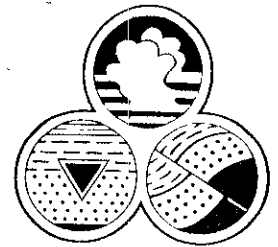


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Ro. 2442

# Advanced GeoEnvironmental, Inc.



05 October 2000  
AGE-NC Project No. 99-0556

Mr. Achim Ehrhardt  
former Continental Volvo, Inc.  
774 Mays Boulevard #10  
Incline Village, Nevada 89451  
facsimile: (775) 833-0545

✓ Inspector Hernan Gomez  
City of Oakland Fire Department  
1605 Martin Luther King Jr. Way  
Oakland, California, 94612

**Subject: Subsurface Investigation Work Plan  
Continental Volvo  
4030 - 4122 East 14<sup>th</sup> Street, Oakland, California**

Dear Mr. Gomez: ~~442~~

At the request of Mr. Achim Ehrhardt of the former Continental Volvo, Inc. *Advanced* GeoEnvironmental, Inc. (AGE) has prepared the enclosed work plan for 4030 - 4122 East 14<sup>th</sup> Street, Oakland, California as verbally directed by the your office. Additionally, the work plan is also presented to the Alameda County Health Care Services Agency - Department of Environmental Health.

Upon approval of the work plan, AGE will schedule field work 48 hours in advance of any sampling at the site. If you have any question or require further information regarding this work plan, please contact Mr. William Little of our office at (209) 467-1006.

Sincerely,

*Advanced GeoEnvironmental, Inc.*

William Little  
Staff Geologist

cc: Mr. Jory Hite McKevitt Volvo.

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OF ENV.  
OAKLAND FIRE

**Subsurface Investigation Work Plan**  
**Former Continental Volvo**  
**4030 - 4122 East 14<sup>th</sup> Street, Oakland, California**

**1.0. INTRODUCTION**

At the request of Mr. Achim Ehrhardt of the former Continental Volvo, Inc. *Advanced GeoEnvironmental, Inc. (AGE)* has prepared the enclosed work plan for 4030 - 4122 East 14<sup>th</sup> Street, Oakland, California (the site) as directed by the your office. Additionally, the work plan is also prepare for the Alameda County Health Care Services Agency - Department of Environmental Health. The location of the site is illustrated in Figure 1. A plan of the site is illustrated in Figure 2.

This work plan has been prepared to further assess petroleum hydrocarbon-impacted soil and ground water related to the former leaking underground storage tanks (USTs) at the site. This plan is prepared in accordance with *Appendix A to Tri-Regional Recommendations - Reporting*, dated 30 August 1991, prepared by the Central Valley Regional Water Quality Control Board (Appendix A - Reports) for the investigation of UST sites.

The purpose of this additional site assessment is to evaluate the lateral and vertical extent of petroleum hydrocarbon impacts to soil and ground water at the site near the former USTs. The scope of work of this plan includes installation of eight soil probe borings, if necessary up to ten ground water wells, and collection of soil and ground water samples for laboratory analysis.

**2.0. BACKGROUND**

**2.1. SITE LOCATION/DESCRIPTION**

The site is located in central Oakland in a commercial area (Figure 1) and is east of State Route 880. Two buildings and a vacant lot utilize as a car lot occupy the site as shown in Figure 2. AGE has been informed that the property was operated as a car or truck maintenance shop since the 1950s. The vacant lot was used as a residence prior to being used as a car lot.

**2.2. REGIONAL GEOLOGIC/HYDROGEOLOGIC SETTING**

The site is situated within the Coast Range Geomorphic province of California. This geomorphic province contains coastal foothills and mountains, which extends from the Tehachapi Mountains in the south to the Klamath Mountains in the north. The western and eastern boundaries of this province are composed of the Pacific Ocean and the Great Valley Province, respectively. The Franciscan complex is split into four major divisions which are identified as the Northern Coast Range, the Franciscan Block, the Diablo Range and the Nacimiento Block.

The site is located in the Franciscan Block, an assemblage of variably deformed and metamorphosed rock units. The surface is composed of Quaternary alluvium, at depth the site is underlain by rocks

of the Franciscan Complex, which are composed predominately of detrital sedimentary rocks with volcanic tuffs and deep ocean marine sediments. The Franciscan lithologies typically have low porosity and permeability.

Based upon the General Soil Map from the *Soil Survey of Alameda County, Western Part*, issued by the United States Department of Agriculture Soil Conservation Service in 1981, the site area is situated within the Urban land-Danville complex. This complex is on low terraces and alluvial fans at an elevation of about 20 to 300 feet and consists of about 60 percent Urban land, 30 percent Danville soil and 10 percent other soils. Danville soil is a silty clay loam that formed in alluvium that derived mainly from sedimentary rock. Urban land consists of areas covered by roads, parking lots and buildings.

The estimated depth to ground water at the property is approximately 20 to 25 feet below surface grade (bsg). The prevailing ground water flow direction in this area is west to southwest, however, localized ground water flow may vary. The topography in the area of the site is suggestive of a southwest flow direction under the site, with sites of recognized environmental conditions west of the site having the greatest or any potential to adversely impact the site. The nearest surface water feature is the San Francisco Bay located approximately 12,000 feet west of the site.

Tertiary marine and non-marine lagoonal clay and silt deposits are the principal source of shallow ground water in the Oakland area. The area is primarily drained by the hydrogeologic system related to the San Francisco Bay.

Ground water in the Oakland area occurs under both confined and unconfined conditions. The ground water occurs in the Alameda Bay Plain Ground Water Basin (formerly the East Bay Area of the Santa Clara Valley Ground Water Basin, Department of Water Resources [DWR] Ground Water Basin No. 2-9.01). The Santa Clara Valley Ground Water Basin is a 580-square mile basin drained primarily by the Guadalupe River and Alameda, Coyote, Redwood and San Francisquito Creeks. The ground water occurs in younger and older alluvium and is used intensively for domestic, industrial and irrigation uses (DWR, 1975, *California's Ground Water*).

Bulletin 118 and DWR, 1980, *Ground Water Basins in California*, Bulletin 118-80). No domestic water wells, state or federal water wells were identified within a 1-mile radius.

### 2.3. UNDERGROUND STORAGE TANK REMOVAL

One waste oil UST was removed from side walk of western 15<sup>th</sup> Street in 1987. A new 1,000-gallon double-walled UST for waste-oil was installed in the same location, immediately following. On 04 May 2000 two USTs were removed from the site. The previously referenced waste oil UST and one

1,000-gallon heating oil UST in the southern sidewalk of 41<sup>st</sup> Street (Figure 2). No dispensers or product line(s) were removed during excavation of the UST.

Total petroleum hydrocarbons quantified as gasoline, diesel and motor oil (TPH-g, d, mo) and (benzene, toluene, ethylbenzene and total xylenes (BTEX) were present in each two of the samples analyzed in concentrations exceeding the method detection limits. TPH-g was detected in the soil samples has high as 360 milligrams per kilogram (mg/kg), TPH-d 1,100 mg/kg and TPH-mo 2,000 mg/kg. BTE&X compounds were detected as high as 0.7 mg/kg benzene. Total lead and other metal were detected at or above background levels. PCBs were also detected in the waste oil UST sample. TPH and BTEX were not detected in the stockpile soil sample (Table 1).

The grab water sample was impacted. TPH-g was detected in the soil samples has high as 180 micrograms per liter ( $\mu\text{g/l}$ ), TPH-d 68,000  $\mu\text{g/l}$  and TPH-mo 200,000  $\mu\text{g/l}$ . BTE&X compounds were detected as high as 23  $\mu\text{g/l}$  benzene. LUFT metals were detected in the grab water sample from the waste oil UST area.

#### 2.4. PREVIOUS INVESTIGATIONS

AGE conducted one previous environmental assessments at the site. A brief summary of the findings from the previous investigations is presented below.

On 26 January 1998, a total of twelve soil probe borings (P1 through P12) were advanced at the site, under the supervision of an AGE geologist. Six soil probe borings were advanced in the vicinity of the lifts within the buildings on the site; two soil probe borings were advanced in the vicinity of the active UST (also the location of the removed UST 1986), in the City of Oakland right-of-way; three soil probe borings were advanced on the car lot and one soil probe boring was advanced in the vicinity the active ASTs location. Locations of the soil probe borings are illustrated on Figure 2.

##### Results

Petroleum hydrocarbon-impacted soil at the site was encountered in the vicinity of the former UST/current UST within East 15<sup>th</sup> Street. The impacted soil was encountered in a somewhat narrow zone from depths of approximately 5 to 10 feet bsg. Hydrocarbon-impacted soil was encountered east of the UST at a depth of 10 feet bsg.

The chlorinated cleaning solvent TCE, commonly use for de-greasing, was detected at low concentrations in soils samples at a depth of 15 feet bsg in the area of the waste oil tank. The vertical or lateral extent of the TCE contamination is not defined.

Diesel fuel or motor oil-impacted ground water on the car lot appears to have originated from a diesel or heating-oil fuel matrix. The laboratory was consulted to decipher the make-up the petroleum-hydrocarbons detected in the water sample. A mix of low concentration diesel and high concentration oil was well pronounced in the laboratory data. This mix of hydrocarbons, with the absence of gasoline and BTEX compounds, suggests a heating oil make-up of a petroleum release, or possibly two releases: one motor oil only and/or diesel fuel only release requiring two sources.

The lack of detection of MTBE in soil samples and the water sample collected from the site suggests that the release of fuels is relatively old, possibly more than twenty years old. The lack of detection of fuels or oil in the service bay indicates no significant releases of petroleum in the area in which samples were collected.

### **3.0. SCOPE OF WORK**

Based on the results of the previous assessment investigations, UST removal and the known petroleum hydrocarbon-impact soil is distributed, additional assessment activities are proposed for the former location of the waste oil and heating oil USTs. Soil borings will be required in the former UST areas.

The proposed investigation of the vertical and lateral extent of petroleum hydrocarbon-impact at the site will consist of the following tasks:

- Permitting and pre-field work activities;
- Soil sample collection and analysis;
- Ground water sample collection and analysis;
- Monitoring well installation and sampling (if necessary);
- Report preparation.

#### **3.1. PERMITTING AND PRE-FIELD WORK ACTIVITIES**

Applicable permits for the investigation on and near the site will be obtained from the Alameda County Public Work Department. As required a health and safety plan has been prepared in accordance with *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities* (National Institute for Occupational Safety and Health Administration, U.S. Coast Guard and U.S. Environmental Protection Agency, 1985). Prior to mobilization, each soil probe/boring location will be clearly marked and an utility clearance obtained through Underground Service Alert.

### 3.2. SOIL SAMPLE COLLECTION AND ANALYSIS

Initially, AGE proposes to advance eight soil probe borings in the vicinity of the former USTs to evaluate the lateral and vertical extent of the petroleum hydrocarbon impact on soil and possible ground water. Proposed probe boring locations are illustrated in Figure 2.

Proposed probe borings will to be advanced to 40 feet bsg or until the field observations and field screening using an organic vapor monitor (OVM) indicate that detectable petroleum vapors are not present in the soil samples screened from two consecutive five-foot intervals.

Soil samples will be collected from borings at 5-foot intervals beginning at 5 feet bsg extending to the total probe boring depths, and soil samples will be collected from continuous cores from the probe boring within the former UST excavations beginning at 5 feet bsg.

Field procedures for advancement of probe borings and collection of soil samples are presented in Section 4.1.1. Selected soil samples from each probe boring will be submitted for laboratory analysis with concurrence of the OFD. The selected soil samples will be analyzed by a State of California Department of Health Services (DHS)-certified laboratory for the following constituents:

- TPH-d by EPA Method 8015 Modified;
- TPH-g by EPA Method 8015 Modified;
- BTEX by EPA Method 8020; and
- Volatile organic compounds (VOCs) and fuel oxygenates including MTBE, tertiary-butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE) and tertiary-amyl methyl ether (TAME) by EPA Method 8260.

Laboratory reports for soil analyses, testing methods, laboratory quality assurance/quality control (QA/QC) reports, and sample chain of custody documentation will be presented in a report with findings and recommendations.

### 3.3. GRAB GROUND WATER SAMPLE COLLECTION AND ANALYSIS

Grab ground water samples will be collected at total depth from each borings using a Geoprobe water sampling assembly. Samples will be collected into 40-ml VOA vials and 1-liter amber bottles as appropriate for the required analyses. Ground water sample collection procedures are presented in Section 4.1.2. Ground water samples will be analyzed by a DHS-certified laboratory for:

- TPH-d by EPA Method 8015 Modified;
- TPH-g by EPA Method 8015 Modified;
- BTEX by EPA Method 8020; and
- Fuel oxygenates including and VOCs by EPA Method 8260.

Laboratory reports for ground water analyses, testing methods, laboratory quality assurance/quality control (QA/QC) reports, and sample chain of custody documentation will be presented in a report with the findings and recommendations.

### 3.4. MONITORING WELL INSTALLATION

#### 3.4.1. Soil Sampling Collection and Analysis

If required, ten soil borings will be advanced as pilot borings for collection of soil samples and the installation of ground water monitoring wells. The purpose of the monitoring wells are to:

- Assess the extent of hydrocarbon impacted water north of the former UST area with a ground water monitoring well network.

The proposed ground water monitoring wells will be located surrounding the former UST areas. Upon installation, each monitoring well will be given a designation.

Soil samples will be collected from each monitoring well pilot boring at five-foot intervals from five feet bsg to the total depth of the boring. Field procedures for advancement of soil borings and collection of soil samples are presented in Section 4.2.1. A total of up to ten soil samples, a minimum of one samples from each soil boring, will be submitted for laboratory analysis. Selected soil samples will be analyzed by DHS-certified laboratory for the analytes noted in section 3.3. above.

Laboratory reports for soil analyses, testing methods, laboratory quality assurance/quality control (QA/QC) reports, and sample chain of custody documentation will be presented in a report with findings and recommendations.

### 3.4.2. Monitoring Well Installation and Development

Each well will be a completed a well ground water monitoring well and will consist of a 10-foot screen section with five feet of screen extending above the water table. The total depth of the wells will be determined based on the depth to ground water or saturated soil conditions determined during site assessment.

Following well installation, the well will be developed in order to maximize water flow into the well and minimize the amount of fine-grained sediment drawn into the well during pumping and sampling. Procedures for well installation and development are presented in Section 4.2.2.

### 3.4.3. Ground Water Sampling Collection and Analysis

Following the installation of the additional monitoring wells, ground water monitoring and sampling activities will be conducted for all the monitoring wells on a quarterly basis for a minimum of one year (four sampling events). Additionally, monitoring activities will include recording depth to ground water measurements and collection of ground water samples. Ground water sample collection procedures are described in Section 4.3. Ground water samples will be analyzed by a DHS-certified laboratory for the analytes noted in section 3.3.

Laboratory reports for ground water analyses, testing methods, laboratory quality assurance/quality control (QA/QC) reports, and sample chain of custody documentation will be presented in a report with the findings and recommendations.

## 3.5. REPORT PREPARATION

Upon completion of field work and receipt of final laboratory analysis, a report will be prepared presenting the findings of the investigation. The report will include a description of the work performed and results of the sampling and analysis. Conclusions, applicable recommendations, maps and cross-sections will be included in the report. The report will be in a format acceptable to the PHS-EHD and the CVRWQCB, and will be reviewed and signed by a California Registered Geologist.



#### **4.0. FIELD PROCEDURES**

All field procedures will be overseen by an AGE representative under the supervision of a California Registered Geologist. Procedures for the advancement of probe borings, soil sampling, ground water sampling, equipment decontamination and sample shipment are outlined below.

##### **4.1. PROBE BORING ADVANCEMENT**

Probe borings will be advanced using a van-mounted Geoprobe 5400 direct-push probing unit equipped with 1.25-inch probing rods. The Geoprobe advances soil probe borings using a hydraulic hammer to drive soil sampling tools to specified depths.

###### **4.1.1. Soil Sampling Collection and Analysis**

Soil borings to be sampled continuously will be sampled using a 2-inch diameter Geoprobe macro-soil sampling assembly and a four-foot Teflon sleeve. Upon sample retrieval, the ends of the liner will be cut and the section of soil desired for analysis will be covered with Teflon sheets, capped and sealed with tape.

Soil borings to be sampled at discreet five-foot intervals will be sampled using a 1.125" Geoprobe soil sampling assembly and four six-inch brass sleeves. Upon sample retrieval, the ends of the second sleeve will be covered with Teflon sheets, capped and sealed with tape.

Appropriately sealed and labeled samples will be placed in a chilled container under ice and transported under chain-of-custody procedure to a DHS-certified laboratory. Each sample sleeve will be labeled with the boring designation, depth, time, date and sampler's initials. Soils encountered in the borings will be visually classified by an AGE geologist in accordance with the Unified soil Classification System (USCS). Additionally, soil samples will be field screened for the presence of volatile organic compounds using an organic vapor meter (OVM), equipped with photo-ionization detector (PID).

###### **4.1.2. Grab Ground Water Sampling Procedures**

For the collection of 'grab' ground water samples, each probe borings will be advanced to a depth of 35 to 40 feet bsg. The grab ground water samples will be collected using a Geoprobe water sampling assembly with a wire-wound steel screen or a pre-cleaned one-inch diameter, 0.01 slotted screen. Each ground water sample will be extracted by lowering a Teflon bailer through the hollow center of the push rods into the screened section. Samples will be collected in laboratory-supplied,

40-ml VOA vials containing 0.5-ml of hydrochloric acid as sample preservative and into a 1-liter amber bottle lacking the preservative. The labeled vials will be placed in a chilled container under ice and transported under chain-of-custody to a DHS-certified laboratory.

#### 4.1.3. Equipment Decontamination

Prior to use, all sampling tools used for sample collection will be thoroughly rinsed with clean water after being washed with a solution of Alconox. All probing rods will be cleaned prior to advancement at each probe boring location.

#### 4.1.4. Boring Abandonment

All probe borings will be permanently sealed to prevent vertical migration of contaminants. Soil borings shall be abandoned by backfilling with cement slurry from the total depth to surface grade.

### 4.2. INSTALLATION OF GROUND WATER MONITORING WELLS

#### 4.2.1. Soil Sampling Procedures

Soil borings will be advanced using hollow-stem auger drilling techniques. Soil samples will be collected from each soil boring at five-foot intervals. Relatively undisturbed soil samples will be collected in each of the borings using a California modified split-spoon sampler fitted with 2-inch diameter, 6-inch long brass sleeves. Upon removal from the sampler, the sample sleeves will be separated with a clean soil knife. The exposed ends of the second sleeve will be covered with Teflon sheets, capped and sealed with tape. Soils sampled in the borings will be visually classified by an AGE geologist in accordance with the Unified Soil Classification System (USCS). Additionally, soil samples will be field screened for the presence of volatile organic compounds using an organic vapor meter (OVM). Soil sample descriptions and OVM readings will be recorded on a log for each boring.

Following sample collection, each preserved sample sleeve will be labeled with the boring location, depth, time, date and sampler's initials. Appropriately sealed and labeled samples will be placed in a chilled container under ice and transported under chain-of-custody procedure to a DHS-certified laboratory.

Soil cuttings generated during drilling of the soil borings will be contained within plastic sheeting on the site for storage. Drums containing decontamination water and soil cutting will be stored on-site pending appropriate removal, disposal and/or treatment.

#### 4.2.2. Monitoring Well Installation

The monitoring well boring will be completed using hollow-stem auger drilling techniques. Soil borings will be advanced using a truck-mounted drill rig equipped with hollow-stem augers.

The pilot boring for wells will be advanced utilizing 8.25-inch augers. Proposed monitoring well design is illustrated in Figure 3.

Following completion of the soil boring for each well a 2-inch diameter Schedule 40 PVC 0.02-inch slotted well screen and casing will be installed. After installing the casing, filter pack material consisting of pre-washed #3 Lonestar sand will be added from the upper portion of the lower bentonite seal to approximately two feet above the upper screened interval. Following placement of the filter pack, the well will be surged to assist in settling the filter pack. Additional sand will be added if settling occurs. A nominal 2-foot bentonite seal will be placed above the filter pack to minimize the potential of grout penetration into the screened section of the well. The bentonite seal will be formed by pouring bentonite chips into the annulus and allowing them to settle on the filter pack. Bentonite chips will be hydrated using five gallons of water. The bentonite chips will be allowed to hydrate for a minimum of one-half hour prior to grouting.

The remaining annular spaces will be filled to the ground surface with a cement grout. The grout mixture will consist of Type I/II portland neat cement and not more than 10 gallons of water per 94-pound sack of cement. The grout will be placed by pumping through tremmie pipe. Grouting procedures will be inspected by PHS-EHD personnel. A traffic-rated well box will be installed over the wells, in accordance with County regulations.

Following completion of the monitoring wells, well elevations and locations will be surveyed by AGE personnel, relative to monitoring well MW-1.

### 4.3. GROUNDWATER SAMPLING PROCEDURES

Groundwater sample collection will be performed in accordance with pertinent applicable sampling protocols, details of which are presented below.

#### 4.3.1. Static Water Level Measurements

Before sampling and during quarterly ground water monitoring, static water level and free-product thickness will be measured using an electric oil/water level indicator. Water level data will be recorded to the nearest 0.01 foot from a reference point marked of the top of the PVC well casing.

Before and after each use, the electric oil/water level indicator will be washed in an Alconox solution and rinsed with water.

#### 4.3.2. Well Evacuation

Subsequent to measurement of depth to water and prior to sampling, the well will be purged using a disposable bailer to ensure that the ground water sample is representative of the formation, rather than water standing in the well casing. The well will be purged until: 1) a minimum of three casing volumes is removed from the well; and/or 2) the field-measured ground water parameters pH, temperature and electrical conductivity have stabilized. However, if a well is purged dry prior to evacuating three casing volumes, a ground water sample will be collected following 80 percent recovery of ground water level within the well or within 8-hours of well evacuation.

Purge water, free-product, and decontamination water generated during the ground water sampling activities will be contained in DOT-approved drums which will be appropriately labeled for storage. Drums containing purge water will be stored on-site pending appropriate removal and disposal.

#### 4.3.3. Sample Withdrawal

Water samples will be collected from the monitoring wells using disposable polyethylene bailer. These bailers are disposed of after one use and require no decontaminating, thereby minimizing cross contamination due to sampling devices. Samples will be drawn and collected in such a manner that agitation and exposure of the groundwater to the atmosphere is minimal. Sample containers will be filled using the appropriate disposable sampling attachment which allows controlled flow out of the bottom of the bailer by lifting up on the check valve.

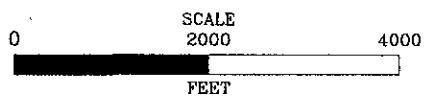
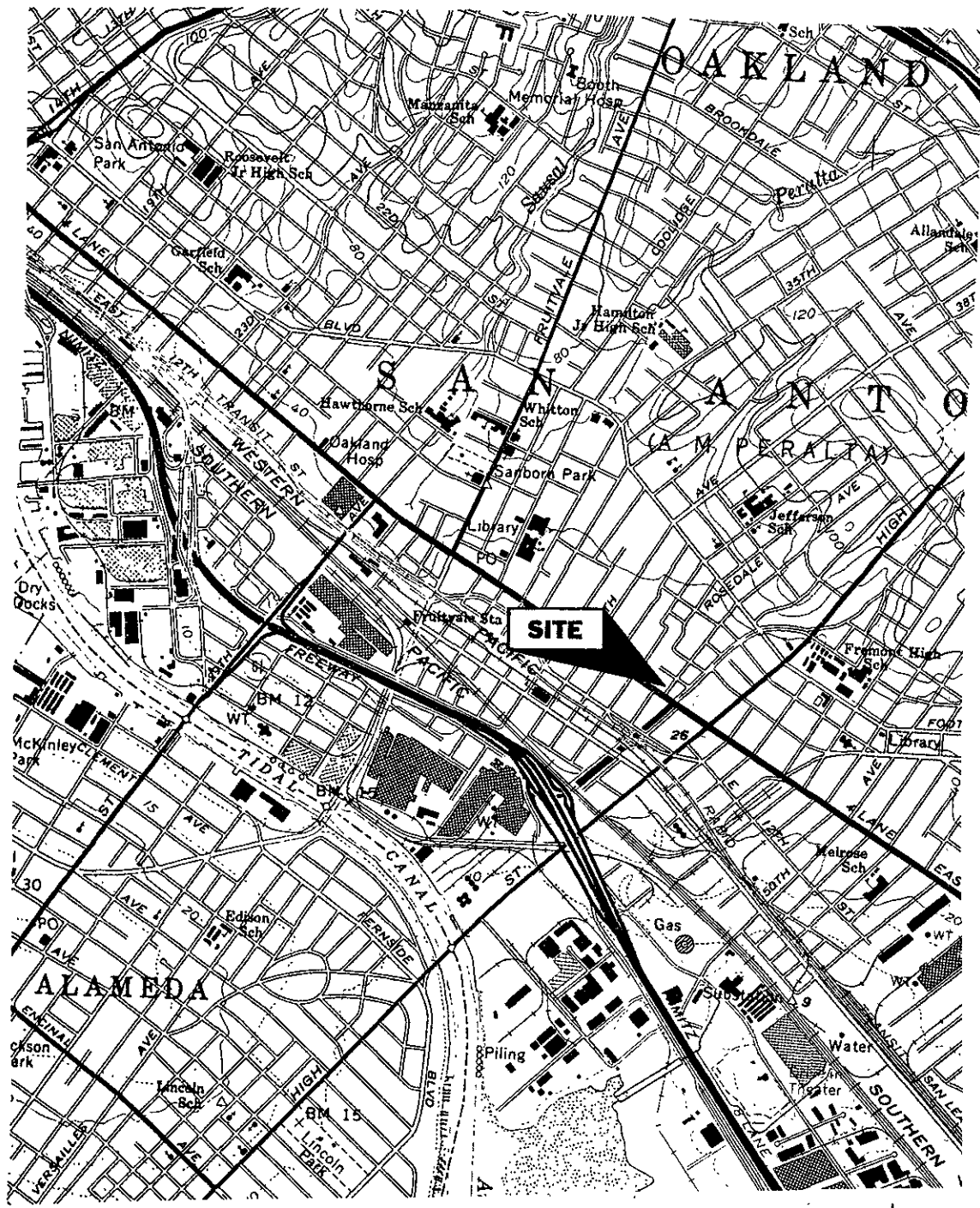
#### 4.3.4. Sample Handling

Ground water samples will be collected into laboratory supplied containers. Ground water samples to be analyzed for BTEX, TPH-g, halogenated volatile organic compounds, and oxygenates analyses will be collected into 40-ml VOA vials containing 0.5-ml of hydrochloric acid as preservative. Samples to be analyzed for TPH-d analysis will be collected into 1-liter amber glass containers lacking the preservative. Following collection, the samples will be placed on ice and kept in a cooler until delivered to the laboratory for analysis. Chain-of-custody protocols will be used to document sample custody transfer from the field to the analytical laboratory. A chain-of-custody form will accompany the samples.

#### 4.4. EQUIPMENT DECONTAMINATION

All sampling tools used for sample collection, except for disposable bailers, will be thoroughly rinsed with clean water after being washed with a solution of Alconox. All down-hole drilling equipment will be pressure washed prior to starting each boring.

Decontamination water generated during the ground water sampling activities will be contained in DOT-approved drums which will be appropriately labeled for storage. Drums containing decontamination water will be stored on-site pending appropriate removal and disposal.

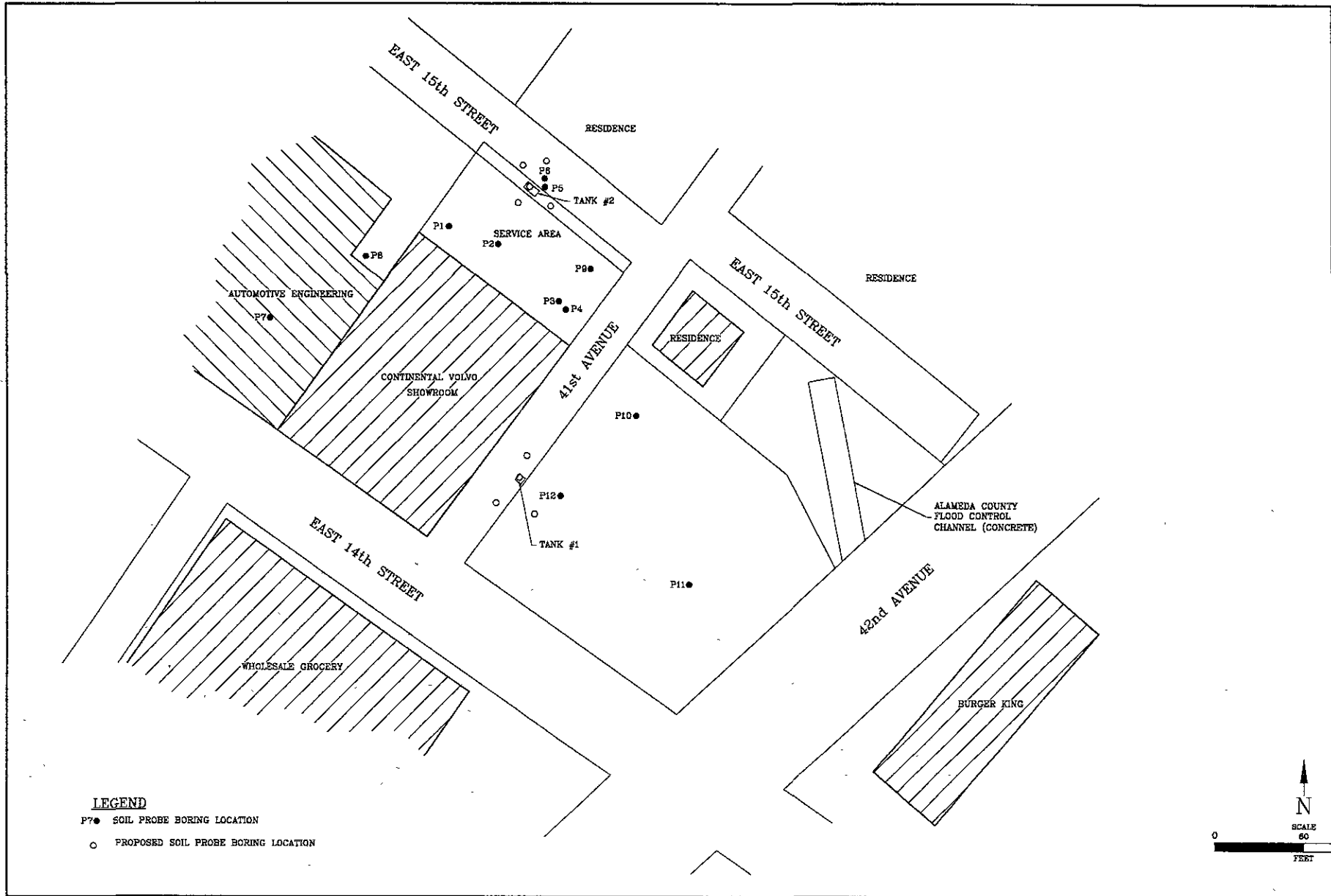


LOCATION MAP  
CONTINENTAL VOLVO  
4030-4122 EAST 14TH STREET  
OAKLAND, CALIFORNIA



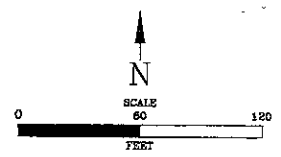
*Advanced*  
GeoEnvironmental, Inc.  
of Northern California

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**LEGEND**

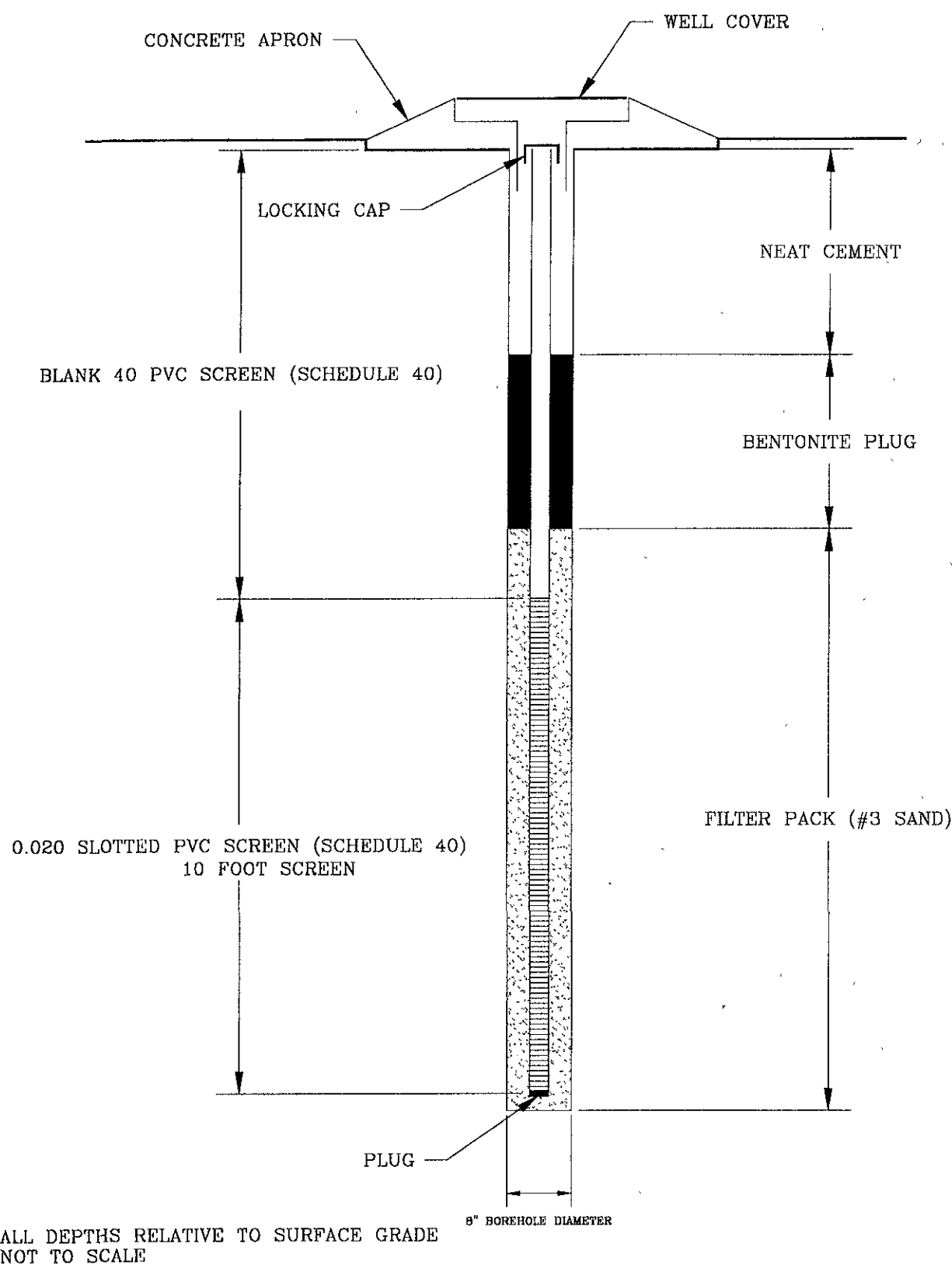
- P7● SOIL PROBE BORING LOCATION
- PROPOSED SOIL PROBE BORING LOCATION



**SITE PLAN**  
**FORMER CONTINENTAL VOLVO**  
**4030 - 4122 EAST 14th STREET**  
**OAKLAND, CALIFORNIA**

**Advanced GeoEnvironmental, Inc.**  
an American company

PROJECT NO. AGE-NC-99-0556	FILE: Y01V02
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PAGE: 2	



MONITORING WELL DESIGN  
 FOMER CONTINENTAL VOLVO  
 4030 EAST 14 TH STREET  
 OAKLAND , CALIFORNIA



*Advanced*  
**GeoEnvironmental, Inc.**  
*of Northern California*

PROJECT NO. AGE-NC-99-0556	FILE: 1WELL	FIGURE:
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**TABLE 1**  
**ANALYTICAL RESULTS OF SAMPLES - EPA 8015m/8020**  
 Continental Volvo  
 4030 - 4122 East 14<sup>th</sup> Street, Oakland, California

Sample I. D. - depth	TPH as gasoline	TPH as diesel	TPH as motor oil	Benzene	Toluene	Ethyl benzene	Xylenes	TCE ( $\mu\text{g}/\text{kg}$ )
Soil sample reported in mg/kg								
P1-10	<1.0	<1.0	<5.0	---	---	---	---	---
P2-10	<1.0	<1.0	<5.0	---	---	---	---	---
P3-10	<1.0	<1.0	<5.0	---	---	---	---	---
P4-3	<1.0	<1.0	<5.0	---	---	---	---	---
P5-7	<b>42</b>	<b>150</b>	<b>660</b>	<b>0.082</b>	<b>0.07</b>	<b>0.033</b>	<b>0.4</b>	<5
P5-10	<b>8.8</b>	<b>59</b>	<b>280</b>	<b>0.008</b>	<b>0.01</b>	<b>0.008</b>	<b>0.05</b>	<5
P5-15	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005	<b>110</b>
P6-10	<b>53</b>	<b>240</b>	<b>1,200</b>	<0.01	<b>0.098</b>	<0.01	<b>0.45</b>	<b>14</b>
P6-15	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005	<b>140</b>
P8-10	<1.0	<1.0	<5.0	---	---	---	---	---
P9-10	<1.0	<1.0	<5.0	---	---	---	---	---
P11-10	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005	
P12-10	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005	---
P12-15	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005	---
Tank1-E	23	1,200	1,200	<0.005	<0.005	<0.005	<0.005	---
Tank1-W	33	1,100	340	<0.005	<0.005	<0.005	<0.005	---
Tank1-SP	5.9	390	100	<0.005	<0.005	<0.005	<0.005	---
Tank2-N	360	680	1,500	<0.05	<b>0.26</b>	<0.08	<b>0.42</b>	<25
Tank2-S	120	790	2,000	<b>0.07</b>	<b>0.2</b>	<b>0.059</b>	<b>2.4</b>	<25

*Notes*

Trichloroethene: TCE

---: Indicates sample was not analyzed for the specific analytes

*Advanced GeoEnvironmental Inc.*

**TABLE 1**  
 ANALYTICAL RESULTS OF SAMPLES - EPA 8015m/8020  
 Continental Volvo  
 4030 - 4122 East 14<sup>th</sup> Street, Oakland, California

Sample I. D.- depth	TPH as gasoline	TPH as diesel	TPH as motor oil	Benzene	Toluene	Ethyl benzene	Xylenes	TCE ( $\mu\text{g}/\text{kg}$ )
Grab water sample reported in $\mu\text{g}/\text{L}$								
P12-H <sub>2</sub> O	<50	<b>6,800</b>	<b>14,000</b>	<0.5	<0.5	<0.5	<0.5	---
Tank-2	180	<b>68,000</b>	<b>200,000</b>	23	0.66	<0.5	<0.5	<0.5

*Notes:*

Trichloroethene: TCE

--- Indicates sample was not analyzed for the specific analytes.

*Advanced GeoEnvironmental Inc.*