs were detected in soil vapor at 12 areas of concern throughout the site. A Human Health Risk Assessment (HHRA) was completed in 2010 for the soil and soil vapor concentrations. The HHRA concluded that the remaining concentrations of VOCs in soil would not pose a significant human health risk to indoor or outdoor workers, or construction workers at the site. Since a limited exposure risk was present due to the site being entirely capped with pavement or buildings, the RWQCB concurred with the conclusions that a low potential human health risk was present. As part of its closure activities, the RWQCB required the owner of the site to record a LUC, which restricts the land use to industrial and commercial purposes. The RWQCB issued a no further action (NFA) letter for soil/soil vapor only, dated May 29, 2014. Groundwater monitoring continues

on a semi-annual basis. Based on groundwater monitoring information from 2016, groundwater below the site occurs at depths ranging from approximately 137 to 139 feet below the ground surface (bgs).

### **2.3 Proposed Activities**

HarBro, a general contractor, has been retained to install a utility pipeline at the site. Ardent has prepared this SMP, as per the LUC, to properly manage known and unknown environmental features that might be encountered. The SMP must be prepared and reviewed by the RWQCB and implemented during soil disturbance activities at the site (i.e. excavation or grading). Although the SMP will be used during the utility installation, this plan can be used during other events at the site during future soil disturbance activities. If future soil disturbance activities are planned at the site, an addendum to this SMP must be prepared and submitted to the RWQCB outlining the proposed activities. Following approval from the RWQCB, the activities must be continuously monitored for elevated VOCs and in accordance with the South Coast Air Quality Management District (AQMD) Rule 1166.

## **3 OBJECTIVE**

The objective of the SMP will be to monitor excavation activities in order to identify and properly manage known and unknown environmental features that might be encountered.

## **4 PROGRAM PARTICIPANTS**

The following presents the SMP program participants.

### **4.1 Ardent Representatives**

Ardent will act as the environmental consultant and provide field oversight and management services for the SMP. Ardent personnel will include a SMP Field Coordinator and a SMP Program Manager.

The SMP Field Coordinator for this project is:

- Ms. Kasia Edlund, Ardent office (951) 736-5334, cell (805) 276-3915

The SMP Program Manager for this project is:

- Mr. Paul Roberts, Ardent office (951) 736-5334, cell (951) 751-3198

The Alternative SMP Program Manager for this project is:

- Mr. Dennis Kawasaki, Ardent office (951) 736-5334

#### **4.2 Owner's Participants**

As owner of the site, Gehr's representatives are as follows:

The Owner's Project Director is:

- Mr. Alfred Somekh, office 323-727-2424, cell 949-322-6900

#### **4.3 General Contractor's Participants**

The General Contractor will provide contracting services, including grading activities, during redevelopment.

The General Contractor's Project Manager is:

- Mr. Brian Edwards, HarBro, Inc., office 562-528-5106, cell 562-6521651

The General Contractor's Project Site Superintendent is:

- To be determined

#### **4.4 Agency Participants**

Mr. Errick Llamas is the case handler for the site with the RWQCB who was the lead regulatory agency for the impacted soil and is the current regulatory agency for the impacted groundwater. As part of the LUC, the RWQCB is to be notified prior to soil disturbance activities and written approval must be obtained. As indicated above, this SMP can be used during other events at the site during future soil disturbance activities. If future soil disturbance activities are planned at the site, an addendum to this SMP must be prepared and submitted to the RWQCB outlining the proposed activities. Ardent will submit this SMP as notification of the utility trench excavation activities.

The RWQCB representative is:

- Mr. Errick Llamas  
Regional Water Quality Control Board, Los Angeles Region  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, California 90013  
Phone (213) 576-6783

## **5 INDIVIDUAL/AGENCY RESPONSIBILITIES**

The following presents the individual/agency responsibilities of the SMP program participants. Based on the information provided above, no significant impacted soils are expected to be encountered during grading activities. This SMP presents the procedures to address possible “unknown environmental concerns” encountered during grading operations (i.e. previously unknown conditions or “surprises”), and to present a sampling protocol for possible import soils to the site, if needed. No exporting of soils is planned at this time, however, if importing of soils is planned during future uses of this SMP, confirmation soil samples will be collected.

As discussed herein, “unknown environmental concerns” are defined as regulated features (e.g. underground storage tanks [USTs], septic pit, clarifier, etc.) or unregulated features (e.g. stained or odorous soil, or soil exceeding 50 ppm as measured with a photoionization detector [PID]) discovered during grading (i.e. “surprises”). If unknown environmental concerns are discovered, Ardent will direct and oversee the characterization and remediation activities. Cleanup activities will be completed to the satisfaction of a regulatory agency or to the standards proposed in Section 6.2.3. Groundwater at the site has been measured at depths of approximately 137 to 139 feet bgs and will not be encountered during construction activities.

### **5.1 SMP Field Coordinator**

The SMP Field Coordinator shall be responsible for the following tasks:

- Periodically monitor field activities to assess potential unknown environmental concerns, if encountered;
- As directed and after having been permitted (if required), supervise activities related to unknown environmental concerns and other environmental conditions;
- If and when needed, collect samples and arrange for laboratory analyses; and
- Maintain record of soil sample locations and document field conditions.

### **5.2 SMP Program Manager**

The SMP Program Manager shall be responsible for the following tasks:

- Monitor the work of the SMP Field Coordinator;
- Communicate field activities to the Owner’s Project Director;
- Notify Owner’s Project Director and RWQCB of unknown environmental concerns encountered during redevelopment activities;
- Communicate with regulatory agencies to investigate unknown environmental concerns and other environmental conditions;

- Consultation with regulatory agencies to characterize and delineate the proper management of unknown environmental concerns and other unknown environmental conditions; and
- Prepare reports of field activities.

### **5.3 General Contractor Project Manager or Project Site Superintendent**

The General Contractor Project Manager or Project Site Superintendent shall be responsible for the following tasks:

- The General Contractor will monitor grading operations for fugitive dust in accordance with SCAQMD guidelines and will take such measures, as necessary, to properly manage dust and soil from leaving the site;
- Report suspected unknown environmental concerns to the SMP Field Coordinator who will notify the SMP Program Manager and/or the Owner's Project Director. The SMP Program Manager or Owner's Project Director will contact the RWQCB, when applicable; and
- If an unknown environmental concern is encountered, the SMP Field Coordinator will direct the General Contractor to stop grading activities in the area of the feature and delineate the area with "Caution" tape, delineators, or fencing, prior to characterization and/or remediation.

### **5.4 Agency Responsibilities**

If unknown environmental concerns are discovered during redevelopment activities, Ardent will work with the appropriate regulatory agency to oversee and approve permits, work plans, and reports on an expedited schedule so as not to delay grading or redevelopment activities. Ardent will notify the RWQCB if regulated or unregulated features are discovered, and may request oversight during site characterization and remediation, if needed.

### **5.5 General Responsibilities**

Ardent personnel working at the site will have current HAZWOPER health and safety training. As presented in Section 6.1.1, Ardent will implement a Health and Safety Plan (HSP) that covers Ardent's employees and subcontractors. A copy of the HSP is presented in Appendix B. Ardent's scope of work for this project does not include health and safety monitoring for the General or Grading Contractor's personnel and subcontractors as part of their daily work activities or during any soil excavation activities. The General Contractor and subcontractors will provide their own HSP.

## **6 ENVIRONMENTAL ACTIVITIES FOR SITE GRADING AND EXCAVATION**

The following presents the activities that will be performed prior to, during, and following the on-site grading and excavation activities.

### **6.1 Pre-Grading or Pre-Excavation Activities**

The pre-grading or pre-excavation activities will be conducted to minimize down time and interruptions of grading/excavation activities if unknown environmental concerns are encountered. Pre-grading/excavation activities are intended for health and safety issues and preparing and coordinating site individuals with their respective responsibilities.

#### **6.1.1 Health and Safety Plan (HSP)**

Ardent has prepared a HSP to protect Ardent's workers and subcontractors from chemicals that might be encountered. A copy of the HSP is provided in Appendix B.

#### **6.1.2 South Coast Air Quality Management District (SCAQMD), Various Sites Permit**

SCAQMD Rule 1166 requires monitoring of soil during "...excavating or grading [of] soil containing VOC materials..." Based on previous investigations, this property, in general, would not be considered a "VOC-Contaminated Site" as defined by SCAQMD Rule 1166. For precautionary measures, Ardent will monitor excavation activities at the site on a full-time basis for stains, odors, and/or elevated PID readings. These precautionary measures will be conducted in general accordance with SCAQMD monitoring guidelines set-forth in SCAQMD's Rule 1166. If mass grading is completed, part-time monitoring might be considered appropriate.

If VOC-Contaminated soils are discovered during the monitoring activities (with PID measurements greater than 50 ppm), soil remediation of the excavation activities may be necessary. If these conditions are discovered, Ardent will use its SCAQMD Various Sites Permit to continuously monitor these activities. If encountered, the vapors will be suppressed, the SCAQMD will be notified, and soil mitigation might be necessary; as per the Various Sites Permit. A copy of the Various Sites Permit is provided in Appendix C.

Based on the results of previous investigations, it is highly unlikely that these levels of VOCs will be obtained. In the unlikely event that elevated PID readings are detected which result in an excess of 2,000 cubic yards of VOC-Contaminated soils, a Site Specific Soil Mitigation Plan will need to be obtained from the SCAQMD.

### **6.1.3 Pre-Grading/Excavation Meeting**

A pre-grading/excavation meeting will be attended by the SMP Field Coordinator, the SMP Program Manager, the General Contractor Project Manager, the General Contractor Project Site Superintendent, and the Owner's Project Director. The agenda of the meeting will include an oversight of the historical land use, environmental investigations, potential chemicals of concern, worker safety requirements, and dust control measures. The meeting will also be held to discuss possible unknown environmental concerns that might be encountered. The SMP Program Managers will present and review the information provided in this SMP, including individual's responsibilities and emergency phone numbers.

### **6.1.4 Sampling Imported Soil**

To assure that imported soils to the site are "clean," Ardent will sample the materials prior to transport to the site. Currently, regulatory agencies have not established standards that address environmental requirements for acceptance of clean imported fill materials at commercial properties. The Department of Toxic Substances Control (DTSC), however, has issued an advisory entitled "*Information Advisory Clean Imported Fill Material*" dated October 2001. This guideline was prepared for school sites and is very conservative, and therefore, will be used as a general guideline, depending on the amount of soil to be imported and source location. A copy of this document is provided in Appendix D. Ardent may use additional information such as knowledge of the property or known land use history to determine actual sampling criteria.

#### **6.1.4.1 Sampling Criteria**

To minimize the potential of introducing contaminated fill material onto the site, it is necessary to verify through documentation that the fill source is adequate and/or have the fill materials analyzed for potential contaminants

based on the location and history of the source area. Fill documentation might include a Phase I ESA and/or the results of testing. If such documentation is not available or is inadequate, Ardent will conduct a review of the property locations current and historical operations to be used to decide what analytical parameters are relevant. The analyses of the fill material will be based on the source of the fill and/or knowledge of the prior land use. If knowledge of the prior land use is unknown, then an appropriate suite of analyses must be performed prior to the fill being used at the site. Sampling procedures are presented in Appendix D.

The following tables present the general recommended number of samples to be collected from an area of fill obtained from in-place materials and the number of samples to be collected from a volume of fill from stockpiled materials.

**Table 1: Recommended Fill Material Sampling Schedule**

<b>Area of Individual Borrow Area</b>	<b>Sampling Requirements</b>
2 acres or less	Minimum of 4 samples
2 to 4 acres	Minimum of 1 sample every ½ acre
4 to 10 acres	Minimum of 8 samples
Greater than 10 acres	Minimum of 8 locations with 4 sub-samples per location (32 total samples)
<b>Volume of Borrow Area Stockpile</b>	<b>Sample per Volume</b>
Up to 1,000 cubic yards	1 sample per 250 cubic yards
1,000 to 5,000 cubic yards	4 samples for first 1,000 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

Table 2 presents the recommended chemical analyses to be performed based on the fill source. To assess the chemical analyses, a Phase I ESA or equivalent document shall be reviewed to assess historical and current uses of the property and to determine whether the borrow area may have been impacted by previous activities on the property. If a Phase I ESA is not

available, Ardent will conduct a preliminary screen of the site. All sampling and analyses will be completed prior to delivery of the materials to the site. Composite sampling will not be allowed. The acceptable levels are based on current regulatory guidelines and/or site specific cleanup criteria's as presented below.

**Table 2: Recommended Chemical Analyses for Fill Source Area**

<b>Fill Source</b>	<b>Target Compounds</b>
Land near to existing freeway	Lead (EPA Methods 6010B or 7471A), PAHs (EPA Method 8310)
Land near mining area or rock quarry	Heavy Metals (EPA Methods 6010B and 7471), Asbestos (polarized light microscopy), pH
Agricultural Land	Organochlorine Pesticides (EPA Method 8081A or 8080A); Organophosphate Pesticides (EPA Method 8141A); Chlorinated Herbicides (EPA Method 8151A), Heavy Metals (EPA Methods 6010B and 7471)
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 (EPA Method 8015 modified), PCBs (EPA Method 8082 or 8080A), Heavy Metals including Lead (EPA Methods 6010B and 7471)

**6.1.4.2 Acceptable Levels**

Following receipt of laboratory reports, Ardent will evaluate these data to assess whether the materials meet the criteria of “clean” soils. To do so, Ardent will compare the results to a number of current regulatory guidelines. When more than one cleanup standards are used, the more conservative value will be used. When applicable, commercial standards will be used. In general, if concentrations exceed the standards set forth in these documents, the materials will not be accepted as fill materials. However, if chosen, a risk analysis may be completed using site specific data to further evaluate whether the materials may be used on site. The following documents will be used to evaluate import soils.

- RWQCB Interim Site Assessment and Cleanup Guidebook dated May 1996 (referred to herein as the “RWQCB guidelines”);

- EPA Region 9, Regional Screening Levels for industrial/commercial land use (RSLi), dated May 2016;
- Hazardous waste criteria outlined in the California Code of Regulations (CCR) Title 22 (referred to herein as Title 22); and/or
- DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC Screening Levels (DTSC-SLs) for industrial/commercial future buildings, dated June 2016.

The following presents the constituents to be analyzed and the cleanup criteria that will be used to assess whether the materials can be used for import soils.

- Petroleum hydrocarbons – RWQCB guidelines.
- VOC – RSLi and DTSC-SLs
- SVOCs and PAHs – RSLi and DTSC-SLs
- Metals – RSLi and DTSC-SLs
- Pesticides and PCBs – RSLi and DTSC-SLs
- Asbestos – less than detectable limits when analyzed by PLM.
- pH – Title 22.

## **6.2 During Grading and Excavation Activities**

Once grading and/or excavation have begun, the following activities will be performed.

### **6.2.1 Dust and Odor Control**

The General or Grading Contractor's health and safety field monitor will monitor grading operations for fugitive dust in accordance with SCAQMD Rule 403 Fugitive Dust and direct the General or Grading Contractor to take such measures, as necessary, such as the application of water or a change in operations or equipment in order to properly manage dust from leaving the site. Due to the type of possible contaminants present at the site, air monitoring for potential toxic materials on dust partials will not be warranted.

If impacted soil is discovered, Ardent will monitor grading operations for odors in accordance with SCAQMD Rule 402 and direct the General or Grading Contractor to take such measures, as necessary, such as the application of water or a change in

operations or equipment in order to properly manage noticeable or nuisance odors from leaving the site.

Due to the VOCs detected in previous soil gas samples collected throughout the site, full-time monitoring for VOCs is necessary. Ardent will monitor grading and excavation activities daily for visual signs of staining, odorous soils, or elevated VOCs as measured in accordance with Rule 1166 guidelines.

If impacted soils are discovered, excavated impacted soils that are stockpiled at the site will be placed on and covered with visqueen plastic. If mass-grading operations are completed, wheel shakers will be installed at all entrances and exits from the site to ensure that soil will be removed from the tires of vehicles exiting the site.

#### **6.2.2 Notification and Identification of Unknown Environmental Concerns**

The SMP Field Coordinator will complete full-time monitoring of soils during the grading activities. Due to the number of environmental studies that have been completed at the site, there is a low likelihood that unknown environmental concerns will be encountered.

As previously stated, “unknown environmental concerns” are defined as regulated features (e.g. USTs, clarifier, etc.) or unregulated features (e.g. stained or odorous soil, or soil containing elevated VOCs as measured by a PID) that are discovered during redevelopment (i.e. “surprises”). If field observations (i.e., odors, staining, and/or elevated PID readings) indicate the possible presences of impacted soils (i.e. greater than 50 ppm as measured with a PID calibrated to hexane), additional characterization/sampling might be necessary. If a regulated feature is discovered, the RWQCB will be notified and the appropriate permits will be obtained prior to the removal of the feature.

The monitoring activities discussed herein will be completed for all invasive soil disturbances, including grading activities, drilling soil borings, and excavating utility trenches. All unknown environmental concerns will be plotted on a scaled plan of the site using Global Positioning System (GPS), survey data, or measurements from surveyed points.

The RWQCB will be notified of unknown environmental concerns as defined by this SMP discovered during grading, regardless of the location. Ardent will complete further characterization, remediation, and agency notification (if necessary) as per this SMP.

### **6.2.3 Cleanup Standards**

Impacted soils will be mitigated to current human health based regulatory guidelines, such as Federal EPA, Region 9 RSLi or DTSC-SLs for industrial/commercial land use. If impacted soil exceeding these cleanup standards is to be left in-place, the material will be evaluated on an environmental and health risk basis (i.e. the preparation of a risk-based analysis based on a commercial land use criteria) or by using engineering controls.

## **6.3 Site-Specific Soil Management Protocols**

The SMP Field Coordinator will monitor soils during the excavation activities on a full-time basis as discussed above. The soils will be monitored during grading/excavation activities for visual fugitive dust, staining, odors, and/or elevated PID readings. These monitoring activities will be conducted using visual, olfactory, and PID meter calibrated daily to hexane. The monitoring activities will be documented on Daily Field Logs. If impacted soil or unknown environmental concerns are encountered during redevelopment, the soil and/or features will be managed in accordance with this SMP.

As presented below, the Site-Specific Soil Management Protocols are grouped by the type of environmental concern and have been developed with acknowledgement of past site use history and previous subsurface investigations completed at the site. Soil samples collected as part of the SMP will be analyzed by a State-certified environmental laboratory.

### **6.3.1 Stained and/or Odorous Soil or Other Unregulated Feature**

If stained or odorous soil is encountered or VOC-impacted soil with readings greater than 50 ppm as measured with a PID, the SMP Field Coordinator will notify the SMP Program Manager, who will notify the Owner's Project Director, DTSC and/or other appropriate regulatory agencies.

### **6.3.2 Regulated Features**

If a regulated feature such as a UST or clarifier is encountered, Ardent will be responsible to obtain the appropriate permits to remove the feature and will follow the regulatory guidelines set forth by the appropriate regulatory agency.

### **6.3.3 Stockpile Sampling for Reuse or Export**

Soils are not expected to be exported from the site during regular grading or excavation activities. If impacted soils are encountered that need to be removed from the site as part of a mitigation measure, the materials will be sampled and tested for the appropriate parameters to meet the disposal profiling purposes.

## **6.4 Final Grading/Excavation Environmental Oversight Report**

The Final Grading/Excavation Environmental Oversight Report will be prepared following completion of the grading/excavation activities and will document the monitoring activities and the results of the environmental issues discovered during these activities, if any.

## 7 REFERENCES

Bureau Veritas North America, Inc, 2010, Health Risk Assessment, 7400 East Slauson Avenue, Commerce, California: Report prepared for California Regional Water Quality of Control Board, Los Angeles Region, Los Angeles, California, dated September 28.

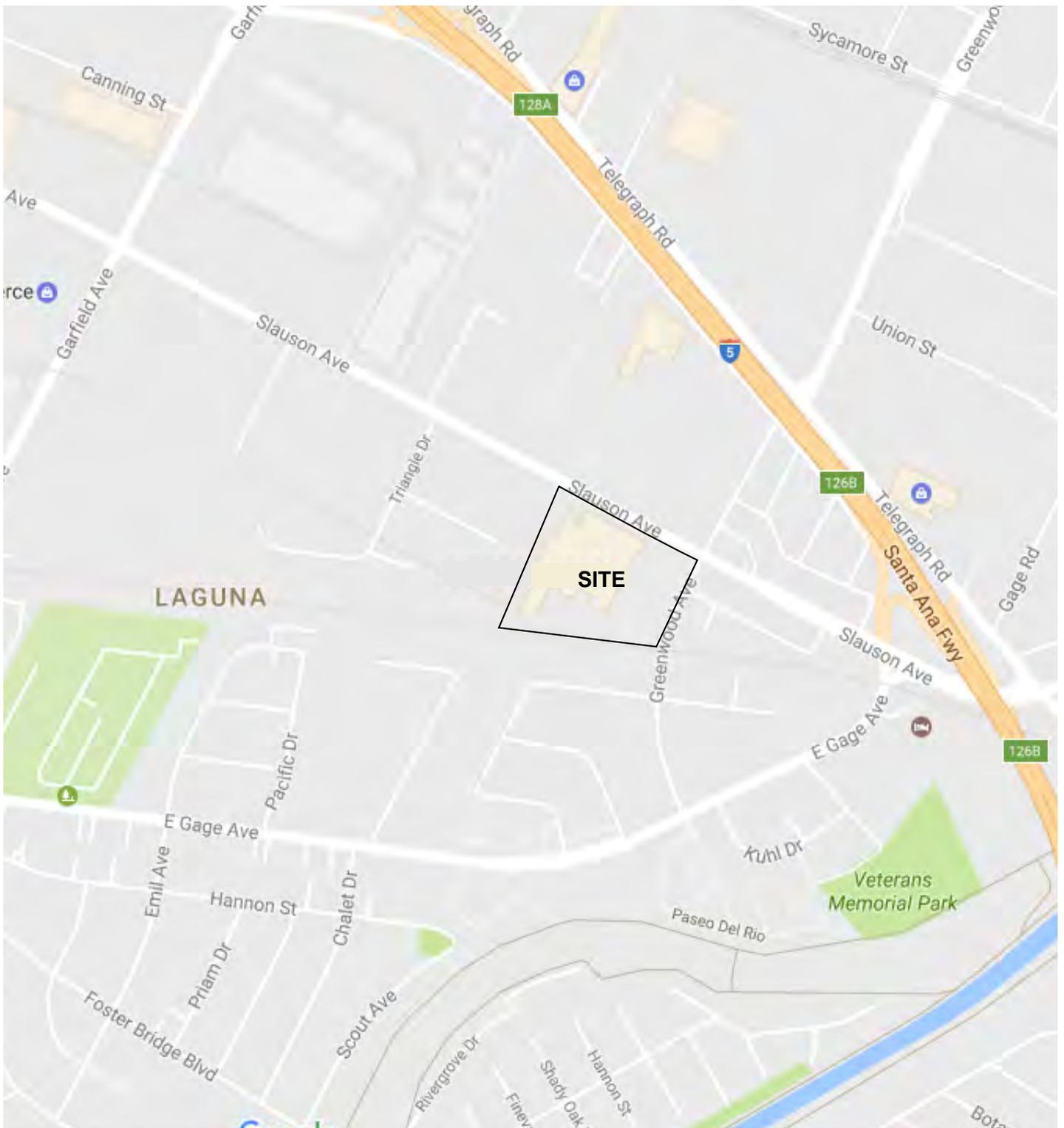
Bureau Veritas North America, Inc, 2017, Second Semester 2016 Groundwater Monitoring Report, 7400 East Slauson Avenue, Commerce, California: Report prepared for California Regional Water Quality of Control Board, Los Angeles Region, Los Angeles, California, dated January 6.

Department of Toxic Substances Control (DTSC), 2011, Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance), dated October.

Department of Toxic Substances Control (DTSC), Human and Ecological Risk Office (HERO), 2016, Human Health Risk Assessment (HHRA) Note Number 3, DTSC-Modified Screening Levels (DTSC-SLs), dated June.

EPA Region 9, 2016, Regional Screening Levels (RSLs) Summary Table, dated May.

Regional Water Quality Control Board, Los Angeles Region (RWQCB), 1996, Interim Site Assessment & Cleanup Guidebook, dated May.



NO SCALE

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

	PROJECT NO. <b>100876001</b>	<b>SITE LOCATION MAP</b>  7400 EAST SLAUSON AVENUE COMMERCE, CALIFORNIA	FIGURE  <b>1</b>
	DATE <b>04/17</b>		



**LEGEND**

- Approximate Site Boundary
- Proposed Utility Trench Excavation



NO SCALE

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.



PROJECT NO.  
**100876001**

DATE  
**04/17**

**SITE MAP**

7400 EAST SLAUSON AVENUE  
COMMERCE, CALIFORNIA

FIGURE

**2**

**APPENDIX A**  
**LAND USE COVENANT**

 **COPY**

**Recording Requested By:**  
Norbert Gehr, Trustee of the Norbert Gehr  
Living Trust, U/D/T dated April 7, 1999  
7400 East Slauson Avenue  
Commerce, California 90040

**When Recorded, Mail To:**  
Samuel Unger, Executive Officer  
California Regional Water Quality Control Board  
Los Angeles Region  
320 W. 4<sup>th</sup> Street, Suite 200  
Los Angeles, California 90013



## COVENANT AND ENVIRONMENTAL RESTRICTION ON PROPERTY

Gehr Industries Facility  
7400 East Slauson Avenue, Commerce, California 90040  
Assessor's Parcel Number: 6356-016-022  
LARWQCB Site Cleanup Program File No. 1132

This Covenant and Environmental Restriction on Property ("Covenant") is made as of the 16<sup>th</sup> day of August 2012 by Norbert Gehr, Trustee of the Norbert Gehr Living Trust, U/D/T dated April 7, 1999 ("Covenantor") who is the Owner of record of that certain property situated at 7400 East Slauson Avenue, in the City of Commerce, County of Los Angeles, State of California, which is more particularly described in Exhibits A and B attached hereto and incorporated herein by this reference (hereinafter referred to as the "Burdened Property"), for the benefit of the California Regional Water Quality Control Board, Los Angeles Region ("Board"), with reference to the following facts:

A. Nature of Covenant. This Covenant is an environmental covenant provided for by Civil Code section 1471 and required by the Board pursuant to Water Code section 13304 because the Burdened Property is contaminated by hazardous materials as defined in section 25260 of the Health and Safety Code.

B. Contamination of the Burdened Property. The soil, soil vapor, and groundwater at the Burdened Property were contaminated by the manufacturing of oil field equipment at the Burdened Property that occurred from the early 1950s until 1982, while the Burdened Property was occupied by Baker Oil Tools. Based on the results of a Site Investigation Report prepared for the Burdened Property, the primary chemicals of concern at the Burdened Property are volatile organic compounds (VOCs), including amongst others perchloroethylene (PCE) and trichloroethylene (TCE), which constitute hazardous materials. Additionally, the relatively consistent historical groundwater analytical data indicates that there is not a continuing source of VOCs in the soil at the Burdened Property. It is expected that the existing contaminants in the soil will naturally attenuate over time. Therefore, the Board determined that remediation at the Burdened Property was not warranted.

C. Exposure Pathways. The contaminants addressed in this Covenant are present in the soil, soil vapor, and groundwater at the Burdened Property. A human health risk assessment (HHRA) was conducted for the soil and soil vapor at the Burdened Property (*Health Risk Assessment [HRA] Gehr Industries Facility, 7400 East Slauson Avenue, City of Commerce, California*) dated September 2010. The HHRA incorporated limitations on land use consistent with those imposed by the Restrictions of this Covenant when identifying human receptors; the HHRA identified indoor and outdoor workers and construction workers as potential human receptors at the Burdened Property. The results of the HHRA for these receptors were within the acceptable range established by the United States Environmental Protection Agency (USEPA).

The concentration of contaminants in the groundwater is low and is regularly monitored. As the Burdened Property is entirely capped with either pavement or buildings, the HHRA finds that the potential for human exposure to soil or groundwater under normal activities is low or non-existent.

D. Land Uses and Population Potentially Affected. The Burdened Property is used for industrial and commercial land uses and is adjacent to industrial land uses to the north and west, and residential land uses to the south and east.

E. Disclosure and Sampling. Disclosure of the presence of hazardous materials on the Burdened Property has been made to the Board and extensive sampling of the Burdened Property has been conducted.

F. Use of Burdened Property. Covenantor desires and intends that in order to benefit the Board, and to protect the present and future public health and safety, the Burdened Property shall be used in a manner consistent with this Covenant as to avoid potential harm to persons or property that might result from any hazardous materials that might remain deposited on portions of the Burdened Property.

## ARTICLE I GENERAL PROVISIONS

1.1 Provisions to Run with the Land. This Covenant sets forth protective provisions, covenants, conditions and restrictions (collectively referred to as "Restrictions") upon and subject to which the Burdened Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. These Restrictions are reasonably necessary to protect present and future human health and safety or the environment as a result of the presence on the land of hazardous materials. Each and all of the Restrictions shall run with the land and pass with each and every portion of the Burdened Property, and shall apply to, inure to the benefit of, and bind the respective successors, assigns, and lessees thereof for the benefit of the Board and all Owners and Occupants. Each and all of the Restrictions: (a) are imposed upon the entire Burdened Property, unless expressly stated as applicable to a specific portion of the Burdened Property; (b) run with the land pursuant to section 1471 of the Civil Code; and (c) are enforceable by the Board.

1.2 Concurrence of Owners and Lessees Presumed. All purchasers, lessees, and possessors of all or any portion of the Burdened Property shall become Owners or Occupants as defined herein and shall be deemed by their purchase, leasing, or possession of the Burdened Property to be bound by the Restrictions and to agree for and among themselves, their heirs, successors, and assignees, and the agents, employees, and lessees of such owners, heirs, successors, and assignees, that the Restrictions herein established must be adhered to for the benefit of the Board and all Owners and Occupants, and that the interest of all Owners and Occupants of the Burdened Property shall be subject to the Restrictions.

1.3 Incorporation into Deeds and Leases. Covenantor desires and covenants that the Restrictions shall be incorporated in and attached to each and all deeds and leases of all or any portion of the Burdened Property. Recordation of this Covenant shall be deemed binding on all successors, assigns, and lessees, regardless of whether a copy of this Covenant has been attached to or incorporated into any given deed or lease.

1.4 Purpose. It is the purpose of this instrument to convey to the Board real property rights, which will run with the land, to protect human health and the environment by reducing the risk of exposure to residual hazardous materials.

## ARTICLE II DEFINITIONS

2.1 Board. "Board" shall mean the California Regional Water Quality Control Board, Los Angeles Region and shall include its successor agencies, if any.

2.2 Improvements. "Improvements" shall mean all buildings, structures, roads, driveways, gradings, re-gradings, and paved areas, constructed or placed upon any portion of the Burdened Property.

2.3 Occupant or Occupants. "Occupant" or "Occupants" shall mean Owners and those persons entitled by ownership, leasehold, or other legal relationship to the right to use and/or occupy all or any portion of the Burdened Property.

2.4 Owner or Owners. "Owner" or "Owners" shall mean the Covenantor and Covenantor's successors in interest who hold title to all or any portion of the Burdened Property.

## ARTICLE III DEVELOPMENT, USE AND CONVEYANCE OF THE BURDENED PROPERTY

3.1 Restrictions on Development and Use. Covenantor promises to restrict the use of the Burdened Property as follows:

a. Development and use of the Burdened Property shall be restricted to industrial, commercial, and/or office space;

- b. No residence for human habitation shall be permitted on the Burdened Property;
- c. No hospitals shall be permitted on the Burdened Property;
- d. No public or private schools for persons under 21 years of age shall be permitted on the Burdened Property;
- e. No care or community centers for children or senior citizens, or other uses that would involve the regular congregation of children or senior citizens, shall be authorized on the Burdened Property;
- f. No Owner or Occupant shall conduct or permit any excavation work on the Burdened Property, unless expressly permitted in writing by the Board. Repair and maintenance of the pavement shall not constitute excavation work requiring approval from the Board. Any contaminated soils brought to the surface by grading, excavation, trenching, or backfilling shall be managed by the Owner, Owner's agent, Occupant or Occupant's agent in accordance with all applicable provisions of local, state and federal law. Any excavation conducted on the Burdened Property shall be performed pursuant to an appropriate and fully implemented *Health and Safety Plan*;
- g. All uses and development of the Burdened Property shall be consistent with any applicable Board Order or Risk Management Plan, each of which is hereby incorporated herein by reference, and including future amendments thereto. All uses and development of the Burdened Property shall maintain a capped surface (pavement or buildings) on the Burdened Property, and shall not impede the operation of or damage any groundwater monitoring system installed on the Burdened Property pursuant to the requirements of the Board, unless otherwise expressly permitted in writing by the Board;
- h. No Owner or Occupant shall drill, bore, otherwise construct, or use a well for the purpose of extracting water for any use, including but not limited to, domestic, potable, or industrial uses, unless expressly permitted in writing by the Board; nor shall the Owner or Occupant permit or engage any third party to do such acts;
- i. The Owner and Occupant shall notify the Board of each of the following: (1) the type, cause, location and date of any disturbance to any cap, any remedial measures taken or remedial equipment installed, and of the groundwater monitoring system installed on the Burdened Property pursuant to the requirements of the Board, which could affect the ability of such cap or remedial measures, remedial equipment, or monitoring system to perform their respective functions, and (2) the type and date of repair of such disturbance. Notifications to the Board shall be made by registered mail within ten (10) working days of both the date of discovery of such disturbance and the date of completion of repairs;
- j. The Covenantor agrees that the Board, and any persons acting pursuant to Board orders, shall have reasonable access to the Burdened Property for the purposes of inspection, surveillance, maintenance, or monitoring as provided in Division 7 of the Water Code; and

k. No Owner or Occupant shall act in any manner that threatens or is likely to aggravate or contribute to the existing contaminated conditions of the Burdened Property. All use and development of the Burdened Property shall preserve the integrity of any capped areas.

3.2 Enforcement. Failure of an Owner or Occupant to comply with any of the Restrictions set forth in Paragraph 3.1 shall be grounds for the Board, by the authority of this Covenant, to require that the Owner or Occupant modify or remove, or cause to be modified or removed, any Improvements constructed in violation of that Paragraph. Violation of this Covenant shall also be grounds for the Board to file civil actions against the Owner or Occupant as provided by law. Nothing in this Covenant shall limit the Board's authority under Division 7 (commencing with section 13000) of the Water Code or other applicable laws.

3.3 Notice in Agreements. After the date of recordation hereof, all Owners and Occupants shall execute a written instrument which shall accompany all purchase agreements or leases relating to all or any portion of the Burdened Property. Any such instrument shall contain the following statement:

The land described herein contains hazardous materials in the soil, soil vapor, and groundwater at the property, and is subject to a Covenant and Environmental Restriction on Property dated as of \_\_\_\_\_, 2012, and recorded on \_\_\_\_\_, 2012, in the Official Records of Los Angeles County, California, as Document No. \_\_\_\_\_, which Covenant and Environmental Restriction on Property imposes certain covenants, conditions, and restrictions on usage of the property described herein. This statement is not a declaration that a hazard exists.

#### ARTICLE IV VARIANCE AND TERMINATION

4.1 Variance. Any Owner or, with the Owner's written consent, any Occupant may apply to the Board for a written variance from the provisions of this Covenant.

4.2 Termination. Any Owner or, with the Owner's written consent, any Occupant may apply to the Board for a termination of the Restrictions as they apply to all or any portion of the Burdened Property.

4.3 Term. Unless terminated in accordance with Paragraph 4.2 above, by law or otherwise, this Covenant shall continue in effect in perpetuity.

#### ARTICLE V MISCELLANEOUS

5.1 No Dedication Intended. Nothing set forth herein shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Burdened Property or any portion thereof to the general public.

5.2 Notices. Whenever any person gives or serves any notice, demand, or other communication with respect to this Covenant, each such notice, demand, or other communication shall be in writing and shall be deemed effective (a) when delivered, if personally delivered to the person being served or an official of a government agency being served, or (b) three (3) business days after deposit in the mail if mailed by United States mail, postage paid certified, return receipt requested, addressed:

*If To: "Covenantor"*

Norbert Gehr, Trustee of the Norbert Gehr Living Trust, U/D/T dated April 7, 1999  
7400 East Slauson Avenue  
Commerce, California 90040

*If To: "Board"*

Regional Water Quality Control Board  
Los Angeles Region  
Attention: Executive Officer  
320 W. 4<sup>th</sup> Street, Suite 200  
Los Angeles, California 90013

5.3 Partial Invalidity. If any portion of the Restrictions or terms set forth herein is determined by a court having jurisdiction to be invalid for any reason, the remaining portion shall remain in full force and effect as if such portion had not been included herein.

5.4 Recordation. This instrument shall be executed by the Covenantor and by the Executive Officer of the Board. This instrument shall be recorded by the Covenantor in the County of Los Angeles within twenty (20) days of the date of execution.

5.5 References. All references to Code sections include successor provisions.

5.6 Construction. Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the Covenant to preserve and implement the purpose of this instrument and the policies and purposes of the Water Code. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

IN WITNESS WHEREOF, the parties execute this Covenant as of the date set forth above.

**[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK;  
SIGNATURES ON FOLLOWING PAGES]**

Covenantor: Norbert Gehr, Trustee of the Norbert Gehr Living Trust, U/D/T dated April 7, 1999

Print Name: NORBERT GEHR

Signature: [Handwritten Signature]

Title: TRUSTEE

Date: 9/28/2012

**CERTIFICATE OF ACKNOWLEDGMENT**

State of California

County of Los Angeles

On September 28, 2012 before me, Dennis M. Nishida, Notary Public, personally appeared Norbert Gehr,

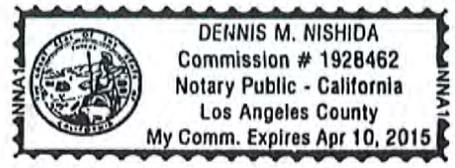
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

[Handwritten Signature]  
Signature of Notary Public

(Notary Seal)



California Regional Water Quality Control Board, Los Angeles Region

Print Name: Samuel Unger

Signature: Samuel Unger

Title: Executive Officer

Date: Aug. 16, 2012

**CERTIFICATE OF ACKNOWLEDGMENT**

State of California

County of Los Angeles

On \_\_\_\_\_, 20\_\_ before me, GWENDOLYN RACHELLE MONROE, Notary Public, personally appeared SAMUEL UNGER,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she~~/they executed the same in his/~~her~~/their authorized capacity(~~ies~~), and that by his/~~her~~/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Gwendolyn Rachelle Monroe  
Signature of Notary Public

(Notary Seal)



EXHIBIT A

LEGAL DESCRIPTION OF THE BURDENED PROPERTY

Assessor's Parcel Number: 6356-016-022

All the certain real property located in the County of Los Angeles, State of California, described as follows:

That portion of Lot 25 of East Laguna, in the City of Commerce, County of Los Angeles, State of California, as per map marked Exhibit "A" and attached to decree of partition in Case No. B-81961 Superior Court of said County, a certified copy of which decree is recorded in Book 122 Page 162 et seq., Official Records of said county, described as follows:

Beginning at a point in the Southerly line of said Lot 25, distant South 82° 50' 10" East 659.96 feet from the most Westerly corner of said lot; thence North 28° 00' East 895.39 feet to a point in the Southwesterly line of Lot 28 of said East Laguna; thence South 62° 00' East 851.69 feet along the Southwesterly lines of Lots 28, 17 and 26 of East Laguna to the Southeast corner of said Lot 26; thence South 28° 00' West along the Southwesterly prolongation of the Southeasterly line of said Lot 26, a distance of 571.26 feet to a point in the Southerly line of said Lot 25; thence along said Southerly line of Lot 25, North 82° 50' 10" West 911.28 feet to the point of beginning.

Except therefrom that portion thereof conveyed to the Pacific Electric Railway Company, by deed recorded July 27, 1945 in Book 22209 Page 114 Official records of said County.

Also except therefrom that portion thereof conveyed to the City of Commerce, by deed recorded June 18, 1975 as Instrument No. 3565 Official Records.



**APPENDIX B**  
**HEALTH AND SAFETY PLAN**



## Health and Safety Plan

**Gehr Industries Facility  
7400 East Slauson Avenue  
Commerce, California**

**Prepared for:**  
Gehr Development Corporation  
7400 East Slauson Avenue  
Commerce, California 90040

**Prepared by:**  
Ardent Environmental Group, Inc.  
1827 Capital Street, Suite 103  
Corona, California 92880

March 28, 2017  
Project No. 100876001

**APPROVED BY**

A handwritten signature in black ink, appearing to be "G.M.", is written over a horizontal line. Below the line, the text "Health and Safety Manager" is printed.

Health and Safety Manager

3/28/2017

Date

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Figure 1 – Hospital Route Map

**Appendices**

- Appendix A – Health and Safety Compliance Agreement
- Appendix B – Health and Safety Orientation Meeting Attendance Roster
- Appendix C – Organic Vapor Monitoring Documentation Form

## **1 INTRODUCTION**

This document presents the health and safety procedures that are intended to guide field activities for the property located at 7400 East Slauson Avenue in the city of Commerce, California (referred to herein as the “site” or “subject property”). The site is currently occupied by Gehr Industries Inc. (also known as Gehr Development Corporation [Gehr]) for packaging and distributing insulated wire products. Gehr also leases portions of the site to other businesses whose operations include importing and distribution, furniture making and storage, and mechanical repair of commercial trucks. Historically, the site was used by Baker Oil Tools to manufacture oil field equipment. Previous investigations completed at the site under the direction and oversight of the California Regional Water Quality Control Board, Los Angeles Region (RWQCB), identified residual contaminants including volatile organic compounds (VOCs), namely tetrachloroethylene (PCE) and trichloroethene (TCE). Based on these studies, it was determined that the residual VOCs do not pose a human health risk through dermal contact or indoor vapor intrusion and that the residual contaminants would naturally attenuate over time. As part of the closure activities, the RWQCB required that a Land Use Covenant (LUC) be recorded restricting land use for commercial/industrial purposes. The LUC states that a Soil Management Plan (SMP) must be prepared and implemented during future soil disturbances.

HarBro Inc. (HarBro), a general contractor, has been retained to install a utility pipeline at the site. Ardent has prepared a SMP, as per the LUC, to properly manage known and unknown environmental features that might be encountered. Although the SMP will be used during the utility installation, the plan can also be used during other future excavation activities.

## **2 PROJECT SAFETY PERSONNEL**

Ardent’s Program Manager is responsible for delivering the plan and any addenda to Ardent’s Field Coordinator. The Program Manager is responsible for distributing the plan to all field personnel and to an authorized representative of each firm that has a subcontract with Ardent to conduct on-site work. The Program Manager is also responsible for implementing the provisions of this plan and its addenda. Implementation includes review of HSP requirements, review of field personnel compliance with medical examination requirements, review of the provisions of this plan with Owners representative (and its subcontractors), field personnel involved with the

project, provision for safety equipment specified in Subsection 5.4, and submission of the requisite health and safety documents, including the forms in Appendix A and Appendix B.

The Field Coordinator is responsible for assisting the Program Manager with on-site implementation of this HSP. His/Her responsibilities include: 1) maintaining safety equipment supplies, 2) performing air quality measurements as specified herein, 3) directing decontamination operations and emergency response operations until public emergency personnel arrive on-site, 4) setting up work zone limits as specified herein, and 5) reporting all accidents, incidents, and infractions of safety rules and requirements to the Program Manager, General Contractor's Project Manager, and the Owner's Project Director.

The Field Coordinator has the authority to suspend work any time he judges that the provisions of the HSP are inadequate to provide a working environment conducive to worker safety, and he is to inform the Program Manager of any individuals whose on-site presence jeopardizes their own health and safety or the health and safety of others. The responsible personnel for this project are listed below.

**Table 1 – Responsible Personnel for the Site**

<b>Title</b>	<b>Name</b>	<b>Daytime</b>	<b>After Hours</b>
Program Manager	Paul Roberts	(951) 736-5334	(951) 751-3198
Field Coordinator	Kasia Edlund	(951) 736-5334	(805) 276-3915
Site Health and Safety Officer (SHSO)	Kasia Edlund	(951) 736-5334	(805) 276-3915
Ardent Corporate Health and Safety Manager	Craig Metheny	(951) 736-5334	(951) 751-2996
Subcontractor	To Be Determined	To Be Determined	To Be Determined

### **3 WORK DESCRIPTION**

Ardent has recently prepared a SMP to be used during excavation activities of a utility trench, as shown on Figure 2 in the SMP. Ardent will continuously monitor soils for stains, orders, and elevated photoionization detector (PID) readings as per the South Coast Air Quality Management District (SCAQMD) Rule 1166. If elevated concentrations of VOCs are detected with the PID, Ardent will notify the SCAQMD and continued monitoring will be completed using Ardent's Various Locations Rule 1166 Soil Mitigation Plan (aka Various Sites Permit). During monitoring activities, Ardent personnel will have current HAZWOPER health and safety training. During monitoring, ambient air quality within the work zone will be monitored for potentially

hazardous materials (e.g., VOCs) using a PID or equivalent equipment calibrated to meet the requirements of the SCAQMD guidelines.

#### **4 HAZARD ASSESSMENT**

The following subsections include potential hazards that may be present at the site or created as a result of the operations being conducted at the site.

##### **4.1 Confined Spaces**

A "confined space" is defined by the United States Department of Health and Human Services as a space that has one of the following characteristics:

- Limited openings for entry and exit, such as tanks, tunnels, vaults, etc.,
- Not designed for continuous worker occupancy, or
- Unfavorable natural ventilation or other hazards.

Work will not be conducted in confined space as defined by 29 Code of Federal Regulations (CFR) 1910.146. Excavations greater than 4 feet deep will not be entered.

##### **4.2 Chemical Hazards**

According to historical land use and information obtained from previous investigations at the site, residual concentrations of VOCs, namely PCE and TCE, may be encountered.

##### **4.3 Inhalation Hazard**

Although not expected, the vapor concentrations that may potentially be encountered during field activities may exceed currently published exposure limits. The following table provides guidelines as to the action required in response to a range of corresponding PID measurements of some of the most conservative chemical compounds that might be encountered. The measurements will be collected in the ambient air in the breathing zone of personnel working in the area. The PID must be equipped with an electron-volt (eV) bulb of 10.2 or greater.

**Table 2 – Monitoring Methods and Action Levels for Volatile Organic Compounds Using Screening Survey Instruments**

Chemical	Routes of Entry	Respirator Protection Required	Stop Work	TLV	OSHA PEL
TCE	Inhalation, Dermal	OVA = >5 ppm	OVA = >100 ppm	50 ppm as TWA	100 ppm
PCE	Inhalation, Dermal	OVA = >5 ppm	OVA = >100 ppm	25 ppm as TWA	100 ppm

**Notes:**  
 If concentrations at or above the stop-work thresholds are encountered, work must cease and the SMP Program Manager and Corporate Health and Safety Director must be contacted to render judgment whether more stringent respiratory protection is required and extension of the restricted access work zone is necessary.  
 TWA – Time-Weighted Average concentration for a normal 8-hour work day and a 40-hour work week, to which nearly all workers may be repeatedly exposed, day after day, without adverse effect.  
 ppm – Parts per million. For inhalation exposure, the exposure concentration is measured in the breathing zone of the individual (i.e., within 3 inches of the nose and mouth).  
 ACGIH – American Conference of Governmental Industrial Hygienists.  
 TLV – Threshold Limit Value. The time-weighted concentration for a normal 8-hour workday and a 40-hour work week, to which nearly all workers may be repeatedly exposed, day after day, without adverse effect.  
 OSHA PEL – Occupation Safety and Health Administration Permissible Exposure Limit. Based on 5-minute maximum peak in any 3-hours.

#### 4.4 SCAQMD Monitoring

If VOC-impacted soils are discovered during the grading activities (with PID measurements greater than 50 ppm), continuous monitoring of the grading activities may be necessary. If continuous monitoring becomes necessary, Ardent will use its SCAQMD Various Locations Rule 1166 Soil Mitigation Plan (aka Various Sites Permit) to continuously monitor grading activities.

#### 4.5 Dermal Exposure Hazard

Contact of sufficient duration to cause significant skin absorption of toxic components is judged to be highly unlikely. Repeated daily or prolonged contact with the chemicals listed in Subsection 4.2 may potentially defat the skin and, over a long period of time, can lead to irritation and dermatitis. For this reason, wearing protective gloves and clothing as specified in Subsection 5.4 should minimize direct skin contact with chemicals potentially present. However, if dermal contact does occur, the exposed areas should be washed with soap and water immediately and rinsed thoroughly.

#### **4.6 Explosion and Fire Hazard**

Explosion hazards are not expected at the site during the planned operations. However, caution will be taken to minimize sources of ignition. Cigarettes and open flames are prohibited within the restricted access work zone (Subsection 5.3).

#### **4.7 Noise Hazard**

Exposure to high levels of noise, both chronic and acute, can lead to different types of reactions. Acute (impulse) noise, such as noise associated with heavy equipment operation, jackhammers, drilling activities, and work performed in the flight path of aircraft, can afflict the operator with a temporary loss of hearing at certain frequencies associated with the equipment being used. Ordinarily, this loss is reversible, and after a short period of time (less than a day) the hearing will return to normal. However, chronic exposure to this noise may eventually cause the hearing acuity to be permanently and irreversibly altered. The change may be subtle and could occur over a period of time.

Permanent noise-induced hearing loss is attributed to the intensity and frequency distribution of the noise, the time pattern and duration of exposure, and individual susceptibility. Sound levels (noise) are measured in decibels using an A-weighting filter (dB [A]). The Threshold Limit Values (TLV) for noise exposure is 85 dBA for an eight-hour duration and 90 dBA for a four-hour duration. It is not expected that the noise level generated during this phase of work will exceed the TLV; however, hearing protection will be readily available on the site and will be mandated at SHSO discretion.

#### **4.8 Heat Stress Hazard**

Heat stress occurs when the body produces or absorbs more heat than it is able to dissipate. Heat is produced internally as the result of metabolic activity and increases with body activity or the level of physical work being performed. Heat can be absorbed by the body from ambient air and from the radiant heat of the sun.

The body's ability to absorb heat is therefore affected by factors such as the ambient air temperature and humidity, air density, radiant energy and cloud cover, wind velocity and airflow, and localized heat generation, such as that from power equipment. The body's ability to dissipate heat to the environment is dependent on factors such as the amount of

heat and radiant energy in the ambient environment, exposure to the ambient or radiant heat in that environment, and its own inherent ability to cool itself (perspiration). Exposure to ambient conditions is affected by such factors as wind velocity or airflow, cloud cover or shade, and the type of protective clothing being worn. Its ability to cool itself is affected by its own inherent biovariability.

Any of these factors may contribute to a loss of body fluids and electrolytes, and an increase in body temperature. A significant increase in body temperature can be life threatening and can rapidly become fatal or result in permanent injury. Heat stress may cause any of the following conditions: heat cramps, heat syncope (fainting), heat exhaustion, and/or heat stroke. If one of these conditions is experienced, call emergency service personnel immediately. To help prevent heat stress, it is recommended that liquids be easily available and frequently consumed during the day. The SHSO will monitor workers visually during site work including body core temperature measurements when and if appropriate. Table 3 presents the action levels and appropriate action to be taken regarding body core temperature monitoring.

**Table 3 – Action Levels for Heat Stress**

Type Measurement	Action Level	Action
Ear insertable core temperature	100.4 degrees Fahrenheit or greater	Remove from work
Ear insertable core temperature	<99 degrees Fahrenheit	Return to work

#### **4.9 Electrical Hazard**

Contact with electrical current can cause shock and electrical burns and can be instantly fatal. The potential for exposure to electrical current exists through contact with electrical tools or equipment, generators and electrical control equipment, and overhead and underground power lines. Care must be taken to avoid contact with sources of electricity. Work will cease if lightning is observed or expected to occur.

Frayed electrical cords or electrical cords with damaged plugs shall not be used. Electrical cords shall not be used in proximity to water.

#### **4.9.1 Underground Utilities**

Prior to starting soil intrusive activities, all known underground utilities and lines shall be located and marked on the ground and on a site map. Locator services from Underground Service Alert (USA) and each utility company whose utility service may intersect the facility shall be requested. Soil intrusive work shall not proceed until all locating activities have been completed and are fully documented in the site records. The initial site safety orientation meeting for all personnel working on-site shall include a review of the underground utility locations and where the site map will be located that shows the positions of any underground utility lines. The site safety orientation shall include a site walkover of each marked utility or line.

During the performance of work, should personnel encounter a subsurface condition that creates suspicion that there may be an unidentified underground line or utility, such an individual shall immediately cease work, secure his/her equipment, and notify the General Contractor, Program Manager, and Field Coordinator.

#### **4.9.2 Overhead Power Lines**

Operation of equipment in the vicinity of overhead power lines shall be in accordance with California Occupational Safety and Health Administration (Cal-OSHA) Electrical Safety Orders. The subcontractor's field supervisors and operators shall take necessary precautions for implementing safe work practices under such conditions. The following information was excerpted from the Cal-OSHA Electrical Safety Orders.

Table 4 indicates the general clearances from electrical lines for personnel and erection, handling, or transportation of tools, machinery, materials, structures, or scaffolds from overhead high-voltage power lines. Table 5 indicates the general clearances for equipment such as drill rigs, cranes, and hoists.

**Table 4 – General Clearances Required from Energized Overhead High-Voltage Conductors**

<b>Normal Voltage (Phase to Phase)</b>	<b>Minimum Required Clearance (feet)</b>
600 to 50,000	6
50,000 to 345,000	10
345,000 to 750,000	16
750,000 to 1,000,000	20

**Table 5 – Boom-Type Lifting or Hoisting Equipment Clearances Required from Energized Overhead High-Voltage Lines**

<b>Normal Voltage (Phase to Phase)</b>	<b>Minimum Required Clearance (feet)</b>
600 to 50,000	10
50,000 to 75,000	11
75,000 to 125,000	13
125,000 to 175,000	15
175,000 to 250,000	17
250,000 to 370,000	21
370,000 to 550,000	27
550,000 to 1,000,000	42
<b>Notes:</b> Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.	

**4.10 Excavation Site Hazards**

The movement of grading equipment, tractors, backhoes, and trucks in the work zone, as it relates to the hazards associated with an excavation site, such as the cave-in of an excavation, requires a high awareness of safety on the part of the equipment operators. The subcontractors are expected to make sure that all of their operators at the site are experienced in excavations and are aware of the excavation site hazards. The boundary of

the site is to be fenced, and movement of unauthorized personnel within the work zone prevented. The boundary of the site is to be clearly posted with the appropriate warning signs. Excavations greater than 4 feet will not be entered.

#### **4.11 Activity Hazard**

The principal type of activity hazard expected to be encountered during this operation includes the potential for falls, and adverse contact with tools and equipment. The experience of personnel with this type of equipment and the procedures outlined in this HSP should minimize potential safety hazards of this type. In addition, the safety equipment listed in Subsection 5.4 that is required to be used for this operation should minimize the potential for injury to personnel.

#### **4.12 Heavy Equipment Operations**

As heavy equipment operations are to be conducted at the site, all haulage, drilling, and earth moving shall, at a minimum, comply with the requirements set forth in Title 8, California Code of Regulations (CCR) Construction Safety Orders. As a part of the initial site safety orientation meeting (Subsection 5.2), equipment operators and any personnel (including foreman, supervisor, surveyors, grade checkers, etc.) associated with haulage and earth moving activity shall carefully review these regulations and any other site-specific requirements. It is the responsibility of the subcontractor to monitor its personnel for compliance with these regulations and requirements. In particular, the following guidelines are to be followed by those involved with haulage and earth moving.

- Subcontractor-authorized personnel, trained in and familiar with the equipment, its operation, and safety provisions, will perform operations.
- Maintenance and/or adjustments to machinery will not be conducted while the equipment is operating or energized, unless continued operation is necessary in accordance with the machinery manufacturer's written specifications. All repairs will be performed in a designated equipment-repair work zone. Power will be disconnected or engines shut off prior to servicing equipment unless continued operation is necessary in accordance with the machinery manufacturer's written specifications. Power supplies/switches will be clearly labeled as such, to prevent accidental startup. Equipment being repaired will be appropriately blocked and/or secured.
- Only equipment with all guards and safety controls in place are to be permitted by the subcontractor to operate on-site.

- Equipment is to meet all federal, state, and local standards and be mechanically sound and in good condition.
- Operators will perform daily safety inspections and necessary repairs are to be made before equipment is operated. If any equipment is judged to be unsafe during operation, it is to be taken out of service until it is repaired.
- When not in use, keys to equipment are to be removed and kept in a location remote from the equipment.

#### **4.13 Subsurface Earth Work**

With the exception of the planned grading and redevelopment activities, excavation activities associated with impacted soils are not planned for the site. However, if encountered, excavation of some impacted soils may be necessary. If excavation is completed, the following will be conducted.

At a minimum, all excavation activity conducted by subcontractors or the Contractor shall comply with the requirements set forth in Title 8, CCR, Construction Safety Orders. All bank, grades, and excavation walls shall be sloped to an angle of less than the angle of repose (but at no time at an angle of less than allowed in the regulations for the existing soil conditions) for the type of soil; alternatively, the excavation can be shored in accordance with applicable regulatory requirements. Trenches and pits more than 5 feet deep, and the bases of excavation embankments more than 5 feet high, will be considered hazardous areas, with no entry permitted unless the slope or shoring requirements have been met.

## **5 GENERAL HEALTH AND SAFETY REQUIREMENTS**

### **5.1 Medical Clearance and Monitoring**

All project personnel who may be required to wear respirators must have on file evidence that they have been cleared by a physician to wear a respirator. All personnel under subcontract to Ardent must also provide this evidence to the Field Coordinator (upon request). All employees of Ardent are to be active participants in the Contractor Medical Surveillance Program.

### **5.2 Safety Orientation Meeting**

All field personnel must attend a safety orientation meeting before commencing the fieldwork. The meeting will be scheduled and conducted by the Program Manager or the

Field Coordinator. The meeting will include presentation of the SMP and receipt of the required signed releases by the Field Coordinator.

### **5.3 Restricted Access Work Zone**

A restricted access work zone (a minimum of 25 feet wide when possible) will be maintained around the work areas. Due to site conditions and constraints, it may be necessary to make modifications to the width/circumference of the restricted access zone. The Field Coordinator has the authority to make reasonable adjustments as he/she judges necessary. Protective clothing and equipment, as described below in Subsection 5.4, are to be worn by all personnel working within the restricted access work zone. The purpose of the restricted access work zone is to provide points of ingress and egress for personnel and equipment. The zone is to be demarcated with caution/hazard tape and barricades (or similar restricting material). The restricted access work zone is to be clearly labeled as such. In addition to the restricted access work zone, a gate should restrict vehicular access to the site when possible.

### **5.4 Protective Equipment and Clothing**

#### **5.4.1 Equipment Required For Field Personnel While Working in the Restricted Access Work Zone**

Personnel working within the restricted access work zone are to wear the following equipment unless otherwise specified in writing by the Corporate Health and Safety Manager and/or the Program Manager.

- Hardhat
- Boots (steel-toed)
- Safety glasses
- Gloves (latex and/or nitrile)

#### **Equipment to be Available On-Site**

- First Aid Reference Guide
- Earplugs
- Two respirators (National Institute of Occupational Safety and Health/Mine Safety and Health Administration (NIOSH/MSHA)-approved half-mask with organic vapor cartridges)

- PID and calibration gas
- First-aid kit with eye wash
- Fire extinguisher
- Construction tape and barriers to delineate restricted access work zone
- Water and soap for washing
- A vehicle with keys in the ignition and headed in a direction for quick departure for the transport of slightly injured personnel to the hospital must be kept on-site when personnel are working. Severely injured personnel **MUST** be transported **ONLY** by paramedics (except as permitted in Subsection 7.1). A copy of the hospital address and route directions from Subsection 7.5 must remain in the vehicle.

#### **5.4.2 Respirator Usage**

The Program Manager is responsible for deciding if respiratory protection is required and if the level of respiratory protection used should be more stringent. If a decision is made to base respirator selection on PID measurements, refer to the table in Subsection 4.3 for critical concentrations. Subsection 6.1 presents organic vapor monitoring frequency and duration.

The conditions in Subsection 5.1 are to be complied with. Cartridges for the respirators must be replaced daily or when breakthrough occurs, whichever occurs first. All individuals intending to wear respirators need to be fit-tested or provide evidence of fit testing.

#### **5.4.3 Buddy System**

All field personnel while working in the restricted access work zone during the field activities are to work with another person at the site. The subcontractor's representative can serve as the second person while the work is being conducted in the field. Under no circumstances, other than completion of paper work at the end of the day, are field personnel to work alone at the site while conducting field activities.

## **6 ORGANIC VAPOR MONITORING**

### **6.1 Exposure Concerns**

In addition to the monitoring requirements established by SCAQMD during any excavation work, organic vapor concentrations (as measured by the PID) in the breathing zone (the area nearest to the individual's mouth) of the individual working nearest to the potential vapor source must be monitored during field operations. Monitoring, using the PID, should be conducted at approximate 15-minute intervals, for a sampling duration of approximately 60 seconds while work is being conducted. Occasionally, the monitoring frequency may be modified at the discretion of the Field Coordinator due to changes in field activities. All measurements, as well as the time of day the measurements were collected, must be documented. A form that can be used to document these measurements is presented in Appendix C. Daily field logs can be used to document these measurements also. Refer to Subsection 4.3 for guidelines to judge when respiratory protection is necessary based on PID measurements.

## **7 EMERGENCY RESPONSE PROCEDURES**

### **7.1 Physical Injury**

In the event of an accident resulting in physical injury, call emergency service personnel immediately and perform first aid commensurate with training and seriousness of the injury. Severely injured personnel are to be transported only by emergency service personnel and/or by ambulance personnel unless a life-threatening condition is judged to exist that must be addressed immediately. If emergency or ambulance personnel transport injured personnel to the hospital, the hospital will be selected at the discretion of the emergency or ambulance personnel. The hospital selected may or may not be the hospital listed in Subsection 7.5 of this document. At the hospital, a physician's attention is mandatory regardless of how serious the injury appears.

The Program Manager is to be notified by the Field Coordinator, as soon after the injury as practical, regarding the nature of the accident. A written report is also to be prepared and submitted by the Field Coordinator to the Program Manager within 24 hours of the accident. If the Field Coordinator is unable to make the report (due to injury), an individual designated by the Program Manager shall make the report.

## **7.2 Fire, Explosion, and Property Damage**

In the event of a fire or explosion, notify the fire department immediately by dialing 911.

The Program Manager is to be notified by the Field Coordinator as soon as practical and a written report prepared within 24 hours of the accident.

In the event of any accident involving serious injury of sufficient magnitude, work at the site shall cease until the Corporate Health and Safety Manager and/or the Program Manager (or a designee) has completed a review of the events and site conditions and has authorized work to resume.

## **7.3 Emergency Telephone Numbers**

Fire Department	911
Police Department	911
Paramedics	911

## **7.4 Work Site Address**

The site is located at 7400 East Slauson Avenue in the city of Commerce, California.

## **7.5 Hospital Address and Route**

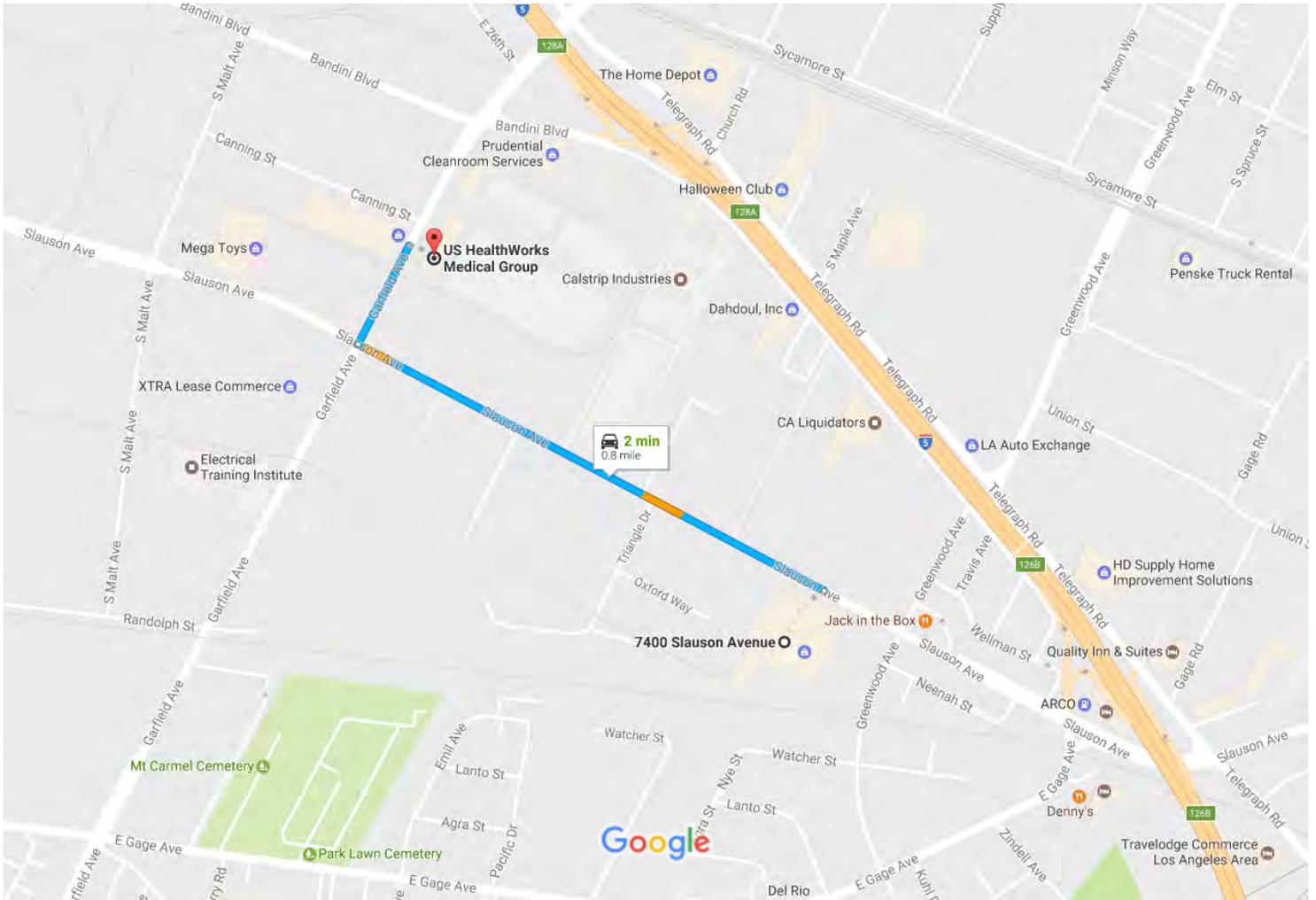
For hospital routes, see attached map from Google Maps.

US HealthWorks Medical Group (Urgent Care)  
3430 Garfield Avenue  
Commerce, California 90040  
Telephone: 323-722-8481



# 7400 Slouson Avenue, Commerce, CA to U.S. HealthWorks Medical Group

Drive 0.8 mile, 2 min



Map data ©2017 Google 500 ft

## 7400 Slouson Ave

Commerce, CA 90040

- ↑ 1. Head northwest on Slouson Ave 0.6 mi

---

- 2. Turn right onto Garfield Ave 0.1 mi  
i Destination will be on the right

## U.S. HealthWorks Medical Group

3430 Garfield Ave, Commerce, CA 90040

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

**APPENDIX A**  
**HEALTH AND SAFETY COMPLIANCE AGREEMENT**

Copy: \_\_\_\_\_

## CONTRACTOR HEALTH AND SAFETY COMPLIANCE AGREEMENT

Project Name: \_\_\_\_\_

I, \_\_\_\_\_ (PRINT NAME), have received a copy of the entire Health and Safety Plan for the above-referenced project. I have read the plan, understand it, and agree to comply with all of the health and safety requirements. I understand that I may be prohibited from working on the project for violating any of the requirements.

I have been approved to wear a respirator by a physician based on medical examination. I have been trained in the appropriate use, care, and storage of respiratory equipment. I have been respirator fit-tested, and I will have my respirator available for use in the field. I understand that I am to use the equipment supplied to me by my employer. I further understand that this equipment is provided solely for my benefit with the intent to minimize my exposure to potentially hazardous conditions. In the event of such usage, I agree to indemnify and hold harmless Contractor and all of its employees from and against any and all losses, demands, claims, liabilities, lawsuits, damages, costs, and expenses arising, in any way, from the use of the equipment.

Visitors will not receive a copy of the Health and Safety Plan but will be required to review it. It is required that visitors be escorted in the restricted access work zone. Visitors must comply with the Contractor escort directions while on-site at all times. Non-compliance with escort directions will not be tolerated, and violators will be requested to leave the site immediately.

Thank you for your cooperation.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Note: This original signed agreement is to be placed in the referenced project file.

**APPENDIX B**

**HEALTH AND SAFETY ORIENTATION MEETING ATTENDANCE ROSTER**

## HEALTH AND SAFETY ORIENTATION MEETING ATTENDANCE ROSTER

The following personnel involved in the field activities have attended a Health and Safety Plan orientation meeting.

By initialing this form, each person acknowledges that he/she has read and understands the indicated, numbered copy of the Health and Safety Plan.

Copy	Name	Company	Date	Attendee s Initial
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

Meeting Date: \_\_\_\_\_

Meeting Leader: \_\_\_\_\_

Project Name: \_\_\_\_\_

**APPENDIX C**

**ORGANIC VAPOR MONITORING DOCUMENTATION FORM**



## **APPENDIX C**

### **VARIOUS LOCATIONS RULE 1166 CONTAMINATED SOIL MITIGATION PLAN**





# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • [www.aqmd.gov](http://www.aqmd.gov)

## ACKNOWLEDGEMENT OF ANNUAL OPERATING PERMIT FEE PAYMENT

Dear Permit Holder:

This letter acknowledges your recent annual operating permit renewal fee payment for the permits to operate or applications listed on the enclosed attachment. The next renewal date for each permit or application is stated on the attachment. For facilities that have been issued a RECLAIM or Title V facility permit, the facility permit serves as a comprehensive permit to operate the equipment listed on the facility permit.

***This payment acknowledgment does NOT replace your original Permit to Operate, and you should NOT discard the original permit.***

You are required by SCAQMD Rule 206 to affix the original Permit to Operate or a legible facsimile of the permit upon the equipment so that the permit number, equipment description, and the operating conditions are clearly visible.

If you have any questions about this permit renewal acknowledgement letter please call SCAQMD's Billing Services Tuesday through Friday from 8 a.m. to 12 Noon and 1 p.m. to 5 p.m. at (909) 396-2900; or from inside California, you may call toll free at (866) 888-8838. A request for a certified permit copy shall be made in writing by the permittee after the destruction, loss, or defacement of a permit. A request for a permit to be reissued shall be made in writing by the permittee where there is a name or address change without a change of operator or location. A fee of \$26.34 must accompany your written request for a certified copy. (If your facility is a RECLAIM or Title V facility, you may request a certified copy of your RECLAIM or Title V facility permit by submitting the request in writing. A fee of \$26.34 for the first page and \$1.86 for each additional page in the facility permit must accompany your written request.) A fee of \$203.93 shall be paid for a reissued permit (RECLAIM or Title V facility shall pay \$203.93 for the first page plus \$1.86 for each additional page of the Facility Permit). The written request and the fee for a certified copy or reissue of an active permit should be sent to SCAQMD, P.O. Box 4944, Diamond Bar, CA 91765-0944. For questions regarding certified or reissued permits please contact Permit Services at 909-396-3385.



This plan must be renewed annually and is subject to annual renewal fees pursuant to Rule 306 (h).

**Plan Issue Date:** 4/6/2016

ID 168313

**Company:** ARDENT ENVIRONMENTAL GROUP, INC.  
1827 CAPITAL ST, STE 103  
CORONA, CA 92880

**Site Location:** VARIOUS LOCATIONS IN SCAQMD

**Conditions:**

The operation under this Rule 1166 has been conditionally approved and is subject to the following conditions:

**SECTION I - GENERAL REQUIREMENTS**

1. A signed copy of this plan shall be present at each excavation site at all times and shall be made available to SCAQMD personnel upon request.
2. This plan is not valid for the excavation of VOC contaminated soils at landfills or sites used for disposal of refuse or other types of waste.
3. This plan does not allow the treatment of VOC contaminated soil by thermal, chemical, or mechanical processes. Any of the above treatment processes requires a Permit to Operate from the SCAQMD and a site specific Rule 1166 plan.
4. This plan does not allow back-filling of treated VOC contaminated soil. Back-filling of treated VOC contaminated soil may be allowed under a site specific Rule 1166 plan.
5. The total quantity of VOC contaminated soil excavated and handled at each site shall not exceed 2,000 cubic yards. This total includes any VOC contaminated soils excavated from this location under a various location plan within the last twelve (12) calendar months. Excavations involving quantities in excess of 2,000 cubic yards of VOC contaminated soil requires the application submittal and approval of a site specific Rule 1166 excavation plan.
6. For the purposes of Rule 1166 and this plan, soil measured pursuant to Rule 1166 as VOC contaminated soil, is considered as VOC contaminated soil from the time of measurement onward, until the soil is treated pursuant to an approved SCAQMD treatment process.
7. During each step of the process up to and including the removal and disposal process, all precautions and measures shall be taken to minimize the release of VOC, odor and dust. This includes, but is not limited to:
  - A. The use of additional plastic sheeting or suppressants on exposed soil surfaces and work areas,
  - B. Maintaining paved public streets free of soil deposits, and
  - C. Operating such that VOC soil shall not be spread on-site or off-site; and not performing any unnecessary movement or agitation of soil, including the reshaping or relocation of stockpiles, that may cause the uncontrolled evaporation of VOCs into the atmosphere.
8. The SCAQMD shall be immediately notified of any complaints received as a result of activities conducted under this plan. Such notification shall include the nature of the complaints, number of complainants, and the action taken by the plan holder to mitigate the source of the complaint.

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**SECTION II - PRIOR TO EXCAVATION**

- 9. At least 24 hours prior to commencing excavation or grading of soil at the site, the Executive Officer or designee shall be notified of the excavation by fax using a form approved by the Executive Officer, which is fully completed and includes the name of the company performing the excavation and the application number listed on this mitigation plan. The notification shall be made by faxing the notification form at (909) 396-3342. Fax notifications will receive a reference number by return fax or can be obtained referencing the fax notification by phone, Tuesday through Friday during business hours, at (909) 396-2326. The reference number shall be retained as proof of compliance with this requirement.

Reference Number:

Notification Date:

- 10. Complete verification information in Attachment section and obtain required signatures, prior to commencing excavation.

**SECTION III - MONITORING**

- 11. All monitoring shall be conducted by trained personnel who are proficient in the use of the hydrocarbon monitor selected for use at this site.
- 12. During the excavation process, an organic vapor analyzer (OVA) shall be on site at all times. The OVA shall be maintained in good working order at all times and shall be calibrated by the manufacturer at least once every three months. The calibration of the OVA shall be verified using certified calibration gas at the beginning of each working day with the procedures specified by the manufacturer. If a calibration gas other than hexane is used, each measured reading shall be correlated to and expressed as hexane, using equivalency factors provided by the manufacturer.
- 13. All monitoring shall be conducted at a distance no more than 3 inches above the soil surface using an OVA described in condition no. 12 above. Monitoring shall be conducted at a minimum frequency of one reading for every two cubic yards of soil excavated, not to exceed fifteen minutes between readings. All readings shall be taken no later than three (3) minutes after each load of soil is excavated.
- 14. Written records of OVA monitoring and calibrations required above shall be kept in a format approved by the SCAQMD. The approved format is included in the Attachment section (total 6 pages). The certification on all records shall be signed and dated on the day the measurements are observed.
- 15. Upon detection of VOC contaminated soil (readings 50 PPMV or greater), the Executive Officer or designee shall be notified within 24 hours of the first detection of VOC contamination. The notification shall be made by faxing the notification form to (909) 396-3342 or calling (909) 396-2326. A reference number will be faxed back or will be issued when the phone notification is received. All phone notifications shall be followed by mailing the notification form to the District postmarked within 48 hours. The reference number will be retained as proof of compliance with this requirement.

Reference Number:

Notification Date:

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#### SECTION IV - HANDLING

16. If the OVA measurement is greater than 50 PPMV but less than 1000 PPMV
  - A. The affected work area and load of soil shall be sprayed with water and/or approved vapor suppressant.
  - B. Contaminated soil in stockpiles shall be covered with plastic sheeting which overlap a minimum of twenty-four inches and are secured so that no portion of the contaminated soil is exposed to the atmosphere. In the course of handling the stockpile, only the working face of the stockpile may be uncovered.
17. If the soil OVA measurement equals or is greater than 1000 PPMV, notify the District immediately or within one hour of detection, and
  - A. The affected soil and working area shall be immediately sprayed with water or an approved vapor suppressant, and either:
    - i. The contaminated soil excavated shall be immediately placed in SCAQMD approved sealed containers equipped with vapor tight lids, or,
    - ii. The soil shall be directly loaded in trucks, sprayed with additional water or approved vapor suppressants, covered, and transported immediately off site to an approved treatment facility, or,
  - B. Handled by alternative storage methods with prior written approval from the SCAQMD
18. All VOC contaminated soil below 1000 PPMV shall be stockpiled, covered with plastic sheeting, and stored separately from non-VOC contaminated soil, or immediately transported to a treatment facility

#### SECTION V - STORAGE

19. A stockpile shall not contain more than 400 cubic yards of soil.
20. During excavation, the only exposed VOC contaminated soil shall be restricted to the immediate working area of the site or stockpile. All other portions of the stockpile shall be covered with plastic sheeting, with seams, which overlap a minimum of twenty-four inches and are secured with duct tape. Any exposed VOC contaminated soil surfaces (work face) shall be kept moist with water or other approved suppressants at all times, and shall be re-covered during periods of inactivity longer than one (1) hour. At the end of each working day, all stockpiles shall be completely covered and securely anchored to prevent any exposure of soil to the atmosphere.
21. Once covered with plastic sheeting, stockpiles shall remain undisturbed until removed from site.
22. Daily inspections shall be conducted of all covered VOC contaminated stockpiles to ensure the integrity of the plastic cover. Such inspections shall include a visual inspection of all seams and plastic cover surfaces. Any holes, tears or any other potential sources of fugitive VOC emissions shall be repaired immediately. Daily records shall be maintained to ensure compliance with this condition.

#### SECTION VI - SOIL REMOVAL AND DISPOSAL

23. All excavated VOC contaminated soil shall be removed from the site within thirty (30) days of its excavation.

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24. All VOC contaminated soil removed from the site shall comply with the following:
- A. Be transported to an approved treatment/disposal facility. It shall be the responsibility of the plan holder to ensure that the receiving treatment/disposal facility has received approval from the appropriate environmental oversight agencies to handle and treat VOC contaminated soils.
  - B. Prior to covering/tarping, loaded contaminated soil shall be treated by spraying with water or dust suppressants.
  - C. The truck or trailer shall be completely covered/tarped prior to leaving the site to prevent particulate emissions to the atmosphere.
  - D. When loading is completed and during transportation, no excavated material shall extend above the sides or rear of the truck or trailer.
  - E. The exterior of the trucks (including the tires) shall be cleaned off prior to the trucks leaving the excavation site.

#### SECTION VII - RECORDS AND REPORTING

25. A written report shall be provided to the SCAQMD within 30 days of initial detection of contaminated soil, which includes the following information:
- A. The status of the excavation pit, and any VOC contaminated soil remaining on site.
  - B. A brief summary indicating if additional clean up efforts are necessary, the additional quantity of VOC contaminated soils to be excavated and the projected schedule of the excavation.
26. Records of disposal shall be maintained for all VOC contaminated soil removed from this site. Such records shall be clearly labeled SCAQMD RULE 1166-VOC CONTAMINATED SOIL and shall include the identification and the location of, 1) the generator, 2) transporter and 3) receiving facility. In addition, such records shall be signed and dated by each of the above parties indicating receipt or relinquishment of the VOC contaminated soil at the time custody is transferred.
27. Records of disposal of VOC contaminated soil shall be maintained on site during the excavation and later maintained for a period of two (2) years. The records shall be made available to SCAQMD personnel upon request.
28. Within thirty (30) days after the excavation at the site is completed, the written records under conditions no. 14, 22, and 27 shall be submitted to the SCAQMD at the following address:

South Coast Air Quality Mgmt District  
Engineering & Compliance division  
Toxics & Waste management unit  
(Rule 1166 Compliance)

**ORIGINAL**



21865 E. Copley Dr.

Diamond Bar, CA. 91765-4182

29. Once issued, this plan is subject to further review by the SCAQMD and may be revoked if excavation activities are found in violation of plan conditions or SCAQMD's Rules and Regulations. Failure to comply with one or more of the conditions contained within this plan constitutes a violation of Rules 221 and 1166.

#### NOTICE

This plan does not authorize the emission of air contaminants in excess of those allowed by Division 26 of the Health and Safety Code of the State of California or the applicable Rules and Regulations of the South Coast Air Quality Management District (SCAQMD). This plan cannot be considered as permission to violate existing laws, ordinances, regulations or statutes of other government agencies.

A copy of this plan shall be displayed in the vicinity of the equipment subject to this plan.

Executive Officer

A handwritten signature in cursive script that reads "Dorris M. Bailey".

By Dorris M. Bailey/GR01  
4/6/2016

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**ATTACHMENT SECTION**

**VERIFICATION AND SIGNATURE**

THIS PLAN IS NOT VALID UNTIL ALL PARTIES HAVE REVIEWED AND SIGNED THE VERIFICATION STATEMENT BELOW.

Site Name		Type of Business	
Address	City	Zip	
Responsible Party (Owner/Operator)			Phone
Address	City	Zip	

I CERTIFY THAT I HAVE REVIEWED AND UNDERSTAND THE CONDITIONS CONTAINED WITHIN THIS PLAN. IN SIGNING BELOW, I ACKNOWLEDGE THAT UNDER THE PROVISIONS OF RULE 1166, I CAN BE HELD RESPONSIBLE FOR THE REQUIREMENTS SET FORTH IN THIS PLAN.

Responsible Party	Responsible Party Signature	Date Signed
General Contractor	General Contractor Signature	Date Signed
Excavation Contractor	Excavation Contractor Signature	Date Signed
Environmental Consultant	Environmental Consultant Signature	Date Signed

**DEFINITIONS**

- Excavation** Is the process of digging out and removing materials including any material necessary to that process such as the digging out and removal of asphalt or concrete necessary to expose, dig out and remove known VOC contaminated soil.
- Organic Vapor Analyzer (OVA)** For the purposes of this plan, an OVA is an hydrocarbon monitor utilizing flame ionization, photo ionization or other analytical methods complying with 40 CFR PART 60 APPENDIX A, EPA METHOD 21 SECTION 3, "DETERMINATION OF VOLATILE ORGANIC COMPOUND LEAKS, MONITORING INSTRUMENT SPECIFICATIONS. The monitor shall be capable of being calibrated using hexane at a range of 0 parts per million by volume (PPMV) to 50 PPMV, and at a detection range of at least 30 PPMV to 1100 PPMV
- Responsible Party** For the purposes of this plan, Responsible Party is the party financially responsible for initiating the excavation. This may include the property owner or the tank operator. This excludes contractors working for the property owner or operator, and any other party that lacks the direct authority to immediately treat all VOC contaminated soils generated at the excavation site.
- VOC Contaminated Soil** Is soil that registers a concentration of 50 PPM or greater of volatile organic compounds as measured before suppression materials have been applied and at a distance of no more than three inches from the surface of the excavated soil with an organic vapor analyzer calibrated with hexane.
- Volatile Organic Compound (VOC)** Is any volatile compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium

carbonate, and exempt compounds. Exempt compounds areas defined in Rule 102 – Definitions of Terms.

Once issued, this plan is subject to further review by the SCAQMD and may be revoked if excavation activities are found in violation of plan conditions or SCAQMD's Rules and Regulations. Failure to comply with one or more of the conditions contained within this plan constitutes a violation of Rules 221 and 1166.

Other governmental agencies may require approval before any excavation begins. It shall be the responsibility of the applicant to obtain that approval. The South Coast Air Quality Management District shall not be responsible or liable for any losses because of measures required or taken pursuant to the requirements of this approved Rule 1166 Contaminated Soil Mitigation Plan.

Questions regarding this plan should be directed to John Anderson, at (909) 396-2499.





# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765

1-800-CUT-SMOG www.aqmd.gov

## IMPORTANT NOTICE Rules 203, 1149 and 1166 Fees

TO COMPANIES AND CONTRACTORS THAT:

- Operate portable soil/vapor extraction units at a location for 5 days or more (Rule 203)*
- Degas storage tanks known/suspected to contain Volatile Organic Compounds (VOC) (Rule 1149)*
- Remove tanks or transfer piping known/suspected to contain VOC (Rule 1166)*
- Handle, excavate, grade, monitor or treat soil known/suspected to contain VOC (Rule 1166)*

SCAQMD Regulation III - Fee amendments for the Fiscal Years notification fee are as shown below. All required notifications for soil vapor extraction projects, tank degassing projects, and excavation of VOC soil projects, are subject to the new fee per Rule 301(x). See fee schedule below:

Fiscal Year	Notification Fee*
2014-2015	\$57.18
2015-2016	\$57.98

The fee is per notification and an additional service charge fee of \$25.00 may apply for any returned check per Rule 313(i).

Initial notifications must be faxed to 909-396-3342 and the original notification and fee must be postmarked within 48 hours of the fax time.

SCAQMD recommends mailing your notification to save time, money, reduce traffic, conserve energy use and avoid air pollution. ***For your convenience please mail all notifications and fees to the following mailing address:***

*SCAQMD R203/1149/1166 Notifications,  
FILE # 55641,  
Los Angeles, CA 90074-5641*

Notifications should be completed, signed, mailed and the fee paid by the contractor performing the project. Notifications submitted without a fee are deemed incomplete and they will be returned to sender and referred to the Air Toxics Compliance Unit.

Rules 203, 1149 and 1166 notification forms, instructions, and information can be obtained from the SCAQMD web site at <http://www.aqmd.gov>

The forms are located at our home page, click on **Business / Compliance Program / Recordkeeping and Reporting Forms** or the **Rule** link below.

- 203 Soil Vapor Extraction (SVE) Notification Form
- 1166 VOC Emissions From Soil Excavation Notification Form
- 1149 Storage Tank Degassing Notification Form

For any Rule 203/1149/1166 questions call the above Rules Hot Line at (909) 396-2326.

\*NOTE: Rule 304(e) requires an owner operator to pay for analysis of SCAQMD field samples showing non compliance. Please consult the current Rule 301 for the correct Notification Fee prior to sending the payment.



**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT  
SVE Operation (R203) or Rule 1166 NOTIFICATION FORM**

Use this form to notify of operation of a Soil Vapor Extraction unit (SVE); or prior to Excavating, Handling, Monitoring, Treating known or suspect Volatile Organic Compounds (VOC) contaminated soil per R1166. See instructions on the back of this form. For questions check our website at [www.aqmd.gov](http://www.aqmd.gov) or call the Hotline at (909) 396-2326. FAX this form to 909-396-3342 and within 48 hours of the fax, MAIL the original form and fee to:

SCAQMD - 1166/203 Notifications, File # 55641, Los Angeles, CA 90074-5641

This form will be faxed back to you with a REFERENCE number if you provide a FAXBACK # here: \_\_\_\_\_

AQMD USE ONLY		RECEIVED BY	POSTMARK	REFERENCE #	
COMPLETED BY		Company		Phone #	
Date	Check #	Amount	Project #		
NOTIFICATION TYPE (check one only)	Original (Initial) <input type="checkbox"/>	Revision (prior reference #) <input type="checkbox"/>	Cancellation (prior reference #) <input type="checkbox"/>		
PROJECT TYPE (check one only)	<sup>1</sup> Soil Vapor Extraction (SVE) <input type="checkbox"/>	<sup>2</sup> R1166 Treating Contaminated Soil <input type="checkbox"/>	<sup>2</sup> R1166 Excavation of VOC Soil/Tank <input type="checkbox"/>	<sup>2</sup> R1166 Reporting > 50 ppm VOC Soil <input type="checkbox"/>	<sup>2</sup> R1166 Reporting > 1000 ppm VOC Soil <input type="checkbox"/>
<sup>1</sup> SVE Permit issued to (name):			<sup>1</sup> SVE Permit Number:		
<sup>1</sup> SVE Distance to nearest sensitive receptor in feet (see your permit condition requirements):					
<sup>2</sup> R1166 Mitigation Plan issued to (name):			<sup>2</sup> R1166 Plan Number:		
<sup>2</sup> R1166 - Date & time of VOC > 50 or 1000 ppm exceedance:			Highest VOC reading in ppm:		
PROJECT DATES	START	END	WORK SHIFT	day <input type="checkbox"/> swing <input type="checkbox"/> night <input type="checkbox"/>	
SITE CONTRACTOR INFORMATION	AQMD ID #	CSLB License #	Phone #		
Name	Address				
City	Zip	Site supv name & phone #			
SITE INFORMATION	Site Name	Site AQMD ID #			
Site Address:	Cross Street				
Site City	Zip	Site contact name & phone #			
TANK INFORMATION	# OF TANKS	EACH	CAPACITY (gal)	MATERIAL STORED IN TANK	ABOVE GROUND? (Y/N)
		@			
		@			
<i>Example</i>	<i>3 tanks</i>	<i>@</i>	<i>10,000</i>	<i>Gasoline</i>	<i>no</i>
INFORMATION CERTIFICATION		I certify that the above information is complete and accurate			
Company Name	Print Name	Signature	Date		
COMMENTS					

## Rule 203 and Rule 1166 Form Notification Instructions

Use this form to notify of operation of a Soil Vapor Extraction unit (SVE) at any site for more than 5 days per permit condition (R203); or for notifying about R1166 projects prior to excavating soil that is known or suspected to contain Volatile Organic Compounds (VOC), VOC tank excavation, discovering the presence of > 50 ppm and 1000 ppm VOC contaminated soil during soil excavation, or to notify of onsite VOC contaminated soil mitigation or treating. For questions check our website at [www.aqmd.gov](http://www.aqmd.gov) or call the Hotline at (909) 396-2326

**NOTIFICATION FEES:** Per Rule 301(x) any person required to submit a notification per Rule 1166 projects or Rule 203 - Soil Vapor Extraction projects must pay a notification fee per notification.

**FAX** all notifications to (909) 396-3342 and then **MAIL** the form and fee within 48 hours of fax to:

SCAQMD Rule 1166 / 203 Notifications, File # 55641, Los Angeles, CA 90074-5641

Notifications must include the following **MANDATORY** information:

**Faxback #** - Provide your fax # at the top of the Notification Form if you want a **Reference #** faxed back to you.

**Notification Type** - **CIRCLE** the type of Notification. **Original** is for new or initial Notifications. **Revisions** are for updating information on notifications in which the project End Date has not expired. Provide the most recent prior Reference # issued for **Revisions** or **Cancellations**.

**Project Type** - **CIRCLE** the type of work you are submitting a notification for. A separate notification and fee is required for each type of work selected.

**Mitigation Plan/Permit** - Each Project Type requires a valid R1166 Mitigation Plan *or* SVE Permit # (*important*).

**Site Contractor Information** - Provide the information for the actual contractor *doing the work*. The AQMD ID #, also known as Company or Facility ID #, can be found on the contractor's AQMD Mitigation Plan, Permits or invoices.

**Site Information** - Provide the site name and complete address. Include the street number and name, city, zip code, and nearest cross street. Give more detailed directions for site(s) difficult to locate.

**Project Dates** - Provide the project Start and End Dates. Any changes will require a Revision notification.

**Tank Information** - For R1166 tank excavation specify the tank capacity, the VOC material stored in the tank, and if the tank is above ground (a/g) or underground (u/g).

**Information Certification** - The notification must be signed and dated by the contractor doing the work or authorized representative to confirm that the information provided is complete and accurate.

**SOIL/TANK EXCAVATION NOTIFICATION** Rule 1166(c)(1)(B) Notify 24 hours prior of intent to *Excavate* known or suspected VOC storage and/or transfer equipment (includes diesel and waste oil tanks); or *handling* known or suspected VOC contaminated soil. **NOTE:** Soil excavation > 5,000 cubic yards may require a R403 Fugitive Dust Plan.

**DETECTING/FINDING VOC SOIL NOTIFICATION** - Rule 1166(c)(1)(D)(ii) Notify of finding VOC contaminated soil

- within 1 hour of detecting VOC greater than 1000 ppm\*
- within 24 hours of detecting VOC greater than 50 ppm
- within 1 hour of an excavation due to a breakdown requiring a Rule 430 notification to SCAQMD

**EMERGENCY NOTIFICATION** Rule 1166(c)(1)(B) Notify prior to start work of any incident declared an emergency by an authorized agency requiring immediate tank removal/repairs or excavating/handling known or suspected VOC soil:

- Call 1-800-CUT-SMOG prior to excavating or fax the emergency notification to 909-396-3342 and
- Mail the notification within 48 hours after the excavation including the agency Order or Declaration.

**SOIL VAPOR EXTRACTION NOTIFICATION (SVE - Rule 203 \*)** Notify upon the 5<sup>th</sup> day after operating at a new site: Notifying of *start-up* or *testing* of operation of portable Soil Vapor Extraction equipment lasting 5 days or more. Provide the distance in feet to the nearest sensitive receptor if the site is located less than ¼ mile from any Long-Term Health Care Facility, Rehabilitation Center, Convalescent Center, Retirement Home, Residence, School, Playground, Child Care Center or Athletic Facility (\* See your SVE permit condition requirements).

**MITIGATION/TREATING VOC SOIL NOTIFICATION (Rule 203 \*)** Notify per Permit condition requirements when: Notifying of on-site *mitigation* or *treating* of VOC contaminated soil (\* See your Permit condition requirements).



# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • www.aqmd.gov

DATE: 01/03/2017

EQUIPMENT LOCATED AT:      VARIOUS LOCATIONS IN SCAQMD  
   CITY OF INDUSTRY, CA 91744

LEGAL OWNER      CO. ID:      168313  
OR OPERATOR      ARDENT ENVIRONMENTAL GROUP, INC.  
                                 1827 CAPITAL ST STE 103  
                                 CORONA, CA, 92880

## PERMIT/APPLICATION RENEWAL

PERMIT/ APPL NBR	EQUIPMENT DESCRIPTION	NEXT RENEWAL DATE
BILLING YEAR: 2016	PLAN RULE 1166-VOC SOIL, VAR LOC	01/16/2018



# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • www.aqmd.gov

## ACKNOWLEDGEMENT OF ANNUAL OPERATING PERMIT FEE PAYMENT

Dear Permit Holder:

This letter acknowledges your recent annual operating permit renewal fee payment for the permits to operate or applications listed on the enclosed attachment. The next renewal date for each permit or application is stated on the attachment. For facilities that have been issued a RECLAIM or Title V facility permit, the facility permit serves as a comprehensive permit to operate the equipment listed on the facility permit.

***This payment acknowledgment does NOT replace your original Permit to Operate, and you should NOT discard the original permit.***

You are required by SCAQMD Rule 206 to affix the original Permit to Operate or a legible facsimile of the permit upon the equipment so that the permit number, equipment description, and the operating conditions are clearly visible.

If you have any questions about this permit renewal acknowledgement letter please call SCAQMD's Billing Services Tuesday through Friday from 8 a.m. to 12 Noon and 1 p.m. to 5 p.m. at (909) 396-2900; or from inside California, you may call toll free at (866) 888-8838. A request for a certified permit copy shall be made in writing by the permittee after the destruction, loss, or defacement of a permit. A request for a permit to be reissued shall be made in writing by the permittee where there is a name or address change without a change of operator or location. A fee of \$26.34 must accompany your written request for a certified copy. (If your facility is a RECLAIM or Title V facility, you may request a certified copy of your RECLAIM or Title V facility permit by submitting the request in writing. A fee of \$26.34 for the first page and \$1.86 for each additional page in the facility permit must accompany your written request.) A fee of \$203.93 shall be paid for a reissued permit (RECLAIM or Title V facility shall pay \$203.93 for the first page plus \$1.86 for each additional page of the Facility Permit). The written request and the fee for a certified copy or reissue of an active permit should be sent to SCAQMD, P.O. Box 4944, Diamond Bar, CA 91765-0944. For questions regarding certified or reissued permits please contact Permit Services at 909-396-3385.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

**RULE 1166 -- VOLATILE ORGANIC COMPOUND EMISSIONS FROM DECONTAMINATION OF SOIL**

*(Adopted August 5, 1988)(Amended July 14, 1995)(Amended May 11, 2001)*

(a) Applicability

This rule sets requirements to control the emission of Volatile Organic Compounds (VOC) from excavating, grading, handling and treating VOC-contaminated soil as a result of leakage from storage or transfer operations, accidental spillage, or other deposition.

(b) Definitions

- (1) EXCAVATION is the process of digging out and removing materials, including any material necessary to that process such as the digging out and removal of asphalt or concrete necessary to expose, dig out and remove known VOC contaminated soil.
- (2) GRADING is the process of leveling off to produce a smooth surface including the removal of any material necessary to that process such as asphalt and concrete necessary to expose known VOC contaminated soil.
- (3) SOIL DECONTAMINATION MEASURE is any process approved by the Executive Officer to remediate, destroy, remove, or encapsulate VOC and VOC-contaminated soil.
- (4) UNDERGROUND STORAGE TANK means any one or combination of tanks, including pipes connected thereto, which is used for the storage of organic liquid which is more than 50% beneath the surface of the ground.
- (5) VOC CONTAMINATED SOIL is a soil which registers a concentration of 50 ppm or greater of Volatile Organic Compounds as measured before suppression materials have been applied and at a distance of no more than three inches from the surface of the excavated soil with an organic vapor analyzer calibrated with hexane.
- (6) VOC CONTAMINATED SOIL MITIGATION PLAN is a plan to minimize VOC emissions to the atmosphere during excavation and any subsequent handling of VOC-contaminated soil.

- (7) VOLATILE ORGANIC COMPOUND (VOC) is any volatile compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds. Exempt compounds are defined in Rule 102—Definition Of Terms.
  - (8) VOLATILE ORGANIC MATERIALS include gasoline, diesel, crude oil, lubricant, waste oil, adhesive, paint, stain, solvent, resin, monomer, and/or any other material containing VOC.
- (c) Requirements
- (1) A person excavating an underground storage tank and/or transfer piping storing or previously storing VOC materials, or excavating or grading soil containing VOC materials shall:
    - (A) Apply for, obtain and operate pursuant to a mitigation plan approved by the Executive Officer prior to commencement of excavation or handling. The mitigation plan general requirement and application requirements are found in Attachment A to this rule. A copy of the approved plan must be on site during the entire excavation period.
    - (B) Notify the Executive Officer at least 24 hours prior to excavation using a form approved by the Executive Officer which is fully completed.

If the excavation does not commence on start date, renotification is required.

An alternative notification procedure may be authorized for multiple excavations within a single facility, with prior written approval from the Executive Officer.
    - (C) Monitor for VOC contamination pursuant to subdivision (e), at least once every 15 minutes commencing at the beginning of excavation or grading and record all VOC concentration readings in a format approved by the Executive Officer; and
    - (D) When VOC-contaminated soil is detected during excavation or grading:
      - (i) Implement the approved mitigation plan (Attachment A).
      - (ii) Notify the Executive Officer within 24 hours of detection of VOC-contaminated soil.

- (iii) Monitor and record VOC concentration readings as prescribed in the plan. Monitoring records must be kept available on site.
  - (iv) Keep calibration records for all monitoring instruments available on site.
- (2) A person handling VOC-contaminated soil at or from an excavation or grading site shall:
  - (A) Segregate VOC-contaminated stockpiles from non-VOC contaminated stockpiles such that mixing of the stockpiles does not take place.
  - (B) Spray VOC-contaminated soil stockpiles with water and/or approved vapor suppressant and cover them with plastic sheeting for all periods of inactivity lasting more than one hour.
  - (C) Conduct a daily visual inspection of all covered VOC contaminated soil stockpiles to ensure the integrity of the plastic covered surfaces. A daily inspection record must be maintained on site.
  - (D) Comply with the provisions in subparagraph (c) (1)(A) and clause (c)(1)(D)(i).
  - (E) Maintain a record of the identification and business addresses of the generator, transporter and storage/treatment facilities. Such record shall be signed by each party at the time custody is transferred.
  - (F) Treat or remove contaminated soil from an excavation or grading site within 30 days from the time of excavation.
- (3) If the VOC concentration in the excavated soil is measured at greater than 1000 ppm, spray the soil with water or vapor suppressant and:
  - (A) As soon as possible, but not more than 15 minutes, place the soil in sealed containers, or
  - (B) As soon as possible, but not more than 15 minutes, load into trucks, moisten with additional water, cover and transport off site, or
  - (C) Implement other alternative storage methods approved in writing by the Executive Officer.

- (4) A person treating VOC-contaminated soil shall:
  - (A) Obtain a permit to construct and operate treatment equipment, as applicable, from the Executive Officer, and
  - (B) Implement VOC-contaminated soil decontamination measures, as approved by the Executive Officer in writing, which result in Best Available Control Technology applied during all segments, and which include, but are not limited to, at least one of the following:
    - (i) Installation and operation of an underground VOC collection system and a disposal system prior to excavation.
    - (ii) Collection and disposal of the VOC from the excavated soil on-site using equipment approved by the Executive Officer.
    - (iii) Any equivalent VOC-contaminated soil control measure previously approved in writing by the Executive Officer.
- (5) A person shall not engage in or allow any on-site or off-site spreading, grading or screening of VOC-contaminated soil, which results in uncontrolled evaporation of VOC to the atmosphere.
- (6) Loading trucks for contaminated soil must meet the following:
  - (A) The truck and trailer shall be adequately tarped prior to leaving the site; no excavated materials shall extend above the sides or rear of the truck or trailer to prevent soil spillage during transport, and
  - (B) The exterior of the truck, trailer and tires shall be cleaned off prior to the truck leaving the site.
- (d) Exemptions
  - (1) The provisions of this rule shall not apply to the following:
    - (A) Excavation, handling, and treating of less than one (1) cubic yard of contaminated soil.
    - (B) Removal of soil for sampling purposes.
    - (C) Accidental spillage of five (5) gallons or less of VOC containing material.

- (2) The provisions of paragraphs (c)(1) and (c)(2) shall not apply to soil excavation or handling as a result of an emergency as declared by an authorized health officer, agricultural commissioner, fire protection officer, or other authorized agency officer. Whenever possible, the Executive Officer shall be notified by telephone prior to commencing such excavation. The Executive Officer shall be notified in writing no later than 48 hours following such excavation. Written notification shall include written emergency declaration from the authorized officer.
- (e) Test Methods
- (1) A person shall measure excavated soils for volatile organic compounds to determine contamination by:
    - (A) Using an organic vapor analyzer calibrated with hexane, complying with 40 CFR Part 60 Appendix A, EPA Reference Method 21 Section 3 or any equivalent method with prior approval in writing by the Executive Officer. If other calibrating gases are used, then the measured readings shall be correlated to and expressed as hexane.
    - (B) Placing the probe inlet at a distance of no more than three inches from the surface of the excavated soil and while slowly moving the probe across the soil surface, observe the instrument readout. If an increased meter reading is observed, continue to sample the excavated soil until the maximum meter reading is obtained. Leave the probe inlet at this maximum reading location for approximately double the instrument response time. If the maximum observed meter reading is greater than the 50 ppm standard in the regulation, record and report the results.
  - (2) The presence of VOC in stored or spillage materials shall be determined by SCAQMD Method 313 [Determination of Presence of Volatile Organic Compounds (VOC) in Headspace] and/or Method 304 (Determination of Volatile Organic Compounds in Various Materials) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

(f) Enforcement

- (1) Violation of any provision of this rule or the violation of the approved mitigation plan shall be grounds for the Executive Officer to amend or revoke the mitigation plan, in addition to penalties provided by the Health & Safety Code.
- (2) If the owner or operator is served with a Notice of Violation for creating a public nuisance, the owner or operator shall suspend operation until the public nuisance is mitigated to the satisfaction of the Executive Officer.

ATTACHMENT A  
GENERAL MITIGATION PLANS REQUIREMENTS

VOC Contaminated Soil Mitigation Plans shall be written to minimize VOC emissions to the atmosphere during excavation, grading, handling and treatment of VOC contaminated soil. VOC Contaminated Soil Mitigation Plans shall consist of three types: Various Locations, Site Specific and Facility Treatment.

- (1) General Requirements
  - (A) A plan is not transferable.
  - (B) A person responsible for the excavation, grading or handling of VOC contaminated soil must be completely familiar with the plan and must adhere to the plan requirement. The Executive Officer may require that the plan be signed by the owner and/or operator.
  - (C) A plan may be amended upon renewal.
  - (D) Permission to excavate, grade or handle VOC contaminated soil may be withdrawn by the District upon a finding by the Executive Officer that the excavation, grading or handling of the VOC contaminated soil is causing a public nuisance or violating other AQMD rules or regulations.
- (2) Various Location Plans:
  - (A) Shall be limited to the excavation of 2000 cubic yards or less of VOC contaminated soil in any consecutive 12 month period at the same site.
  - (B) Shall not be used in conjunction with any other various location plan at the same site within a consecutive 12-month period.
  - (C) Shall expire after one year from issuance unless renewed.
  - (D) Shall not be issued for nor used for operations that involve grading, soil treatment or remediation, or landfills.
- (3) Site Specific Plans:
  - (A) Shall be for excavation of greater than 2000 cubic yards of VOC contaminated soil.
  - (B) Shall be issued for specific excavation or grading locations for a period not to exceed two years.
  - (C) Shall not be renewable.

- (4) Facility Treatment Plans:
  - (A) Shall be issued for a treatment facility at a permanent location.
  - (B) Shall expire after one year from issuance unless renewed.
- (5) Applications for Site Specific Plans shall contain as a minimum:
  - (A) Reasons for excavation or grading.
  - (B) Cause of VOC soil contamination and history of the site.
  - (C) Description of tanks or piping associated with the soil contamination.
  - (D) An estimate of the amount of contaminated soil.
  - (E) The operating schedule for excavation and removal.
  - (F) Description of how the excavation or grading will be conducted.
  - (G) Description of mitigation measures for dust, odors and VOC.
  - (H) Details of disposal of VOC contaminated soil, including the ultimate receptor.
  - (I) Description of monitoring equipment and techniques.
  - (J) A map showing the facility layout, property line, and surrounding area up to 2500 feet away, and including any schools, residential areas or other sensitive receptors such as hospitals or locations where children or elderly people live or work.
  - (K) Designation of a person who can conduct a site inspection with the Executive Officer prior to issuance of the plan.
- (6) Applications for Facility Treatment Plans shall at a minimum:
  - (A) Include a list of all AQMD permits to construct or operate which have been issued for that treatment and control equipment.
  - (B) Provide for the implementation of VOC-contaminated soil decontamination measures, as approved by the Executive Officer in writing, which result in Best Available Control Technology during all operations.
  - (C) Provide a map showing the facility layout including the location of all proposed VOC and non-VOC contaminated soil stockpiles.
  - (D) Specify the total amount of VOC contaminated soil proposed to be stockpiled on site.
  - (E) Provide for VOC contaminated soil stockpiles to be kept moist with water or suppressant and be covered to prevent fugitive emissions.

- (F) Provide for VOC contaminated soil stockpiles to be segregated from non-VOC contaminated soil stockpiles.
  - (G) Provide for maintenance of records for stockpiles according to the source name, address and dates of reception.
  - (H) Provide for records of the generator, transporter and storage/treatment facilities and indicate their identification and business addresses. Such records shall be signed by each party at the time custody is transferred.
  - (I) Provide a map showing the facility layout, property line, and surrounding area up to 2500 feet away, and including any schools, residential area or other sensitive receptors such as hospitals, or locations where children or elderly people live or work.
  - (J) Designation of a person who can conduct a site inspection with the Executive Officer prior to issuance of the plan.
  - (K) Specify the operating schedule and maximum amount of VOC-contaminated soil proposed to be remediated on a daily basis.
- (7) In approving a plan, the Executive Officer require reasonable conditions deemed necessary to ensure the operations comply with the plan and AQMD rules. The conditions may include, but shall not be limited to, procedures for ensuring responsibility for the implementation of the plan, accessibility to the site for AQMD staff, notification of actions required by the plan, identification of emission receptors, monitoring and testing, suppression and covering of stockpiles, prevention of public nuisance from VOC or dust emissions, prevention of fugitive emissions of VOC contaminated soil, loading of truck trailers, and disposal and treatment.
- (8) In approving a plan, the Executive Officer may require any records deemed necessary to be maintained by the operator to demonstrate compliance with the plan. Such records shall be retained for at least 2 years and be made available to the Executive officer upon request.

**APPENDIX D**

**IMPORT SOIL SAMPLING REQUIREMENTS**

# 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](http://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

<b>Area of Individual Borrow Area</b>	<b>Sampling Requirements</b>
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
<b>Volume of Borrow Area Stockpile</b>	<b>Samples per Volume</b>
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 E**  
**FIELD PROCEDURES**

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### **FIELD PROCEDURES**

#### **Drilling and Soil Sampling Procedures**

1. The borings will be drilled using a truck-mounted drill rig equipped with nominal 6-inch hollow-stem augers or using direct-push equipment. Drilling services will be provided by a State-licensed drilling contractor.
2. The augers and sampling equipment will be steam-cleaned prior to the drilling.
3. Soil cuttings from the drilling operations will be stored on-site in Department of Transportation (DOT)-approved 55-gallon drums, pending disposal disposition. The drums will be labeled with the boring designation from which the soil was collected, date, and project number.
4. Soil descriptions, in general accordance with the Unified Soil Classification System, sample type and depth, and related drilling information, will be recorded on a boring log under the supervision of a California Professional Geologist from Ardent Environmental Group, Inc.
5. Soil samples will be collected using a split-barrel modified California sampler at approximately 5 feet below the ground surface (bgs) and at approximate 5-foot-depth intervals thereafter, and continue to the bottom of the boring or at significant changes in lithology. Some samples will be collected at shallower depths.
6. The sampler will be washed between sampling intervals, using a bristle brush, with an Alconox solution (an inorganic detergent); followed by two tap water rinses. The sampler will be dried by air or with a paper towel prior to being used for sampling.
7. Soil samples will be collected (at each sample interval) in three 6-inch-long stainless steel or brass sampling rings inside the sampler. Prior to initiation of the field program, the sample rings will be cleaned and dried in a similar fashion as described above in item 6.
8. The sampler will be driven using a 140-pound hammer (approximate weight) dropping approximately 30 inches. The number of blows (blow count) required to advance the sampler 18 inches will be recorded on the boring log.
9. Following retrieval of the sampler, the first 6-inch-long ring from the shoe of the sampler will be removed from the sampler; the ends will be covered with Teflon and capped with PVC end caps. The sample will be labeled with the sample number, collection date, and project number and will be retained for potential laboratory analysis.

10. The soil in the second sample tube from the shoe of the sampler will be used to describe the soil, measure volatile organic compounds (VOCs) using a Photoionization Detector (PID) equipped with an 11.7 electronvolt (eV) bulb, and collect a sample using EPA Method 5035. Following retrieval of the sample ring, a plastic syringe will be used to collect three samples of approximately 5 grams of soil. The first two soil samples will be ejected into a pre-weighed, laboratory supplied, 40-milliliter, VOA vial containing sodium bisulfate. One additional sample weighing approximately 5 grams of soil will be collected using the syringe and ejected into a VOA vial containing methanol. A new syringe will be used for each sampling interval. Approximately half of the remaining soil in the ring will be removed and placed in a Ziploc bag. The bag will then be agitated and set aside for approximately 15 to 30 minutes to allow organic vapors, if present, to accumulate in the void space (headspace) of the sample tube. The headspace will then be "sniffed" using the PID. The measurements will be considered in the selection of soil samples for laboratory analyses. The PID will be calibrated daily as per the manufactures specifications.
11. The borings will be backfilled with bentonite grout or hydrated granular bentonite to ground surface.

### **Soil Sampling from Excavations, Test Pits, or Stockpiles**

1. Soil samples will be collected from the excavation, test pits, and stockpiles using a backhoe bucket or clean spade. The samples will be placed into 4-ounce glass jars supplied by the laboratory or stainless steel rings with PVC end caps. Soil sampling will be conducted under the supervision of a California Professional Geologist from Ardent.
2. Samples to be chemically analyzed for total petroleum hydrocarbons as gasoline (TPHg) or VOCs will be collected in accordance with EPA Method No. 5035, as described above.

### **Sample Handling**

1. The soil samples retained for chemical analyses will be placed in Ziploc bags and stored in an ice chest cooled, using ice, to a temperature of approximately 40 degrees Fahrenheit.
2. The samples will be delivered to a State-certified environmental laboratory within 24 hours of collection. Sample handling, transport, and delivery to the laboratory will be documented using chain-of-custody procedures, including the use of chain-of-custody forms.

### **Quality Assurance/Quality Control (QA/QC)**

1. QA will be implemented to assess whether the data obtained are comparable and representative of actual field conditions. The QC checks will be controlled samples that will be introduced into the sample analysis stream, and will be used to assess the performance of the laboratory, and to evaluate the accuracy, precision, and completeness of the laboratory analytical procedures.
2. The QA/QC program will consist of the minimization of possible cross-contamination during sample collection, and included decontamination of sampling equipment and the internal QA/QC procedures that will be conducted by the laboratory: laboratory blanks, laboratory surrogate spikes, and laboratory matrix spike samples.