RO-463

FUGRO WEST, INC.

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October 8, 2002
Job Number: 946.004

Alameda County

OCT 11 2002

Environmental Health

Ms. Eva Chu
Hazardous Materials Specialist
Alameda County Health Care Services Agency
1161 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Subject: Work Plan
Supplemental Subsurface Investigation and Supplemental Risk Evaluation
2528 Adeline Street
Oakland, California

Dear Ms. Chu:

INTRODUCTION

Fugro West Inc. (Fugro) presents this work plan to conduct a subsurface investigation and risk evaluation at the subject Site (Plates 1 and 2). In their letter dated June 28, 2002, the Alameda County Health Care Services Agency (ACHCSA) requested that additional evaluation be conducted to assess the presence of and potential human health risks associated with residual benzene and toluene concentrations in soil, prior to granting regulatory Site closure.

BACKGROUND

Two underground storage tanks (UST) were removed from the site in the late 1980s. The tanks were reportedly situated near each other at the northeast corner of the site. An Underground Storage Tank Unauthorized Release Form filed following removal of the first UST in June 1987, indicated that soil beneath the former fill end of the UST contained 11 milligrams per kilogram (mg/kg) of benzene and 11 mg/kg of toluene. This UST reportedly stored Great Western Solvent 225 for an unspecified period of time. Samples obtained by others from a well in this UST area (referred to as "Former Well" hereafter), revealed that groundwater local to this UST contained a variety of petroleum hydrocarbons and chlorinated solvents. As a result of this initial testing, it appeared that there had been previous release(s) from this former UST.

The second UST was removed in August 1988 and reportedly stored kerosene. Subsurface soil sampling, documented by Uriah, Inc., indicated that two soil samples collected from beneath the UST did not contain TPH as diesel. Hence, it did not appear as though there had been significant previous releases from this UST.

The Former Well was abandoned by others in 1995 since its integrity was of concern, and three new wells were subsequently installed in April 1995. Subsurface Consultants Inc. (a wholly owned subsidiary of Fugro West Inc) performed quarterly groundwater monitoring events as documented in reports dated; September 26, 1997, February 6 1998, and October 27, 1998. The October 1998 report included a risk assessment study and recommendations for Site closure.

Alameda County Health Care Services Agency (ACHCSA) has been evaluating the Site for regulatory closure. To facilitate their evaluation, Fugro met and discussed Site concerns and proposed this study on August 19, 2002. At the meeting, the ACHCSA also requested a risk evaluation of the vertical extent of barium concentrations near the former USTs and an

evaluation of halogenated volatile organic compounds (HVOCs) in groundwater below the existing building.

SCOPE OF WORK

FUGRO proposes to complete the following tasks in this scope of work:

- Task 1 Sampling and Chemical Analysis Program
- Task 2 Data Evaluation
- Task 3 Report Preparations

These tasks are further described below:

Task 1 Sampling and Chemical Analysis Program

Prior to drilling activities, we will prepare and submit drilling permits to Zone 7. Once permits are approved we will retain the services of a utility locating company to screen the proposed sampling locations for the presence of active, metallic pipelines and underground utilities. Probes will be relocated as necessary.

We will measure water levels in the existing three wells to determine current depth to water and we will calculate the groundwater flow direction. The wells will then be purged of at least 3 well volumes using new disposable bailers, while monitoring pH, conductivity, Dissolved Oxygen (DO), Oxygen Reducing Potential (ORP), and temperature. Once the above-mentioned parameters have stabilized, samples will be collected and decanted into appropriate pre-cleaned containers provided by the analytical laboratory. The samples will be placed in an ice filled chest until delivery to a California certified laboratory.

To evaluate subsurface conditions 5 direct push probes will be advanced to depths of about 15 feet at the locations shown on Plate 2. Two (2) probes will be located within the former UST excavation to obtain samples to evaluate residual benzene and toluene levels, as well as the vertical extent of barium levels in the area. Three (3) probes will be located near the northeast and southeast boundary of the Site. To facilitate the collection of additional grab groundwater samples we will install slotted PVC pipes into the three probes. Groundwater samples will be collected from these locations using a clean disposable bailer. The grab groundwater samples and the well samples will be used to evaluate the potential of an offsite, upgradient source of HVOCs previously detected in groundwater at the Site.

Drilling and sampling will be performed following procedures outlined in the attached Health and Safety Plan (HSP). We will retain selected soil samples within the depth explored. Soil samples will be retained in clear butyrate liners, capped with Teflon sheeting and plastic end caps, and placed in an ice-chilled cooler. Soil samples will be logged in the field according to the Unified Soil Classification System (ASTM D2487-93), and screened using an organic vapor meter (OVM), a device that detects certain organic vapors. Following sampling activities the probes will be filled with neat cement grout.

Selected soil and groundwater samples will be placed in an ice filled chest and submitted under chain of custody documentation to a California certified testing laboratory for chemical analysis. The samples will be analyzed on a standard turnaround basis. The testing program will include the following:

- Total Petroleum Hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and Methyl tert butyl ether (MtBE) using EPA Test Method 8015m/8020 (6 soil samples, 3 water samples),
- HVOCs using EPA Test Method 8010 (6 water samples), and
- Total Barium using EPA Test Method 6010 (10 soil samples).

Selected soil samples (4) will also be tested for standard soil parameters including grain size and moisture content.

Soil cuttings and rinsate/purge water generated during drilling and sampling activities will be put into Department of Transportation (DOT) approved and labeled drums, which will be temporarily left onsite pending review of the analytical test results. Fugro will arrange for the disposal of the soil cuttings and rinsate/purge water from the drilling and sampling operations.

Task 2 Data Evaluation

Fugro will evaluate the field and laboratory data and compare detected concentrations to the applicable regulatory standards, in order to determine what, if any, human health risks would be associated with detected chemical concentrations in soil and groundwater. We will initially review the results of the soil parameter tests to determine soil type and whether the City of Oakland Urban Land Redevelopment Tier 2 Risk Based Screening Levels, can be used. We will also evaluate groundwater data to determine if there appears to be an offsite source of HVOCs impacting the Site.

Task 3 Report Preparation

Fugro will prepare a written report, which describes the field activities as well as our conclusions and findings. The report will include tabulated data with a comparison of laboratory results to the current risk based screening levels used by either the Regional Water Quality Control Board or City of Oakland. The report will be complete with a Site Plan showing sampling locations, the laboratory analytical test reports, and chain of custody forms.

CLOSURE

FUGRO requests that you review this work plan and send a letter that indicates your approval of the scope of work described herein. If you have any questions or comments, please call.

Very Truly Yours,

FUGRO WEST INC.

Obiajulu Nzewi
Staff Geologist

Jeriann Alexander
Associate Engineer

REGISTERED PROFESSIONAL ENGINEER
JERIANN N. ALEXANDER
No. C040469
Exp. 3-2003
CIVIL
STATE OF CALIFORNIA

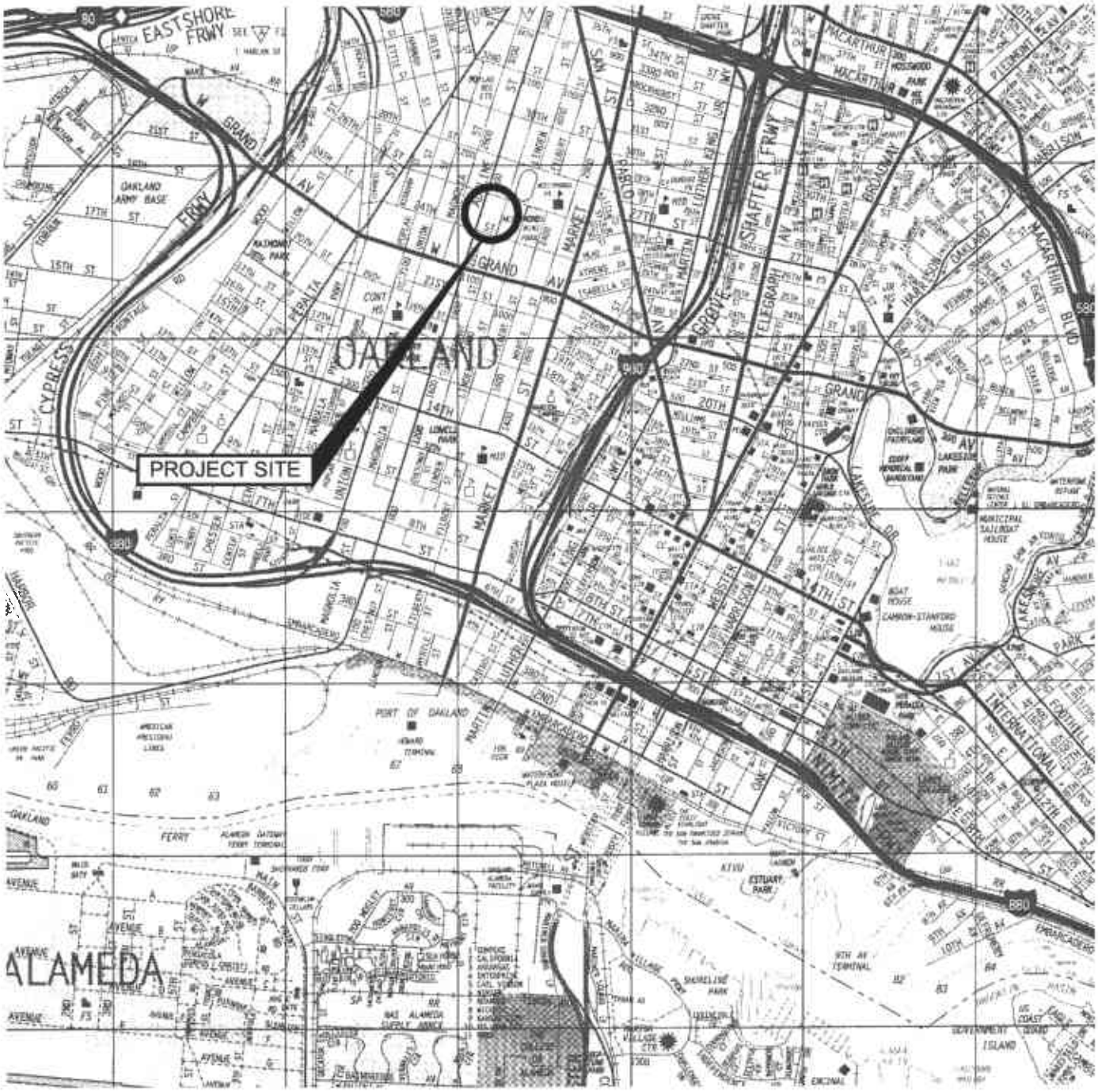
ON:JA/kel

Attachments: Plate 1 -Vicinity Map
Plate 2 - Site Plan
Health and Safety Plan

Distribution: Addressee (1)

cc: Ms. Shirley Howkins
c/o Mr. Gerald C. Smith
Fitzgerald, Abbot and Beardsley LLP
1221 Broadway 21st Floor
Oakland, California 94612

August 2002
Project No. 946.004



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NOTE:

This Vicinity Map Is Based On A Thomas Guide Map For San Francisco, Alameda And Contra Costa Counties, California, Map 649, YEAR 2000

NORTH

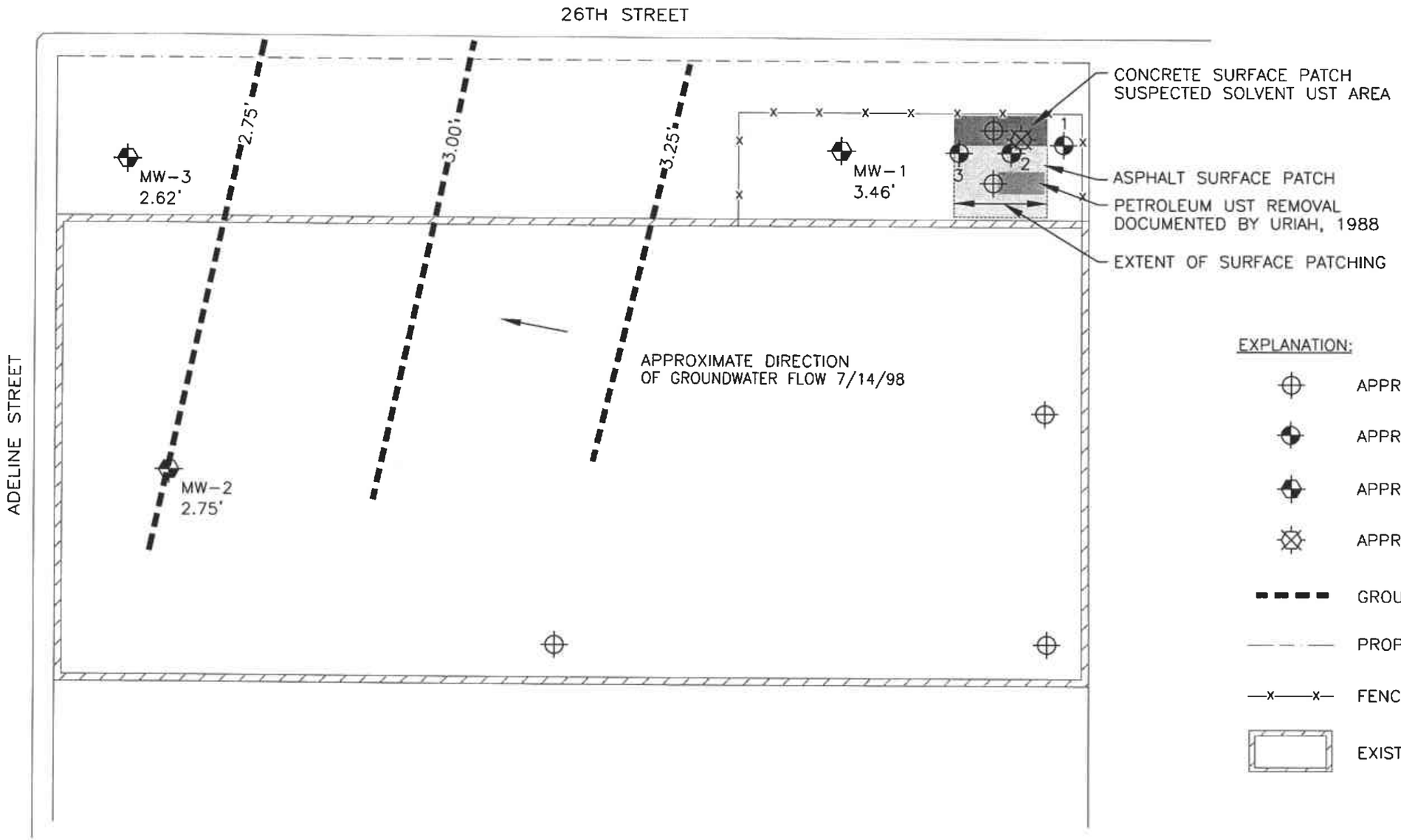
0 2400

FEET

VICINITY MAP

2528 Adeline Street
Oakland, California

PLATE 1



EXPLANATION:

- APPROXIMATE LOCATION OF PROPOSED BORING
- APPROXIMATE LOCATION OF EXISTING BORING
- APPROXIMATE LOCATION OF MONITORING WELL
- APPROXIMATE LOCATION OF FORMER WELL
- GROUNDWATER ELEVATION CONTOUR
- PROPERTY BOUNDARY
- FENCE
- EXISTING STRUCTURE

NORTH

0 20 40
FEET

NOTE:

BOTH FORMER TANKS WERE BELIEVED TO EXIST AT THE EASTERN END OF THE FENCED AREA LOCATED ON-SITE. CEMENT AND ASPHALT SURFACE PATCHING WERE LIKELY PLACED FOLLOWING TANK REMOVAL.

SITE PLAN
2528 Adeline Street
Oakland, California

PLATE 2

SITE-SPECIFIC HEALTH AND SAFETY PLAN

Project Title: 2528 Adeline Street

Project No.: 946.004

Client: Ms. Shirley Hawkins

Date: 10/8/02

This form may be used for those site activities that pose a significant threat of exposure to site contaminants or hazards (e.g., well installation, soil borings, water/soil sampling, excavation/ trenching). The Fugro West, Inc.(Fugro) Health and Safety Director will determine whether or not this form is appropriate for any given activity at the site. It is the responsibility of the Project Manager to complete the Health and Safety Plan (HSP). The Health and Safety Director must sign the HSP. All project personnel must receive a copy of this form, familiarize themselves with its contents, and sign the signature page before work begins.

1. **Site Name and Address**

   2528 Adeline Street
   Oakland, California

2. **Site Personnel and Assigned Responsibilities**

   Principal-in-Charge: Glenn Young

   Project Manager: Jeriann Alexander

   Site Safety Officer: Obi Nzewi

   Other Field Personnel:

3. **Site Description and Background (attach site map)**

The Site is currently occupiped by a single story building surrounded by an asphalt parking lot.

Two former leaking onsite USTs impacted soil and groundwater conditions at this property.

Field work consiting of drilling and sampling soil and groundwater will be conducted to evaluate the presence of benzene, toluene and barium concentrations. Work wil be conducted both inside and outside the existing structure

4. **Planned Site Activities**

- Tag water levels in existing wells
- Collect groundwater samples from 3 existing wells
- Advance 5 temporary probes to about 15 feet bgs
- Collect soil samples from each boring
- Collect 3 grab groundwater samples from select borings

5. **Chemical Compounds at the Site (complete 5a and/or 5b, as appropriate)**

5a. **Chemical Data Summary**

_____ **Available Chemical Information has been requested from client.**

_____ **No Known or Suspected Chemical Contamination**

Known Compounds	Source (soil/water/drum, etc.)	Known Concentrations Range (ppm, mg/kg, mg/l)	
		Lowest	Highest
Benzene	Soil		11 mg/kg
Toluene	Soil		11 mg/kg
TVH	Groundwater		2,800 ug/l
TEH	Groundwater		330 ug/l
Ethylbenzene	Groundwater		16 ug/l
1,1-DCA	Groundwater		70 ug/l

Known Compounds	Source (soil/water/drum, etc.)	Known Concentrations Range (ppm, mg/kg, mg/l)	
		Lowest	Highest
1,1-DCE	Groundwater		270 ug/l
1,1,1-TCA	Groundwater		110 ug/l
Barium	Soil		67,000 mg/kg

5b. **Chemical Data Tables**

Available data summary tables for the site attached.

6. **Potential Physical, Mechanical, Electrical, and Biological Hazards**

(Check all boxes that potentially apply to the project)

☐	Do not stand near backhoe buckets and earthmoving equipment.
☒	Wear hard hat, safety glasses, and steel toed boots when working around drill rig.
☐	Use noise meter to survey area to determine if the OSHA PEL-TWA of 85 decibels is exceeded in any area. If so, mark area and use earplugs or earmuffs within area.
☒	If noise survey is not performed as a precautionary measure, wear ear muffs or plugs when working within 25 feet of operating machinery.
☐	Verify that all equipment is in good condition.
☒	Do not stand or walk under elevated loads or ladders.
☐	Do not stand near unguarded excavation and trenches.
☐	Do not enter excavation or trenches over 5 feet deep that are not properly guarded, shored, or sloped.
☒	Consult Health and Safety Director if other mechanical hazards exist.
☐	Discuss location of buried utilities with client.
☒	Locate and mark buried utilities, and notify USA (Date: USA Tag No.
☒	Have buried utilities cleared by private utility locating company.
☒	Maintain at least 10-foot clearance from overhead power lines.
☐	Contact utility company for minimum clearance from high voltage power lines. If unavoidably close to buried or overhead power line, have power turned off, with circuit breaker locked and tagged.
☐	Properly ground all electrical equipment.
☐	Avoid standing in water when operating electrical equipment.
☐	If equipment must be connected by splicing wires, make sure all connections are properly taped.
☐	Be familiar with specific operating instructions for each piece of equipment.
☐	Avoid contact with poison oak and poison ivy.
☐	Avoid contact with potentially infectious waste.
☐	Be aware of and avoid contact with potentially rabid animals.

☐	Use appropriate insect repellant to avoid disease carrying or poisonous insects. Avoid breathing dust in dry desert or central valley areas (valley fever, Hanta virus, etc.).
☒	Open doors and windows to promote ventilation during indoor drilling operation

7. Health and Safety Procedures Required by the Facility

(Describe any client-specified safety requirements or check "Not Applicable" if there are none).

_____ **Not Applicable**

8. Special Procedures and Precautions

☒	**Not Applicable**.
☐	Obtain permit for confined space entry.
☐	Monitor oxygen and organic vapors before entering. If following values are exceeded, do not enter: (a. oxygen less than 19.5 percent or greater than 25%; b. LEL greater than 10%).
☐	If radiation meter indicates 2mR/hr or more, leave the area and consult DHS.
☐	**Dust Suppression:** Stockpiled soil will be covered to prevent airborne conditions of affected soil.
☐	**Dust Suppression:** Dust suppression for vehicular traffic and earth moving operations will be implemented (area water spray).
☐	**Dust Suppression:** Perimeter ambient air monitoring will be used to analytically measure chemical concentrations of known constituents in fugitive dust. The laboratory analytical results will be used to determine that adequate dust control measures are employed to avoid off-site migration of contaminated dust.

9. Air Monitoring Procedures

Note: If applicable, see last page of this HSP for Total Dust Equivalency calculation instructions.

☐	**Not Applicable**	Because no chemical contamination or excessive dust is expected, no air monitoring will be performed.
☒	**Volatile organics only**	VOC concentrations in the breathing zone will be monitored using a PID or FID, during intrusive activities, or any time activities or site conditions change.
☐	**Uncontaminated dust only**; Total dust monitoring w/Real Time Dust Monitors	Monitoring will be performed when there is visual dust, using a Real Time Total Dust Meter, to detect if total dust levels are above the OSHA PEL for dust of 10 mg/m3.

☐	**Contaminated dust only;** Total dust monitoring w/Real Time Dust Monitors	To obtain current information about potential exposure conditions to contaminated airborne dust, Real Time Total Dust Meter(s) will be used to monitor the breathing zone or immediate work area. Calculations have been done to determine the total airborne dust level necessary to reach the Permissible Exposure Level (Cal/OSHA, PEL-TWA) of _____given it's highest known concentration in soil. The compound with the highest soil concentration, and the lowest PEL is _____. Subsequently, it has the lowest Total Dust Equivalency Level of _____. This is the amount of total dust necessary in the breathing zone to create an inhalation exposure exceeding the PEL of _____. Since, the number is **above/below** the OSHA PEL for simple Nuisance Dust/Particulate (non-toxic) of 10 mg/m3, then the Action Level to upgrade to respiratory protection during site activities will be the more conservative limit, _____ mg/m3. See item #10 for a detailed description of Action Levels, Activities, and corresponding PPE.

☐	**Volatile organics and uncontaminated dust**	VOC concentrations in the breathing zone will be monitored using a PID or FID, during intrusive activities, or any time activities or site conditions change. Monitoring will be performed when there is visual dust, using a Real Time Total Dust Meter, to detect if total dust levels are above the OSHA PEL for dust of 10 mg/m3.

☐	**Volatile organics and contaminated dust**	VOC concentrations in the breathing zone will be monitored using a PID or FID, during intrusive activities, or any time activities or site conditions change. To obtain current information about potential exposure conditions to contaminated airborne dust, Real Time Total Dust Meter(s) will be used to monitor the breathing zone or immediate work area. Calculations have been done to determine the total airborne dust level necessary to reach the Permissible Exposure Level (Cal/OSHA, PEL-TWA) of _____ given its highest known concentration in soil. The compound with the highest soil concentration, and the lowest PEL is _____. Subsequently, it has the lowest Total Dust Equivalency Level of_____. This is the amount of total dust necessary in the breathing zone to create an inhalation exposure exceeding the PEL of _____. Since, the number is **above/below** the OSHA PEL for simple Nuisance Dust/Particulate (non-toxic) of 10 mg/m3, then the Action Level to upgrade to respiratory protection during site activities will be the more conservative limit, _____ mg/m3. See item #10 for a detailed description of Action Levels, Activities, and corresponding PPE.
☐	**Methane**	Methane will be monitored using an LEL/O2 meter (Combustible Gas Indicator such as a GasTech) during excavation or confined space activities, to protect against explosion hazards. Methane is an asphyxiant and is not considered to be an inhalation hazard.

10. Action Levels

☐ **Not Applicable (No air monitoring will be performed)**

Note: If PID/FID readings in the breathing zone exceed 5 ppm consistently and Level C is required, contact the Project Manager before proceeding.

Volatile Organics		PID/FID	
	Activities/Locations	**Action Level**	**Level of Protection**
☒	Drilling/sampling of soil and groundwater	0 to 5 ppm	Level D with steel toed boots, safety glasses, hard hat, and latex inner gloves and nitrile or neoprene outer gloves. Regular or polycoated Tyvek is optional.
		5 to 50 ppm	Level C: Level D as above plus a half face respirator with organic vapor cartridges, and chemical goggles, and polycoated tyvek.
		50 to 250 ppm	Level C as above EXCEPT with a Full FACE respirator.
		> 250 ppm	Upgrade to Level B or Cease operations until vapors dissipate and readings are below 200 ppm.

Uncontaminated Dust		Total Dust Meter	
	Activities/Locations	Action Level	Level of Protection
☐	Drilling/sampling of soil and groundwater	0<10 mg/m3	Level D with steel toed boots, safety glasses, hard hat, and latex inner gloves and nitrile or neoprene outer gloves. Regular or polycoated Tyvek is optional.
		> 10 mg/m3	Level C: Level D as above plus a half face respirator with dust/mist cartridges, chemical goggles, and regular or polycoated tyvek. Or use dust suppression methods.

Contaminated Dust		Total Dust Meter	
	Activities/Locations	Action Level	Level of Protection
☐	Drilling/sampling of soil and groundwater	0<10 mg/m3 or _____ mg/m3 level calculated in Item #9	Level D with steel toed boots, safety glasses, hard hat, and latex inner gloves and nitrile or neoprene outer gloves. Regular or polycoated Tyvek is optional.
		>10 mg/m3 or _____ mg/m3 level calculated in Item #9	Level C: Level D as above plus a half face respirator with dust/mist cartridges, chemical goggles, and regular or polycoated tyvek. Or use dust suppression methods.

Other			
	Activities/Locations	Action Level	Level of Protection
☐	Drilling/sampling of soil and groundwater		

11. Decontamination

☒	**Not Applicable.**
☐	**General:** A designated decontamination area will be setup within the Contamination Reduction Zone prior to the commencement of work. The designated area will accommodate both personnel and vehicles that have been in the Exclusion Zone and then pass through the Contamination Reduction Zone to enter the Support zone.
☐	**Specific:** Set up decon as necessary before work begins. Decon in the following order (as appropriate): Wash/Rinse/Remove: Outer boots, outer gloves, tyvek, respirator, inner gloves. Wash and rinse hands and face.

12. Sample Handling and Investigation – Derived Waste Management

☐	Chemical contamination not suspected. If contamination is encountered, contact the project manager regarding special sample handling or waste management requirements.
☒	Sample contamination known or suspected. Wear gloves when handling samples. If geotechnical testing of samples is necessary, testing should not be performed at Fugro's laboratory.
☒	Place soil cuttings and equipment rinsate wastewater in labeled 55 gallon drums or other appropriate containers.

13. Emergency Contacts (names and telephone numbers)

Police:	911
Fire:	911
Ambulance:	911
Hospital:	Alta Bates Summit Medical Center (510) 869 6600

Facility Health and Safety Officer (if applicable):

Fugro Health and Safety Director:	Glenn Young
	(510) 267 4424 (Office)
	(510) 610 8057 (Cell)

14. **Written Directions to Nearest Hospital (attach route map)**

Alta Bates Medical Center, 350 Hawthorne Avenue.

Start out going **NORTH** on **ADELINE** Street

Turn **Right** on **W MACARTHUR Blvd**

Turn **Right** on **WEBSTER Street**

15. **By my signature below, I hereby indicate that I have read and understand this HSP and I agree to follow the guidelines therein.**

Name (Print)	Name (Signature)	Date

TO THE SUBCONTRACTOR: *This plan has been prepared solely for the use of Fugro personnel. It is supplied to you for informational purposes only. You are responsible for your own health and safety program.*

16. Checklist

This HSP contains the following attachments. If they are not present with this document, it is incomplete.

☒ Site Map (see Item 3)

☒ Hospital Route Map (see Item 14)

☒ Data/Sample Results, if available

17. Signatures

Note: For sites with known or suspected chemical contamination, the HSP must be reviewed and approved by the Health and Safety Director or his designee. For other sites, the HSP may be reviewed and approved by the Health and Safety Director, the Geotechnical Group Leader, or the Project Manager

Fugro Health and Safety Director — Date

Fugro Geotechnical Group Leader — Date

Project Manager — 10/8/02 — Date

Calculation of Total Dust Equivalency (TDE) Factor

Equation: $\text{TDE (mg/m}^3\text{)} = \frac{\text{PEL} \times (1 \times 10^6)}{\text{A}}$

Where:

A = Highest concentration of compound in soil in mg/kg

PEL = PEL-TWA or TLV-TWA of compound ("A") in mg/m^3

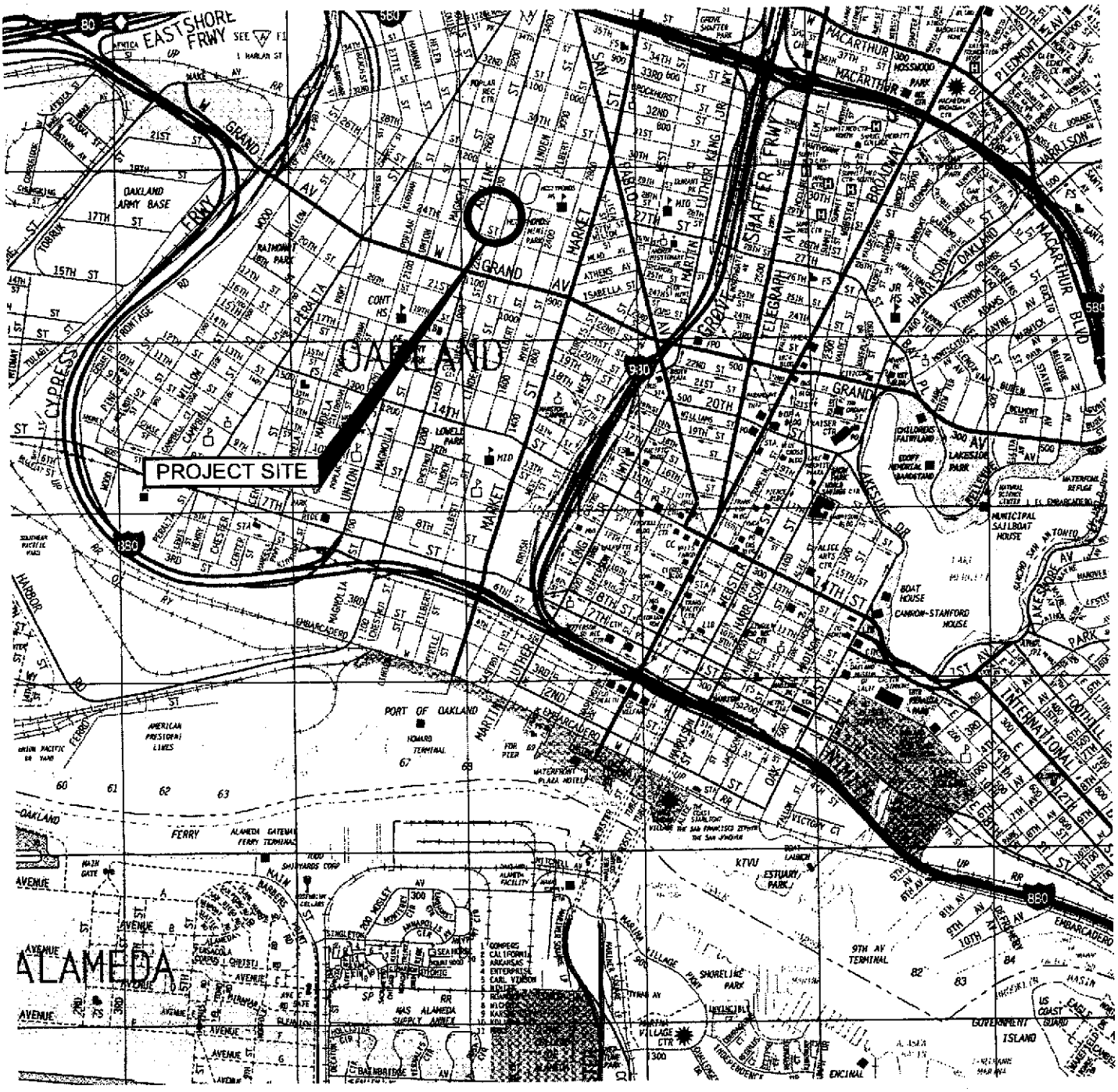
Example:

Compound is Lead, in soil (highest known concentration in soil is 7,000 mg/kg)
The PEL-TWA for Lead is 0.050 mg/m^3

$$\frac{(0.050\ mg/m^3) \times (1 \times 10^6)}{7{,}000\ mg/kg} = 7.14\ mg/m^3$$

PEL = Permissible Exposure Limit
TWA = Time-Weighted Average
TLV = Threshold Limit Value
mg = milligrams
kg = kilograms
m = meter

August 2002
Project No. 946.004



NOTE:

This Vicinity Map Is Based On A Thomas Guide Map For San Francisco, Alameda And Contra Costa Counties, California, Map 649, YEAR 2000

NORTH

0 2400

FEET

VICINITY MAP

2528 Adeline Street
Oakland, California

PLATE 1

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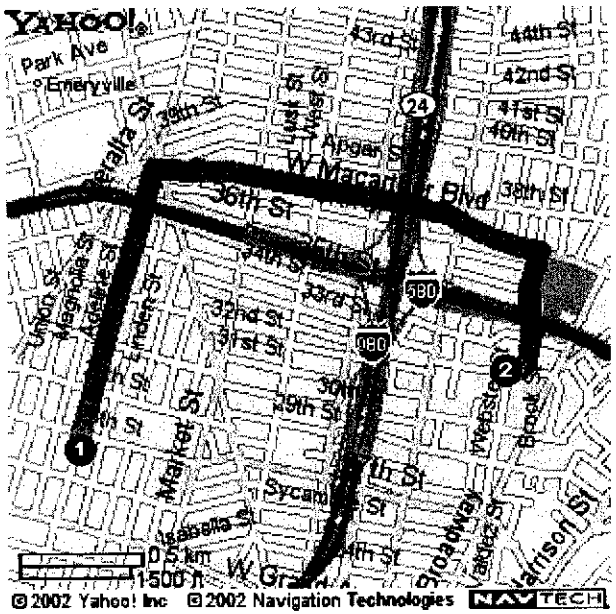
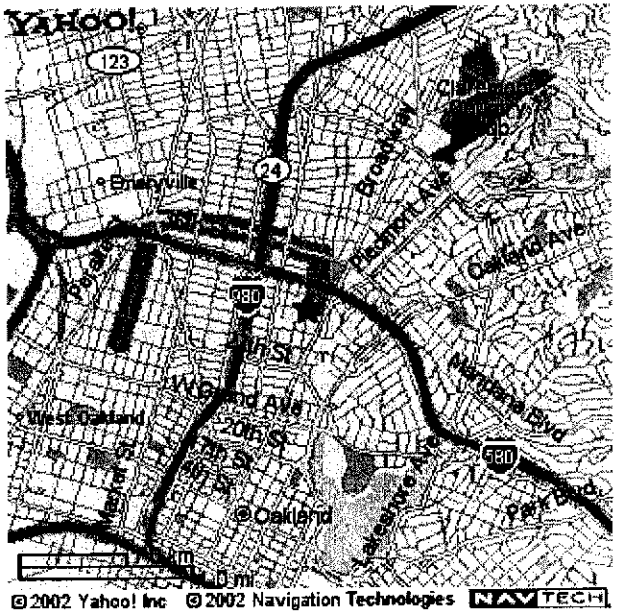


Full Route



Destination

	Directions	Miles
1.	Start on **ADELINE ST**	0.7
2.	Turn Right on **W MACARTHUR BLVD**	1.0
3.	Turn Right on **WEBSTER ST**	0.3

When using any driving directions or map, it's a good idea to do a reality check and make sure the road still exists, watch out for construction, and follow all traffic safety precautions. This is only to be used as an aid in planning.

Driving Directions

New Location

1 **Enter a starting address** or select from My Locations

My Locations -- My Locations -- Sign In

Address (Address, Intersection or Airport Code)

2 **Enter a destination address** or select from My Locations

My Locations -- My Locations -- Sign In

Address (Address, Intersection or Airport Code)

TABLE 1
PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUNDWATER
2528 ADELINE STREET
OAKLAND, CALIFORNIA

		TVH[1]		TEH[2]							
Sample ID	Date	as Gasoline (µg/L)	as Stoddard Solvent (µg/L)	as Diesel C12-C22 (µg/L)	as Kerosene C10-C16 (µg/L)	O&G (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
Former Well (abandoned)	3/31/1995	2800	**	1600*	**	37	--	--	--	--	--
MW-1	4/3/1995	730	**	**	310*	5.8	--	--	--	--	--
	4/29/1996	2000*	2000*	240*	220*	<5	<0.5	<0.5	65	16	--
	7/25/1996	730*	750*	190*	180*	<5	<0.5	<0.5	26	<0.5	--
	10/31/1996	<50	<50	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--
	1/9/1997	1800	**	470*	550*	--	<0.5	<0.5	57	26	--
	7/31/1997	700	610	290	360	--	<0.5	<0.5	2.7	<0.5	--
	1/13/1998	1400*	2800	320*	330*	--	1.2C	4.3C	16	0.95	13C
MW-2	8/15/1995	83*	**	<50	<50	<5	--	--	--	--	--
	4/29/1996	75*	74*	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--
	7/25/1996	110*	92*	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--
	10/31/1996	<50	<50	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--
	1/9/1997	<50	<50	<50	<50	--	<0.5	<0.5	<0.5	<0.5	--
	7/31/1997	<50	<50	<50	<50	--	<0.5	<0.5	<0.5	<0.5	--
	1/13/1998	<50	<50	<50	<50	--	0.55	<0.5	<0.5	<0.5	15
MW-3	8/15/1995	<50	<50	<50	<50	<5	--	--	--	--	--
	4/29/1996	<50	<50	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--
	7/25/1996	<50	<50	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--
	10/31/1996	<50	<50	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--
	1/9/1997	<50	<50	<50	<50	--	<0.5	<0.5	<0.5	<0.5	--
	7/31/1997	<50	<50	<50	<50	--	<0.5	<0.5	<0.5	<0.5	--

[1]Gasoline and stoddard solvent hydrocarbon ranges overlap

[2]Diesel and kerosene hydrocarbon ranges overlap

* = Sample chromatogram does not resemble standard pattern

** = Range not reported due to overlap of hydrocarbons

µg/L = micrograms per liter or parts per billion

mg/L = milligrams per liter or parts pr million

TVH = Total volatile hydrocarbons

TEH = Total extractable hydrocarbons

MTBE = Methyl tertiary butyl ether

O&G = Oil and grease

-- = Test not requested

<50 = None detected above the laboratory reporting limit stated.

C = Presence of this compound confirmed by a second column; however, the confirmation concentration differed from the reported result by more than a factor of two.

TABLE 2
VOLATILE ORGANIC COMPOUND
CONCENTRATIONS IN GROUNDWATER
2528 ADELINE STREET
OAKLAND, CALIFORNIA

SAMPLE ID	Date Sampled	Acetone (µg/L)	Carbon disulfide (µg/L)	1,1-DCA (µg/L)	1,1-DCE (µg/L)	2-Butanone (µg/L)	4-Methyl-2-pentanone (µg/L)	1,1,1-TCA (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total xylenes (µg/L)	cis-1,2-DCE (µg/L)	Other EPA 8240 Compounds
Former Well (Abandoned)	3/31/1995	24	4.1*	<5.0	<5.0	7.7*	57	<5.0	4.5*	49	34	270	<5.0	ND
MW-1	4/3/1995	<20	<5.0	<5.0	4.2	<10	<10	<5.0	3.1	39	13	75	<5.0	ND
	4/29/1996	<20	<5.0	<5.0	6.2	<10	<10	<5.0	<5.0	<5.0	62	12	<5.0	ND
	7/25/1996	<20	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	<5.0	6.4	<5.0	<5.0	ND
	10/31/1996	<20	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND
	1/9/1997	<20	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	<5.0	51	22	<5.0	ND
	7/31/1997	<20	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND
MW-2	8/15/1995	<50	<13	62	260	<25	<25	170	<13	<13	<13	<13	<13	ND
	4/29/1996	<20	<5.0	91	400	<10	<10	260	<5.0	<5.0	<5.0	<5.0	<5.0	ND
	7/25/1996	<40	<10	70	270	<20	<20	230	<10	<10	<10	<10	<10	ND
	10/31/1996	<33	<8.3	67	210	<17	<17	160	<8.3	<8.3	<8.3	<8.3	<8.3	ND
	1/9/1997	<50	<13	79	340	<25	<25	230	<13	<13	<13	<13	<13	ND
	7/31/1997	<33	<8.3	66	210	<17	<17	120	<8.3	<8.3	<8.3	<8.3	<8.3	ND
	1/13/1998	<40	<10	70	270	<20	<20	110	<10	<10	<10	<10	<10	ND
MW-3	8/15/1995	<20	<5.0	3.3	4.1	<10	<10	8.8	<5.0	<5.0	<5.0	<5.0	2.9	ND
	4/29/1996	<20	<5.0	<5.0	14	<10	<10	12	<5.0	<5.0	<5.0	<5.0	<5.0	ND
	7/25/1996	<20	<5.0	<5.0	7.2	<10	<10	8	<5.0	<5.0	<5.0	<5.0	<5.0	ND
	10/31/1996	<20	<5.0	<5.0	<5.0	<10	<10	5.1	<5.0	<5.0	<5.0	<5.0	<5.0	ND
	1/9/1997	<20	<5.0	<5.0	<5.0	<10	<10	5.6	<5.0	<5.0	<5.0	<5.0	<5.0	ND
	7/31/1997	<20	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND

1,1-DCA = 1,1-Dichloroethane
1,1-DCE = 1,1-Dichloroethene
1,1,1-TCA = 1,1,1-Trichloroethane
cis-1,2-DCE = cis-1,2-Dichloroethene
<20 = None detected at or above the stated detection limit

ND = Not detected at or above analytical detection limits. See analytical test reports for individual detection limits.
µg/L = micrograms per liter or parts per billion
* = Estimated value detected below the laboratory reporting limit.

TABLE 2
HEAVY METALS CONCENTRATIONS IN SOIL
2528 ADELINE STREET
OAKLAND, CALIFORNIA

	1 @ 2.0'	2 @ 4.0'	3 @ 2.0'	MW-1 @ 3.0'	TTLC
Antimony	<2.9	3.0	3.6	6.5	500
Arsenic	2.8	3.1	3.4	3.9	500
Barium	83	67,000	14,000	220	10,000
Beryllium	0.61	0.16	0.20	0.41	75
Cadmium	<0.25	<0.25	<0.25	<0.24	100
Chromium	35	19	21	35	500
Cobalt	8.5	19	6.1	6.4	8,000
Copper	38	63	42	20	2,500
Lead	3.8	21	49	4.4	1,000
Mercury	<0.10	<0.10	<0.10	<0.10	20
Molybdenum	<0.98	1.5	1.2	<0.97	3,500
Nickel	34	65	19	51	2,000
Selenium	<2.5	<2.5	<2.4	<2.5	100
Silver	<0.49	<0.50	<0.49	<0.49	500
Thallium	<2.5	<2.5	<2.4	<2.5	700
Vanadium	25	85	24	28	2,400
Zinc	61	190	250	63	5,000

<3.0 = None detected at or above the stated detection limit.
All concentrations are in milligrams per kilogram (mg/kg).
TTLC = Total threshold limit concentration value for California regulated hazardous wastes.