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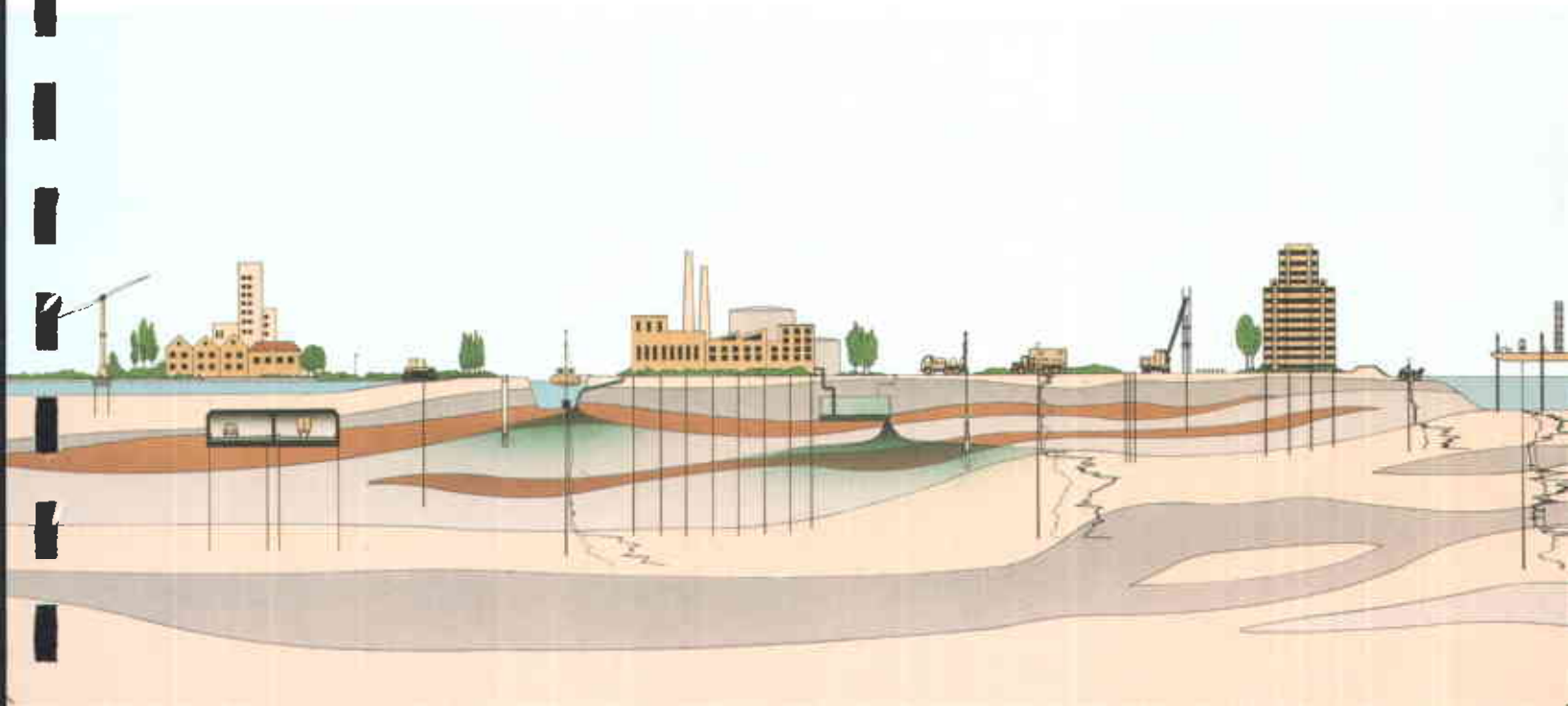
FUGRO WEST, INC.

SUPPLEMENTAL SUBSURFACE INVESTIGATION AND RISK EVALUATION 2528 ADELINE STREET OAKLAND, CALIFORNIA Project No. 946.004

Prepared for:
MS. EVA CHU
HAZARDOUS MATERIALS SPECIALIST
ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY

April 2003



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April 14, 2003
Project No. 946.004

Ms. Eva Chu
Hazardous Materials Specialist
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1161 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

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

Dear Ms. Chu:

Fugro is pleased to present this Supplemental Subsurface Investigation and Risk Evaluation report for the referenced property. The report summarizes our explorations, laboratory testing, findings and conclusions based on our studies conducted to date.

Please call if you have questions regarding the information contained in this report.

Sincerely:

FUGRO WEST INC.

Obiajulu Nzewi
Staff Geologist

Jeriann Alexander, PE, REA
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CONTENTS

1.0 INTRODUCTION

This report presents the results of a Supplemental Subsurface Investigation and Risk Evaluation conducted by Fugro West, Inc. (Fugro) at 2528 Adeline Street, Oakland, California (Plates 1 and 2). The purpose of the study was to address the concerns of the Alameda County Health Care Service Agency (ACHCSA) as they contemplate the site for regulatory closure.

In their letter dated June 28, 2002, and in subsequent discussions, the ACHCSA requested that an investigation be conducted to assess the potential human health risks associated with residual benzene, toluene, and barium concentrations in soil, and to evaluate the impacts and possible sources of halogenated volatile organic compounds (HVOCs) in groundwater below the site. The scope of work described herein is in general accordance with the Work Plan prepared by Fugro dated October 8, 2002 (Appendix A).

2.0 SITE DESCRIPTION

The Site is situated at the south-east corner of Adeline Street and 26th Street in west Oakland, just south of the boundary between Oakland and Emeryville (Plates 1 and 2). The Site and immediately adjacent properties have been zoned commercial for quite some time. The general terrain in the Site vicinity is flat with a gradual surface gradient to the west, toward the bay. Groundwater studies conducted onsite and in the site vicinity have shown that the groundwater flow direction is toward the west.

The Site is occupied by a one-story building; the interior of which has been partitioned and finished for use by a promotion and graphic design business. Exterior areas are paved with the exception of a small area closest to the intersection. A chain link fence encompasses an area near the north-east corner of the building.

Three monitoring wells exist onsite. Two of the wells (MW-1 and MW-3) are located outside of the building, and one well (MW-2) is located in an interior area. The wellheads are protected by metal well boxes that are locked.

3.0 BACKGROUND

Two underground storage tanks (UST) were removed from the Site in the late 1980s. The tanks were reportedly situated adjacent to each other at the northeast corner of the site (Plate 2). 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. According to a material safety data sheet obtained from Great Western Chemical Company of Richmond, Solvent 255 contained the following compounds:

- Light aliphatic naphtha
- Toluene
- N-heptane
- Methylcyclohexane
- cyclohexane

Samples obtained by others from a well in this UST area (referred to as "Former Well" hereafter) detected a variety of petroleum hydrocarbons, barium and volatile organics in the groundwater.

The second UST which reportedly stored kerosene was removed from the Site in August 1988. Subsurface soil sampling, documented by Uriah, Inc., indicated that two soil samples collected from beneath the UST did not contain detectable concentrations of Total Petroleum Hydrocarbons (TPH). Hence, it did not appear that there had been significant previous releases from this UST.

The Former Well was abandoned in 1995 by Subsurface Consultants, Inc. (SCI) since its integrity was of concern, and three new wells were subsequently installed. SCI (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. Chemicals of concern included in the monitoring program included volatile organic compounds, petroleum hydrocarbons, barium and selenium. The October 1998 report included a risk assessment study and recommendations for Site Closure, as in our opinion the presence of various chemicals of concern in soil and groundwater posed no significant risk to human health nor the environment given the continued commercial use of the Site.

ACHCSA is evaluating the Site for regulatory closure. To facilitate their evaluation, Fugro met and discussed Site concerns with the ACHCSA on August 19, 2002. At the meeting, the ACHCSA 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. Fugro prepared a Work Plan dated October 8, 2002 to address the ACHCSA concerns, a copy of which is presented in Appendix A.

4.0 FIELD SAMPLING AND ANALYTICAL TESTING PROGRAM

4.1 General

Prior to drilling activities, Fugro procured drilling permits from the Alameda County Public Works Department (Zone 7). Fugro also retained the services of a private utility locator to screen proposed sampling locations for buried utilities. Fieldwork was conducted using standard industry practices regarding worker safety, equipment decontamination, and sample handling. Sampling equipment was cleaned prior to each use.

4.2 Field Sampling

On November 21, 2002 Vironex, an environmental service provider and sampling subcontractor, advanced five (5) probes (B-1 to B-5) to depths of approximately 15 to18 feet below the ground surface (bgs) using a limited access direct-push drilling rig. Probe locations are shown on Plate 2. Two probes (B-1 and B-2) were located within the former UST area, which is situated immediately adjacent to the northeast corner of the existing warehouse structure. The remaining three probes were located inside the warehouse structure, and along the east and south building walls. Vironex collected continuous soil samples at all probe locations. Soil samples were retained in clean butyrate liners, capped with Teflon sheeting and plastic end caps. The samples were screened in the field with an organic vapor meter (OVM) and were logged in accordance with the Unified Soil Classification System (USCS). Logs are presented in Appendix B.

Groundwater depths were measured in the three existing monitoring wells (MW-1, MW-2 and MW-3). The wells were then purged of at least 3 well volumes while monitoring for changes in pH, conductivity, dissolved oxygen (DO), Oxygen Reducing Potential (ORP) and temperature. Once the above mentioned parameters had stabilized, samples were collected from each of the wells using clean disposable bailers. Grab groundwater samples were also obtained from within three of the probes (B-3, B-4 and B-5). To facilitate the collection of grab groundwater samples from these probes, Vironex installed plastic well screen into probe holes through which a clean disposable bailer was inserted. Groundwater samples were decanted into the appropriate pre-cleaned containers provided for our use by the laboratory, STL San Francisco, a State of California certified chemical testing laboratory. All soil and groundwater samples were placed into an ice-chilled chest and were kept refrigerated until delivery under chain of custody documentation, to the laboratory.

Following drilling and sampling activities, the well screens were removed and disposed of, and the probes were backfilled with neat cement grout to match previous surface conditions. Vironex placed all of the cuttings from the field activities into two 55-gallon drums. **The drums are currently stored onsite, pending waste profiling, and will be off-hauled to an appropriate facility upon acceptance.**

4.3 Subsurface Conditions

Soils encountered during drilling comprised alluvial sediments consisting of varying gradations of sand, silt and clay. During our logging and screening of the soil samples, we recorded no OVM readings and observed no detectable organic vapor odors or discolored soils in any of the soil samples collected from probes B-4 and B-5. A strong hydrocarbon odor and light green staining was observed in soil samples and cuttings ranging from 6.5 to 15 feet bgs in probe B-1, and ranging from 5.5 to about 11 feet bgs in Probe B-2. Detected OVM readings ranged from 15 to 17 parts per million (ppm). Faint odors were also observed in soil samples and cuttings ranging from 4 to 9 feet bgs in Probe B-3.

Groundwater was encountered during drilling of the probes at approximately 12.5 feet bgs, and was measured in the existing wells at depths ranging from 6 to 8 feet bgs (Table 1). No odors or sheen was observed on the groundwater surface in the existing wells nor probes.

4.4 Physical Parameter Testing

Risk screening threshold concentrations have been developed by the City of Oakland (Urban Land redevelopment Program, 2000) and the Regional Water Quality Control Board (Region 2, 2001). The threshold concentrations are developed by taking into account many regional and site specific factors including, depth to water and soil type. To assist in determining which risk screening criteria to apply to the Site, selected soil samples were tested for the following physical characteristics:

- Grain size distribution
- Moisture content.

The grain size distribution has been summarized graphically in Appendix C. The soils within the upper 10 feet of the stratum below the Site would be classified as being fine-grained, more specifically as, a "SILT, with some clay and sand". Moisture contents varied from 20 to 24%.

4.5 Chemical Analysis

Selected soil and groundwater samples were tested for various chemicals of potential concern in accordance with the approved work plan. The testing program included the following:

- Total Petroleum Hydrocarbons within the gasoline range (TPHg) using US EPA Test Method 8015m
- Benzene, toluene, ethylbenzene and xylenes (BTEX), and Methyl tert butyl ether (MTBE) using US EPA Test Method 8020
- Halogenated Volatile Organic Compounds (HVOCs) using US EPA Test Method 8010
- Total Barium using US EPA Test Method 6010

Test results are summarized in Tables 2 and 3, which also contain pertinent test results from past studies. Analytical test reports and chain-of-custody documents are presented in Appendix D.

4.5.1 Results of Soil Samples

The current scope of sampling and analysis detected barium concentrations ranging from 50 mg/kg to 160 mg/kg. Considering all data collected to date, it is apparent that the highest concentrations of barium are associated with fill placed within the former Great Western 255 tank excavation, and/or activities conducted specific to this use area. Concentrations of barium detected in 6 samples obtained previously from within the former tank pit area (borings 2 and 3) varied from 820 to 67,000 mg/kg.

No TPHg, BTEX or MTBE were detected in any of the samples analyzed during this current scope of services.

4.5.2 Results of Groundwater Samples

The current scope of sampling and analysis detected dissolved halogenated volatile organic compounds including 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), 1,1,1-trichloroethane (1,1,1-TCA) cis-1,2-dichloroethene (cis-1,2-DCE) and tetrachloroethene (PCE) in Probes B-3 and B-5, and wells MW-2 and MW-3. Analysis detected 1,1-DCA, 1,1-DCE and 1,1,1-TCA at concentrations of 7.8, 3.7, and 1.0 ug/L in Probe B-3 and concentrations of 3.8, 4.1, and 8.8 ug/L in Probe B-5. Analysis also detected 2.9 ug/L of cis-1,2-DCE in B-5. Analysis detected 100 ug/L of 1,1-DCA, 120 ug/l of 1,1-DCE and 9.3 ug/L of 1,1,1-TCA in Well MW-2, and 1.4 ug/L of cis-1,2-DCE and 4.4 ug/L of PCE in Well MW-3. No HVOC's were detected in B-4 and MW-1.

5.0 SUPPLEMENTAL RISK ASSESSMENT

To assist in the evaluation of the Site data and risks that may be posed by the chemicals of concern, we have summarized the pertinent Site constraints and the exposure pathways, which in our opinion, would be considered driving forces when considering the risks posed.

- Current commercial site use.
- Interior of existing building has a concrete slab floor.
- Exterior surfaces are predominately paved.
- Shallow groundwater is not used for domestic, agricultural, municipal or industrial purposes.
- Closest surface water body is the San Francisco Bay situated about 1 mile west of site.
- The upper 10 feet of soil below the site can be classified as fine-grained, clayey silt.
- No aquatic receptors within 1 mile of site.
- Completed direct exposure pathway may exist for a future construction worker.
- Completed inhalation to indoor air pathway for commercial building occupants.
- Completed leaching pathway to groundwater.

Risk Based Screening Levels (RBSL) established by the RWQCB and City of Oakland are summarized in Table 2 for both residential and commercial land uses. The RBSL's presented are based on the site-specific characteristics listed above. Table 2 also presents the driving force behind the RBSLs selected for the site. For instance, the risk driving forces for soil are potential dermal, ingestion and inhalation exposures associated with coming into contact with surficial soil, as well as potential leachability to underlying groundwater resources. For groundwater, the driving forces are potential inhalation exposures to volatiles that have migrated into interior air spaces, and/or ceiling value indicators including response to objectionable odors.

In general, the selected RWQCB RBSL's are lower than those established for the City of Oakland ULR program, similarly the residential RBSL's are lower than those for a commercial land use scenario. A lower RBSL would be viewed as more conservative.

In conducting a comparison of the site data to selected RBSL's, we compared the highest detected concentration to the lowest applicable RBSL, and if the detected concentration was below the RBSL then the evaluation was stopped. If the highest concentration exceeded the lowest applicable RBSL then we looked at average concentrations and area exposure factors for comparison purposes.

A description of the apparent risks posed for each chemical of concern is presented in the subsequent sections. Cumulative risks were not evaluated.

5.1 BTEX AND MTBE COMPOUNDS

BTEX and MTBE compounds were not detected in any of the soil samples analyzed to date. These compounds were not detected during the sampling event conducted in November 2002. The highest concentrations of BTEX compounds were detected previously in groundwater within the former tank area located outside the structure; the highest concentration of MTBE was detected previously from a sample from well MW-2. The historic highest concentrations of these compounds measured in groundwater are summarized below.

Compound	Highest Detect (ug/L)	RBSL (ug/L)
Benzene	4.5	5,800 (residential exposure)
Toluene	49	530,000 (residential exposure)
Ethylbenzene	34	170,000 (residential exposure)
Xylenes	270	160,000 (residential exposure)
MTBE	15	490,000 (residential exposure)

As shown above, the highest concentrations detected of these compounds to date do not exceed the selected RBSL's for a residential exposure scenario. We therefore conclude that none of these compounds pose a significant risk to human health or the environment.

5.2 BARIUM

The highest barium concentrations detected in soil and groundwater to date have been from within the former tank area located outside the structure. Barium concentrations in soil within the former tank excavation area vary from 83 and 67,000 mg/kg, with a skewed average of 11,112 mg/kg. The detected concentration of 67,000 mg/kg should, in our opinion, be viewed as an anomaly, given that the next closest detected concentration was 14,000 mg/kg from within the same former tank area. Concentrations located outside of the former tank excavation area vary between 37 and 220 mg/kg, with an average of 116 mg/kg. This data suggests that a risk of exposure to high levels of barium is not widespread across the site. The concentrations detected in the area of concern (former tank area) would only represent a risk if a direct pathway for contact were completed, which is not currently the case.

The barium concentration in groundwater from within a former well (28,000 ug/L) is also viewed to skew the groundwater data. The former well was subsequently accepted for closure due to concerns about the integrity of the wells' surface seal. The average barium concentrations detected in groundwater outside of the former tank area can be observed by reviewing the historic data of samples obtained from the existing groundwater monitoring wells[1].

[1] The initial groundwater samples obtained from the site wells were not filtered prior to analysis, all subsequent samples were filtered. The difference between filtered and non-filtered samples is judged to be inappreciable.

The barium concentrations from these wells have varied from 33 to 270 ug/L. The highest concentration of barium in water (28,000 ug/L) is below the selected RBSL of 50,000 ug/L (ceiling value). The barium impacts to water are localized to the former tank area as suggested by the concentration gradient.

A direct exposure to impacted soil and groundwater would exist if construction were planned in the area of the former tank excavation. Impacted soil would need to be handled as a hazardous waste in the event that 1) new data suggests that the average barium concentration of the removed soil exceeds 10,000 mg/kg, and 2) the soil is to be transported from the site. However, given that the area of impact soil is located in an isolated area of the site and the area is encapsulated by pavement, the risk of exposure is currently mitigated.

5.3 PETROLEUM HYDROCARBONS

TPH within the gasoline range has been detected in soil and groundwater at the site. The historic concentrations detected in soil are significantly below the selected RBSL of 400 mg/kg, and as such are not considered to represent a risk.

Concentrations detected in groundwater during the November 2002 event are within the range of historic measured concentrations. The area of highest concentrations is localized to the former tank area situated outside of the structure. This area is currently capped. The highest detected concentration in groundwater (TPHg = 2,800 ug/L) is below the lowest RBSL established by the RQWCB (5,000 ug/L for an exposure to odors). Consequently, it is our opinion that detected TPHg concentrations represent a low risk to human health and the environment.

5.4 VOLATILE ORGANIC COMPOUNDS

A variety of VOCs have been detected in groundwater at the site including the following: acetone, carbon disulfide, MEK, MIBK, 1,1 DCA, 1,1-DCE, 1,1,1-TCA, cis-1,2-DCE, TCE and PCE. The apparent location of the source of these compounds is not readily apparent from a review of the data. These compounds have not been detected historically in well MW-1 situated closest to the former tank area, thought to represent the location where chemicals were previously stored. Concentrations are highest in the area of monitoring well MW-2, which is situated away further downgradient from the former tank area. No areas of surface drains, possible potential migration pathways, were observed within the existing building. These compounds were not detected in shallow soil samples obtained previously from the former tank area and well borings.

Since there is no documented or proposed beneficial use of groundwater at this site the apparent risk driving forces would be potential exposure to vapors which may migrate from the groundwater surface vertically into indoor air spaces. Of the VOC detected to date, only three possess concentrations exceeding the Tier I RBSLs established by either the RWQCB or City of Oakland(1,1 DCA, 1,1-DCE, and 1,1,1-TCA). The highest detected concentrations and the averages of these compounds are summarized below.

Compound	Highest Detect ug/L	MW-2 Average ug/L	RBSL ug/L
1,1 DCA	100	75	22,000 (res. exp)
1,1 DCE	400	250	200 (res. exp)/ 850 (com. exp)
1,1,1 TCA	260	151	50,000 (odors)

As observed above, 1,1 DCA and 1,1,1 TCA are significantly below their selected RBSL's, and as result are not viewed to represent a risk to site occupants.

The average 1,1 DCE concentration in well MW-2 is just above the RBSL for a residential land use, and below the RBSL for a commercial land use. Since the property is not zoned for residential land uses, we judge that the commercial RBSL should be used. Hence, presence of 1,1 DCE would not represent a risk to site occupants.

6.0 CONCLUSIONS AND REQUEST FOR SITE CLOSURE

In summary, the areas of impacted soil and groundwater onsite, do not appear to pose a significant risk to human health or the environment, and as a result the site should be considered for closure as a "low risk" site. The rationale for this consideration is based on the following:

- The site is zoned and used for commercial purposes.
- There is no known or proposed beneficial use of groundwater at the site.
- No water wells, sensitive receptors or surface water bodies are likely to be exposed.
- Onsite sources of chemicals of concern (former tanks) and storage areas have been removed from the site.
- Concentrations of chemicals of concern are localized and have not significantly migrated across the site.
- Concentrations of chemicals of concern are below the selected RBSLs, and therefore do not appear to pose a significant risk to human health.

Thus on behalf of Mrs. Howkins, Fugro request that the ACHCSA consider the site for closure as a low risk site and that no further action be required at this time.

TABLES

TABLE 1
GROUNDWATER ELEVATION DATA
2528 ADELINE STREET
OAKLAND, CALIFORNIA

Well Number	Date	TOC Elevation (feet)	Groundwater Depth (feet)	Groundwater Elevation (feet)
MW-1	4/3/1995	10.99	5.78	5.21
	8/14/1995		8.04	2.95
	4/29/1996		8.16	2.83
	7/25/1996		8.80	2.19
	10/31/1996		8.69	2.30
	1/9/1997		5.65	5.34
	7/31/1997		7.58	3.41
	1/13/1998		5.20	5.79
	7/14/1998		7.53	3.46
	11/21/2002		8.02	2.97
MW-2	8/14/1995	9.12	6.42	2.70
	4/29/1996		5.43	3.69
	7/25/1996		6.68	2.44
	10/31/1996		6.74	2.38
	1/9/1997		3.99	5.13
	7/31/1997		6.78	2.34
	1/13/1998		3.70	5.42
	7/14/1998		6.37	2.75
	11/21/2002		6.32	2.80
MW-3	8/14/1995	9.93	7.48	2.45
	4/29/1996		7.16	2.77
	7/25/1996		7.55	2.38
	10/31/1996		7.17	2.76
	1/9/1997		6.66	3.27
	7/31/1997		7.57	2.36
	1/13/1998		6.22	3.71
	7/14/1998		7.31	2.62
	11/21/2002		7.25	2.68

Notes:
1. TOC - Top of Casing
2. Measured below TOC
3. Reference Mean Sea Level

TABLE 2
COMPARISON of RBSLs
2528 ADELINE STREET
OAKLAND, CALIFORNIA

Chemical of Concern	SOIL		GROUNDWATER	
	RWQCB RBSL (mg/kg)	ULR RBSL (mg/kg)	RWQCB RBSL (ug/L)	ULR RBSL (ug/L)
Barium	1,100/2,400 (CW) not a volatile, not an inhalation risk	5,000/71,000 surficial soil	50,000 (CV)	not a volatile not an inhalation risk
TPHg	400 (L)	NA	5,000 (CV)	NA
Benzene	0.18/0.39(CW)	19/49 surficial soil 3.3/52 (I)	5,800/24,000 (I)	6,600/100,000 (I)
Toluene	8.4 (L)	7,100/34,000 surficial soil 1,600/SAT (I)	SOL (I)	SOL (I)
Ethylbenzene	24(L)	3900/18000 surficial soil SAT Inhalation	300(CV)/SOL (I)	SOL (I)
Total Xylenes	1.0 (L)	53000/260000 surficial soil SAT Inhalation	5,300(CV)/SOL (I)	SOL (I)
1,1-DCA	2.1 (L) 3.2/13 (I)	330/870 surficial soil 43/680 Inhalation	22,000/94,000 (I)	120,000/1,900,000 (I)
1,1-DCE	4.3 (L) 0.028/0.12 (I)	3.3/8.5 surficial soil 0.4/6.3 Inhalation	200/850 (I)	2,500/39,000 (I)
1,1,1-TCA	8.0 (L) 330/1,100 (I)	3.3/8.5 surficial soil 0.4/6.3 Inhalation	50,000 (CV)	SOL (I)

Notes
1,100/2,400=Residential Exposure Risk/Commercial Exposure Risk

RBSL = Risk Based Screening Criteria
RWQCB=Regional Water Quality Control Board-Region 2 Interim Final Guidance , December 2001, Tables B, D, E-1a, E-1b, F and K.
ULR=Oakland Urban Land Redevelopment Program Guidance, January 2000
Assumes Clayey Silt Soil Type and Shallow Groundwater. Analysis driven by surfacial soil impacts and risk of inhalation of impacted vapors in indoor air spaces.
mg/kg = milligrams per kilogram=parts per million
ug/L=micrograms per liter=parts per billion
TPHg = Total volatile hydrocarbons reported within gasoline range
<1.0 = None detected at or above the stated detection limit
Sol=RBSL exceedssolubility of chemical in water
Sat=RBSL exceeds saturated soil concentration of chemical
NA=RBSL not established

TABLE 3
CHEMICALS OF CONCERN In SOIL
2528 ADELINE STREET
OAKLAND, CALIFORNIA

Sample ID	Barium (mg/kg)	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl benzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)
March -August 1995 Data							
1 @ 2.0'	**83**	<1.0	<0.005	<0.005	<0.005	<0.005	--
1 @ 3.5'	**91**	--	--	--	--	--	--
1 @ 10.5'	--	**14**	--	--	--	--	--
2 @ 4.0'	**67,000**	<1.0	<0.005	<0.005	<0.005	<0.005	--
2 @ 5.5'	**1,900**	--	--	--	--	--	--
2 @ 10.5'	**820**	--	--	--	--	--	--
2 @ 11.0'	--	**24**					
3 @ 2.0'	**14,000**	<1.0	<0.005	<0.005	<0.005	<0.005	--
3 @ 4.0'	**2,100**	--	--	--	--	--	--
3 @ 8.0'	**2,900**	--	--	--	--	--	--
MW-1 @ 3.0'	**220**	<1.0	<0.005	<0.005	<0.005	<0.005	--
MW-1 @ 7.0'	--	<1.0	--	--	--	--	--
MW-1 @ 8.0'	**160**	--	--	--	--	--	--
MW-2 @ 1.0'	**37**	--	--	--	--	--	--
MW-3 @ 2.5'	**100**	--	--	--	--	--	--
November 2002 Data							
B-1 @ 1.5'	**100**	--	--	--	--	--	--
B-1 @ 4.0'	**83**	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
B-1 @ 8.0'	**120**	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
B-2 @ 1.0'	**100**	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
B-2 @ 5.0'	**66**	--	--	--	--	--	--
B-2 @ 8.0'	**130**	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
B-3 @ 1.0'	**160**	--	--	--	--	--	--
B-3 @ 4.0'	**50**	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
B-3 @ 8.0'	**83**	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
B-5 @ 1.5'	**110**	--	--	--	--	--	--

Ba = Barium
TPHg = Total volatile hydrocarbons within the gasoline range
MIBK = Methyl isobutyl ketone
MTBE = Methyl tertiary buthyl ether
-- = Test not requested
mg/kg = milligrams per kilogram
<1.0 = None detected at or above the stated detection limit

TABLE 4
CHEMICALS OF CONCERN In GROUNDWATER
2528 ADELINE STREET
OAKLAND, CALIFORNIA

			TVH[1]		TEH[2]																
Sample ID	Date	Barium (ug/L)	Gasoline Range (µg/L)	Stoddard Solvent (µg/L)	Diesel Range (µg/L)	Kerosene Range (µg/L)	O&G (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Acetone (µg/L)	Carbon disulfide (µg/L)	1,1-DCA (µg/L)	1,1-DCE (µg/L)	MEK (µg/L)	MIBK (µg/L)	1,1,1-TCA (µg/L)	cis-1,2-DCE (µg/L)	TCE (µg/L)	PCE (µg/L)
Former Well (abandoned)	3/31/1995	28000	2800	**	1600	**	37	4.5	49	34	270	--	24	4.1	<5.0	<5.0	7.7	57	<5.0	<5.0		
MW-1	4/3/1995	160	730	**	**	310	5.8	--	--	--	--	--	<20	<5.0	<5.0	4.2	<10	<10	<5.0	<5.0	<5.0	<5.0
	4/29/1996	130	2000	2000	240	220	<5	<0.5	<0.5	65	16	--	<20	<5.0	<5.0	6.2	<10	<10	<5.0	<5.0	<5.0	<5.0
	7/25/1996	110	730	750	190	180	<5	<0.5	<0.5	26	<0.5	--	<20	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	<5.0	<5.0
	10/31/1996	130	<50	<50	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--	<20	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	<5.0	<5.0
	1/9/1997	270	1800	**	470	550	--	<0.5	<0.5	57	26	--	<20	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	<5.0	<5.0
	7/31/1997	220	700	610	290	360	--	<0.5	<0.5	2.7	<0.5	--	<20	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	<5.0	<5.0
	1/13/1998	--	1400	2800	320	330	--	1.2C	4.3C	16	0.95	13C	--	--	--	--	--	--	--	--	--	--
	7/14/1998	--	630	340	250	160	--	<0.5	<0.5	1.8	<0.5	3.1	--	--	--	--	--	--	--	--	--	--
	11/21/2002	--	630	**	--	--	--	<0.5	<0.5	<0.5	<0.5	<5	--	--	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5
MW-2	8/15/1995	180	83	**	<50	<50	<5	<13	<13	<13	<13	--	<50	<13	62	260	<25	<25	170	<13	<13	<13
	4/29/1996	120	75	74	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--	<20	<5.0	91	400	<10	<10	260	<5.0	<5.0	<5.0
	7/25/1996	130	110	92	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--	<40	<10	70	270	<20	<20	230	<10	<10	<10
	10/31/1996	130	<50	<50	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--	<33	<8.3	67	210	<17	<17	160	<8.3	<8.3	<8.3
	1/9/1997	150	<50	<50	<50	<50	--	<0.5	<0.5	<0.5	<0.5	--	<50	<13	79	340	<25	<25	230	<13	<13	<13
	7/31/1997	150	<50	<50	<50	<50	--	<0.5	<0.5	<0.5	<0.5	--	<33	<8.3	66	210	<17	<17	120	<8.3	<8.3	<8.3
	1/13/1998	--	<50	<50	<50	<50	--	0.55	<0.5	<0.5	<0.5	15	<40	<10	70	270	<20	<20	110	<10	<10	<10
	7/14/1998	--	<50	<50	58	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<33	<8.3	62	170	<17	<17	68	<8.3	<8.3	<8.3
	11/21/2002	--	56	**	--	--	--	<0.5	<0.5	<0.5	<0.5	<5	--	--	100	120	--	--	9.3	<2.5	<2.5	<2.5
MW-3	8/15/1995	62	<50	<50	<50	<50	<5	<5.0	<5.0	<5.0	<5.0	--	<20	<5.0	3.3	4.1	<10	<10	8.8	2.9	<5.0	<5.0
	4/29/1996	82	<50	<50	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--	<20	<5.0	<5.0	14	<10	<10	12	<5.0	<5.0	<5.0
	7/25/1996	33	<50	<50	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--	<20	<5.0	<5.0	7.2	<10	<10	8	<5.0	<5.0	<5.0
	10/31/1996	100	<50	<50	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--	<20	<5.0	<5.0	<5.0	<10	<10	5.1	<5.0	<5.0	<5.0
	1/9/1997	130	<50	<50	<50	<50	--	<0.5	<0.5	<0.5	<0.5	--	<20	<5.0	<5.0	<5.0	<10	<10	5.6	<5.0	<5.0	<5.0
	7/31/1997	65	<50	<50	<50	<50	--	<0.5	<0.5	<0.5	<0.5	--	<20	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	<5.0	<5.0
	11/21/2002	--	<50	**	--	--	--	<0.5	<0.5	<0.5	<0.5	<5	--	--	<0.5	<0.5	--	--	<0.5	1.4	1.4	4.4
Probe B-3	11/21/2002	--	--	--	--	--	--	--	--	--	--	--	--	--	7.8	3.7	--	--	1.0	<0.5	<0.5	<0.5
Probe B-4	11/21/2002	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5
Probe B-5	11/21/2002	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5

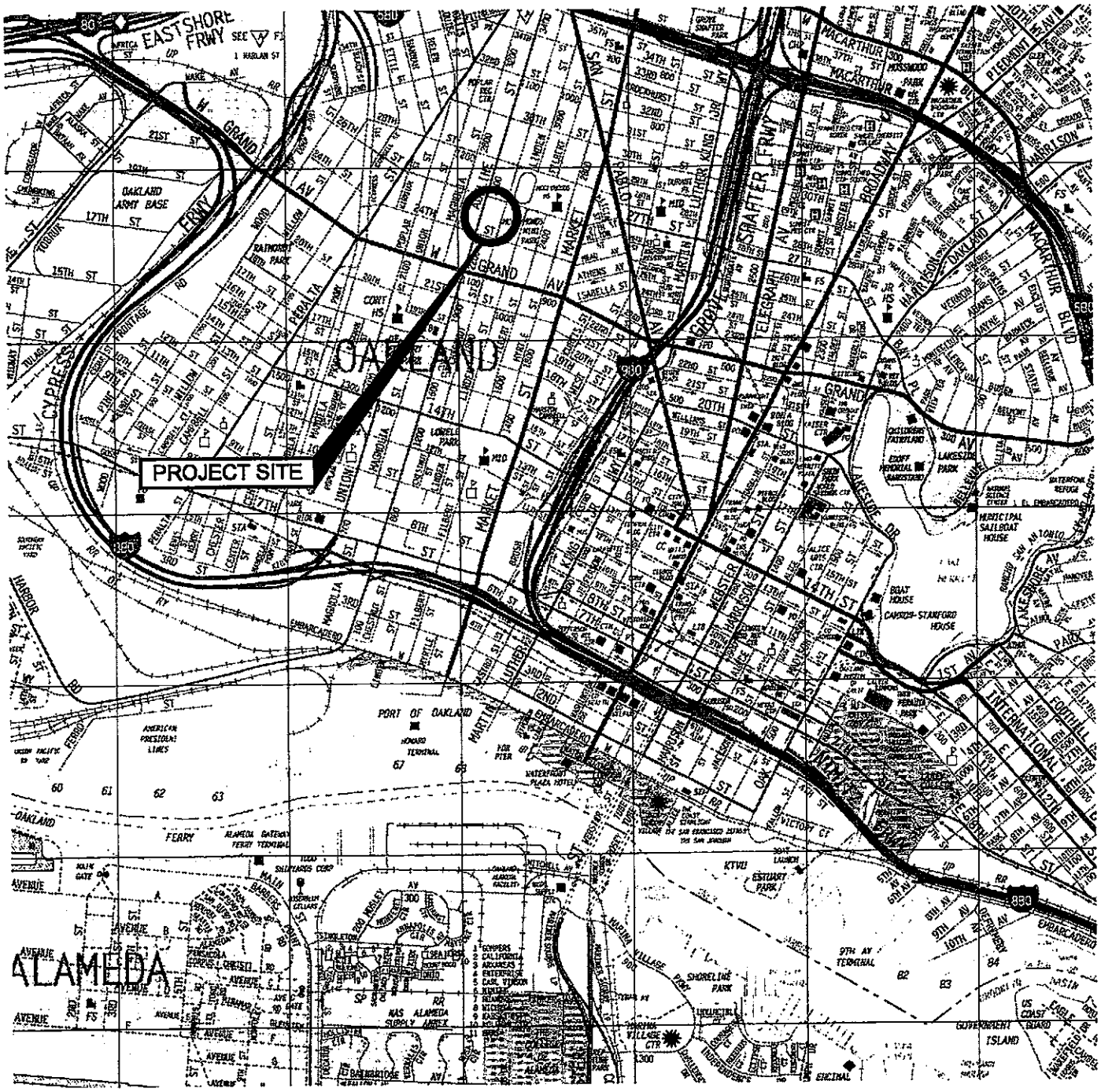
[1]Gasoline and stoddard solvent hydrocarbon ranges overlap
[2]Diesel and kerosene hydrocarbon ranges overlap
** = Range not reported due to overlap of hydrocarbons
µg/L = micrograms per liter or parts per billion
mg/L = milligrams per liter or parts pr million

TVH = Total volatile hydrocarbons
TEH = Total extractable hydrocarbons
MTBE = Methyl tertiary butyl ether
O&G = Oil and grease
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.

<50 = None detected above the laboratory reporting limit stated.
-- = Test not requested

PLATES

March 2003
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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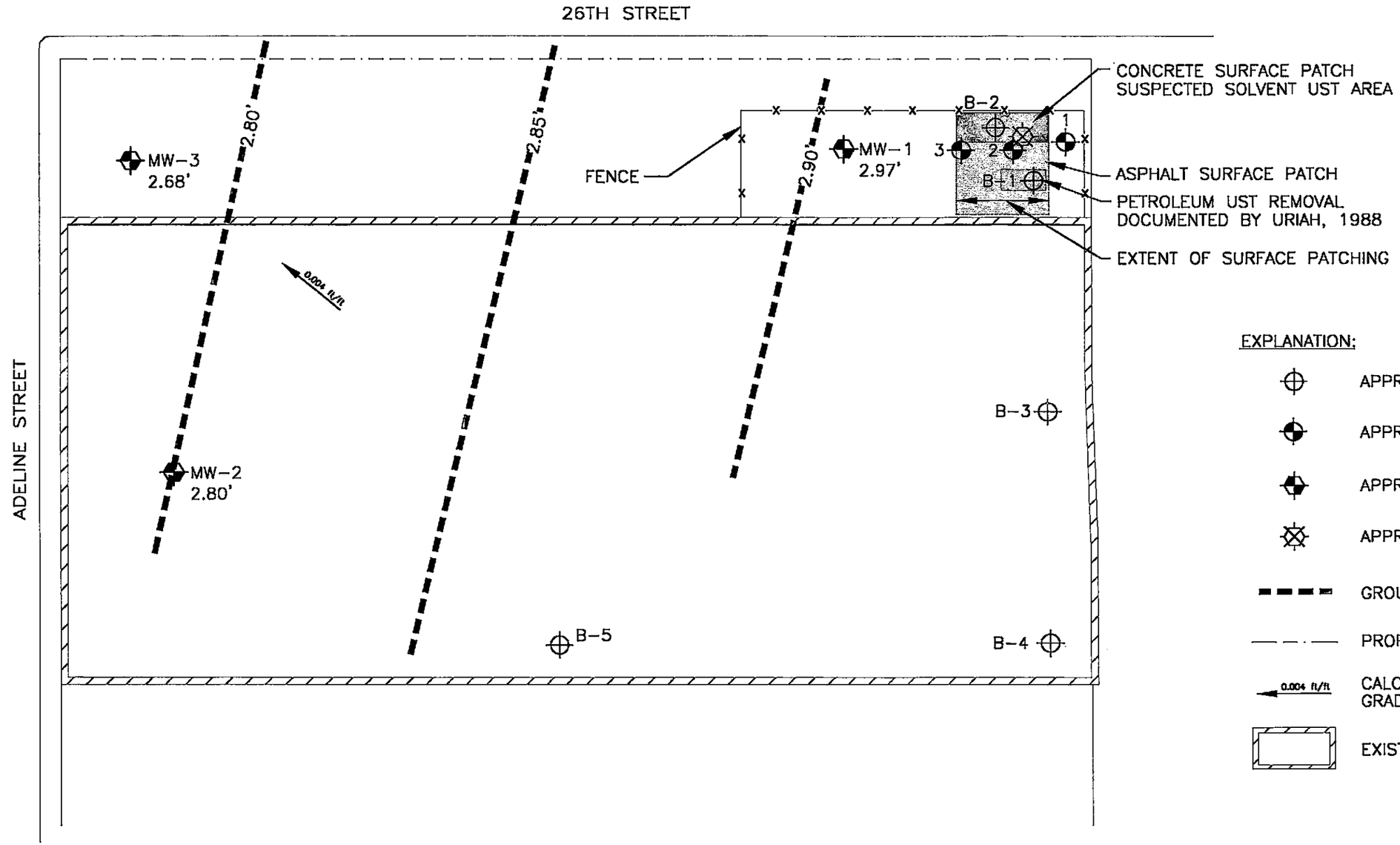
March 2003
Project No. 946.004



EXPLANATION:

- APPROXIMATE LOCATION OF 2002 PROBE
- APPROXIMATE LOCATION OF PREVIOUS BORING
- APPROXIMATE LOCATION OF EXISTING MONITORING
- APPROXIMATE LOCATION OF FORMER WELL
- GROUNDWATER ELEVATION CONTOUR
- PROPERTY BOUNDARY
- 0.004 ft/ft — CALCULATED GROUNDWATER GRADIENT & DIRECTION ON 11/21/02
- 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

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APPENDIX A
WORK PLAN

RO0000463

October 11, 2002

Ms. Shirley Howkins
1745 Shue, #112
Walnut Creek, CA 94596

Mr. Richard Sciortino
2528 Adeline Street
Oakland, CA 94607

RE: Work Plan Approval for 2526 Adeline Street, Oakland, CA

Dear Ms. Howkins and Mr. Sciortino:

I have completed review of Fugro West, Inc.'s October 2002 work plan titled *Supplemental Subsurface Investigation and Supplemental Risk Evaluation* that was prepared for the above referenced site. Five soil borings are proposed at the site. Two will be advanced within the former tank pit and three will be advanced along the east and south perimeter of the property. Soil samples will be collected from the borings advanced in the former tank pits to verify barium, toluene, and benzene concentrations. Groundwater samples will be collected from the other three borings for HVOC analysis to determine if there is an off-site source for the solvents. Select soil samples will also be tested for grain size and moisture content. Data from this investigation will be used to amend a risk assessment.

The proposed work plan is acceptable. Field work should commence within 60 days of the date of this letter, or **by December 16, 2002.** Please provide at least 72 hours notice prior to the start of field activities. If you have any questions, I can be reached at (510) 567-6762.

eva chu
Hazardous Materials Specialist

email: Jeriann Alexander (Frugo)

aerove-3

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

RO0000463

June 28, 2002

Ms. Shirley Howkins
1745 Shue, #112
Walnut Creek, CA 94596

Mr. Richard Sciortino
2528 Adeline Street
Oakland, CA 94607

RE: Risk Assessment Addendum for 2526 Adeline Street, Oakland, CA

Dear Ms. Howkins and Mr. Sciortino:

I have completed review of the case file to determine if closure is warranted at this time. Environmental investigations were conducted at the site to evaluate the release of petroleum hydrocarbon products from two former underground storage tanks. Soil samples collected from the vicinity of the former solvent tank identified up to 11 mg/kg benzene and 11 mg/kg toluene. Groundwater monitoring wells were installed to evaluate groundwater conditions. Groundwater contained petroleum hydrocarbons in the gasoline and kerosene range as well as some chlorinated solvents. A preliminary human health risk assessment was prepared for the site. Groundwater contaminant concentrations were compared with the ASTM's Standard Guide for RBCA at Petroleum Release Sites, Tier 1 Look Up Table. Representative site concentrations were below the Risk Based Screening Levels for a commercial scenario.

Not evaluated in the risk assessment was the potential impact due to residual benzene and toluene in soil. Before I will continue to evaluate the case for closure, an addendum to the risk assessment is required that will evaluate human health risk due to residual benzene and toluene. An amended risk evaluation is due within 60 days of the date of this letter, **or by September 3, 2002.**

If you have any questions, I can be reached at (510) 567-6762.

eva chu
Hazardous Materials Specialist

aerove-2

FUGRO WEST, INC.

1000 Broadway, Suite 200
Oakland, California 94607
Tel: (510) 268-0461
Fax: (510) 268-0137

October 8, 2002
Job Number: 946.004

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

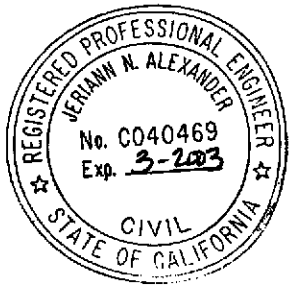
FUGRO requests that you review this work plan and send a letter that indicates your approval of the scope of work described herein. If you have any questions or comments, please call.

Very Truly Yours,

FUGRO WEST INC.

Obiajulu Nzewi
Staff Geologist

Jeriann Alexander
Associate Engineer

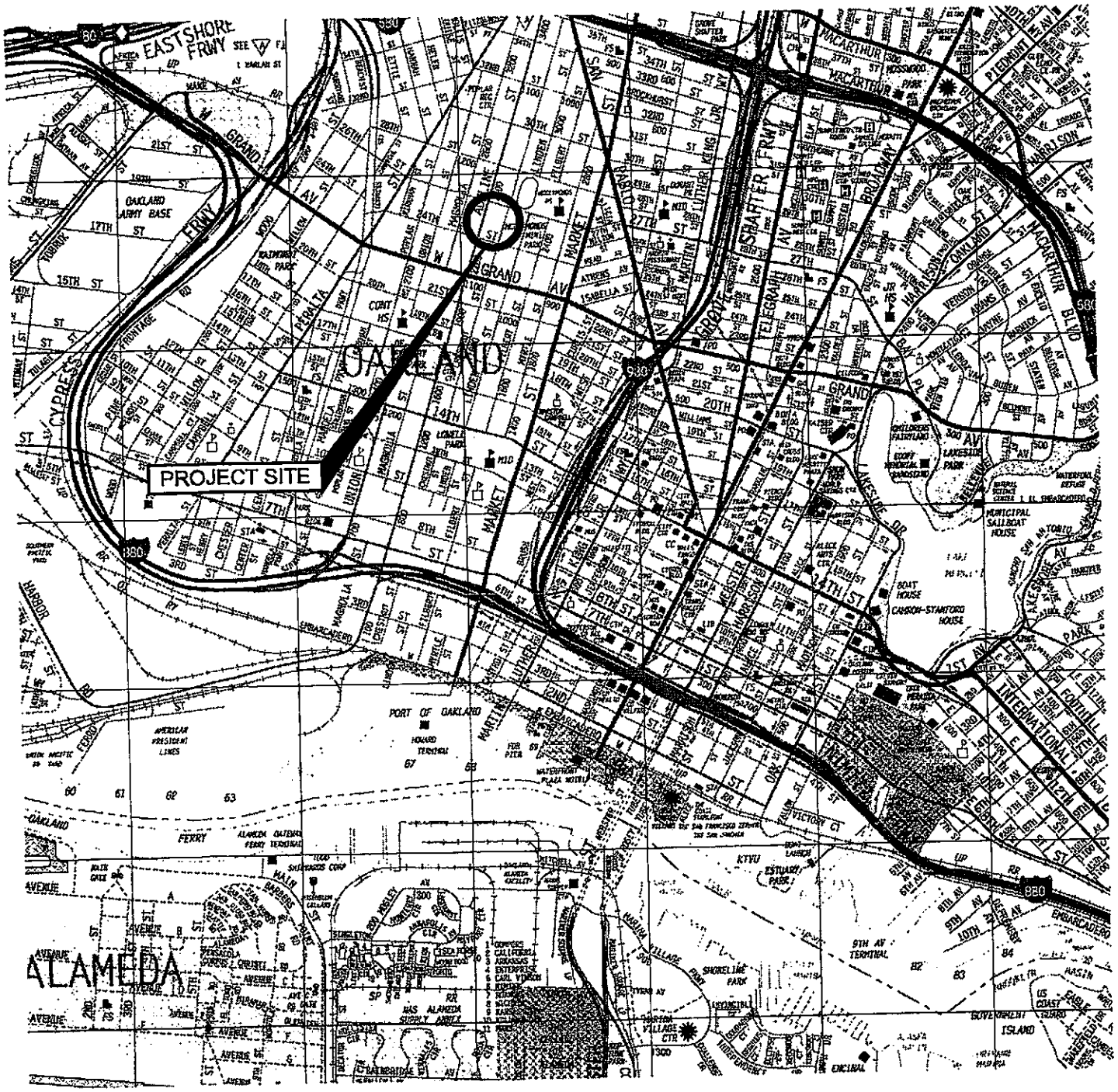


ON:JA/kel

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



NOTE:

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

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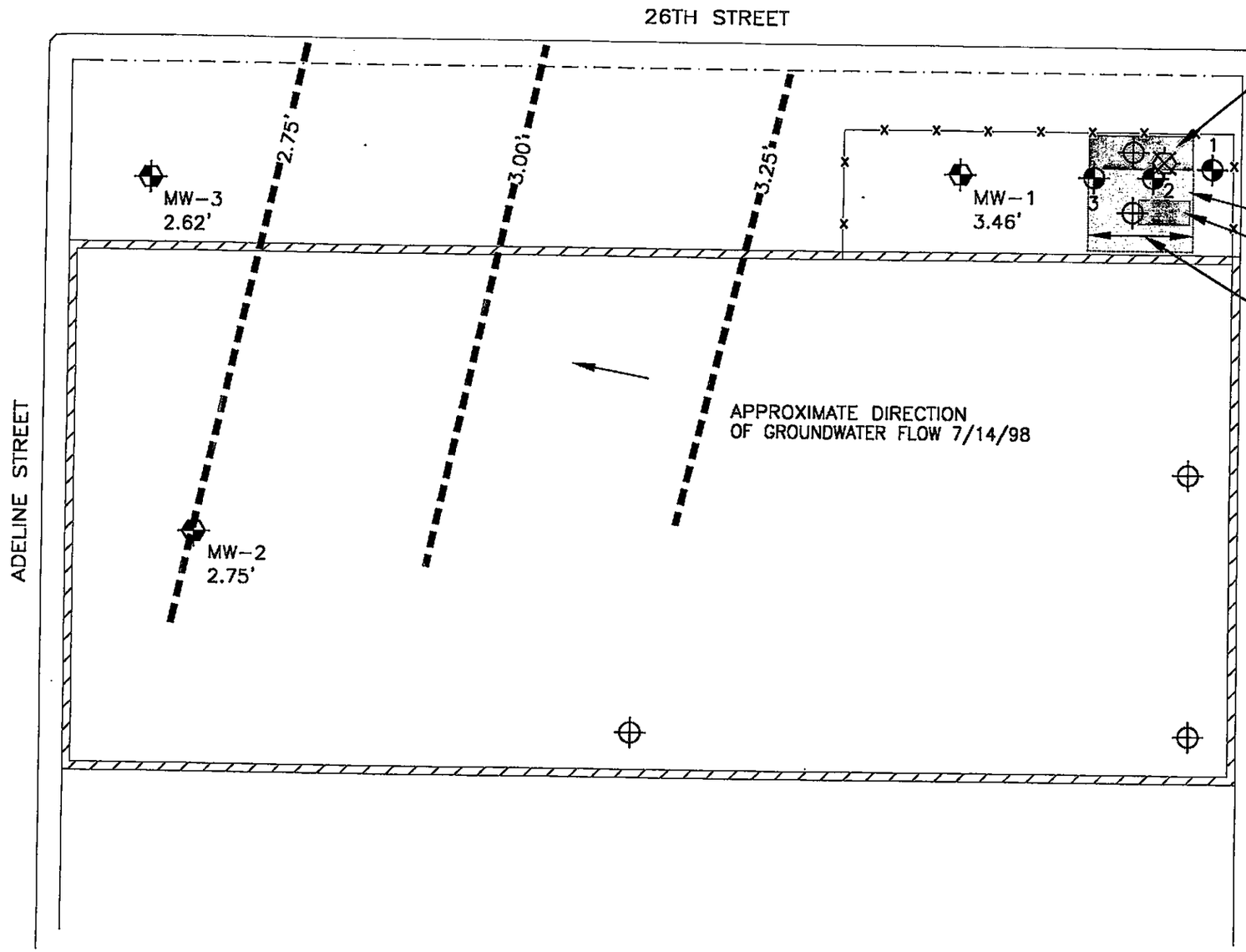
VICINITY MAP
2528 Adeline Street
Oakland, California

PLATE 1



CONCRETE SURFACE PATCH
SUSPECTED SOLVENT UST AREA

ASPHALT SURFACE PATCH

PETROLEUM UST REMOVAL
DOCUMENTED BY URIAH, 1988

EXTENT OF SURFACE PATCHING

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

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.

Uncontaminated Dust		Total Dust Meter 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 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			Level of Protection
	Activities/Locations	Action Level	
☐	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
John McAssey		11/21/02
BRYAN TOLEDO		11/21/02

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

Where:

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

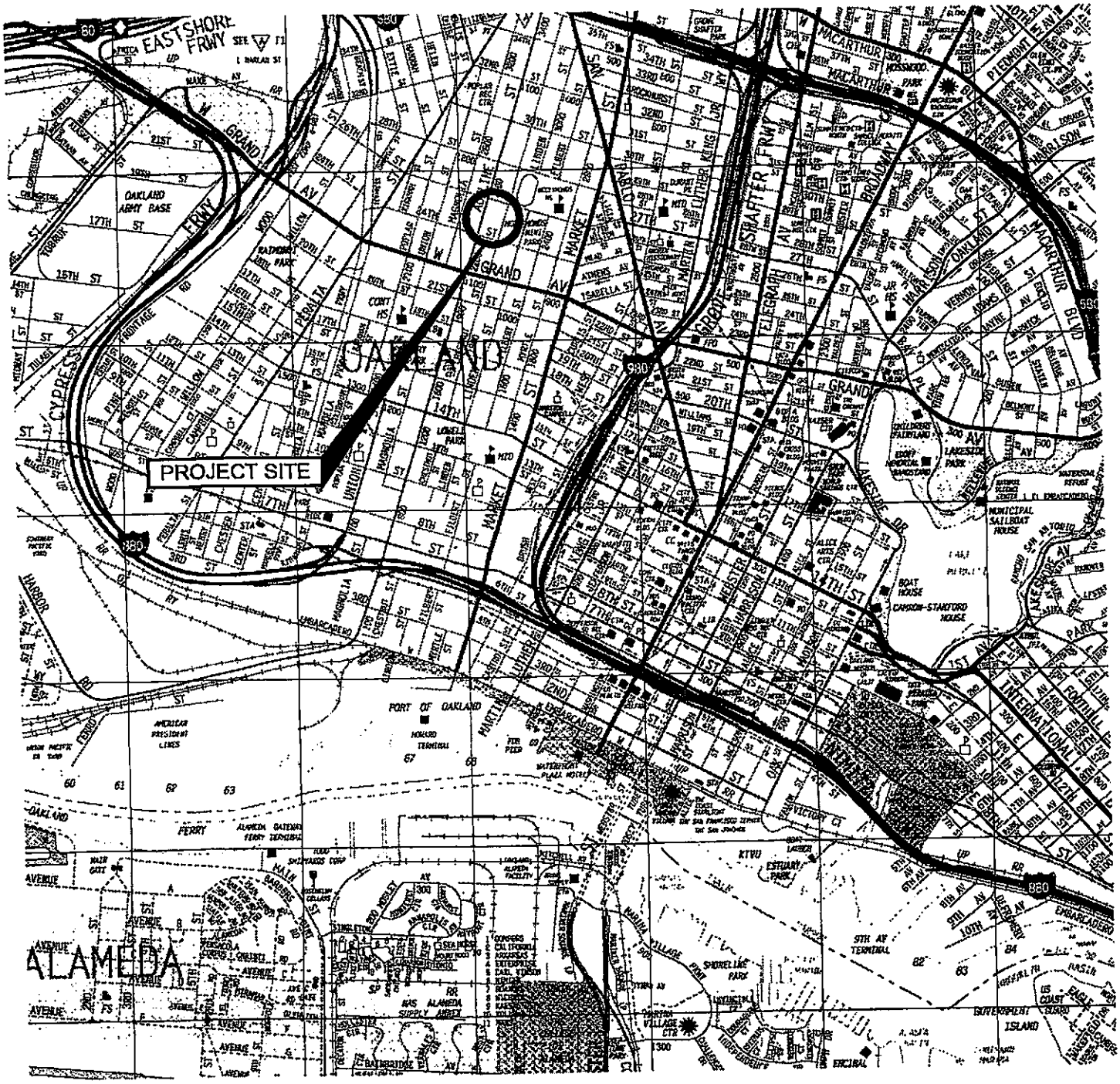
PEL = PEL-TWA or TLV-TWA of compound ("A") in mg/m^3

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



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

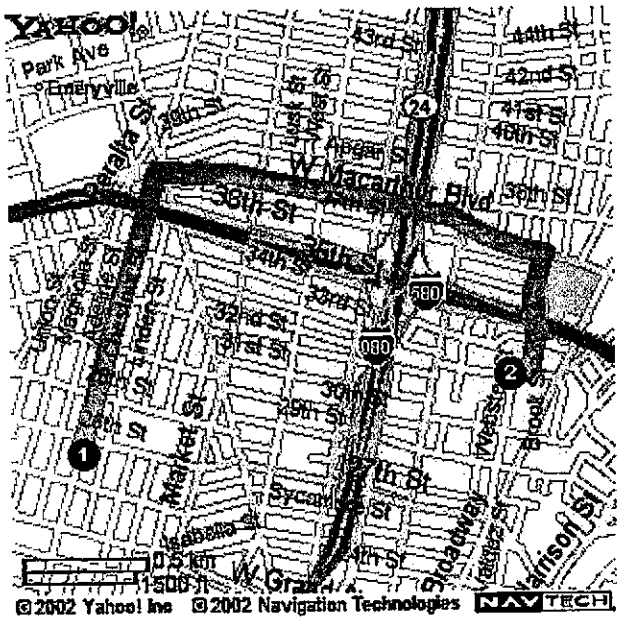
VICINITY MAP

2528 Adeline Street

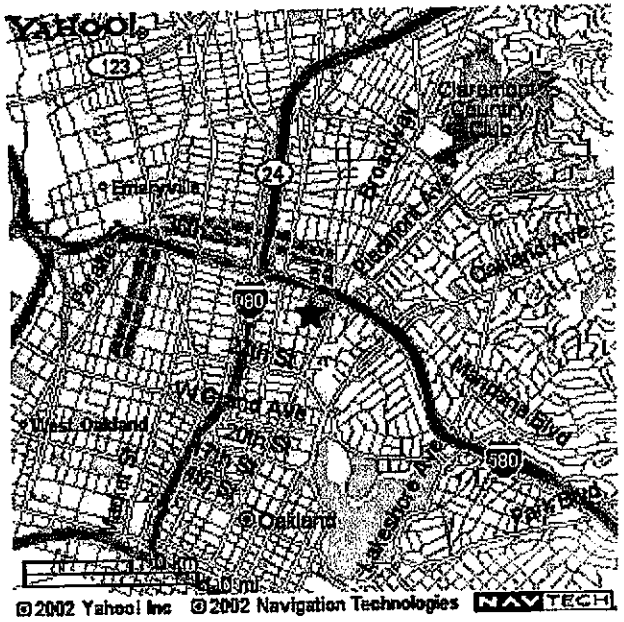
Oakland, California

PLATE 1

G:\jobdocs\946\946.004\drawings\A946.004.01.dwg 9-30-02 02:46:18 PM cyoung



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.

APPENDIX B
LOGS OF PROBES

LOG OF BORING

Project Name & Location: 2528 Adeline Street Oakland, California	Ground Surface Elevation: Elevation Datum:
Drilling Coordinates: See Plate 1	Start: Date 11/21/02 Time 13:25 / Finish: Date 11/21/02 Time 14:10
Drilling Company & Driller: Vironex J.M.	Drilling Fluid: N.A. / Hole Diameter: 2"
Rig Type & Drilling Method: Limited Access Rig, Direct Push	
Sampler Type(s): A) Clear Butyrate Tubes	Logged By: O Nzewi
Sampling Method(s): A) Direct Push	Backfill Method: Neat Cement / Date: 11/21/02

Depth (feet)	Sampler Type	Blows/6 inches or pressure	Blows/12 inches	OVM (ppm)	Sample Interval	Graphic Log	SOIL DESCRIPTIONS GROUP NAME (GROUP SYMBOL) color, consistency/density, moisture condition, other descriptions (Local Name or Material Type)
0							**CONCRETE**
	A			N.O.			**Sandy SILT (ML) with pebbles** Dark brown to black, moist to wet, No Odor (N.O.)
	A			N.O.			**Clayey SILT (ML) with some small pebbles and roots** Light green gray to brown, moist, fairly stiff
	A			N.O.			
5				N.O.			
	A						**Clayey SILT (ML) with hydrocarbon odor** Light brown to green, stiff
	A						
10							
	A						
	A						
	A						
15							Bottom of boring at 15 feet below ground surface.
20							

FUGRO LOG OF BORING 946-004.GPJ SCI_CORP.GDT 3/28/03

FUGRO WEST, INC.
1000 Broadway, Suite 200, Oakland, California 94607
Tel: (510) 268-0481, Fax: (510) 268-0137

2528 Adeline Street
Oakland, California

JOB NUMBER 946.004

DATE 3/03

BORING **B-1**

LOG OF BORING

Project Name & Location: 2528 Adeline Street Oakland, California	Ground Surface Elevation:
	Elevation Datum:
Drilling Coordinates: See Plate 1	Start: Date 11/21/02 Time 12:25 / Finish: Date 11/21/02 Time 13:15
Drilling Company & Driller: Vironex J.M.	Drilling Fluid: N.A. / Hole Diameter: 2"
Rig Type & Drilling Method: Limited Access Rig, Direct Push	
Sampler Type(s): A) Clear Butyrate Tubes	Logged By: O Nzewi
Sampling Method(s): A) Direct Push	Backfill Method: Neat Cement / Date: 11/21/02

Depth (feet)	Sampler Type	Blows/6 inches or pressure	Blows/12 inches	OVM (ppm)	Sample Interval	Graphic Log	SOIL DESCRIPTIONS GROUP NAME (GROUP SYMBOL) color, consistency/density, moisture condition, other descriptions (Local Name or Material Type)
0							**CONCRETE**
	A			0			**Clayey SILT (ML)** Dark brown to black, wet
	A			0			
	A			0			**Clayey SILT (ML) with some pebbles** Brown to dark brown, moist, fairly stiff
5	A			0			
	A			0			
	A			0			**CLAY (CL)** Light green gray to brown with green staining and hydrocarbon odor
10	A			17			- Strong hydrocarbon odor
	A			15			
	A			N.O.			- No Odor (N.O.)
				N.O.			
15							Bottom of boring at 15 feet below ground surface.
20							

FUGRO LOG OF BORING 946-004.GPJ SCI_CORP.GDT 3/26/03

FUGRO WEST, INC.
1000 Broadway, Suite 200, Oakland, California 94607
Tel: (610) 268-0461, Fax: (610) 268-0137

2528 Adeline Street
Oakland, California

JOB NUMBER 946.004

DATE 3/03

BORING **B-2**

LOG OF BORING

Project Name & Location: 2528 Adeline Street Oakland, California	Ground Surface Elevation: Elevation Datum:
Drilling Coordinates: See Plate 1	Start: Date 11/21/02 Time 09:05 / Finish: Date 11/21/02 Time 09:56
Drilling Company & Driller: Vironex J.M.	Drilling Fluid: N.A. / Hole Diameter: 2"
Rig Type & Drilling Method: Limited Access Rig, Direct Push	
Sampler Type(s): A) Clear Butyrate Tubes	Logged By: O Nzewi
Sampling Method(s): A) Direct Push	Backfill Method: Neat Cement / Date: 11/21/02

Depth (feet)	Sampler Type	Blows/6 inches or pressure	Blows/12 inches	OVM (ppm)	Sample Interval	Graphic Log	SOIL DESCRIPTIONS GROUP NAME (GROUP SYMBOL) color, consistency/density, moisture condition, other descriptions (Local Name or Material Type)
0							**CONCRETE** Red brown brick debris
	A			0			**Sandy SILT (ML)** Dark brown to black brown
				0			**Clayey SILT (ML)** Dark gray to black green, moist, with faint to medium odor (solvent?)
	A			0			
5	A			0			- increased green staining
				0			**Clayey SILT (ML)** Light brown to light green brown, stiff clayey sand, slight odor (solvent?)
				0			
	A			0			
				0			**Sandy SILT (ML)** Light green to grayish brown
10	A			0			
				0			
	A			0			
				0			- increasing sands
15							**Medium-fine grain SAND (SP)** Brown, moist
							Bottom of boring at 16 feet below ground surface.
20							

FUGRO WEST, INC.
1000 Broadway, Suite 200, Oakland, California 94607
Tel: (510) 268-0461, Fax: (510) 268-0137

2528 Adeline Street
Oakland, California

JOB NUMBER	DATE	BORING
946.004	3/03	B-3

LOG OF BORING

Project Name & Location: 2528 Adeline Street Oakland, California	Ground Surface Elevation: Elevation Datum:
Drilling Coordinates: See Plate 1	Start: Date 11/21/02 Time 10:00 / Finish: Date 11/21/02 Time 11:05
Drilling Company & Driller: Vironex J.M.	Drilling Fluid: N.A. / Hole Diameter: 2"
Rig Type & Drilling Method: Limited Access Rig, Direct Push	
Sampler Type(s): A) Clear Butyrate Tubes	Logged By: O Nzewi
Sampling Method(s): A) Direct Push	Backfill Method: Neat Cement / Date: 11/21/02

Depth (feet)	Sampler Type	Blows/6 inches or pressure	Blows/12 inches	Sample Interval	Graphic Log	SOIL DESCRIPTIONS GROUP NAME (GROUP SYMBOL) color, consistency/density, moisture condition, other descriptions (Local Name or Material Type)
0						**CONCRETE**
	A					**Sandy SILT (ML)** Dark brown to black, moist
						Sandy CLAY (CL) with some pebbles Brown to mottled light green and black
	A					
5						**Sandy CLAY (CL)** Dark brown to black, moist
						Sandy CLAY (CL) Light brown to green gray, moist
						Silty SAND (SM) Light brown to brown, ? to fine grain, increasing sand and pebbles with depth
	A					
10	A					- increasing sands
						▽
	A					
15						Bottom of boring at 15 feet below ground surface.
20						

FUGRO LOG OF BORING 946-004.GPJ SCI_CORP.GDT 3/26/03

FUGRO WEST, INC.
1000 Broadway, Suite 200, Oakland, California 94607
Tel: (510) 268-0481, Fax: (510) 268-0137

2528 Adeline Street
Oakland, California

JOB NUMBER	DATE	BORING
946.004	3/03	B-4

LOG OF BORING

Project Name & Location: 2528 Adeline Street Oakland, California	Ground Surface Elevation: Elevation Datum:
Drilling Coordinates: See Plate 1	Start: Date 11/21/02 Time 11:10 / Finish: Date 11/21/02 Time 12:20
Drilling Company & Driller: Vironex J.M.	Drilling Fluid: N.A. / Hole Diameter: 2"
Rig Type & Drilling Method: Limited Access Rig, Direct Push	
Sampler Type(s): A) Clear Butyrate Tubes	Logged By: O Nzewi
Sampling Method(s): A) Direct Push	Backfill Method: Neat Cement / Date: 11/21/02

Depth (feet)	Sampler Type	Blows/6 inches or pressure	Blows/12 inches	OVM (ppm)	Sample Interval	Graphic Log	SOIL DESCRIPTIONS GROUP NAME (GROUP SYMBOL) color, consistency/density, moisture condition, other descriptions (Local Name or Material Type)
0							**CONCRETE**
	A			0			**Sandy SILT (ML)** Dark brown to black, moist
				0			
				0			**Clayey SILT (ML)** Brown to light greenish gray, moist
				0			
5	A			0			**Clayey SILT (ML)** Light greenish gray, moist, increasingly stiff, with some pebbles
				0			
				0			
				0			
10				0			**Clayey SILT (ML)** Light greenish gray to brown, stiff
	A						
	A			0			**Clayey SILT (ML)** Light brown to greenish gray, stiff, increased sands
				0			
15				0			- Moist and soft, with dark brown black streaks
	A						
20							Bottom of boring at 18 feet below ground surface.

FUGRO WEST, INC.
1000 Broadway, Suite 200, Oakland, California 94607
Tel: (510) 268-0461, Fax: (510) 268-0137

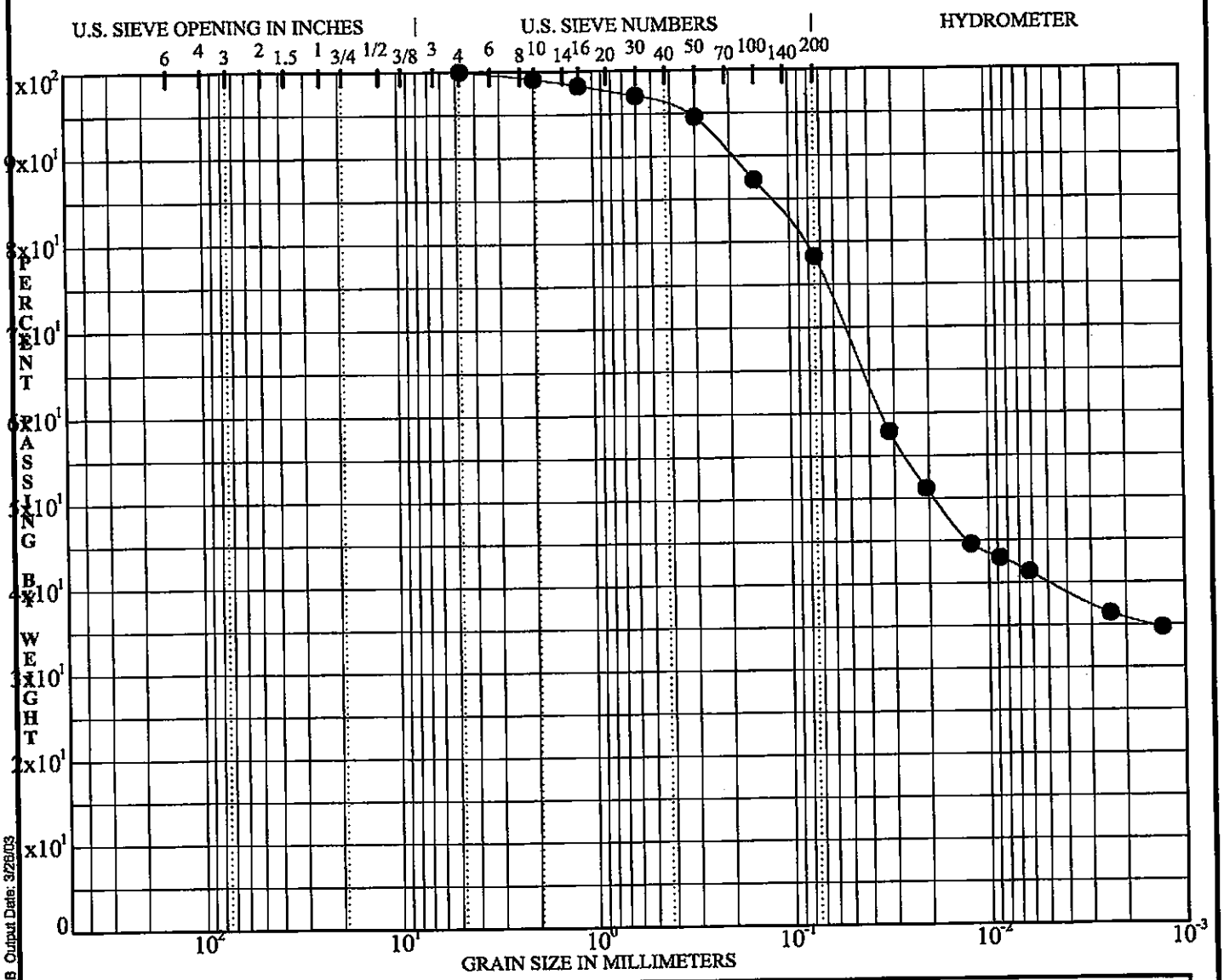
2528 Adeline Street
Oakland, California

JOB NUMBER 946.004

DATE 3/03

BORING **B-5**

APPENDIX C
GRADATION TEST DATA



Cobbles	Gravel		Sand			Silt and Clay
	Coarse	Fine	Coarse	Medium	Fine	

Key Symbol	Boring No.	Depth (Feet)	% Passing No. 200 Sieve	% Passing No. 4 Sieve	Sample Descsription	USCS
●	B-1	3.0	78	100	Brown SILT with clay, some sand	ML

FUGRO

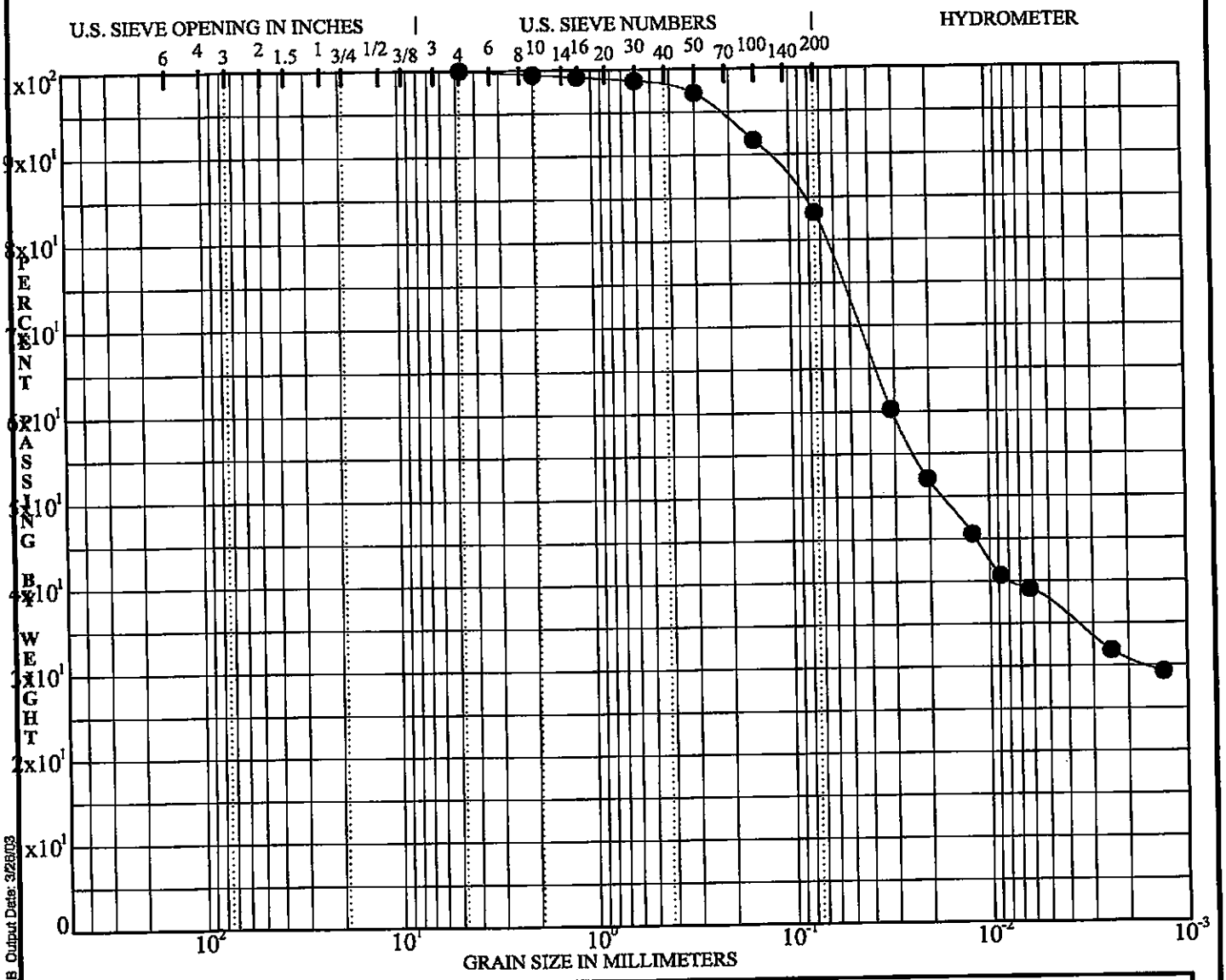
PREP'D BY:
APP'D BY:
DATE: 3/26/03
DWG FILE: 946004.GPJ

GRADATION TEST DATA

2528 ADELINE STREET
Oakland, California

FIGURE
C-1
PROJECT No.
946.004

File Name: G:\ENGINEER\GINT\PROJECTS\LAB_PROJECTS\946004.GPJ Report Templets: GRADATION_B Output Date: 3/26/03



Cobbles	Gravel		Sand			Silt and Clay
	Coarse	Fine	Coarse	Medium	Fine	

Key Symbol	Boring No.	Depth (Feet)	% Passing No. 200 Sieve	% Passing No. 4 Sieve	Sample Descsription	USCS
●	B-1	7.0	83	100	Olive gray SILT with clay, trace sand	ML

FUGRO

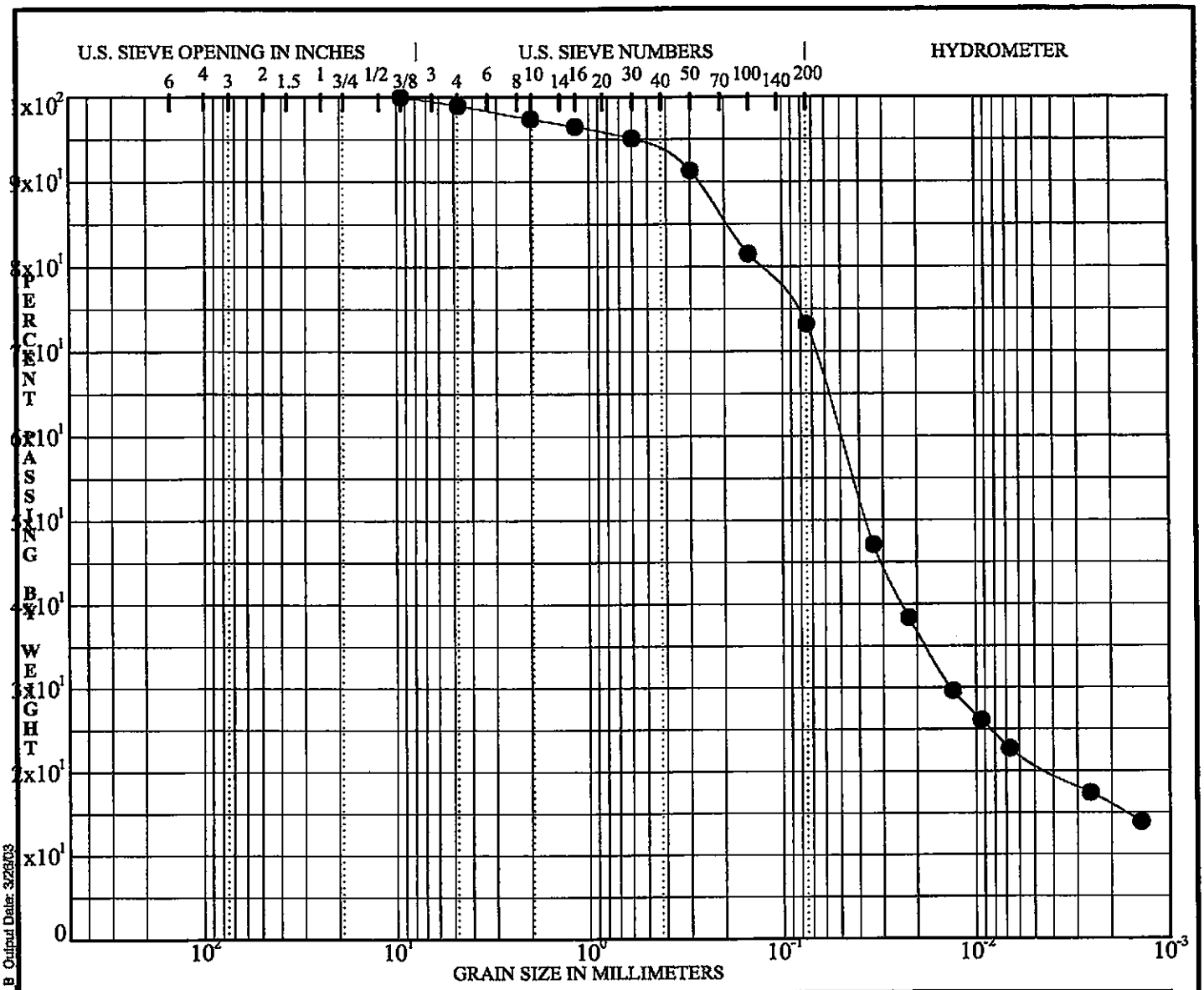
PREP'D BY:
APP'D BY:
DATE: 3/26/03
DWG FILE: 946004.GPJ

GRADATION TEST DATA

2528 ADELINE STREET
Oakland, California

FIGURE
C-2
PROJECT No.
946.004

File Name: G:\ENGINEERING\PROJECTS\LAB_PROJECTS\946004.GPJ Report Template: GRADATION_B Output Date: 3/26/03



Cobbles	Gravel		Sand			Silt and Clay
	Coarse	Fine	Coarse	Medium	Fine	

Key Symbol	Boring No.	Depth (Feet)	% Passing No. 200 Sieve	% Passing No. 4 Sieve	Sample Descsription	USCS
●	B-5	2.0	73	99	Dark brown SILT, some sand and clay	ML

FUGRO

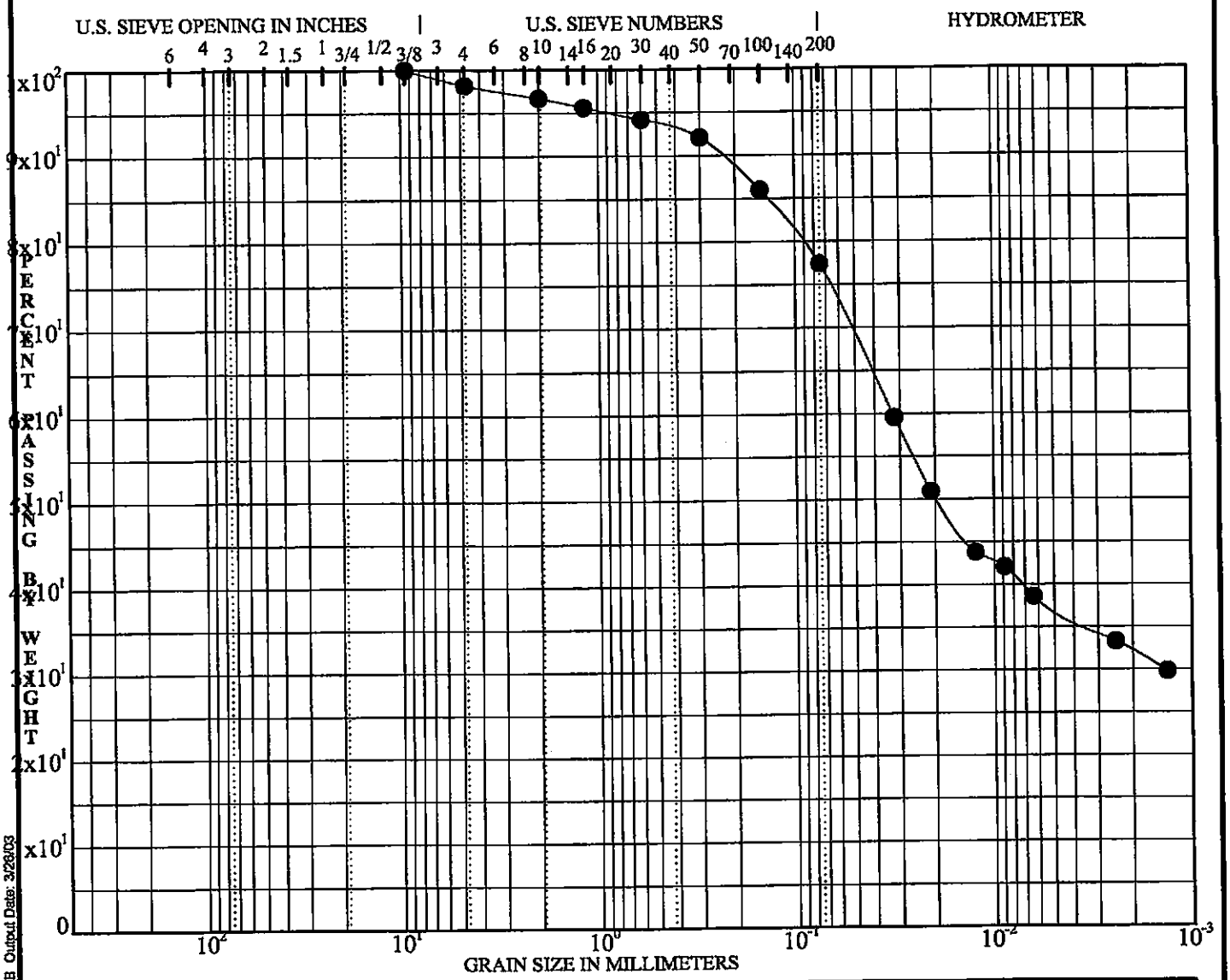
PREP'D BY:
APP'D BY:
DATE: 3/26/03
DWG FILE: 946004.GPJ

GRADATION TEST DATA

2528 ADELINE STREET
Oakland, California

FIGURE
C-3
PROJECT No.
946.004

File Name: G:\ENGINEER\GINT\PROJECTS\LAB_PROJECTS\946004.GPJ Report Template: GRADATION_B Output Date: 3/26/03



Cobbles	Gravel		Sand			Silt and Clay
	Coarse	Fine	Coarse	Medium	Fine	

Key Symbol	Boring No.	Depth (Feet)	% Passing No. 200 Sieve	% Passing No. 4 Sieve	Sample Descsription	USCS
●	B-5	7.0	77	98	Light brown SILT with clay, some sand	ML

FUGRO

PREP'D BY:
APP'D BY:
DATE: 3/26/03
DWG FILE: 946004.GPJ

GRADATION TEST DATA

2528 ADELINE STREET
Oakland, California

FIGURE
C-4
PROJECT No.
946.004

File Name: G:\ENGINEER\GINT\PROJECTS\LAB_PROJECTS\946004.GPJ Report Template: GRADATION_B Output Date: 3/26/03

APPENDIX D
ANALYTICAL TEST DATA

SEVERN TRENT STL

Submission#: 2002-11-0524

December 13, 2002

Fugro

1000 Broadway Suite 200
Oakland, CA 94607

Attn.: Jeriann Alexander

Project#: 946.004
Project: 2528 Adeline Street

Dear Jeriann,

Attached is our report for your samples received on 11/22/2002 17:20
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 01/06/2003 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: tgranicher@stl-inc.com

Sincerely,

Tod Granicher
Project Manager

SEVERN TRENT STL

Submission #: 2002-11-0524

Gas/BTEX Compounds by 8015M/8021

Fugro
Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-1	11/21/2002 10:30	Water	4
MW-2	11/21/2002 16:05	Water	5
MW-3	11/21/2002 15:12	Water	6

SEVERN TRENT STL

Submission #: 2002-11-0524

Gas/BTEX Compounds by 8015M/8021

Fugro
Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s):	5030 5030	Test(s):	8015M 8021B
Sample ID:	**MW-1**	Lab ID:	2002-11-0524 - 4
Sampled:	11/21/2002 10:30	Extracted:	12/5/2002 13:18
Matrix:	Water	QC Batch#:	2002/12/05-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	630	50	ug/L	1.00	12/05/2002 13:18	g
Benzene	ND	0.50	ug/L	1.00	12/05/2002 13:18	
Toluene	ND	0.50	ug/L	1.00	12/05/2002 13:18	
Ethyl benzene	ND	0.50	ug/L	1.00	12/05/2002 13:18	
Xylene(s)	ND	0.50	ug/L	1.00	12/05/2002 13:18	
MTBE	ND	5.0	ug/L	1.00	12/05/2002 13:18	
Surrogates(s)						
Trifluorotoluene	85.1	58-124	%	1.00	12/05/2002 13:18	
4-Bromofluorobenzene-FID	90.6	50-150	%	1.00	12/05/2002 13:18	

SEVERN TRENT STL

Submission #: 2002-11-0524

Gas/BTEX Compounds by 8015M/8021

Fugro
Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s):	5030 5030	Test(s):	8015M 8021B
Sample ID:	**MW-2**	Lab ID:	2002-11-0524 - 5
Sampled:	11/21/2002 16:05	Extracted:	12/5/2002 13:50
Matrix:	Water	QC Batch#:	2002/12/05-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	56	50	ug/L	1.00	12/05/2002 13:50	g
Benzene	ND	0.50	ug/L	1.00	12/05/2002 13:50	
Toluene	ND	0.50	ug/L	1.00	12/05/2002 13:50	
Ethyl benzene	ND	0.50	ug/L	1.00	12/05/2002 13:50	
Xylene(s)	ND	0.50	ug/L	1.00	12/05/2002 13:50	
MTBE	ND	5.0	ug/L	1.00	12/05/2002 13:50	
Surrogates(s)						
Trifluorotoluene	88.0	58-124	%	1.00	12/05/2002 13:50	
4-Bromofluorobenzene-FID	78.7	50-150	%	1.00	12/05/2002 13:50	

Gas/BTEX Compounds by 8015M/8021

Fugro

Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s):	5030 5030	Test(s):	8015M 8021B
Sample ID:	**MW-3**	Lab ID:	2002-11-0524 - 6
Sampled:	11/21/2002 15:12	Extracted:	12/5/2002 14:23
Matrix:	Water	QC Batch#:	2002/12/05-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/05/2002 14:23	
Benzene	ND	0.50	ug/L	1.00	12/05/2002 14:23	
Toluene	ND	0.50	ug/L	1.00	12/05/2002 14:23	
Ethyl benzene	ND	0.50	ug/L	1.00	12/05/2002 14:23	
Xylene(s)	ND	0.50	ug/L	1.00	12/05/2002 14:23	
MTBE	ND	5.0	ug/L	1.00	12/05/2002 14:23	
Surrogates(s)						
Trifluorotoluene	94.8	58-124	%	1.00	12/05/2002 14:23	
4-Bromofluorobenzene-FID	81.9	50-150	%	1.00	12/05/2002 14:23	

Gas/BTEX Compounds by 8015M/8021

Fugro

Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5030
Method Blank

Water

Test(s): 8015M
QC Batch # 2002/12/05-01.05

MB: 2002/12/05-01.05-001

Date Extracted: 12/05/2002 12:03

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/05/2002 12:03	
Benzene	ND	0.5	ug/L	12/05/2002 12:03	
Toluene	ND	0.5	ug/L	12/05/2002 12:03	
Ethyl benzene	ND	0.5	ug/L	12/05/2002 12:03	
Xylene(s)	ND	0.5	ug/L	12/05/2002 12:03	
MTBE	ND	5.0	ug/L	12/05/2002 12:03	
Surrogates(s)					
Trifluorotoluene	87.0	58-124	%	12/05/2002 12:03	
4-Bromofluorobenzene-FID	79.6	50-150	%	12/05/2002 12:03	

Gas/BTEX Compounds by 8015M/8021

Fugro

Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5030

Test(s): 8015M

Laboratory Control Spike **Water** **QC Batch # 2002/12/05-01.05**

LCS 2002/12/05-01.05-004 Extracted: 12/05/2002 Analyzed: 12/05/2002 09:30

LCSD 2002/12/05-01.05-005 Extracted: 12/05/2002 Analyzed: 12/05/2002 10:02

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Gasoline	519	500	500	103.8	100.0	3.7	75-125	20		
Surrogates(s)										
4-Bromofluorobenzene-FID	479	450	500	95.8	90.0		50-150	0		

SEVERN TRENT STL

Submission #: 2002-11-0524

Gas/BTEX Compounds by 8015M/8021

Fugro
Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Legend and Notes

Result Flag

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

2002-11-0524

10405

CHAIN OF CUSTODY

PAGE 1 OF

PROJECT NAME: 2528 Adeline Street

JOB NUMBER: 946 004

PROJECT CONTACT: Jenni Alexander

SAMPLED BY: Obi Nzeni

LAB: STL

TURNAROUND: 10 days

REQUESTED BY: Obi Nzeni

LABORATORY I.D. NUMBER	FIELD SAMPLE I.D.	MATRIX: WATER	MATRIX: SOIL	MATRIX: AIR	CONTAINERS: VOA	CONTAINERS: LITER	CONTAINERS: PINT	CONTAINERS: TUBE	PRESERVATIVE: HCL	PRESERVATIVE: H_2SO_4	PRESERVATIVE: HNO_3	PRESERVATIVE: ICE	PRESERVATIVE: OTHER	PRESERVATIVE: NONE	SAMPLING DATE: MONTH	SAMPLING DATE: DAY	SAMPLING DATE: YEAR	SAMPLING DATE: TIME	NOTES
	B-3	X			4				X			X			11	12	10	1110	
	B-4	X			4				X			X			11	12	10	1220	
	B-5	X			4				X			X			11	12	10	1030	
	MW-1	X			6				X			X			11	12	10	1605	
	MW-2	X			6				X			X			11	12	10	1512	
	MW-3	X			5				X			X							

ANALYSIS REQUESTED	
TPH-g, BTEX, MTBE (8015 and 8020)	X
TPH as Diesel - using silica gel clean up (8	
VOCs (8260)	
CAM 17 Title 22 Metals (6010/7000)	
Lead (6010)	
HVOC's (8010)	X
EDF Format	
Chromatograms	

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
Obi Nzeni	11/22/02 1537	[signature]	11/22/02 1537
[signature]	11/22/02 1720		

COMMENTS & NOTES:

4.2°C

Fugro West, Inc./Subsurface Consultants, Inc.
1000 Broadway, Suite 200 Oakland, CA 94607
510-268-0461 FAX: 510-268-0137
2011 Soscol Ave., Suite 5, Napa, CA 94559
707-257-6993 FAX: 707-257-6995

Excel

g:/server migration/data/template/chain of custody

SEVERN TRENT SERVICES

STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 11 - 0524

Checklist completed by: (initials) NH Date: 11/25/02

Courier name: ☑ STL San Francisco ☐ Client _____

Custody seals intact on shipping container/samples	Yes___ No___	Not Present ✓
Chain of custody present?	Yes ✓ No___	
Chain of custody signed when relinquished and received?	Yes ✓ No___	
Chain of custody agrees with sample labels?	Yes ✓ No___	
Samples in proper container/bottle?	Yes ✓ No___	
Sample containers intact?	Yes ✓ No___	
Sufficient sample volume for indicated test?	Yes ✓ No___	
All samples received within holding time?	Yes ✓ No___	
Container/Temp Blank temperature in compliance (4^{o} C ± 2)?	Temp: 4.2 °C Yes ✓ No___	
Water - VOA vials have zero headspace?	No VOA vials submitted___ Yes ✓ No___	

(if bubble is present, refer to approximate bubble size and itemize in comments as **S** (small ~O), **M** (medium ~ O) or **L** (large ~ O)

Water - **pH acceptable upon receipt?** ☐ Yes ☐ No

☐ **pH adjusted**– Preservative used: ☐ HNO_3 ☐ HCl ☐ H_2SO_4 ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments: _____

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: _____/_____/02

Client contacted: ☐ Yes ☐ No

Summary of discussion: _____

Corrective Action (per PM/Client): _____

SEVERN TRENT STL

Submission #: 2002-11-0524

Halogenated Volatile Organic Compounds by 8021

Fugro
Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
B-3	11/21/2002	Water	1
B-4	11/21/2002 11:10	Water	2
B-5	11/21/2002 12:20	Water	3
MW-1	11/21/2002 10:30	Water	4
MW-2	11/21/2002 16:05	Water	5
MW-3	11/21/2002 15:12	Water	6

Halogenated Volatile Organic Compounds by 8021

Fugro

Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s):	5030B	Test(s):	8021B
Sample ID:	B-3	Lab ID:	2002-11-0524 - 1
Sampled:	11/21/2002	Extracted:	12/5/2002 14:28
Matrix:	Water	QC Batch#:	2002/12/05-01.25

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	12/05/2002 14:28	
Vinyl chloride	ND	0.50	ug/L	1.00	12/05/2002 14:28	
Chloroethane	ND	0.50	ug/L	1.00	12/05/2002 14:28	
Trichlorofluoromethane	ND	0.50	ug/L	1.00	12/05/2002 14:28	
1,1-Dichloroethene	3.7	0.50	ug/L	1.00	12/05/2002 14:28	
Methylene chloride	ND	5.0	ug/L	1.00	12/05/2002 14:28	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/05/2002 14:28	
cis-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/05/2002 14:28	
1,1-Dichloroethane	7.8	0.50	ug/L	1.00	12/05/2002 14:28	
Chloroform	ND	0.50	ug/L	1.00	12/05/2002 14:28	
1,1,1-Trichloroethane	1.0	0.50	ug/L	1.00	12/05/2002 14:28	
Carbon tetrachloride	ND	0.50	ug/L	1.00	12/05/2002 14:28	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	12/05/2002 14:28	
Trichloroethene	ND	0.50	ug/L	1.00	12/05/2002 14:28	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	12/05/2002 14:28	
Bromodichloromethane	ND	0.50	ug/L	1.00	12/05/2002 14:28	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	12/05/2002 14:28	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/05/2002 14:28	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/05/2002 14:28	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	12/05/2002 14:28	
Tetrachloroethene	ND	0.50	ug/L	1.00	12/05/2002 14:28	
Dibromochloromethane	ND	0.50	ug/L	1.00	12/05/2002 14:28	
Chlorobenzene	ND	0.50	ug/L	1.00	12/05/2002 14:28	
Bromoform	ND	2.0	ug/L	1.00	12/05/2002 14:28	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/05/2002 14:28	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	12/05/2002 14:28	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	12/05/2002 14:28	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	12/05/2002 14:28	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	12/05/2002 14:28	
Chloromethane	ND	1.0	ug/L	1.00	12/05/2002 14:28	
Bromomethane	ND	1.0	ug/L	1.00	12/05/2002 14:28	

SEVERN TRENT STL

Submission #: 2002-11-0524

Halogenated Volatile Organic Compounds by 8021

Fugro
Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s):	5030B	Test(s):	8021B
Sample ID:	**B-3**	Lab ID:	2002-11-0524 - 1
Sampled:	11/21/2002	Extracted:	12/5/2002 14:28
Matrix:	Water	QC Batch#:	2002/12/05-01.25

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Surrogates(s)						
1-Chloro-2-fluorobenzene	84.1	70-130	%	1.00	12/05/2002 14:28	

Halogenated Volatile Organic Compounds by 8021

Fugro

Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s):	5030B	Test(s):	8021B
Sample ID:	B-4	Lab ID:	2002-11-0524 - 2
Sampled:	11/21/2002 11:10	Extracted:	11/26/2002 21:47
Matrix:	Water	QC Batch#:	2002/11/26-01.26

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	11/26/2002 21:47	
Vinyl chloride	ND	0.50	ug/L	1.00	11/26/2002 21:47	
Chloroethane	ND	0.50	ug/L	1.00	11/26/2002 21:47	
Trichlorofluoromethane	ND	0.50	ug/L	1.00	11/26/2002 21:47	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	11/26/2002 21:47	
Methylene chloride	ND	5.0	ug/L	1.00	11/26/2002 21:47	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	11/26/2002 21:47	
cis-1,2-Dichloroethene	ND	0.50	ug/L	1.00	11/26/2002 21:47	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	11/26/2002 21:47	
Chloroform	ND	0.50	ug/L	1.00	11/26/2002 21:47	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	11/26/2002 21:47	
Carbon tetrachloride	ND	0.50	ug/L	1.00	11/26/2002 21:47	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	11/26/2002 21:47	
Trichloroethene	ND	0.50	ug/L	1.00	11/26/2002 21:47	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	11/26/2002 21:47	
Bromodichloromethane	ND	0.50	ug/L	1.00	11/26/2002 21:47	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	11/26/2002 21:47	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	11/26/2002 21:47	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	11/26/2002 21:47	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	11/26/2002 21:47	
Tetrachloroethene	ND	0.50	ug/L	1.00	11/26/2002 21:47	
Dibromochloromethane	ND	0.50	ug/L	1.00	11/26/2002 21:47	
Chlorobenzene	ND	0.50	ug/L	1.00	11/26/2002 21:47	
Bromoform	ND	2.0	ug/L	1.00	11/26/2002 21:47	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	11/26/2002 21:47	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	11/26/2002 21:47	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	11/26/2002 21:47	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	11/26/2002 21:47	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	11/26/2002 21:47	
Chloromethane	ND	1.0	ug/L	1.00	11/26/2002 21:47	
Bromomethane	ND	1.0	ug/L	1.00	11/26/2002 21:47	

Halogenated Volatile Organic Compounds by 8021

Fugro

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Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s):	5030B	Test(s):	8021B
Sample ID:	**B-4**	Lab ID:	2002-11-0524 - 2
Sampled:	11/21/2002 11:10	Extracted:	11/26/2002 21:47
Matrix:	Water	QC Batch#:	2002/11/26-01.26

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Surrogates(s)						
1-Chloro-2-fluorobenzene	93.4	70-130	%	1.00	11/26/2002 21:47	

Halogenated Volatile Organic Compounds by 8021

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Prep(s):	5030B	Test(s):	8021B
Sample ID:	B-5	Lab ID:	2002-11-0524 - 3
Sampled:	11/21/2002 12:20	Extracted:	11/26/2002 22:29
Matrix:	Water	QC Batch#:	2002/11/26-01.26

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	11/26/2002 22:29	
Vinyl chloride	ND	0.50	ug/L	1.00	11/26/2002 22:29	
Chloroethane	ND	0.50	ug/L	1.00	11/26/2002 22:29	
Trichlorofluoromethane	ND	0.50	ug/L	1.00	11/26/2002 22:29	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	11/26/2002 22:29	
Methylene chloride	ND	5.0	ug/L	1.00	11/26/2002 22:29	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	11/26/2002 22:29	
cis-1,2-Dichloroethene	ND	0.50	ug/L	1.00	11/26/2002 22:29	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	11/26/2002 22:29	
Chloroform	ND	0.50	ug/L	1.00	11/26/2002 22:29	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	11/26/2002 22:29	
Carbon tetrachloride	ND	0.50	ug/L	1.00	11/26/2002 22:29	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	11/26/2002 22:29	
Trichloroethene	ND	0.50	ug/L	1.00	11/26/2002 22:29	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	11/26/2002 22:29	
Bromodichloromethane	ND	0.50	ug/L	1.00	11/26/2002 22:29	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	11/26/2002 22:29	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	11/26/2002 22:29	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	11/26/2002 22:29	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	11/26/2002 22:29	
Tetrachloroethene	ND	0.50	ug/L	1.00	11/26/2002 22:29	
Dibromochloromethane	ND	0.50	ug/L	1.00	11/26/2002 22:29	
Chlorobenzene	ND	0.50	ug/L	1.00	11/26/2002 22:29	
Bromoform	ND	2.0	ug/L	1.00	11/26/2002 22:29	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	11/26/2002 22:29	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	11/26/2002 22:29	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	11/26/2002 22:29	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	11/26/2002 22:29	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	11/26/2002 22:29	
Chloromethane	ND	1.0	ug/L	1.00	11/26/2002 22:29	
Bromomethane	ND	1.0	ug/L	1.00	11/26/2002 22:29	

Halogenated Volatile Organic Compounds by 8021

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Prep(s):	5030B	Test(s):	8021B
Sample ID:	**B-5**	Lab ID:	2002-11-0524 - 3
Sampled:	11/21/2002 12:20	Extracted:	11/26/2002 22:29
Matrix:	Water	QC Batch#:	2002/11/26-01.26

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Surrogates(s)						
1-Chloro-2-fluorobenzene	100.2	70-130	%	1.00	11/26/2002 22:29	

Halogenated Volatile Organic Compounds by 8021

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Received: 11/22/2002 17:20

Prep(s):	5030B	Test(s):	8021B
Sample ID:	**MW-1**	Lab ID:	2002-11-0524 - 4
Sampled:	11/21/2002 10:30	Extracted:	11/26/2002 23:12
Matrix:	Water	QC Batch#:	2002/11/26-01.26

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	11/26/2002 23:12	
Vinyl chloride	ND	0.50	ug/L	1.00	11/26/2002 23:12	
Chloroethane	ND	0.50	ug/L	1.00	11/26/2002 23:12	
Trichlorofluoromethane	ND	0.50	ug/L	1.00	11/26/2002 23:12	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	11/26/2002 23:12	
Methylene chloride	ND	5.0	ug/L	1.00	11/26/2002 23:12	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	11/26/2002 23:12	
cis-1,2-Dichloroethene	ND	0.50	ug/L	1.00	11/26/2002 23:12	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	11/26/2002 23:12	
Chloroform	ND	0.50	ug/L	1.00	11/26/2002 23:12	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	11/26/2002 23:12	
Carbon tetrachloride	ND	0.50	ug/L	1.00	11/26/2002 23:12	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	11/26/2002 23:12	
Trichloroethene	ND	0.50	ug/L	1.00	11/26/2002 23:12	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	11/26/2002 23:12	
Bromodichloromethane	ND	0.50	ug/L	1.00	11/26/2002 23:12	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	11/26/2002 23:12	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	11/26/2002 23:12	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	11/26/2002 23:12	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	11/26/2002 23:12	
Tetrachloroethene	ND	0.50	ug/L	1.00	11/26/2002 23:12	
Dibromochloromethane	ND	0.50	ug/L	1.00	11/26/2002 23:12	
Chlorobenzene	ND	0.50	ug/L	1.00	11/26/2002 23:12	
Bromoform	ND	2.0	ug/L	1.00	11/26/2002 23:12	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	11/26/2002 23:12	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	11/26/2002 23:12	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	11/26/2002 23:12	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	11/26/2002 23:12	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	11/26/2002 23:12	
Chloromethane	ND	1.0	ug/L	1.00	11/26/2002 23:12	
Bromomethane	ND	1.0	ug/L	1.00	11/26/2002 23:12	

SEVERN TRENT STL

Submission #: 2002-11-0524

Halogenated Volatile Organic Compounds by 8021

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Prep(s):	5030B	Test(s):	8021B
Sample ID:	**MW-1**	Lab ID:	2002-11-0524 - 4
Sampled:	11/21/2002 10:30	Extracted:	11/26/2002 23:12
Matrix:	Water	QC Batch#:	2002/11/26-01.26

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Surrogates(s)						
1-Chloro-2-fluorobenzene	99.5	70-130	%	1.00	11/26/2002 23:12	

Halogenated Volatile Organic Compounds by 8021

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Received: 11/22/2002 17:20

Prep(s):	5030B	Test(s):	8021B
Sample ID:	**MW-2**	Lab ID:	2002-11-0524 - 5
Sampled:	11/21/2002 16:05	Extracted:	11/27/2002 23:34
Matrix:	Water	QC Batch#:	2002/11/27-01.25

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	5.0	ug/L	5.00	11/27/2002 23:34	
Vinyl chloride	ND	2.5	ug/L	5.00	11/27/2002 23:34	
Chloroethane	ND	2.5	ug/L	5.00	11/27/2002 23:34	
Trichlorofluoromethane	ND	2.5	ug/L	5.00	11/27/2002 23:34	
1,1-Dichloroethene	120	2.5	ug/L	5.00	11/27/2002 23:34	
Methylene chloride	ND	25	ug/L	5.00	11/27/2002 23:34	
trans-1,2-Dichloroethene	ND	2.5	ug/L	5.00	11/27/2002 23:34	
cis-1,2-Dichloroethene	ND	2.5	ug/L	5.00	11/27/2002 23:34	
1,1-Dichloroethane	100	2.5	ug/L	5.00	11/27/2002 23:34	
Chloroform	ND	2.5	ug/L	5.00	11/27/2002 23:34	
1,1,1-Trichloroethane	9.3	2.5	ug/L	5.00	11/27/2002 23:34	
Carbon tetrachloride	ND	2.5	ug/L	5.00	11/27/2002 23:34	
1,2-Dichloroethane	ND	2.5	ug/L	5.00	11/27/2002 23:34	
Trichloroethene	ND	2.5	ug/L	5.00	11/27/2002 23:34	
1,2-Dichloropropane	ND	2.5	ug/L	5.00	11/27/2002 23:34	
Bromodichloromethane	ND	2.5	ug/L	5.00	11/27/2002 23:34	
2-Chloroethylvinyl ether	ND	2.5	ug/L	5.00	11/27/2002 23:34	
trans-1,3-Dichloropropene	ND	2.5	ug/L	5.00	11/27/2002 23:34	
cis-1,3-Dichloropropene	ND	2.5	ug/L	5.00	11/27/2002 23:34	
1,1,2-Trichloroethane	ND	2.5	ug/L	5.00	11/27/2002 23:34	
Tetrachloroethene	ND	2.5	ug/L	5.00	11/27/2002 23:34	
Dibromochloromethane	ND	2.5	ug/L	5.00	11/27/2002 23:34	
Chlorobenzene	ND	2.5	ug/L	5.00	11/27/2002 23:34	
Bromoform	ND	10	ug/L	5.00	11/27/2002 23:34	
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5.00	11/27/2002 23:34	
1,3-Dichlorobenzene	ND	2.5	ug/L	5.00	11/27/2002 23:34	
1,4-Dichlorobenzene	ND	2.5	ug/L	5.00	11/27/2002 23:34	
1,2-Dichlorobenzene	ND	2.5	ug/L	5.00	11/27/2002 23:34	
Trichlorotrifluoroethane	ND	2.5	ug/L	5.00	11/27/2002 23:34	
Chloromethane	ND	5.0	ug/L	5.00	11/27/2002 23:34	
Bromomethane	ND	5.0	ug/L	5.00	11/27/2002 23:34	

Halogenated Volatile Organic Compounds by 8021

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Prep(s):	5030B	Test(s):	8021B
Sample ID:	**MW-2**	Lab ID:	2002-11-0524 - 5
Sampled:	11/21/2002 16:05	Extracted:	11/27/2002 23:34
Matrix:	Water	QC Batch#:	2002/11/27-01.25

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Surrogates(s)						
1-Chloro-2-fluorobenzene	99.6	70-130	%	1.00	11/27/2002 23:34	

Halogenated Volatile Organic Compounds by 8021

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Prep(s):	5030B	Test(s):	8021B
Sample ID:	**MW-3**	Lab ID:	2002-11-0524 - 6
Sampled:	11/21/2002 15:12	Extracted:	11/28/2002 00:23
Matrix:	Water	QC Batch#:	2002/11/27-01.25

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	11/28/2002 00:23	
Vinyl chloride	ND	0.50	ug/L	1.00	11/28/2002 00:23	
Chloroethane	ND	0.50	ug/L	1.00	11/28/2002 00:23	
Trichlorofluoromethane	ND	0.50	ug/L	1.00	11/28/2002 00:23	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	11/28/2002 00:23	
Methylene chloride	ND	5.0	ug/L	1.00	11/28/2002 00:23	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	11/28/2002 00:23	
cis-1,2-Dichloroethene	1.4	0.50	ug/L	1.00	11/28/2002 00:23	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	11/28/2002 00:23	
Chloroform	ND	0.50	ug/L	1.00	11/28/2002 00:23	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	11/28/2002 00:23	
Carbon tetrachloride	ND	0.50	ug/L	1.00	11/28/2002 00:23	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	11/28/2002 00:23	
Trichloroethene	1.4	0.50	ug/L	1.00	11/28/2002 00:23	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	11/28/2002 00:23	
Bromodichloromethane	ND	0.50	ug/L	1.00	11/28/2002 00:23	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	11/28/2002 00:23	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	11/28/2002 00:23	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	11/28/2002 00:23	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	11/28/2002 00:23	
Tetrachloroethene	4.4	0.50	ug/L	1.00	11/28/2002 00:23	
Dibromochloromethane	ND	0.50	ug/L	1.00	11/28/2002 00:23	
Chlorobenzene	ND	0.50	ug/L	1.00	11/28/2002 00:23	
Bromoform	ND	2.0	ug/L	1.00	11/28/2002 00:23	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	11/28/2002 00:23	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	11/28/2002 00:23	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	11/28/2002 00:23	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	11/28/2002 00:23	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	11/28/2002 00:23	
Chloromethane	ND	1.0	ug/L	1.00	11/28/2002 00:23	
Bromomethane	ND	1.0	ug/L	1.00	11/28/2002 00:23	

Halogenated Volatile Organic Compounds by 8021

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Prep(s):	5030B	Test(s):	8021B
Sample ID:	**MW-3**	Lab ID:	2002-11-0524 - 6
Sampled:	11/21/2002 15:12	Extracted:	11/28/2002 00:23
Matrix:	Water	QC Batch#:	2002/11/27-01.25

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Surrogates(s)						
1-Chloro-2-fluorobenzene	102.5	70-130	%	1.00	11/28/2002 00:23	

Halogenated Volatile Organic Compounds by 8021

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2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2002/11/26-01.26-005

Water

Test(s): 8021B
QC Batch # 2002/11/26-01.26
Date Extracted: 11/26/2002 10:05

Compound	Conc.	RL	Unit	Analyzed	Flag
Dichlorodifluoromethane	ND	1.0	ug/L	11/26/2002 10:05	
Vinyl chloride	ND	0.5	ug/L	11/26/2002 10:05	
Chloroethane	ND	0.5	ug/L	11/26/2002 10:05	
Trichlorofluoromethane	ND	0.5	ug/L	11/26/2002 10:05	
1,1-Dichloroethene	ND	0.5	ug/L	11/26/2002 10:05	
Methylene chloride	ND	5.0	ug/L	11/26/2002 10:05	
trans-1,2-Dichloroethene	ND	0.5	ug/L	11/26/2002 10:05	
cis-1,2-Dichloroethene	ND	0.5	ug/L	11/26/2002 10:05	
1,1-Dichloroethane	ND	0.5	ug/L	11/26/2002 10:05	
Chloroform	ND	0.5	ug/L	11/26/2002 10:05	
1,1,1-Trichloroethane	ND	0.5	ug/L	11/26/2002 10:05	
Carbon tetrachloride	ND	0.5	ug/L	11/26/2002 10:05	
1,2-Dichloroethane	ND	0.5	ug/L	11/26/2002 10:05	
Trichloroethene	ND	0.5	ug/L	11/26/2002 10:05	
1,2-Dichloropropane	ND	0.5	ug/L	11/26/2002 10:05	
Bromodichloromethane	ND	0.5	ug/L	11/26/2002 10:05	
2-Chloroethylvinyl ether	ND	0.5	ug/L	11/26/2002 10:05	
trans-1,3-Dichloropropene	ND	0.5	ug/L	11/26/2002 10:05	
cis-1,3-Dichloropropene	ND	0.5	ug/L	11/26/2002 10:05	
1,1,2-Trichloroethane	ND	0.5	ug/L	11/26/2002 10:05	
Tetrachloroethene	ND	0.5	ug/L	11/26/2002 10:05	
Dibromochloromethane	ND	0.5	ug/L	11/26/2002 10:05	
Chlorobenzene	ND	0.5	ug/L	11/26/2002 10:05	
Bromoform	ND	2.0	ug/L	11/26/2002 10:05	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	11/26/2002 10:05	
1,3-Dichlorobenzene	ND	0.5	ug/L	11/26/2002 10:05	
1,4-Dichlorobenzene	ND	0.5	ug/L	11/26/2002 10:05	
1,2-Dichlorobenzene	ND	0.5	ug/L	11/26/2002 10:05	
Trichlorotrifluoroethane	ND	0.5	ug/L	11/26/2002 10:05	
Chloromethane	ND	1.0	ug/L	11/26/2002 10:05	

Halogenated Volatile Organic Compounds by 8021

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2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2002/11/26-01.26-005

Water

Test(s): 8021B
QC Batch # 2002/11/26-01.26
Date Extracted: 11/26/2002 10:05

Compound	Conc.	RL	Unit	Analyzed	Flag
Bromomethane	ND	1.0	ug/L	11/26/2002 10:05	
1-Chloro-2-fluorobenzene	78.1	70-130	%	11/26/2002 10:05	

Halogenated Volatile Organic Compounds by 8021

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Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2002/11/27-01.25-004

Water

Test(s): 8021B
QC Batch # 2002/11/27-01.25
Date Extracted: 11/27/2002 09:32

Compound	Conc.	RL	Unit	Analyzed	Flag
Dichlorodifluoromethane	ND	1.0	ug/L	11/27/2002 09:32	
Vinyl chloride	ND	0.5	ug/L	11/27/2002 09:32	
Chloroethane	ND	0.5	ug/L	11/27/2002 09:32	
Trichlorofluoromethane	ND	0.5	ug/L	11/27/2002 09:32	
1,1-Dichloroethene	ND	0.5	ug/L	11/27/2002 09:32	
Methylene chloride	ND	5.0	ug/L	11/27/2002 09:32	
trans-1,2-Dichloroethene	ND	0.5	ug/L	11/27/2002 09:32	
cis-1,2-Dichloroethene	ND	0.5	ug/L	11/27/2002 09:32	
1,1-Dichloroethane	ND	0.5	ug/L	11/27/2002 09:32	
Chloroform	ND	0.5	ug/L	11/27/2002 09:32	
1,1,1-Trichloroethane	ND	0.5	ug/L	11/27/2002 09:32	
Carbon tetrachloride	ND	0.5	ug/L	11/27/2002 09:32	
1,2-Dichloroethane	ND	0.5	ug/L	11/27/2002 09:32	
Trichloroethene	ND	0.5	ug/L	11/27/2002 09:32	
1,2-Dichloropropane	ND	0.5	ug/L	11/27/2002 09:32	
Bromodichloromethane	ND	0.5	ug/L	11/27/2002 09:32	
2-Chloroethylvinyl ether	ND	0.5	ug/L	11/27/2002 09:32	
trans-1,3-Dichloropropene	ND	0.5	ug/L	11/27/2002 09:32	
cis-1,3-Dichloropropene	ND	0.5	ug/L	11/27/2002 09:32	
1,1,2-Trichloroethane	ND	0.5	ug/L	11/27/2002 09:32	
Tetrachloroethene	ND	0.5	ug/L	11/27/2002 09:32	
Dibromochloromethane	ND	0.5	ug/L	11/27/2002 09:32	
Chlorobenzene	ND	0.5	ug/L	11/27/2002 09:32	
Bromoform	ND	2.0	ug/L	11/27/2002 09:32	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	11/27/2002 09:32	
1,3-Dichlorobenzene	ND	0.5	ug/L	11/27/2002 09:32	
1,4-Dichlorobenzene	ND	0.5	ug/L	11/27/2002 09:32	
1,2-Dichlorobenzene	ND	0.5	ug/L	11/27/2002 09:32	
Trichlorotrifluoroethane	ND	0.5	ug/L	11/27/2002 09:32	
Chloromethane	ND	1.0	ug/L	11/27/2002 09:32	
Bromomethane	ND	1.0	ug/L	11/27/2002 09:32	

Halogenated Volatile Organic Compounds by 8021

Fugro

Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5030B
Method Blank

Water

Test(s): 8021B
QC Batch # 2002/11/27-01.25

MB: 2002/11/27-01.25-004

Date Extracted: 11/27/2002 09:32

Compound	Conc.	RL	Unit	Analyzed	Flag
Surrogates(s)					
1-Chloro-2-fluorobenzene	85.4	70-130	%	11/27/2002 09:32	

Halogenated Volatile Organic Compounds by 8021

Fugro

Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2002/12/05-01.25-004

Water

Test(s): 8021B
QC Batch # 2002/12/05-01.25
Date Extracted: 12/05/2002 12:20

Compound	Conc.	RL	Unit	Analyzed	Flag
Dichlorodifluoromethane	ND	1.0	ug/L	12/05/2002 12:20	
Vinyl chloride	ND	0.5	ug/L	12/05/2002 12:20	
Chloroethane	ND	0.5	ug/L	12/05/2002 12:20	
Trichlorofluoromethane	ND	0.5	ug/L	12/05/2002 12:20	
1,1-Dichloroethene	ND	0.5	ug/L	12/05/2002 12:20	
Methylene chloride	ND	5.0	ug/L	12/05/2002 12:20	
trans-1,2-Dichloroethene	ND	0.5	ug/L	12/05/2002 12:20	
cis-1,2-Dichloroethene	ND	0.5	ug/L	12/05/2002 12:20	
1,1-Dichloroethane	ND	0.5	ug/L	12/05/2002 12:20	
Chloroform	ND	0.5	ug/L	12/05/2002 12:20	
1,1,1-Trichloroethane	ND	0.5	ug/L	12/05/2002 12:20	
Carbon tetrachloride	ND	0.5	ug/L	12/05/2002 12:20	
1,2-Dichloroethane	ND	0.5	ug/L	12/05/2002 12:20	
Trichloroethene	ND	0.5	ug/L	12/05/2002 12:20	
1,2-Dichloropropane	ND	0.5	ug/L	12/05/2002 12:20	
Bromodichloromethane	ND	0.5	ug/L	12/05/2002 12:20	
2-Chloroethylvinyl ether	ND	0.5	ug/L	12/05/2002 12:20	
trans-1,3-Dichloropropene	ND	0.5	ug/L	12/05/2002 12:20	
cis-1,3-Dichloropropene	ND	0.5	ug/L	12/05/2002 12:20	
1,1,2-Trichloroethane	ND	0.5	ug/L	12/05/2002 12:20	
Tetrachloroethene	ND	0.5	ug/L	12/05/2002 12:20	
Dibromochloromethane	ND	0.5	ug/L	12/05/2002 12:20	
Chlorobenzene	ND	0.5	ug/L	12/05/2002 12:20	
Bromoform	ND	2.0	ug/L	12/05/2002 12:20	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	12/05/2002 12:20	
1,3-Dichlorobenzene	ND	0.5	ug/L	12/05/2002 12:20	
1,4-Dichlorobenzene	ND	0.5	ug/L	12/05/2002 12:20	
1,2-Dichlorobenzene	ND	0.5	ug/L	12/05/2002 12:20	
Trichlorotrifluoroethane	ND	0.5	ug/L	12/05/2002 12:20	
Chloromethane	ND	1.0	ug/L	12/05/2002 12:20	
Bromomethane	ND	1.0	ug/L	12/05/2002 12:20	

Halogenated Volatile Organic Compounds by 8021

Fugro

Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2002/12/05-01.25-004

Water

Test(s): 8021B
QC Batch # 2002/12/05-01.25
Date Extracted: 12/05/2002 12:20

Compound	Conc.	RL	Unit	Analyzed	Flag
Surrogates(s)					
1-Chloro-2-fluorobenzene	81.0	70-130	%	12/05/2002 12:20	

Halogenated Volatile Organic Compounds by 8021

Fugro

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Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5030B

Test(s): 8021B

Laboratory Control Spike **Water** **QC Batch # 2002/11/26-01.26**

LCS 2002/11/26-01.26-003 Extracted: 11/26/2002 Analyzed: 11/26/2002 08:41

LCSD 2002/11/26-01.26-004 Extracted: 11/26/2002 Analyzed: 11/26/2002 09:23

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
1,1-Dichloroethene	24.7	24.1	20.0	123.5	120.5	2.5	70-130	20		
Trichloroethene	17.6	16.8	20.0	88.0	84.0	4.7	70-130	20		
Chlorobenzene	19.3	18.8	20.0	96.5	94.0	2.6	70-130	20		
Surrogates(s)										
1-Chloro-2-fluorobenzene	17.7	17.4	20	88.5	87.0		70-130			

Halogenated Volatile Organic Compounds by 8021

Fugro

Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5030B

Test(s): 8021B

Laboratory Control Spike **Water** **QC Batch # 2002/11/27-01.25**

LCS 2002/11/27-01.25-002 Extracted: 11/27/2002 Analyzed: 11/27/2002 07:54

LCSD 2002/11/27-01.25-003 Extracted: 11/27/2002 Analyzed: 11/27/2002 08:43

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
1,1-Dichloroethene	20.8	21.2	20.0	104.0	106.0	1.9	70-130	20		
Trichloroethene	19.2	18.1	20.0	96.0	90.5	5.9	70-130	20		
Chlorobenzene	22.3	21.0	20.0	111.5	105.0	6.0	70-130	20		
Surrogates(s)										
1-Chloro-2-fluorobenzene	24.2	23.3	20	121.0	116.5		70-130			

Halogenated Volatile Organic Compounds by 8021

Fugro
Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5030B

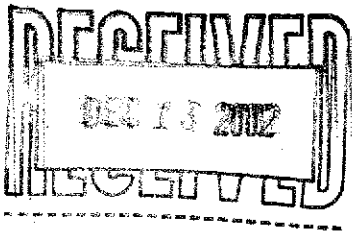
Test(s): 8021B

Laboratory Control Spike **Water** **QC Batch # 2002/12/05-01.25**

LCS 2002/12/05-01.25-005 Extracted: 12/05/2002 Analyzed: 12/05/2002 09:44
LCSD 2002/12/05-01.25-003 Extracted: 12/05/2002 Analyzed: 12/05/2002 10:30

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
1,1-Dichloroethene	19.9	19.7	20.0	99.5	98.5	1.0	70-130	20		
Trichloroethene	17.6	17.6	20.0	88.0	88.0	0.0	70-130	20		
Chlorobenzene	20.6	20.5	20.0	103.0	102.5	0.5	70-130	20		
Surrogates(s)										
1-Chloro-2-fluorobenzene	20.8	20.8	20	104.0	104.0		70-130	0		

SEVERN TRENT STL



Submission#: 2002-11-0525

Fugro

December 10, 2002

1000 Broadway Suite 200
Oakland, CA 94607

Attn.: Jeriann Alexander

Project#: 946.004
Project: 2528 Adeline Street

Dear Jeriann,

Attached is our report for your samples received on 11/22/2002 17:20
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 01/06/2003 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: tgranicher@stl-inc.com

Sincerely,

Tod Granicher
Project Manager

SEVERN TRENT STL

Submission #: 2002-11-0525

Metals

Fugro
Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
B-1@1.5	11/21/2002 13:39	Soil	1
B-1@4.0	11/21/2002 13:17	Soil	2
B-1@8.0	11/21/2002 13:57	Soil	3
B-2@1.0	11/21/2002 12:43	Soil	4
B-2@5.0	11/21/2002 12:52	Soil	5
B-2@8.0	11/21/2002 13:00	Soil	6
B-3@1.0	11/21/2002 09:09	Soil	7
B-3@4.0	11/21/2002 09:17	Soil	8
B-3@8.0	11/21/2002 09:29	Soil	9
B-5@1.5	11/21/2002 11:48	Soil	10

SEVERN TRENT STL

Submission #: 2002-11-0525

Metals

Fugro
Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s): 3050B
Sample ID: **B-1@1.5**
Sampled: 11/21/2002 13:39
Matrix: Soil

Test(s): 6010B
Lab ID: 2002-11-0525 - 1
Extracted: 12/9/2002 09:13
QC Batch#: 2002/12/09-05.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Barium	100	1.0	mg/Kg	1.00	12/09/2002 13:51	

SEVERN TRENT STL

Submission #: 2002-11-0525

Metals

Fugro
Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s): 3050B
Sample ID: **B-1@4.0**
Sampled: 11/21/2002 13:17
Matrix: Soil

Test(s): 6010B
Lab ID: 2002-11-0525 - 2
Extracted: 12/9/2002 09:13
QC Batch#: 2002/12/09-05.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Barium	83	1.0	mg/Kg	1.00	12/09/2002 13:54	

Metals

Fugro

Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s): 3050B
Sample ID: **B-1@8.0**
Sampled: 11/21/2002 13:57
Matrix: Soil

Test(s): 6010B
Lab ID: 2002-11-0525 - 3
Extracted: 12/9/2002 10:29
QC Batch#: 2002/12/09-06.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Barium	120	1.0	mg/Kg	1.00	12/09/2002 16:50	

SEVERN TRENT STL

Submission #: 2002-11-0525

Metals

Fugro
Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s): 3050B
Sample ID: **B-2@1.0**
Sampled: 11/21/2002 12:43
Matrix: Soil

Test(s): 6010B
Lab ID: 2002-11-0525 - 4
Extracted: 12/9/2002 10:29
QC Batch#: 2002/12/09-06.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Barium	100	1.0	mg/Kg	1.00	12/09/2002 16:54	

Metals

Fugro

Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s): 3050B
Sample ID: **B-2@5.0**
Sampled: 11/21/2002 12:52
Matrix: Soil

Test(s): 6010B
Lab ID: 2002-11-0525 - 5
Extracted: 12/9/2002 10:29
QC Batch#: 2002/12/09-06.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Barium	66	1.0	mg/Kg	1.00	12/09/2002 17:14	

Metals

Fugro

Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s): 3050B
Test(s): 6010B

Sample ID: **B-2@8.0**
Lab ID: 2002-11-0525 - 6

Sampled: 11/21/2002 13:00
Extracted: 12/9/2002 10:29

Matrix: Soil
QC Batch#: 2002/12/09-06.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Barium	130	1.0	mg/Kg	1.00	12/09/2002 17:17	

Metals

Fugro
Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s): 3050B
Test(s): 6010B
Sample ID: **B-3@1.0**
Lab ID: 2002-11-0525 - 7
Sampled: 11/21/2002 09:09
Extracted: 12/9/2002 10:29
Matrix: Soil
QC Batch#: 2002/12/09-06.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Barium	160	1.0	mg/Kg	1.00	12/09/2002 17:21	

Metals

Fugro
Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s): 3050B
Sample ID: **B-3@4.0**
Sampled: 11/21/2002 09:17
Matrix: Soil

Test(s): 6010B
Lab ID: 2002-11-0525 - 8
Extracted: 12/9/2002 10:29
QC Batch#: 2002/12/09-06.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Barium	50	1.0	mg/Kg	1.00	12/09/2002 17:24	

Metals

Fugro

Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s): 3050B
Test(s): 6010B

Sample ID: **B-3@8.0**
Lab ID: 2002-11-0525 - 9

Sampled: 11/21/2002 09:29
Extracted: 12/9/2002 10:29

Matrix: Soil
QC Batch#: 2002/12/09-06.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Barium	83	1.0	mg/Kg	1.00	12/09/2002 17:28	

Metals

Fugro

Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s): 3050B
Sample ID: **B-5@1.5**
Sampled: 11/21/2002 11:48
Matrix: Soil

Test(s): 6010B
Lab ID: 2002-11-0525 - 10
Extracted: 12/9/2002 10:29
QC Batch#: 2002/12/09-06.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Barium	110	1.0	mg/Kg	1.00	12/09/2002 17:31	

Metals

Fugro

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1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 3050B
Method Blank

Soil

Test(s): 6010B
QC Batch # 2002/12/09-05.15

MB: 2002/12/09-05.15-005

Date Extracted: 12/09/2002 09:13

Compound	Conc.	RL	Unit	Analyzed	Flag
Barium	ND	1.0	mg/Kg	12/09/2002 13:40	

Metals

Fugro

Attn.: Jeriann Alexander

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Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 3050B
Method Blank

Soil

Test(s): 6010B
QC Batch # 2002/12/09-06.15

MB: 2002/12/09-06.15-034

Date Extracted: 12/09/2002 10:29

Compound	Conc.	RL	Unit	Analyzed	Flag
Barium	ND	1.0	mg/Kg	12/09/2002 15:49	

Metals

Fugro
Attn.: Jeriann Alexander

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Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 3050B

Test(s): 6010B

Laboratory Control Spike **Soil** **QC Batch # 2002/12/09-05.15**

LCS 2002/12/09-05.15-006 Extracted: 12/09/2002 Analyzed: 12/09/2002 13:44
LCSD 2002/12/09-05.15-007 Extracted: 12/09/2002 Analyzed: 12/09/2002 13:47

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Barium	99.7	99.8	100.0	99.7	99.8	0.1	80-120	20		

Metals

Fugro

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Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 3050B

Test(s): 6010B

Laboratory Control Spike **Soil** **QC Batch # 2002/12/09-06.15**

LCS 2002/12/09-06.15-035 Extracted: 12/09/2002 Analyzed: 12/09/2002 15:53
LCSD 2002/12/09-06.15-036 Extracted: 12/09/2002 Analyzed: 12/09/2002 15:56

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Barium	100	99.0	100.0	100.0	99.0	1.0	80-120	20		

SEVERN TRENT STL

Submission #: 2002-11-0525

Gas/BTEX Compounds by 8015M/8021

Fugro
Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
B-1@4.0	11/21/2002 13:17	Soil	2
B-1@8.0	11/21/2002 13:57	Soil	3
B-2@1.0	11/21/2002 12:43	Soil	4
B-2@8.0	11/21/2002 13:00	Soil	6
B-3@4.0	11/21/2002 09:17	Soil	8
B-3@8.0	11/21/2002 09:29	Soil	9

Gas/BTEX Compounds by 8015M/8021

Fugro

Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s):	5035 5035	Test(s):	8015M 8021B
Sample ID:	**B-1@4.0**	Lab ID:	2002-11-0525 - 2
Sampled:	11/21/2002 13:17	Extracted:	12/3/2002 18:57
Matrix:	Soil	QC Batch#:	2002/12/03-01.02

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/03/2002 18:57	
Benzene	ND	0.0050	mg/Kg	1.00	12/03/2002 18:57	
Toluene	ND	0.0050	mg/Kg	1.00	12/03/2002 18:57	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/03/2002 18:57	
Xylene(s)	ND	0.0050	mg/Kg	1.00	12/03/2002 18:57	
MTBE	ND	0.0050	mg/Kg	1.00	12/03/2002 18:57	
Surrogates(s)						
Trifluorotoluene	49.2	53-125	%	1.00	12/03/2002 18:57	sl
Trifluorotoluene-FID	57.7	53-125	%	1.00	12/03/2002 18:57	

Gas/BTEX Compounds by 8015M/8021

Fugro

Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s):	5035 5035	Test(s):	8015M 8021B
Sample ID:	**B-1@8.0**	Lab ID:	2002-11-0525 - 3
Sampled:	11/21/2002 13:57	Extracted:	12/5/2002 22:33
Matrix:	Soil	QC Batch#:	2002/12/05-01.02

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/05/2002 22:33	
Benzene	ND	0.0050	mg/Kg	1.00	12/05/2002 22:33	
Toluene	ND	0.0050	mg/Kg	1.00	12/05/2002 22:33	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/05/2002 22:33	
Xylene(s)	ND	0.0050	mg/Kg	1.00	12/05/2002 22:33	
MTBE	ND	0.0050	mg/Kg	1.00	12/05/2002 22:33	
Surrogates(s)						
Trifluorotoluene	50.9	53-125	%	1.00	12/05/2002 22:33	sl
Trifluorotoluene-FID	72.8	53-125	%	1.00	12/05/2002 22:33	

Gas/BTEX Compounds by 8015M/8021

Fugro

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Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s):	5035 5035	Test(s):	8015M 8021B
Sample ID:	**B-2@1.0**	Lab ID:	2002-11-0525 - 4
Sampled:	11/21/2002 12:43	Extracted:	12/3/2002 19:30
Matrix:	Soil	QC Batch#:	2002/12/03-01.02

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/03/2002 19:30	
Benzene	ND	0.0050	mg/Kg	1.00	12/03/2002 19:30	
Toluene	ND	0.0050	mg/Kg	1.00	12/03/2002 19:30	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/03/2002 19:30	
Xylene(s)	ND	0.0050	mg/Kg	1.00	12/03/2002 19:30	
MTBE	ND	0.0050	mg/Kg	1.00	12/03/2002 19:30	
Surrogates(s)						
Trifluorotoluene	68.1	53-125	%	1.00	12/03/2002 19:30	
4-Bromofluorobenzene-FID	70.5	58-124	%	1.00	12/03/2002 19:30	

Gas/BTEX Compounds by 8015M/8021

Fugro

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Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s):	5035 5035	Test(s):	8015M 8021B
Sample ID:	**B-2@8.0**	Lab ID:	2002-11-0525 - 6
Sampled:	11/21/2002 13:00	Extracted:	12/3/2002 20:02
Matrix:	Soil	QC Batch#:	2002/12/03-01.02

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/03/2002 20:02	
Benzene	ND	0.0050	mg/Kg	1.00	12/03/2002 20:02	
Toluene	ND	0.0050	mg/Kg	1.00	12/03/2002 20:02	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/03/2002 20:02	
Xylene(s)	ND	0.0050	mg/Kg	1.00	12/03/2002 20:02	
MTBE	ND	0.0050	mg/Kg	1.00	12/03/2002 20:02	
Surrogates(s)						
Trifluorotoluene	80.9	53-125	%	1.00	12/03/2002 20:02	
4-Bromofluorobenzene-FID	62.9	58-124	%	1.00	12/03/2002 20:02	

Gas/BTEX Compounds by 8015M/8021

Fugro

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Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s):	5035 5035	Test(s):	8015M 8021B
Sample ID:	**B-3@4.0**	Lab ID:	2002-11-0525 - 8
Sampled:	11/21/2002 09:17	Extracted:	12/3/2002 20:35
Matrix:	Soil	QC Batch#:	2002/12/03-01.02

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/03/2002 20:35	
Benzene	ND	0.0050	mg/Kg	1.00	12/03/2002 20:35	
Toluene	ND	0.0050	mg/Kg	1.00	12/03/2002 20:35	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/03/2002 20:35	
Xylene(s)	ND	0.0050	mg/Kg	1.00	12/03/2002 20:35	
MTBE	ND	0.0050	mg/Kg	1.00	12/03/2002 20:35	
Surrogates(s)						
Trifluorotoluene	64.2	53-125	%	1.00	12/03/2002 20:35	
4-Bromofluorobenzene-FID	60.4	58-124	%	1.00	12/03/2002 20:35	

Gas/BTEX Compounds by 8015M/8021

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Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Prep(s):	5035 5035	Test(s):	8015M 8021B
Sample ID:	**B-3@8.0**	Lab ID:	2002-11-0525 - 9
Sampled:	11/21/2002 09:29	Extracted:	12/3/2002 21:07
Matrix:	Soil	QC Batch#:	2002/12/03-01.02

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/03/2002 21:07	
Benzene	ND	0.0050	mg/Kg	1.00	12/03/2002 21:07	
Toluene	ND	0.0050	mg/Kg	1.00	12/03/2002 21:07	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/03/2002 21:07	
Xylene(s)	ND	0.0050	mg/Kg	1.00	12/03/2002 21:07	
MTBE	ND	0.0050	mg/Kg	1.00	12/03/2002 21:07	
Surrogates(s)						
Trifluorotoluene	54.9	53-125	%	1.00	12/03/2002 21:07	
Trifluorotoluene-FID	58.5	53-125	%	1.00	12/03/2002 21:07	

Gas/BTEX Compounds by 8015M/8021

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Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5030
Method Blank

Soil

Test(s): 8015M
QC Batch # 2002/12/03-01.02

MB: 2002/12/03-01.02-008

Date Extracted: 12/03/2002 10:49

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	12/03/2002 10:49	
Benzene	ND	0.5	ug/L	12/03/2002 10:49	
Toluene	ND	0.5	ug/L	12/03/2002 10:49	
Ethyl benzene	ND	0.5	ug/L	12/03/2002 10:49	
Xylene(s)	ND	0.5	ug/L	12/03/2002 10:49	
MTBE	ND	5.0	ug/L	12/03/2002 10:49	
Surrogates(s)					
4-Bromofluorobenzene-FID	93.2	58-124	%	12/03/2002 10:49	
Trifluorotoluene	75.8	58-124	%	12/03/2002 10:49	

Gas/BTEX Compounds by 8015M/8021

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Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5035
Method Blank

Soil

Test(s): 8015M
QC Batch # 2002/12/05-01.02

MB: 2002/12/05-01.02-003

Date Extracted: 12/05/2002 08:03

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	12/05/2002 08:03	
Benzene	ND	0.0050	mg/Kg	12/05/2002 08:03	
Toluene	ND	0.0050	mg/Kg	12/05/2002 08:03	
Ethyl benzene	ND	0.0050	mg/Kg	12/05/2002 08:03	
Xylene(s)	ND	0.0050	mg/Kg	12/05/2002 08:03	
MTBE	ND	0.0050	mg/Kg	12/05/2002 08:03	
Surrogates(s)					
Trifluorotoluene	84.2	53-125	%	12/05/2002 08:03	
4-Bromofluorobenzene-FID	98.5	58-124	%	12/05/2002 08:03	

Gas/BTEX Compounds by 8015M/8021

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Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5030

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/12/03-01.02**

LCS 2002/12/03-01.02-009 Extracted: 12/03/2002 Analyzed: 12/03/2002 11:21
LCSD 2002/12/03-01.02-010 Extracted: 12/03/2002 Analyzed: 12/03/2002 11:54

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Gasoline	0.555	0.565	0.500	111.0	113.0	1.8	75-125	35		
Surrogates(s)										
4-Bromofluorobenzene-FID	541	509	500	108.2	101.8		58-124			

Gas/BTEX Compounds by 8015M/8021

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Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5035

Test(s): 8021B

Laboratory Control Spike **Soil** **QC Batch # 2002/12/03-01.02**

LCS 2002/12/03-01.02-019 Extracted: 12/03/2002 Analyzed: 12/03/2002 17:52

LCSD 2002/12/03-01.02-020 Extracted: 12/03/2002 Analyzed: 12/03/2002 18:25

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	0.0887	0.0830	0.1000	88.7	83.0	6.6	77-123	35		
Toluene	0.0865	0.0819	0.1000	86.5	81.9	5.5	78-122	35		
Ethyl benzene	0.0881	0.0824	0.1000	88.1	82.4	6.7	70-130	35		
Xylene(s)	0.261	0.246	0.300	87.0	82.0	5.9	75-125	35		
Surrogates(s)										
Trifluorotoluene	372	336	500	74.4	67.2		53-125			

SEVERN TRENT STL

Submission #: 2002-11-0525

Gas/BTEX Compounds by 8015M/8021

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Attn.: Jeriann Alexander

1000 Broadway Suite 200
Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5035

Test(s): 8021B

Laboratory Control Spike **Soil** **QC Batch # 2002/12/05-01.02**

LCS 2002/12/05-01.02-004 Extracted: 12/05/2002 Analyzed: 12/05/2002 08:36
LCSD 2002/12/05-01.02-005 Extracted: 12/05/2002 Analyzed: 12/05/2002 09:08

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	0.0868	0.106	0.1000	86.8	106.0	19.9	77-123	35		
Toluene	0.0850	0.104	0.1000	85.0	104.0	20.1	78-122	35		
Ethyl benzene	0.0873	0.105	0.1000	87.3	105.0	18.4	70-130	35		
Xylene(s)	0.258	0.312	0.300	86.0	104.0	18.9	75-125	35		
Surrogates(s)										
Trifluorotoluene	350	423	500	70.0	84.6		53-125			

Gas/BTEX Compounds by 8015M/8021

Fugro

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Oakland, CA 94607
Phone: (510) 268-0461 Fax: (510) 268-0137

Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Batch QC Report

Prep(s): 5035

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/12/05-01.02**

LCS 2002/12/05-01.02-006 Extracted: 12/05/2002 Analyzed: 12/05/2002 09:41
LCSD 2002/12/05-01.02-007 Extracted: 12/05/2002 Analyzed: 12/05/2002 10:13

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Gasoline	0.565	0.490	0.500	113.0	98.0	14.2	75-125	35		
Surrogates(s)										
4-Bromofluorobenzene-FID	520	490	500	104.0	98.0		58-124			

Gas/BTEX Compounds by 8015M/8021

Fugro

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Project: 946.004
2528 Adeline Street

Received: 11/22/2002 17:20

Legend and Notes

Result Flag

sl

Surrogate recoveries were lower than QC limit due to matrix interference, confirmed by reanalysis.

2002-11-0525

70406

PAGE 1 OF 1

CHAIN OF CUSTODY

PROJECT NAME: 2528 Adeline Street

JOB NUMBER: 946.00H

PROJECT CONTACT: Jennann Alexeneler

SAMPLED BY: Obi Nzewi

LAB: STL

TURNAROUND: 10day

REQUESTED BY: Obi Nzewi

LABORATORY I.D. NUMBER	FIELD SAMPLE I.D.	MATRIX: WATER	MATRIX: SOIL	MATRIX: AIR	CONTAINERS: VOA	CONTAINERS: LITER	CONTAINERS: PINT	CONTAINERS: TUBE	PRESERVATIVE: HCL	PRESERVATIVE: H_2SO_4	PRESERVATIVE: HNO_3	PRESERVATIVE: ICE	PRESERVATIVE: OTHER	PRESERVATIVE: NONE	SAMPLING DATE: MONTH	DAY	YEAR	TIME	NOTES	ANALYSIS REQUESTED: TPH-g, BTEX, MTBE (8015 and 8020)	TPH as Diesel - using silica gel clean up (8	VOCs (8260)	CAM 17 Title 22 Metals (6010/7000)	Lead (6010)	Barium	EDF Format	Chromatograms
	B-1@1.5		X					1				X			11	21	02	1339		X				X		
	B-1@4.0		X					1				X			11	21	02	1317		X				X		
	B-1@8.0		X					1				X			11	21	02	1357		X				X		
	B-2@1.0		X					1				X			11	21	02	1243		X				X		
	B-2@5.0		X					1				X			11	21	02	1252						X		
	B-2@8.0		X					1				X			11	21	02	1305		X				X		
	B-3@1.0		X					1				X			11	21	02	0904						X		
	B-3@4.0		X					1				X			11	21	02	0917		X				X		
	B-3@8.0		X					1				X			11	21	02	0929		X				X		
	B-5@1.5		X					1				X			11	21	02	1148						X		

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
[signature]	11/22/02 1537	[signature]	11/22/02 1537
[signature]	11/22/02 1720	[signature]	DATE/TIME
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature) 11/22	DATE/TIME
		Nomark, STL-SF	1720

COMMENTS & NOTES:

4.2°C

Fugro West, Inc./Subsurface Consultants, Inc.
1000 Broadway, Suite 200 Oakland, CA 94607
510-268-0461 FAX: 510-268-0137
2011 Soscol Ave., Suite 5, Napa, CA 94559
707-257-6993 FAX: 707-257-6995

Excel

SEVERN TRENT SERVICES

STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 11 - 0525

Checklist completed by: (initials) NM Date: 11 / 25 /02

Courier name: ☑ STL San Francisco ☐ Client _____

Custody seals intact on shipping container/samples	Yes___ No___	Not Present ✓
Chain of custody present?	Yes ✓ No___	
Chain of custody signed when relinquished and received?	Yes ✓ No___	
Chain of custody agrees with sample labels?	Yes ✓ No___	
Samples in proper container/bottle?	Yes ✓ No___	
Sample containers intact?	Yes ✓ No___	
Sufficient sample volume for indicated test?	Yes ✓ No___	
All samples received within holding time?	Yes ✓ No___	
Container/Temp Blank temperature in compliance (4^0 C ± 2)?	Temp: 4.2 °C	Yes ✓ No___
Water - VOA vials have zero headspace?	No VOA vials submitted ✓	Yes___ No___

(if bubble is present, refer to approximate bubble size and itemize in comments as **S** (small ~O), **M** (medium ~ O) or **L** (large ~ O)

Water - **pH acceptable upon receipt?** ☐ Yes ☐ No

☐ **pH adjusted**– Preservative used: ☐ HNO_3 ☐ HCl ☐ H_2SO_4 ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments: _____

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: _____/_____/02

Client contacted: ☐ Yes ☐ No

Summary of discussion: _____

Corrective Action (per PM/Client): _____