

# SUNCOUNTRY PARTNERS, LLC

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April 22, 1999

Ms. Madhulla Logan Hazardous Materials Specialist Alameda County Department of Environmental Health 1131 Harbor Bay Parkway Alameda, California 94503

Subject:

Phase II Environmental Assessment of the 22 Acre Former Alameda

Beltline Rail Yard, Alameda

Dear Ms. Logan:

Enclosed please find Check Number 109 for Two Thousand Two Hundred Dollars (\$2,200) representing the requested fee to review the above-referenced report previously sent to you by our consultant, Mr. Albert Ridley of Woodward Clyde, per his cover letter dated March 16, 1999.

We look forward to receiving your comments on this report. If you have any questions or need additional information, please call Al Ridley at (510) 874-3125 or myself at (925) 467-9900.

Very truly yours,

Chit 61

Robert Radanovich

Enclosure

CC: Albert P. Ridley, URS Greiner Woodward Clyde

1925 Sherman St Alameda 94501

Sti0#1649

# **URS Greiner Woodward Clyde**

A Division of URS Corporation

500 12th Street, Suite 200 Oakland, CA 94607-4014 Tel: 510.893.3600 Fax: 510.874.3268 Offices Worldwide

March 9, 1999 5109967009.00

Mr. Mike Valley Sun Country Partners, LLC 5000 Hopyard Road, Suite 170 Pleasanton, California 94588

Subject: Phase II Environmental Assessment, Alameda Belt Line Yard

Alameda, California

Dear Mr. Valley:

We are pleased to present our Phase II Environmental Assessment report for the Alameda Belt Line Yard property, located at 1925 Sherman Street, Alameda, California. This study was prepared in accordance with the scope of work in our agreement dated January 26, 1999. Mr. Marco Lobascio, Ms. April Ann Giangerelli and Mr. Paul Scherbak assisted in the preparation of this report.

This report summarizes the findings and our conclusions and recommendations regarding the potential for a significant environmental concern at this site. Please call if you have any questions.

Sincerely,

**URS Greiner Woodward Clyde** 

Albert P. Ridley, C.E.G.

Project Manager

Attachment: Phase II ESA Report

# PHASE II ENVIRONMENTAL ASSESSMENT 22-ACRE FORMER ALAMEDA BELT LINE RAIL YARD ALAMEDA, CALIFORNIA

Prepared for Sun Country Partners, LLC 5000 Hopyard Road, Suite 170 Pleasanton, California 94588

March 1999

# **URS Greiner Woodward Clyde**

500 12th Street, Suite 200 Oakland, California 94607

# PHASE II ENVIRONMENTAL ASSESSMENT 22-ACRE FORMER ALAMEDA BELT LINE RAIL YARD ALAMEDA, CALIFORNIA

Prepared for Sun Country Partners, LLC 5000 Hopyard Road, Suite 170 Pleasanton, California 94588

March 1999

# **URS Greiner Woodward Clyde**

500 12th Street, Suite 200 Oakland, California 94607

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SECTIONONE Introduction

# 1.1 INTRODUCTION

This report presents the results of an Environmental Site Assessment (ESA) for soil and shallow groundwater performed by URS Greiner Woodward Clyde (URSGWC) at the Former Alameda Belt Line 22-acre Parcel (the Site), on behalf of Sun Country Partners, LLC (Sun Country). It is our understanding that Sun Country intends to redevelop the site for residential use.

The purpose of the ESA was to collect site-specific data and use the information to evaluate the potential for contamination of soil and groundwater that might impact the intended use of the site. The results of the evaluation will support decisions about the need (if any) and extent of further characterization and/or remedial actions for the protection of human health related to the future residential use of the site. The ultimate goal is to satisfy the requirements of the Alameda County Department of Environmental Health (the County) and the City of Alameda (the City) for residential development of the site.

The preliminary results of a Phase I Environmental Assessment were presented to Ms. Madhulla Logan, of the Alameda County Department of Environmental Health, on February 9, 1999. A Phase I report was later issued on February 12, 1999 (see highlights in Appendix A). Mr. Mike Valley, of Sun Country, and Messrs. Albert Ridley and Marco Lobascio of URSGWC met with Ms. Logan at the County's offices to discuss the plan for a residential development at the site and the proposed scope of the ESA work plan. The recommendations made by Ms. Logan were incorporated into the revised scope of work detailed in the work plan submitted to the County on February 10, 1999. The work plan highlights can be found in Appendix B of this report.

The site characterization activities described in this report involved:

- 1) record search and preparation of the field exploration work plan,
- 2) field exploration to collect soil and shallow groundwater samples,
- 3) laboratory analysis of the samples collected and QA/QC of the results, and
- 4) data interpretation and reporting.

The results of the record search activity were presented in the Phase I report (Appendix A). The field exploration work plan (URSGWC 1999) was developed based on these results (Appendix B). The field exploration sampling activities were conducted on February 15 and 16, 1999. Figure 2 shows the sampling locations. A total of 12 borings were drilled using a Geoprobe rig to collect soil and grab groundwater samples. The soil samples were collected from a depth of 0 to 1 foot and from 2 to 3 feet. A grab groundwater sample was collected from each of the borings. Surface soil samples were collected at five additional random locations. Section 2.1 describes the field exploration activities.

The results of the laboratory analyses performed on the samples are presented in Section 2.2. The samples were analyzed for TPH-diesel, TPH-gasoline, MTBE and BTEX, TPH-motor oil, VOCs, SVOCs, PCBs, and CAM 17 metals.

**SECTIONONE** Introduction

Section 3.0 presents the results of the data evaluation activity. Conclusions and recommendations are in Section 4.0. Limitations of this study are summarized in Section 5.0. References are in Section 6.0.

As mentioned above, highlights of the Phase I report and of the revised work plan are provided in Appendices A and B. Appendix C contains the boring logs. Analytical laboratory reports are in Appendix D. Appendix E contains the lead risk assessment spreadsheet.

#### 1.2 SITE ENVIRONMENTAL SETTING

The site is located in Alameda, California, occupying an area of approximately 22 acres. The site is about 3000 feet long (east to west) and about 450 feet wide (see Figure 1). The site consists of two parcels: the Alameda Belt Line Railroad owned the larger parcel (see Figure 1), and the Union Pacific Railroad owned the smaller parcel along the south edge of the site.

The site is bounded by the commercial office complex of Marina Village to the north, by Sherman Street to the east, and by residential properties on the southern side. The western boundary of the site is at Constitution Way. Most of the site is occupied by parallel spur tracks. Several fenced tenant spaces are located at Sherman Street, and along the north property line. Boats, trucks, wood, and metal scrap still exist at one tenant space at the north edge of the site. The former tenants have removed vehicles and equipment from the other spaces. The Yard House, a one story wood structure, is located at Sherman Street. Concrete foundations remain from a former above ground fuel tank and the former Maintenance Building at the western end of the site. Two concrete maintenance pits remain at the former Maintenance Building. At the bottom of one pit ponded water was observed. The other pit (northern) has been filled and paved over with asphaltic concrete.

According to the US Geological Survey (USGS, 1980) Oakland West 7.5 minute Quadrangle, the site is located on gently sloping level land, with an elevation of about 10 feet above mean sea level. The Marina Village development, located to the north of the site, was raised by filling. Therefore, the surface drainage is directed towards the west. The nearest body of water is the Encinal Basin, which is located about 800 feet northeast, and it is part of the Oakland Estuary.

The Alameda Belt Line Railway, initially known as the Industrial Railway or the Municipal Railway, was built in 1918 by the City of Alameda. Although it was to be operated by the City's Board of Public Utilities, it was operated from the beginning by Southern Pacific Railroad. In January of 1925 the City proposed to extend the Belt Line west of Grand Street to Encinal Terminal. Western Pacific and Santa Fe Railroad bought the existing tracks, and acquired additional land for the expansion. Construction was delayed by the objections of the residents and neighbors, but on February 1927 the City Council approved the Belt Line Extension. The Belt Line served local customers with spurs between Grand Avenue and Constitution Way.

After the maintenance building, located at the western end of the site near Constitution Way, burned to the ground around 1980, the Belt Line had only one principal building, the Yard House at 1925 Sherman Street. There are piles of soil and construction debris with asphaltic concrete and concrete on the north side of the site and west of the tenant spaces.

#### 2.1 SUMMARY OF FIELD INVESTIGATION ACTIVITIES

The drilling activities were performed on February 15, 1999, under the supervision of an engineer from URSGWC. A total of 12 "direct push" soil borings were drilled at the site in the locations described in the work plan. Five bulk surface soil samples were collected at locations selected randomly in a grid pattern. The locations of the borings and the surface soil samples are shown in Figure 2.

At each boring location, a direct 2¼ -inch push sampler was advanced into the ground using the hydraulic capacity of the truck-mounted drill rig. At each boring location 2 soil samples were collected including a surface soil sample at a depth of 0- to 1- foot and a subsurface soil sample at a depth of 2-to 3- feet (see boring logs provided in Appendix C). Soil samples were collected from within the sampler by removing the polycarbonate sample liner and capping each end with teflon tape and plastic endcaps. Sampling equipment was cleaned by pressure washing between sampling events.

All of the soil samples taken at a depth 0 to 1-foot from Borings 1 through 12 (Figure 2) were analyzed for TPH-gasoline and diesel, BTEX, MTBE, VOCs, PCBs and CAM 17 metals. The soil samples collected at 2- to 3-feet from Borings 1 through 12 were analyzed for TPH-diesel and motor oil, and CAM 17 metals. The 5 shallow soil samples, SS-1 through SS-5, were collected from the ballast rock, and were analyzed for TPH-diesel and motor oil, PCBs and CAM 17 metals.

The 5 shallow soil samples and Borings 6 and 7 were randomly located on a grid. Shallow soil sample SS-3 was collected from one of the soil piles to evaluate potential for petroleum product, solvent and metals contamination. Borings 1, 2, 3 and 5 were collected at the tenant spaces to investigate for potential contamination. Borings 4 and 8 and shallow soil sample SS-2 were collected to evaluate potential impacts from the adjacent Union Pacific Railroad parcel. Borings 11 and 12 were collected from each end of the former maintenance pit area and the former maintenance building at the west end of the site. Borings 9 and 10 were located on each end of the former above ground diesel storage tank.

Grab groundwater samples were collected from each boring following the installation of a temporary PVC well of 3/4-inch diameter. Groundwater samples were collected using clean teflon tubing and a peristaltic pump. Groundwater samples for metals were field filtered using 0.45µm disposable Quickfilter™ filters prior to transfer into sample bottles pre-preserved with nitric acid. The groundwater samples were analyzed for TPH-gasoline and diesel, BTEX, MTBE, VOCs and CAM 17 metals. Most borings had a significant recovered volume of groundwater available for sampling, however heavy silting of Boring 9 prevented the pumping of enough volume to complete the analytical suite.

Soil and groundwater samples were sealed, individually labeled and stored on ice in an ice chest prior to transportation to Chromalab Analytical Laboratory of Pleasanton, California. Chain-of-custody procedures were used during sampling and transport of these samples.

Drill cuttings from the soil borings were collected and stored on-site in a 20 gallon drum. The drum was appropriately labeled and sealed for proper handling. A single composite sample of

the material within the drum, soil sample DC01, was collected and submitted for analysis. Following receipt of the analytical results the drum shall be appropriately disposed by the drilling subcontractor.

#### Observations of Subsurface Conditions

On-site materials were predominantly a silty sand overlain by sandy clay fill and coarse ballast gravel at the surface, as shown on the boring logs in Appendix C. Surface soils in the vicinity of samples SS-1, SS-2 and SS-5 were predominantly a coarse rail ballast gravel with silty sand at approximately 4- to 12-inches below the surface.

Stockpiled fill materials on the northeastern side of the site in the vicinity of surface sample location SS-3 were predominantly a sandy clay with large fragments of green glass, brick and minor charcoal fragments. Surface soils at location SS-4 were predominantly a dense, cohesive, clay with minor gravel and sand.

The depth to groundwater ranged from about one foot to a depth of about four feet. The shallow groundwater conditions may have been a result of recent precipitation during this winter season. The depth to groundwater is noted on the boring logs in Appendix C.

### 2.2 ANALYTICAL RESULTS

This section describes the results of the laboratory analyses performed on the samples collected at the site on February 15 and 16, 1999. Soil and groundwater samples were analyzed by Chromalab, Inc. of Pleasanton, California for TPH-gasoline, BTEX and MTBE, TPH-motor oil, and TPH-diesel by EPA Method 8020A; VOCs by EPA Method 8260; PCBs by EPA Method 8080A; and CAM 17 metals by EPA Method 3050A/6010A/7471A.

# Soil Analytical Results

Table 2-1 presents the results of the laboratory analyses performed on the soil samples from the site. The table is organized by analysis type and sample ID, and only those VOCs, PNAs, PCBs and CAM 17 metals detected in at least one sample are listed on the table. Results above the detection limit are bolded. A dash in the table indicates that the sample was not analyzed for the particular chemical.

Using EPA Method 8020A, TPH-diesel was detected in 21 of the 24 soil samples, ranging in concentration from < 1 mg/kg to 39 mg/kg (Boring 1). TPH-motor oil was detected in 5 of the 24 soil samples, and concentrations ranged from < 50 mg/kg to 350 mg/kg (Boring 1). Since polynuclear aromatic hydrocarbons (PNAs) are often associated with elevated detections of TPHs, the shallow soil sample from Boring 1 was analyzed for PNAs by EPA Method 8270A. However, PNAs were not detected in this sample. TPH-diesel was detected in 2 of the 5 shallow grab samples, and concentrations ranged from < 1 mg/kg to 11 mg/kg (SS-3). TPH-motor oil was not detected in the shallow grab samples. TPH-gasoline and BTEX were not detected in any of the soil samples.

Using EPA Method 8260A, VOCs were not detected in any of the soil samples. EPA Method 8080A was used to detect for PCBs, and only Aroclor 1260 was detected in shallow soil sample SS-1 at a concentration of 0.11 mg/kg. Using EPA Methods 3050A/6010A/7471A, the following CAM 17 metals were detected in nearly all of the soil samples: antimony, arsenic, barium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, selenium, vanadium, zinc and mercury. The metals appear to be distributed throughout the surface soils of the site at background levels, except for lead, which was detected in shallow soil sample SS-1 at a concentration of 380 mg/kg. A citrate waste extraction test (WET) and a deionized (D.I.) water WET test were performed on the 3 shallow soil samples with lead concentrations that exceeded 50 mg/kg. The following concentrations of lead were detected in the citrate WET: Boring 5 < 1mg/l, Boring 11 = 2.2 mg/l and shallow soil sample SS-1 = 33 mg/l. The D.I. water WET analysis reported that concentrations of lead in all 3 samples were below detection levels.

# Shallow Groundwater Analytical Results

Table 2-2 presents the laboratory analyses results for the water samples from the site. The table is organized by analysis type and sample number, and only the VOCs and CAM 17 metals detected in at least one sample are listed on the table. Results above the detection limit are bolded, and a dash indicates that the sample was not analyzed for the particular chemical. The row "Depth to Water" indicates the depth when water was first encountered during drilling.

EPA Method 8020A was used to analyze for TPH-diesel, TPH-gasoline, BTEX and MTBE in groundwater. A total of 13 water samples (including 1 duplicate sample) were analyzed using EPA Method 8020A. Seven of the water samples detected TPH-gasoline at concentrations ranging from 0.052 mg/l to 0.43 mg/l (Boring 10). TPH-diesel was detected in 3 of the 12 water samples analyzed for diesel, and concentrations ranged from 0.099 mg/l to 3.7 mg/l (Boring 10). MTBE was detected in 2 of the 13 water samples at concentrations of 0.062 mg/l and 0.017 mg/l (Borings 1 and 9, respectively). A silica gel cleanup analysis using EPA Method 8015M was performed on the groundwater sample from Boring 10. This analysis was performed to evaluate if the TPH-diesel concentration of 3.7 mg/l was due to natural organics in the groundwater or a spill of diesel. The silica gel cleanup analysis detected a concentration of 2.4 mg/l TPH-diesel in groundwater from Boring 10, indicating that the detected concentration was TPH as diesel.

EPA Method 8260A was used to analyze for VOCs in the groundwater samples. Carbon disulfide, 1,2-dichloroethene (cis), 1,2-dichloroethene (trans), trichloroethene and total xylenes were found in at least one groundwater sample. Carbon disulfide was found in Borings 1 and 5 at concentrations of 0.0012 mg/l and 0.0024 mg/l, respectively. The Boring 6 groundwater sample had detections of 1,2-dichloroethene (cis) at 0.11 mg/l, 1,2-dichloroethene (trans) at 0.0042 mg/l, and trichloroethene at 0.0029 mg/l. Total xylenes were detected in Boring 8 at a concentration of 0.0024 mg/l. Using EPA Method 3050A/6010A/7471A, the following CAM 17 metals were detected in nearly all of the groundwater samples: antimony, barium, cobalt, copper, molybdenum, nickel, selenium, vanadium and zinc.

#### 2.3 DATA VALIDATION

A quality assurance evaluation of the analytical data provided by Chromalab Analytical Laboratory from soil and groundwater samples collected at the Alameda Belt Line site, Alameda California during February of 1999 was undertaken to confirm the accuracy and precision of the laboratory results for use in this report. A total of 24 soil samples (including a soil sample from soil cuttings produced during the investigation), 5 shallow soil samples, and 12 groundwater samples were collected, in addition to a trip blank and a duplicate for groundwater.

Upon receipt of the final laboratory reports, the following steps were taken in accordance with the EPA guidance for data validation. Sample custody documents were cross-checked with laboratory reports for sampling dates and required analyses. Holding times were calculated using analysis date, preparation date, and/or test date in relation to sampling date. The results were reviewed for QA/QC elements of precision, accuracy, reporting limits, and contamination. Also noted were any deviations from plans, protocols, or data quality objectives. Problems and irregularities were discussed with the laboratory, which printed revised reports as necessary. The following QA/QC parameters were reviewed during data evaluation.

- Chains of Custody Verify that requested analyses were performed and that sampling dates are accurately noted in lab reports.
- Holding Times Check for holding times in excess of EPA guidelines.
- Method Blanks Review blank analyses for evidence of potential contamination.
- Matrix Spikes Review spike and spike duplicate recoveries and relative percent differences (RPDs) as a check for analytical precision and accuracy.
- Laboratory Control Samples Review control and control duplicate recoveries and relative percent differences (RPDs) as a check for analytical accuracy and precision.
- Surrogates Review surrogate recoveries as a check for sample specific accuracy.
- Field Blanks Review field blanks for evidence of potential contamination.
- Field Duplicates Review field duplicate analyses for agreement of results as a check for analytical precision.
- Trip Blank Review trip blank as a check for good field technique.

# Chains of Custody

All analyses were performed as requested and samples were adequately accounted for throughout the transfer from the field to the laboratory.

# **Holding Times**

Holding time (the time between sampling and sample preparation/analysis) was not exceeded in any case.

#### Method Blanks

Method blanks did not reveal any laboratory contamination.

# Matrix Spikes

The recoveries for 1,1-dichloroethene and toluene (133% and 244% respectively) for batch 17524 (VOCs) were out of control limits (65%-135%). All other batch QC elements were in control for the associated samples. Several MS/MSD recoveries were outside control limits for TPH-gasoline, BTEX, and MTBE analyses and are summarized in the table below. Volatiles are not qualified based on MS/MSD alone and no qualification was judged necessary for the associated samples.

Out of Control MS/MSD Recoveries for TPH-g, BTEX, and MTBE Analyses

QC Batch	Sample ID	Analyte	MS % Rec.	MSD % Rec.	RPD	Notes
Control I	Limits for Soil	·,.· · · ·	65-135	65-135	<35	
17514	ABL-SB-12-0-1	gasoline	51.7	52.2	0.96	no qual
	±	benzene	62.4	62.0	0.64	no qual
		toluene	57.7	54.6	5.52	no qual
		ethylbenzene	51.1	47.4	7.51	no qual
		xylenes	50.7	46.1	9.50	no qual
Control 1	Limits for Water		65-135	65-135	<20	
17501	PZ-1	MTBE	64.5	74.6	14.5	no qual
17547	BE 2/18	xylenes	68.0	87.3	24.8	no qual

Several MS/MSD recoveries were outside control limits for the metals analyses and are summarized in the table on the next page. These irregularities may be due to matrix interference or matrix heterogeneity. Associated data were qualified as noted in the table. All other QC elements were in control for the affected samples and these discrepancies are not expected to invalidate the data.

Out of Control MS/MSD Recoveries for Metals Analyse
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QC Batch	Sample ID	Analyte	MS % Rec.	MSD % Rec.	RPD	Notes
Control I	imits		80-120	80-120c	<20	
17453	MW-2	Antimony	53.8	55.8	3.65	J or UJ
		Barium	60.0	38.0	44.9	no qual
		Selenium	78.4	76.5	2.45	J or UJ
į		Thallium	75.3	75.5	0.26	J or UJ
:		Zinc	80.0	61.0	27.0	no qual
17454	ABL-SB-9-2-3	Antimony	78.4	76.7	2.19	J or UJ
		Selenium	80.6	77.5	3.92	J or UJ
		Zinc	81.4	78.7	3.37	J or UJ
17459	ST2	Antimony	52.9	47.4	11.0	J or UJ
		Lead	151	108	33.2	J or UJ
		Molybdenum	77.0	75.7	1.70	J or UJ
		Selenium	79.5	77.7	2.29	J or UJ
		Silver	74.9	78.7	4.95	J or UJ
	1.6. 11	Zinc	89.0	79.0	11.9	J or UJ

no qual -- not qualified because spike concentration was less than 4x sample concentration

# Laboratory Control Samples

Laboratory control samples (LCS) were periodically analyzed. All LCS and LCS duplicates analyzed had acceptable recoveries.

# Surrogates

#### Surrogates

Surrogates (1,4-bromofluorobenzene, 1,2-dichloroethane-d4, and toluene-d8) were added to every sample analyzed for volatile organics. Surrogate recoveries for 4-bromofluoro-benzene were out of control for the MS/MSD associated with batch 17552. However, volatile organics are not qualified based on MS/MSD alone and no qualification was judged to be necessary in this case.

Surrogates (trifluorotoluene and 4-bromofluorobenzene) were added to every sample analyzed for TPH-gasoline, BTEX and MTBE. Surrogate recoveries were below control limits for several

samples and were qualified as estimated **J** or **UJ** to indicate potential low bias. The out of control surrogates are summarized in the table on the next page.

# Out of Control Surrogate Recoveries for TPH-g, BTEX, MTBE Analyses

Sample ID	Surrogate	% Recovery	Control Limits	Notes
ABL-SB-2-0-1	4-bromofluorobenzene	55.8	58-124	J or UJ
ABL-SB-5-0-1	4-bromofluorobenzene	37.1	58-124	J or UJ
ABL-SB-11-0-1	4-bromofluorobenzene	33.7	58-124	J or UJ
ABL-SB-12-0-1	4-bromofluorobenzene	41.1	58-124	J or UJ
ABL-GW-4	trifluorotoluene	23.9	58-124	J or UJ
	4-bromofluorobenzene	25.1	50-150	J or UJ

A surrogate (o-terphenyl) was added to every sample analyzed for TPH-diesel. Surrogate recovery for sample ABL-GW-10 was high (306%) compared to control limits (60%-130%) and sample results were qualified as estimated **J** to indicate potential high bias.

Surrogates (decachlorobiphenyl and 2,4,5,6-tetrachloroxyl) were added to every sample analyzed for PCBs. All surrogate recoveries for PCBs were acceptable.

# Field Duplicates

One set of groundwater duplicates was collected and analyzed (ABL-GW-1 and DUPGW01) for TPH-diesel; TPH-gasoline, BTEX, and MTBE; VOCs; and metals. The results and calculated RPDs are summarized in the attached table. In general, agreement between the duplicates is reasonable. These discrepancies are not expected to invalidate the data.

Relative Percent Differences for Water Duplicate Taken on February 15, 1999

Analyte		Units	RL	ABL-GW-1	DUPGW01	RPD
Petroleum	Hydrocarbons		<u> </u>	<u> </u>		
	ТРН-D	ug/L	50	nd	nđ	nc
	TPH-G	ug/L	50	79	52	10.3
	Benzene	ug/L	0.50	nd	nd	nc
,	Toluene	ug/L	0.50	nd	nd	nc
	Ethylbenzene	ug/L	0.50	nd	nd	nc
	Xylenes	ug/L	0.50	nd	nd	nc
	MTBE	ug/L	5.0	62	nd	nc
Volatiles		ug/L	0.5-50	nd	nd	nc
	Carbon disulfide	ug/L	1.0	nd	1.2	nc
Metals						
	Antimony	mg/l	0.0050	nd	nd	nc
	Arsenic	mg/l	0.0050	nd	nd	nc
	Barium	mg/l	0.0050	0.081	0.026	25.7
	Beryllium	mg/l	0.0050	nd	nd	nc
	Cadmium	mg/l	0.0020	nd	nd	nc
	Chromium	mg/l	0.0050	nd	nd	nc
	Cobalt	mg/l	0.0050	nd	nd	nc
:	Copper	mg/l	0.0050	0.023	nd	nc
	Lead	mg/l	0.0050	nd	nd	nc
	Mercury	mg/l	0.0005	nd	nd	nc
	Molybdenum	mg/l	0.0050	nd	nd	nc
	Nickel	mg/l	0.0050	0.053	0.0083	36.5
	Selenium	mg/l	0.0050	nd	0.043	nc
	Silver	mg/l	0.0050	nd	nd	nc
	Thallium	mg/l	0.0050	nd	nd	nc
	Vanadium	mg/l	0.0050	nd	0.016	nc
	Zinc	mg/l	0.010	0.011	nd	nc

RL = Reporting Limit

# **SECTIONTWO**

# **Summary of Field Sampling and Laboratory Analyses**

RPD = Relative Percent Difference (the difference between the two concentrations divided by the average of the two concentrations)

nd = Not detected above the reporting limit

nc = Not calculated due to nd status of at least one of the samples being compared

# Trip Blanks

One trip blank was sampled and analyzed for VOCs. Target analytes were not detected in the trip blank.

# Field QA/QC

A groundwater duplicate sample (DUPGW01) was collected during the groundwater sampling at Boring 5 and submitted for the same analyses as for the Boring 5 groundwater sample. A laboratory prepared trip blank (TR01) was submitted for VOC analysis only. The trip blank is used to assess the potential for sample contamination due to sample storage and analysis within the laboratory.

# Summary

The data reviewed are of acceptable precision and accuracy for use in this soil and groundwater assessment report.

This section describes the evaluation of the results of the field sampling and laboratory analysis activities. The purpose of this evaluation is to indicate if soil and groundwater conditions may be of concern regarding protection of human health and the environment based on long-term exposure to low-levels of contaminants. Considering that the site is planned for residential development, the results of this evaluation will be used to support decisions about the need (if any) and extent of further characterization and/or remedial actions necessary for the future land use.

For soil, the evaluation was based on comparing detected soil concentrations to the U.S. EPA Region 9 Preliminary Remedial Goals (PRGs). For groundwater, detected concentrations were compared to drinking water criteria.

# **Evaluation of Soil Samples Results**

Table 3-1 presents the comparison of detected soil concentrations to the PRGs. The maximum detected concentration was conservatively selected for the comparison. The table also presents the number of times the chemicals were analyzed, the number of times they were detected in the soil samples, the average detected concentration, and the sample location where the maximum concentration was detected.

The PRGs are conservative, non-site-specific, risk-based concentrations corresponding to a cancer risk of one-in-a-million or a unit (one) non-cancer hazard quotient for residential or commercial/industrial receptor exposure scenarios (USEPA 1998). The soil PRGs assume exposure to chemicals due to incidental ingestion, dermal contact, inhalation of particulates, and inhalation of vapor emissions into ambient air (VOCs only). For instance, a very conservative hypothesis of the soil PRGs is that there is and will be no barrier between the contaminated soil and the receptor. Due to their conservatism, the PRGs are used as screening-level criteria. If representative site concentrations do not exceed PRGs, and the site has been adequately investigated, no further action is generally warranted in terms of protection of human health. If PRGs are exceeded, a more refined, site-specific evaluation of potential risk may need to be performed.

As shown on Table 3-1, arsenic and lead maximum detected concentrations were the only two exceedences of residential soil PRGs. These exceedences are discussed below.

The average arsenic detected concentration was 3.9 mg/kg. This metal was detected in 26 out of 30 samples. As shown in Table 2-1, sample location SB-8 is the only one with detected concentration above 20 mg/kg. These detected arsenic concentrations and the associated variability are within the expected natural background in Northern California soil. This conclusion is based on the results of background studies (Shaklette, H. T., et al., "Elemental Composition of Surficial Material in the Conterminous United States", 1971), (USGS Professional Paper "Geochemistry of Some Rocks, Soil, Plant and Vegetables in the Conterminous United States", 1975), (C. Scott, "Background Metal Concentrations in Soils in Northern Santa Clara County, California", MS Thesis, USF 1991.). These studies indicate that in Santa Clara County the arsenic mean soil concentration was found to be about 2.9 mg/kg, and the upper range of arsenic soil background concentrations in the Western U.S. is well above 150

mg/kg, with a mean of 11 mg/kg. Recently, background threshold levels in the order of 15 to 20 mg/kg were approved by Cal/EPA and other local Agencies for Bay Area sites such as the Hamilton Army Airfield in Novato, the FMC site in San Jose, and the San Francisco International Airport in San Mateo. In the PRG document (USEPA 1998), the Agency states that the published PRGs are not applicable in case they exceed the soil background concentration. Based on the above considerations, it is concluded that arsenic detected in the soil samples does not warrant any further consideration from the standpoint of human health protection.

The average detected soil lead concentration was 36 mg/kg. This concentration is well below the California-modified residential soil PRG of 130 mg/kg (USEPA 1998). This indicates that lead is not a concern when considered on a site-wide basis. However, the mean lead concentration is higher than the concentration of 11.5 mg/kg expected for soil lead background according to the Santa Clara study (Scott 1991). The reported soluble lead concentration from the Waste Extraction Test of sample SS-1 is 33 mg/l, which exceeds the STLC of 5 mg/l and would characterize this soil as a hazardous waste. However, reported soluble lead is less than the reporting limit of 0.5 mg/l using de-ionized water for the Waste Extraction Test.

The California EPA residential target level of 130 mg/kg is being updated by the Department of Toxic Substances Control, and the new level is 300 mg/kg (personal communication between Dr. Kimi Klein/DTSC and Mr. Marco Lobascio/URSGWC, March 3, 1999). The reason for the revision is due to the change of the expected dietary concentration of lead in food with respect to the value recommended in the DTSC Supplemental Guidance for Human Health Multimedia Risk Assessment (1992). Based on the results of the FDA Market Basket Study (Gunderson, Ellis L. FDA Total Diet Study, July 1986-April 1991, Dietary Intakes of Pesticides, Selected Elements, and Other Chemicals. Journal of AOAC International, Vol. 78, No. 6, 1995), this concentration changes from 0.01 to 0.00256 mg-lead/kg-diet. URSGWC ran the LeadSpread model with the new value of dietary concentration (Appendix E), and obtained a residential soil lead concentration of 300 mg/kg instead of 130 mg/kg. The model estimates that this soil concentration is protective of children at the 99 percent confidence level. As shown in Appendix E, the estimated child target blood lead concentration of 0.01 mg-lead/dl-blood (DTSC 1992) is not exceeded when the on-site soil concentration is 300 mg/kg.

The maximum detected concentration of 380 mg/kg at location SS-1 warrants further consideration due to the exceedance of the revised California PRG of 300 mg/kg. The California PRG is based on very stringent exposure assumptions about children's potential intake and bioavailability of lead in soil. It should also be noted that the Federal PRG for lead of 400 mg/kg is not exceeded in the site samples. One of the main assumptions of the lead exposure model used to develop the PRGs is that children are exposed by direct contact (including incidental ingestion and dermal contact) with soil containing a constant lead concentration for six years. This can happen only in case the area of soil affected by lead is sufficiently large, which corroborates the assumption that all of the soil ingested is impacted by lead. In addition, it is assumed that there are and will be no barriers limiting the potential for direct contact exposure with the affected soil. Based on these considerations, it is concluded that the soil near location SS-1 needs to be delineated to evaluate the significance of the exceedance of the lead PRG. Depending on the extent of the delineated area impacted by lead it will be possible to make recommendations about the need (if any) for remedial action.

Since TPH is a mixture of many hydrocarbons, a risk-based PRG is not available. Therefore, the evaluation of detected TPH-diesel and TPH-motor oil was performed by comparing detected concentrations of relevant TPH indicator compounds with their respective PRGs, namely the BTEX and the PNA compounds (ASTM 1995). As reported in the previous sections, the BTEX and PNA compounds were non-detectable in the samples analyzed. Therefore, it is concluded that soil TPHs detected at the site do not represent a concern to human health.

# **Evaluation of Shallow Groundwater Samples Results**

For shallow groundwater, the maximum detected concentration was compared to the MCL (DTSC 1994), the AL (DTSC 1994), or the Region 9 Tap Water PRGs (USEPA 1998), in order of priority. The MCL and AL are state and/or federal drinking water standards. The Tap Water PRGs are drinking water concentrations corresponding to a cancer risk of 1x10-6 (one-in-a-million) or to a unit (1.0) non-cancer hazard quotient for a residential exposure scenario. The screening used the drinking water standards due to the lack of groundwater criteria for uses other than potable. This was done only to focus on the most important chemicals, and does not imply that the shallow groundwater at the site should be considered a viable source of drinking water. In case of significant exceedance of the stringent drinking water standards, a more refined evaluation of the potential uses of the shallow groundwater may be warranted to develop appropriate site-specific groundwater criteria that are protective of human health and the environment for the exposure scenarios corresponding to those uses.

Table 3-2 presents the comparison of the maximum detected groundwater concentration to water quality criteria. As shown on the table, MTBE, 1,2-dichloroethene (1,2-DCE), antimony, nickel, and selenium maximum detected concentration exceeded the drinking water standards.

MTBE was detected in 2 of the 13 samples at concentrations of 0.062 and 0.017 mg/l, only marginally exceeding the AL of 0.035 mg/l. This exceedance is evaluated to be of no concern to human health due to the low frequency and magnitude, and the fact that the shallow groundwater is not a viable source of drinking water.

1,2-DCE was detected in one out of 13 samples at a concentration of 0.11 mg/l, exceeding the MCL of 0.006 mg/l. This exceedance is likely to be of minor concern to human health due to the low frequency and magnitude, and the fact that the shallow groundwater is not a viable source of drinking water. Moreover, there is evidence of natural attenuation occurring in that area of the site. Evidence shows that reductive dechlorination of TCE into 1,2-DCE (cis) and 1,2-DCE (trans) is occurring. This process generally occurs in an anaerobic, methane-rich environment by methanogenic bacteria. However, additional delineation and confirmation needs to be performed near location GW-6 to support the above conclusion.

Even in the unlikely case that the shallow groundwater may be used as a drinking water source, the 1,2-DCE detection should be averaged with the 12 non-detects to obtain a concentration representing the overall site conditions. Conservatively assuming that the non-detects are all at the detection limit of 0.0005 mg/l, the average 1,2-DCE concentration is 0.009 mg/l, exceeding the MCL of 0.006 mg/l by a factor of less than two. This exceedance is evaluated to be not of concern in terms of protection of human health, provided that the recommended additional

delineation activity confirms the assumption of relatively limited extent of area impacted by 1,2-DCE.

Antimony was detected in 3 out of 12 samples at concentrations of 0.0098, 0.0084, and 0.0069 mg/l, only marginally exceeding the MCL of 0.006 mg/l. This exceedance is evaluated to be of no concern to human health due to the low frequency and magnitude, and the fact that the shallow groundwater is not a viable source of drinking water.

Nickel was detected in one out of 12 samples at a concentration of 0.27 mg/l, slightly exceeding the MCL of 0.1 mg/l. This exceedance is evaluated to be of no concern to human health due to the low frequency and magnitude, and the fact that the shallow groundwater is not a viable source of drinking water.

Selenium was detected in one out of 12 samples at a concentration of 0.051 mg/l, barely exceeding the MCL of 0.05 mg/l. This exceedance is evaluated to be of no concern to human health due to the low frequency and magnitude, and the fact that the shallow groundwater is not a viable source of drinking water.

Since TPH is a mixture of many hydrocarbons, water quality criteria or risk-based PRGs are not available. Therefore, the evaluation of detected TPH-diesel and TPH-motor oil was performed by comparing detected concentrations of relevant TPH indicator compounds, the BTEX and the PNAs, with their respective risk-based criteria (ASTM 1995). As reported in the previous sections, the BTEX compounds were non-detectable in the samples analyzed. Concerning the PNAs, we estimated the benzo(a)pyrene (BaP) and naphthalene expected water concentration corresponding to the maximum detected TPH-diesel concentration according to the California LUFT manual corrected as referenced in Calabrese (1993) and Guerin (1984). The estimated BaP concentration is  $0.07x10^{-6}$  mg/kg-diesel \* 3.7 mg-diesel/L =  $0.26x10^{-6}$  mg/l, which is significantly lower than detection limit of  $0.5x10^{-4}$  mg/l. The estimated naphthalene concentration is  $0.13x10^{-2}$  mg/kg-diesel \* 3.7 mg-diesel/L = 0.0048 mg/l, which is lower than the tap water PRG of 0.0062 mg/l (there is no MCL for this chemical). Based on the above considerations, it is concluded that TPHs detected in shallow groundwater at the site do not represent a human health concern. Additional delineation of TPH in groundwater may be required by the County for documentation purposes.

# 4.1 CONCLUSIONS

Based upon our review of field exploration and laboratory analysis of soil and groundwater samples collected at the Alameda Belt Line site during this environmental site assessment, we conclude the following:

#### Soil Conditions

The laboratory analyses results indicate that:

- The VOCs and the SVOCs, in particular BTEX and PNAs, were not detectable in the soil samples.
- The maximum reported concentration of 350 mg/kg Total Petroleum Hydrocarbons (TPH) as motor oil in shallow soil at Boring 1 and 39 mg/kg TPH-diesel are below the Alameda County guidance of a maximum of 1,000 mg/kg TPH motor oil in soil. In addition, the BTEX and the PNAs, that are the "risk drivers" for TPH (ASTM 1995), were non detectable. Therefore, it is concluded that TPH in soil does not warrant further consideration concerning protection of human health from potential exposure to residual chemicals in soil.
- The reported concentrations of arsenic with a maximum detection of 22 mg/kg in shallow soil from Boring 8 are within the expected arsenic background range, based upon our review of the background metals concentrations for this region. Therefore, no further consideration is warranted for arsenic in soil.
- The maximum concentrations of the other chemical compounds detected in soil samples did not exceed residential soil PRGs, with the exception of lead detected in shallow soil at a maximum reported concentration of 380 mg/kg at location SS-1. This concentration exceeds the revised California EPA-modified residential PRG of 300 mg/kg. Additional delineation of the extent of the area where lead exceeds 300 mg/kg is warranted. Based on the results of the delineation it will be possible to draw conclusions about the need (if any) for remedial actions related to lead in soil near location SS-1.

### **Groundwater Conditions**

The laboratory analyses results indicate that:

- The BTEX and the PNAs were not detectable in the shallow groundwater samples, except for an isolated detection of total xylenes (well below the MCL) and MTBE, which is addressed below. The PNA concentrations were estimated from TPH-diesel based on the method of Calabrese (1993) and Guerin (1984).
- The laboratory reports detection of TPH gasoline at 0.43 mg/l, and diesel at 3.7 mg/l in groundwater from Boring 10. BTEX and PNAs, the "risk drivers" for TPH (ASTM 1995), were non-detectable. While there is no regulatory guidance (MCL, Action Level, or tap water PRG) for TPH diesel or gasoline in groundwater these detections may require further delineation following review by the Alameda County Department of Environmental Health.

- The laboratory reports that the concentration of MTBE in groundwater from Boring 1 of 0.062 mg/l MTBE slightly exceeds the Action Level of 0.035 mg/l. This exceedance is evaluated to be of no concern to human health due to the low frequency and magnitude, and the fact that the shallow groundwater is not a viable source of drinking water.
- The concentration of VOCs in groundwater do not exceed either the California MCL or the USEPA PRG for tap water in groundwater samples from the exploratory borings, with the exception of 1,2-DCE. The laboratory reports that the concentration of 1,2-DCE (cis) in groundwater from Boring 6 exceeds the MCL of 0.006 mg/l. This exceedance is likely to be of minor concern to human health due to the low frequency and magnitude, and the fact that the shallow groundwater is not a viable source of drinking water.

Moreover, there is evidence of natural attenuation occurring in that area of the site. Evidence shows that reductive dechlorination of TCE into 1,2-DCE (cis) and 1,2-DCE (trans) is occurring. This process generally occurs in an anaerobic, methane-rich environment by methanogenic bacteria. However, additional delineation and confirmation needs to be performed near location GW-6 to support the above conclusion.

Even in the unlikely case the shallow groundwater may be used as a drinking water source, the 1,2-DCE detection should be averaged with the 12 non-detects to obtain a concentration representing the overall site conditions. Conservatively assuming that the non-detects are all at the detection limit of 0.0005 mg/l, the average 1,2-DCE concentration is 0.009 mg/l, exceeding the MCL of 0.006 mg/l by a factor of less than two. This exceedance is evaluated to be not of concern in terms of protection of human health, provided that the recommended additional delineation activity confirms the assumption of relatively limited extent of area impacted by 1,2-DCE.

• The concentration of metals in groundwater do not exceed either the California MCL or the USEPA PRG for tap water, with the exception of slight exceedances of antimony in groundwater from Boring 4, selenium from Boring 7, and nickel from Boring 8. The reported concentration of antimony at 0.0098 mg/l slightly exceeds the MCL of 0.006 mg/l, selenium reported at 0.051 mg/l slightly exceeds the MCL of 0.05 mg/kg, and nickel at 0.27 mg/l slightly exceeds the MCL of 0.10 mg/l. Since drinking water at the future site development will be supplied by the local public water supply, and there is a low potential for incidental contact of construction workers or future residents to the relatively low concentrations, it is concluded that no further consideration is warranted for metals in groundwater at this site.

#### **Overall Conclusions**

• It is our opinion that this site may be used for the planned residential development provided that the additional investigation activities and appropriate remedial actions recommended below are developed and performed to address the environmental issues identified in this study.

# 4.2 RECOMMENDATIONS

Recommendations for the intended residential use of the site are:

# e: while with

#### Recommended Actions for Site Soils

We recommend that additional soil sampling be performed in the vicinity of shallow soil sample location SS-1 and laboratory testing be performed on these samples for total lead to evaluate the extent of lead impacted soils. Remedial actions are recommended for soil containing lead at concentrations exceeding the revised California/EPA of 300 mg/kg for residential exposure scenario. A soil management plan should be developed for lead impacted soils. The remedial alternatives for lead impacted soils include:

- Excavation of soils exceeding the revised California/EPA PRG of 300 mg/kg lead and disposal of these excavated soils at an off-site approved waste management site, or
- Excavation of soils exceeding 300 mg/kg lead and placement of these soils beneath a capping layer of clean soil or asphaltic concrete pavement or concrete pavement. Possible placement under the street areas or parking might be considered. This option may require a notification be placed on file at the City of Alameda to identify the area of placed soils with lead for future subsurface site activities.
- Excavation of soils exceeding 300 mg/kg lead and on-site treatment to reduce the soluble lead concentrations to levels acceptable to Alameda County.
- Performance of a site-specific risk-based evaluation for potential exposure to lead in soil.

#### Recommended Actions for Site Groundwater

Since it is unlikely that groundwater at the site will be used for drinking water, no active remediation of impacted groundwater is recommended. It is assumed that the drinking water for the planned development will be supplied by the local public water supply. In addition there is a low potential for incidental contact of construction workers and future residents at the site with groundwater. We recommend the following:

- Exploration of the extent of impacted groundwater with 1,2-DCE exceeding the MCL of 0.11 mg/l in the vicinity of Boring 6.
- Exploration of the extent of impacted groundwater with TPH gasoline and diesel in the vicinity of Boring 10.
- Installation of groundwater monitoring wells and documentation of stability of the plume and natural attenuation is the recommended long-term approach for areas affected by 1,2-DCE, and TPH-gasoline and diesel.
- No further actions for metals in groundwater is recommended.

# Site Preparation - Removal of Rails and Ties and Tenant Materials

We understand that it is the responsibility of the seller to have the tenant remove the stored vehicles, boats, equipment, wood and debris that remains in one of the tenant spaces. In addition, we understand that the seller will remove the existing tracks and wooden railroad ties. We recommend that the removal of rails and ties be observed and documented by a representative of Sun Country Partners, LLP. We also recommend that removal of the tenant materials be observed and documented by a representative of Sun Country Partners, LLP. A URSGWC representative should visit the site to document the removal of tenant materials and observe the surface conditions in the tenant space.

# Site Preparation - Removal of Maintenance Pits

We recommend that a URSGWC representative observe the demolition of the two maintenance pits. Samples of soil should be collected from adjacent to these pits, and be analyzed in the laboratory for TPH-motor oil, diesel, gasoline and BTEX. If the field observations indicate evidence of petroleum in groundwater during the pit demolition, such as a visible sheen on the water in the excavations, samples of water from the excavations should be collected and submitted to the laboratory for analysis for TPH-motor oil, diesel, gasoline and BTEX. If laboratory analyses of soil samples indicate that soil adjacent to the pit walls is impacted with TPH exceeding 1,000 mg/kg, these soils should be excavated and either disposed off-site, or managed on-site by placement under pavement areas. The management of soils with potential TPH should be approved by the County.

**SECTION**FIVE Limitations

It would be extremely expensive, and perhaps impossible, to conduct a site reconnaissance or investigation which would ensure detection of materials at the subject property which are now or in the future might be considered hazardous. Our failure to discover hazardous materials through a reasonable and mutually agreed-upon limited scope of work does not guarantee that hazardous materials do not exist on an area. Similarly, an area which in fact is unaffected by hazardous materials at the time of our assessment may later, due to natural phenomena or human intervention, become contaminated.

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TABLE 2-1. SUMMARY OF LABORATORY ANALYSIS RESULTS FOR SOIL SAMPLES [mg/kg]

Sample ID	ABL-DC01 (Soil Cuttings)	ABL-SS-1-0-1	ABL-8S-2-0-1	ABL-SS-3-0-1	ABL-SS-4-0-1	ABL-SS-5-0-1	ABL/SB-1-0-1	ABL-SB-1-2-3	ABL-SB-2-0-1	ABL-SB-2-2-3	ABL-SB-3-0-1	ABL-SB-3-2-3	ABL-SB-4-0-1	ABL-5B-4-2-3	ABL-SB-5-0-1	ABL-SB-5-2-3	ABL-SB-6-0-1	ABL-SB-6-2-3	ABL-SB-7-0-1	ABL-SB-7-2-3	ABL-SB-8-0-1	ABL-SB-8-2-3	ABL-SB-9-0-1	ABLSB-9-2-3	ABL-SB-10-0-1	ABL-SB-10-2-3	ABL-SB-11-0-1	ABL-SB-11-2-3	ABL-SB-12-0-1	ABL-SB-12-2-3
Sampling Date	2/16/99	2/16/99	2/16/99	2/16/99	2/16/99	2/16/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99
Sampling Depth [ft]	-	0-1	0-1	0-1	0-1	0-1	0-1	2-3	0-1	2-3	0-1	2-3	0-1	2-3	0-1	2-3	0-1	2-3	0-L	2-3	0-1	2-3	0-1	2-3	0-1	2-3	0-1	2-3	0-L	2-3
втех, мтре, тр	ly, and Ti	PHd by	EPA Me	thod 802	OA.															_										
Benzene	<0.005	(E	-	-	-	-	<0.005	-	<0,005		<0.005	_	<0.005	-	<0.005	-	< 0.005		-		<0.005	-	<0.005	-	<0.005	-	<0.005	-	<0.005	-
Toluene	<0.005	12	-	100	-	125	<0.005		<0.005	- 1	< 0.005	-	<0.005	46	<0.005	-	<0.005	-	<0.005	-	<0.005		<0.005	_	<0.005	44	<0.005	(4.0	< 0.005	-
Ethlybenzene	<0.005	-	E4- 1	99	#	-	<0.005		<0.005	:=:	<0.005	-	<0.005	100	<0.005	-	<0.005	-	<0.005	gar.	<0.005	===	<0.005	-	<0.005	-	<0.005		<0.005	-
Total Xylenes	<0.005	er.	100	30	-	100	<0.005	~	<0.005	-	<0.005	<del></del>	<0.005		< 0.005	-	<0.005	-	<0.005	: ¥- :	<0.005	144	<0.005	-	<0.005		<0.005	-	<0.005	-
TPH-Diesel	<10	3.5	<1.0	11	<1.0	<1.0	39.0 H	1.1 H	6.8 H	5.8 H	7.6 H	6.2 H	<1.0	6.4 H	16.0 H	10.0 H	7.0 H	6.5 H	<1.0	5.0 H	5.1 H	9.8 H	6.1 H	<1.0	38.0 H	-	36.0 H	5.0 H	36.0 H	4.6 H
TPH-Motor Oil	-	<50	<50	<50	<50	<50	350.0 H	<50	<50	<50	<50	<50	<50	<50	66.0 H	<50	<50	<50	<50	<50	<50	<50	<50	<50	72.0 H	<50	280.0 H	<50	180.0 H	<50
TPH-Gasoline	<10	-	-	-	-		<10		<10	-	<10	-	<1.0	-	<10	-	<1.0	-	<10	-	<1.0		<10	_	<1.0		<1.0	-	<1.0	-
VOCa by EPA Meti	and 8260/																													
None Detected	(05;ئ				-	1=1	<5,<50	-	<5;<50		<5 <50	_	<5,<50	_	<5 <50	=	<5;<50		<5,<50	1122	ර ර0		<5;<50		<5;<50		<5;<50	_	< <b>ර</b> ,< <b>්</b> 0	-
SVOCs by EPA Me	thed 8270	A																												
PNAs	-	2-2	141	<del>14</del>	-		<0.05-<2		- 1	- 1	-	-	- 1	-	-	_	-		-	~	- 1	-	-		-	_	131			-
PCBs by EPA Meth	ed 8080A	(detecte	d only)												75															
AROCLOR 1260	<0.1	0.11	<01	<0.1	<0.1	<0.1	<0.66 S	-	<0.1	-	<0.1	-	<0.1		<0.66 S	-	<0.1	· e:	<01	-	<01	-	<0.1	_	<01	-	<0.1	146	<0.1	-
CAM 17 Metals by	EPA Med	hed 3050	A/ 6010/	V 7471A	(detecte	d anly)																		- 1						
Antimony	<2.0	5	<20	<2.0	<2.0	<20	<20	<2.0	<20	<2.0	<2.0	<2.0	<20	<2.0	<2.0	<20	<2.0	<2.0	<2.0	<20	<20	<20	<2.0	<2.0	<2.0	<2.0	<20	<2.0	<2.0	<20
Arsenic	1.3	12	6.3	3.4	2.5	3.1	3.1	1.7	<1.0	<1.0	2.7	1.2	3.8	1.8	1.6	2	2.2	<1.0	2.8	1.2	22	3.5	3.4	16	4	<1.0	4	2.2	2.2	2.1
Barium	22	120	60	160	46	62	57	15	11	11	68	24	40	51	62	32	47	9.1	40	48	28	34	190	11	240	9.6	76	25	39	14
Cadmium	<0.5	3.9	<0.5	0.79	<0.5	<0.5	< 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5
Chromium	17	35	21	18	28	29	29	22	17	16	26	22	28	34	28	30	27	21	21	20	27	30	21	18	47	22	38	29	27	25
Cobalt	2.5	6.2	4.6	15	5.2	7.1	4.5	2.8	2.5	1.8	6.6	4.4	4.6	6.1	9.2	3.4	4.2	2.2	7.5	5	17	11	9.9	2.4	17	2	9.1	3	4.4	2.4
Copper	5.5	160	16	15	15	17	12	3.7	3	3.2	52	21	20	9.6	45	14	14	2.6	62	9.3	25	18	14	5	19	2.7	81	10	9.5	4.2
Lead	2.7	380 +	41	64	11	36	65	2.4	1.6	6.6	50	5.5	88	4.3	50 *	30	29	1.2	24	4.3	7.9	6.8	9.7	6.4	9.6	1.9	93 +	12	5.5	3.2
Mercury	<0.05	0.26	0.24	0.18	0.21	0.071	<0.05	<0.05	<0.05	< 0.05	0.11	<0.05	0.14	<0.05	0.097	< 0.05	<0.05	<0.05	0.2	<0.05	0.057	<0.05	<0.05	<0.05	0.052	<0.05	0.058	0.067	<0.05	<0.05
Molybdenum	<1	1.5	<1	<1	<1	<1	<1	<i< td=""><td>&lt;1</td><td>&lt;1</td><td><l< td=""><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td><l< td=""><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td><l< td=""><td><l< td=""><td>&lt;1</td><td>&lt;1</td><td><i.< td=""><td>&lt;1</td></i.<></td></l<></td></l<></td></l<></td></l<></td></i<>	<1	<1	<l< td=""><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td><l< td=""><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td><l< td=""><td><l< td=""><td>&lt;1</td><td>&lt;1</td><td><i.< td=""><td>&lt;1</td></i.<></td></l<></td></l<></td></l<></td></l<>	<1	<1	<1	<l< td=""><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td>&lt;1</td><td><l< td=""><td><l< td=""><td>&lt;1</td><td>&lt;1</td><td><i.< td=""><td>&lt;1</td></i.<></td></l<></td></l<></td></l<>	<1	<1	<1	<1	<1	<1	<1	<1	<1	<l< td=""><td><l< td=""><td>&lt;1</td><td>&lt;1</td><td><i.< td=""><td>&lt;1</td></i.<></td></l<></td></l<>	<l< td=""><td>&lt;1</td><td>&lt;1</td><td><i.< td=""><td>&lt;1</td></i.<></td></l<>	<1	<1	<i.< td=""><td>&lt;1</td></i.<>	<1
Nickel	12	47	24	18	32	45	30	24	19	15	32	20	28	41	33	20	29	17	22	32	24	21	42	19	99	17	59	26	24	17
Selenium	<2	3.5	<2	<2	<2	2.2	<2	<2	<2	<2	2	<2	2	<2	2.7	2.5	<2	<2	<2	<2	2	2	<2	2.1	2.2	<2	2.6	<2	<2	2
Vanadium	13	22	18	85	23	20	22	14	10	9.6	24	19	20	21	33	22	19	13	23	13	26	24	16	12	20	14	28	23	20	18
								_																	=-		40		40	215

#### Notes

Results above detection limit are builded.

Soil number are a composite of 1 foot of soil.

H = Hydrocarbon does not match the pattern standard or have a characteristic hydrocarbon pattern.

<sup>\*</sup> Samples analyzed for DI Water STLC Lead did not detect concentrations: ABL-SB-5-0-1 = < 1 mg/L, ABL-SB-11-0-1 = 2.2 mg/L, ABL-SS-1-0-1 = 33 mg/L. Samples analyzed for DI Water STLC Lead did not detect concentrations of lead above the reporting limit.

TABLE 2-2. SUMMARY OF LABORATORY ANALYSIS RESULTS FOR WATER SAMPLES [mg/L]

Sample ID	TB01	DUP-GW-1	ABL-GW-1	ABL-GW-2	ABL-GW-3	ABL-GW-4	ABL-GW-5	ABL-GW-6	ABL-GW-7	ABL-GW-8	ABL-GW-9	ABL-GW-10	ABL-GW-11	ABL-GW-12
Sampling Date	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99
Depth to Water [ft]		2.7	2.7	2.7	2.1	1.5	3.4	3.6	3.1	9.0	1.3	1.3	3.0	3.2
BTEX, TPH2, TPH4, MTBE	by EPA Met	thod 8020A												
Benzene		<0.0005	< 0.0005	< 0.0005	<0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	<0.0005	< 0.0005	< 0.0005	< 0.0005
Toluene		<0.0005	< 0.0005	< 0.0005	<0.0005	<0.0005	<0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	<0.0005	< 0.0005	< 0.0005
Ethlybenzene		< 0.0005	< 0.0005	< 0.0005	<0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	<0.0005	<0.0005	< 0.0005	<0.0005
Total Xylenes		<0.0005	< 0.0005	< 0.0005	<0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0024	< 0.0005	< 0.0005	<0.0005	< 0.0005
TPH-Gasoline	- (+)	0.052 H	0.079 H	<0.050	0.160 H	< 0.050	< 0.050	0.110 H	< 0.050	0.055 H	0.092 H	0.430 H	< 0.050	< 0.050
TPH-Diesel	- 44	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.100 H	0.099 H	< 0.050	< 0.050	-*	3.700 H S	< 0.050	< 0.050
МТВЕ	**	<0.005	0.062	< 0.005	< 0.005	< 0.005	<0.005	<0.005	< 0.005	< 0.005	0.017	< 0.005	< 0.005	< 0.005
VOCs by EPA Method 8260A	(detected or	nly)												
Carbon Disulfide	< 0.001	0.0012	<0.001	<0.001	<0.001	< 0.001	0.0024	< 0.001	< 0.001	< 0.001	++ *	< 0.001	<0.001	< 0.001
1,2-Dichloroethene (cis)	<0.0005	< 0.0005	<0.0005	<0.0005	<0.0005	< 0.0005	<0.0005	0.11	< 0.0005	< 0.0005	+ 4	< 0.0005	< 0.0005	<0.0005
1,2-Dichloroethene (trans)	<0.0005	<0.0005	<0.0005	< 0.0005	<0 0005	< 0.0005	< 0.0005	0.0042	<0.0005	< 0.0005		< 0.0005	< 0.0005	<0.0005
Trichloroethene	<0.0005	< 0.0005	< 0.0005	<0.0005	< 0.0005	< 0.0005	<0 0005	0.0029	< 0.0005	< 0.0005		<0.0005	<0.0005	< 0.0005
Total Xylenes	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	<0.001	< 0.001	0.0019		< 0.001	<0.001	< 0.001
CAM 17 Metals by EPA Met	hod 3050A/6	010A/ 7471A	(detected o	nly)										
Antimony	***	< 0.005	< 0.005	0.0057	< 0.005	0.0098	< 0.005	0.0059	0.0057	0.0052	24	0.0084	0.0069	< 0.005
Barium	(m)	0.026	0.081	0.022	0.055	0.067	0.022	0.1	0.019	0.026	<b>**</b> *	0.019	0.058	0.024
Cobalt	146	< 0.005	< 0.005	<0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06	*	< 0.005	< 0.005	0.0064
Copper	5 <del>-2</del> 5	< 0.005	0.023	0.033	0.043	0.032	0.0023	0.033	0.027	0.063		0.045	0.019	0.043
Molybdenum	-	< 0.005	< 0.005	<0.005	<0.005	< 0.005	< 0.005	< 0.005	0.0065	< 0.005	*	< 0.005	0.0068	< 0.005
Nickel		0.0083	0.053	0.0075	0.012	0.0069	<0.005	0.015	0.0056	0.27	- +	0.018	0.0082	0.012
Selenium		0.043	<0.005	<0.005	0.0073	< 0.005	0.051	0.0077	<0.005	0.0059		< 0.005	0.013	0.0059
Vanadium	**	0.016	< 0.005	< 0.005	< 0.005	< 0.005	0.019	<0.005	< 0.005	< 0.005	*	< 0.005	< 0.005	< 0.005
Zinc	-	<0.01	0.011	0.036	0.013	0.018	< 0.01	0.014	0.01	0.24	*	0.022	0.027	0.011

#### Notes:

Results above detection limit are bolded.

<sup>\* =</sup> Not enough water collected due to silting of borehole.

H = Hydrocarbon does not match the pattern standard or have a characteristic hydrocarbon pattern.

S = Analysis by EPA Method 8015M silica get cleanup detected a diesel concentration of 2.4 mg/L.

TABLE 3-1. COMPARISON OF SOIL MAXIMUM DETECTIONS WITH U.S.EPA REGION 9 PRGs

Sample II)	Number of Samples Analyzed	Number of Detections	Average Detected Cone. [mg/kg]	Maximum Detection [mg/kg]	Location of Maximum Detection	Residential Soil PRG [mg/kg]	Is Soil PRG Exceeded by Max. Conc. ?
TPH-Diesel	29	23	12.4	39 H	SB-1-0-1	N/A	NO
TPH-Motor Off	29	5	190	350 H	SB-1-0-1	N/A	NO
AROCLOR 1260	18	1	0.11	0.11	SS-1-0-1	0.2	NO
Antimony	30	1	5.0	5.0	SS-1-0-1	30	NO
Arsenic	30	26	3.9	22	SB-8-0-1	0.377 to 20.8	PRG Exceeded
Barium	30	30	56	240	SB-10-0-1	5,150	NO
Cadmium	30	3	1.9	3.9	SS-1-0-1	9	NO
Chromium	30	30	26	47	SB-10-0-1	211	NO
Cobalt	30	30	6.2	17	SB-10-0-1	3,250	NO
Copper	30	30	24	160	SS-1-0-1	2,780	NO
Lend	30	30	36	380	SS-1-0-1	300* (130)	PRG Exceeded
Mercury	30	13	0.13	0.26	SB-8-0-1	5.45	NO
Molybdenum	30	1	1.5	1.5	SS-1-0-1	. 375	NO
Nickel	30	30	30	99	SB-10-0-1	150	NO
Selentum	30	11	2.3	3.5	SS-1-0-1	375	NO
Vanadium	30	30	22	85	SS-3-0-1	525	NO
Zinc	30	30	61	460	SS-1-0-1	22,500	NO

#### Notes:

H = Hydrocarbon does not match the pattern standard or have a characteristic hydrocarbon pattern.

PRG = Preliminary Remedial Goal. USEPA 1998. Region 9 PRG Tables. May.

Exceedances of PRG are bolded.

DATA395.XLS 3/15/99 aag

<sup>\*</sup> The California-modified PRG of 130 mg/kg was revised based on the updated FDA dietary concentration as explained in Section 3.0 and Appendix E.

TABLE 3-2. COMPARISON OF WATER MAXIMUM DETECTIONS WITH GROUNDWATER QUALITY CRITERIA

Sample ID	Number of Samples Analyzed	Number of Detections	Maximum Detection [mg/L]	Location of Maximum Detection		Criteria (WQC) rence [mg/L]	Is WQC Exceeded by Max. Detection ?
TPH-Gasoline	13	7	0.43 H	ABL-GW-10	N/A	N/A	NO
TPH-Diesel	12	3	3.7 H	ABL-GW-10	N/A	N/A	NO
мтве	13	2	0.062	ABL-GW-1	0.035	AL,	WQC Exceeded
Total Xylenes	13	1	0.0024	ABL-GW-8	1.75	MCL	NO
Carbon Disulfide	13	2	0.0024	ABL-GW-5	1.04	PRG	NO
1,2-Dichloroethene (cis)	13	1	0.11	ABL-GW-6	0.006	MCL	WQC Exceeded
1,2-Dichloroethene (trans)	13	1	0.0042	ABL-GW-6	0.01	MCL	NO
Trichloroethene	13	1	0.0029	ABL-GW-6	0.005	MCL	NO
Total Xylenes	13	1	0.0019	ABL-GW-8	1.75	MCL	NO
Antimony	12	7	0.0098	ABL-GW-4	0.006	MCL	WQC Exceeded
Barium	12	12	0.1	ABL-GW-6	1	MCL	NO
Cobalt	12	2	0.06	ABL-GW-8	2.19	PRG	NO
Copper	12	11	0.063	ABL-GW-8	1	SEC. DWS	NO
Molybdenum	12	2	0.0068	ABL-GW-11	0.183	PRG	NO
Nickel	12	11	0.27	ABL-GW-8	0.1	MCL	WQC Exceeded
Selenium	12	7	0.051	ABL-GW-5	0.05	MCL	WQC Exceeded
Vanadium	12	2	0.019	ABL-GW-5	0.256	PRG	NO
Zinc	12	10	0.24	ABL-GW-8	5	SEC. DWS	МО

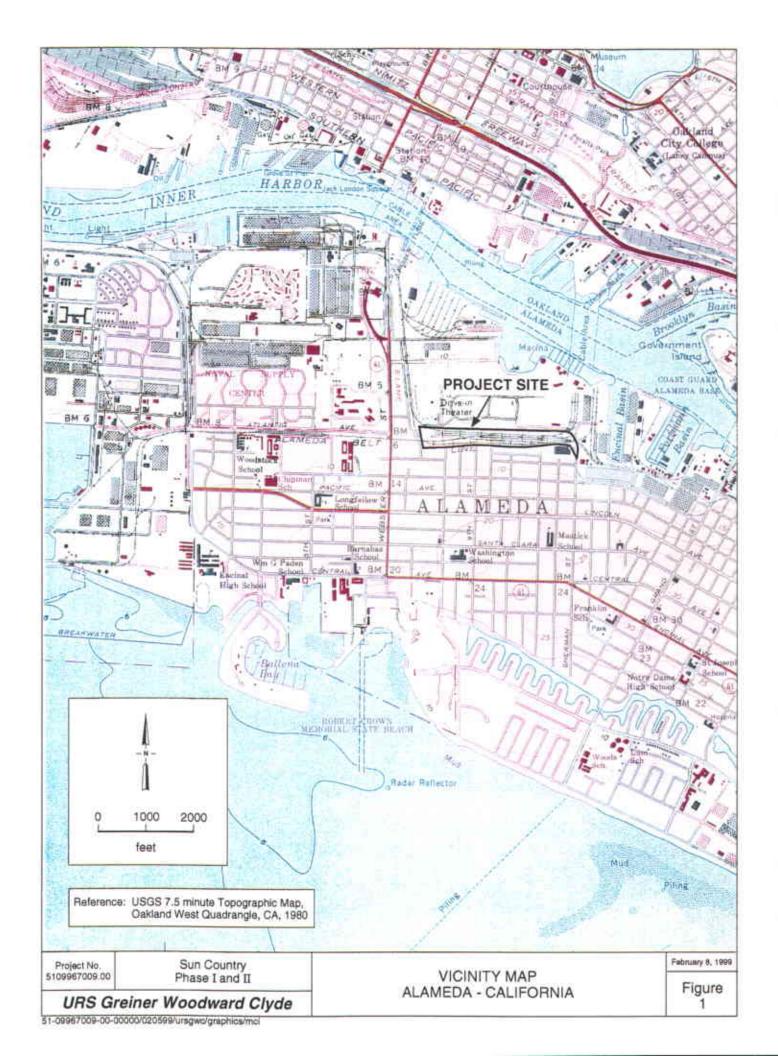
#### Notes:

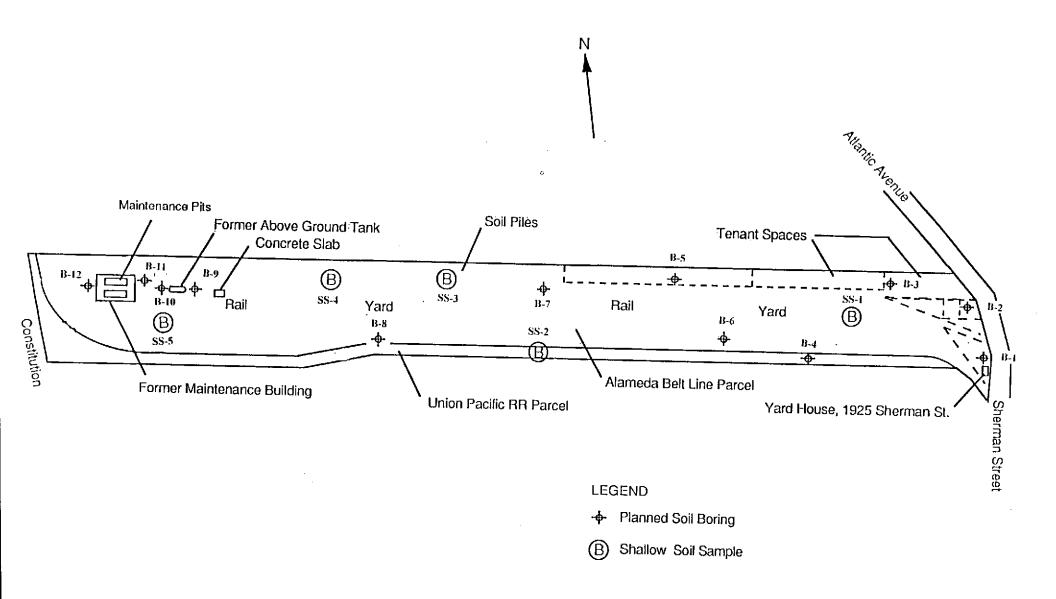
Exceedances of WQC are bolded.

H = Hydrocarbon does not match the pattern standard or have a characteristic hydrocarbon pattern. PRG = Preliminary Remedial Goal. USEPA 1998. Region 9 PRG Tables. May.

MCL = Maximum Contaminant Level

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- Project No. 5109967009.00		SUN COUNTRY PARTNERS	PHASE II	March 1999
UR	S Gre	iner Woodward Clyde	EXPLORATION LOCATIONS	Figure 2

Appendix A

Phase I Environmental Assessment Report Highlights

# **URS Greiner Woodward Clyde**

A Division of URS Corporation

500 12th Street, Suite 200 Oakland, CA 94607-4014 Tel: 510.893.3600 Fax: 510.874.3268 Offices Worldwide

February 12, 1999 5109967009.00

Sun Country Partners, LLC 5000 Hopyard Road, Suite 170 Pleasanton, California 94588

Attention: Mr. Mike Valley

Subject:

Phase I Environmental Assessment, Alameda Belt Line Yard

Dear Mr. Valley:

We are pleased to present our Phase I Envronmental Assessment report for the Alameda Belt Line Yard property, located at 1925 Sherman Street, Alameda, California. This study was prepared in accordance with the scope of work in our agreement dated January 26, 1999. Ms. Almudena Villanueva, URSGWC engineer, assisted in the preparation of this report.

This report summarizes the findings and our conclusions and recommendations regarding the potential for a significant environmental concern at this site. Please call if you have any questions.

Sincerely,

Albert P. Ridley, C.E.G.

Project Manager

Attachment: Phase I ESA Report

# FINAL REPORT

# PHASE I ENVIRONMENTAL ASSESSMENT 22-ACRE FORMER ALAMEDA BELT LINE RAIL YARD ALAMEDA, CALIFORNIA

Prepared for Sun Country Partners, LLC 5000 Hopyard Road, Suite 170 Pleasanton, California 94588

February 1999

# **URS Greiner Woodward Clyde**

500 12th Street, Suite 200 Oakland, California 94607

09967009

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#### 1.1 PROJECT BACKGROUND

Sun Country Partners, LLC has retained URS Greiner Woodward-Clyde International-Americas, Inc. (URSGWC) to perform a Phase I Environmental Assessment (ESA) of the former Alameda Belt Line 22-acre Parcel (The Site). We understand that Sun Country Partners intend to purchase the Site for redevelopment for residential use.

This ESA was performed in accordance with our Proposal for Phase I Environmental Site Assessment, dated January 25, 1999. The ESA work was limited to observation of the surface site conditions, interview of Alameda Belt Line staff, and review of available data in the files of Regualtory Agencies.

#### 1.2 PROJECT OBJECTIVE

The objective of the ESA was to identify "recognized environmental conditions" that may exist on the Property. ASTM Practice E 1527, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, defines recognized environmental conditions as "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property." The extent of research to identify recognized environmental conditions is limited by the scope of services (see Section 2 of this report).

The scope of services conducted for this Phase I ESA consisted of the following tasks:

- Site Reconnaissance- A site reconnaissance was conducted by URSGWC employees (Mr. Marco Lobascio and Mr. Albert Ridley) experienced in hazardous materials surveys. Surface conditions and current activities on the Property and adjoining properties were observed. An inventory of potential contaminant sources on and adjoining the Property was completed on the basis of visual observations. There was no sampling or laboratory analysis (including an evaluation of asbestos-containing materials on the Property) included in the scope of work.
- Records Review and Interviews- During the records review, information was obtained from public agencies (federal, state, and local) to evaluate whether current and past property usage within the study area may have created a potential for contamination of the Property. The federal, state and local environmental database search by Environmental Data Resources, Inc. (EDR) was used to conduct this survey. The study area for the records review is based on the ASTM Practice and consists of the following:
  - The subject property and adjoining properties for registered underground storage tanks (USTs) and Resource Conservation and Recovery Act (RCRA) generators.
  - One-half-mile radius for leaking USTs, landfill sites, and Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) sites.
  - One-mile radius for RCRA treatment, storage and disposal facilities, and state and federal Superfund sites.

In addition to the standard ASTM record review, additional federal, state and local agency database records were reviewed. A complete summary of the database records reviewed for the Property and surrounding properties is provided in Section 6 of this report.

URSGWC also used interviews, Sanborn fire insurance maps, historical aerial photographs, and available documentation regarding previous site investigations and tank closure to characterize past activities on and around the Site. The aerial photographs were obtained from the files of URSGWC. The source of photographs is Pacific Aerial Surveys, Oakland, California. Private data sources included URSGWC's geologic, hydrogeologic, and hazardous waste project experience. URSGWC recently completed remediation and redevelopment of a 24-acre parcel of land immediately northeast of the Site. Part of that development was also former Alameda Belt Line Property that was used for rail transport.

 Evaluation, Analysis and Report-Information collected during the above activities was evaluated and analyzed. This ESA report addresses the findings, and presents URSGWC's conclusions and recommendations.

The ESA was performed in accordance with ASTM Practice E 1527. Because of the reported extended period of time that the Site was reported as being owned and used for rail transport, a Title Search was not performed. No other exceptions to or deletions from the Practice were made.

# 3.1 LOCATION AND TOPOGRAPHY

The Property comprises approximately 22-acres in Alameda, California (Figure 1). The commercial office complex of Marina Village borders the Site on the North. Sherman Street forms the Eastern boundary. Residential property borders the Site on the South.

According to the U. S. Geological Survey (USGS) Oakland West 7.5 minute Quadrangle, the Property is located on gently sloping level land, with an elevation of about 10 feet above mean sea level (ft MSL) (USGS 1980). The local land slopes gently Northeastward towards the Oakland Estuary. The nearest body of water is the Encinal Basin, located about 800 feet Northeast, which is part of the Oakland Estuary.

## 3.2 SITE IMPROVEMENTS

Only one wood frame building remains near Sherman Street. This single story building was formerly used as a field office for railroad personnel. Chain-link fencing surrounds a small yard near the wood frame building. Chain-link fencing also encloses three tenant spaces located at the northeast corner of the site (Figure 2). A series of parallel rail spurs run the entire east-west length of the Site (Figure 1, and 2). The rails are set on wood ties that rest in gravel ballast materials. The remains of a former maintenance building and a concrete maintenance pit are located at the west end of the Site (Figure 2). Fencing also extends along the north and south border of the Site.

Water and sanitary sewer services are provided by the City of Alameda. Pacific Gas & Electric (PG&E) supplies electricity to the wood frame building at the east end of the Site. Electricity is also supplied to the railroad guard crossing gate that is located at Sherman Street, and another gate that is located at the west end of the property, at Atlantic Avenue.

It is reported that a large storm drain pipe is located beneath the surface along the south boundary of the Site. A utility survey will confirm the location of this and other subsurface utilities.

# 3.3 ENVIRONMENTAL SETTING

A map prepared by the US Geological Survey (Radbruch, 1957) shows the site as underlain by man-made fill ranging in depth from 0 to 5 feet. The southern limit fill material is shown at the approximate south boundary of the Site, with an increasing thickness northward to the edge of the Oakland Estuary. Bay Mud deposits are shown as underlying the fill material. The total depth of Bay Mud deposits, consisting of organic clays and sands, are shown in a boring about 500 feet northwest of the site, to extend to a depth of about 16 feet, where brown sandy clay was reported. A geologic cross-section on the geologic map (Radbruch, 1957) shows the Bay Mud as being underlain by Quaternary Aged sedimentary units of the Merritt sand, Temescal Formation, and Alameda Formation, that extend to depths greater than 200 feet.

The depth to groundwater at the Site is estimated to be 3 to 5 feet below ground surface (ft bgs) based upon previous information from the adjacent Wind River Systems development.. The direction of groundwater flow is anticipated to be towards the north. According to the U. S. Geological Survey Oakland West 7.5 minute Quadrangle, drainage of the surface water in the

vicinity of the Site flows to the north. Onsite drainage flow is not clearly evident. However, it is anticipated that flow would be towards the west, based upon the USGS topographic map.

#### 4.1 INTERVIEWS

#### 4.1.1 Alameda Belt Line

Mr. Phil Copple, Alameda Belt Line supervisor from 1968 to present, was interviewed regarding the past site history and historical use, storage, or releases of petroleum or hazardous materials. Mr. Copple reported that the range of liquids in tank cars transported through the yard was limited to: alcohol, shortening, and lubricating oil. Other materials shipped were peanuts and canned goods shipped by Del Monte Corporation. The site was first used for rail service in 1918 when the first rail line was constructed to service this part of the Alameda waterfront.

The only historical release of materials is a reported release of "syrup" by vandals who opened a valve on a parked tank car.

Petroleum products and possibly solvents and paints were in use in the former Maintenance Building at the west end of the Site. An above ground diesel fuel storage tank was formerly located east of that Maintenance Building. That building burned to the ground around 1980.

Mr. Copple reports that tenants may have stored petroleum products in small quantities in containers for their operations. One tenant was Clyde Perin Concrete, who occupied one of the tenant spaces. Alameda Paving leased the yard near the Yard House for about 7 years, and they allowed Mad Dog Drilling to also use the space. The tenant space at the northeast corner of the property was occupied by Alameda Crane (Mr. Roger Reed) for about 30 years. Mr. Art Hellwig took over that lease and now is the tenant in that space.

The fenced space immediately west of the Hellwig space was leased by Ken Haynes Trucking to store new Volkswagen Cars for some period of time. Later this space was leased to King Pallet Company, and later to Pallet Pallet Company to store wooden pallets.

Soil fill material that has a smooth surface was placed on the north part of the site during the development of Marina Village, according to Mr. Copple. Numerous stockpiles of soil with concrete and asphalt along the north central, and north west part of the site were placed there by Alameda Paving Company during numerous paving jobs in the City of Alameda.

#### 4.2 AERIAL PHOTOGRAPHS

Historical aerial photographs for the years 1949, 1959 and 1969, provided by Pacific Aerial Surveys at our request, were reviewed for the site. A stereoscope was used to better visualize the site. The findings are summarized below. Copies of the photographs are included in Appendix A.

1949 Aerial Photograph. A 1949 aerial photographs (scale 1" = 666') shows the central and western portion of the Site. A series of parallel rail spurs run the entire east-west length of the Site. There appears to be no vegetation on the property, and several buildings can be observed. Two buildings are located in the west end of the Site. The larger building is most likely the maintenance building that burned to the ground in about 1980. Two sets of rail tracks extend to this building from the east. The soil in the area where the rail tracks enter the maintenance building appears to be darker colored than the soil in the rest of the property. The roof of this

building shows two elevated roof structures right over the extension of the railroad tracks inside the building. These elevations are most likely where the cranes used to lift the carts for maintenance were. Maintenance pits are most likely located under these cranes, inside the building. The other building is located west of the large building. A third small cube-like structure can be observed north of this building.

A hanging pipe runs from the maintenance building towards the east to a white structure covered with a roof, and further continues to another white structure. Two above ground storage tank (AST) are located next to the railroads, one horizontal and one vertical.

Several car trucks are parked along the rail road tracks, inside the property.

The photograph indicates that the adjacent properties are occupied by what appears to be residential housing to the south, and a navy base to the north and west of the Site. The residential housing consists mainly of individual houses with a small parcel. The Navy base extends north from the Site to the Oakland Inner Harbor, and west to the limits of the aerial photograph. On the land adjacent to the Site along the north side, the photograph shows what appears to be military barracks.

1959 Aerial Photograph. The 1959 aerial photograph (scale 1" = 1000') shows the entire Site. No changes are observed in the structures in the western side of the property. Two buildings are observed in the eastern side, along Sherman Street. The large building is most likely the Yard House. The Yard House has three parts: the old house, linked to an equal size block on the south by a connecting building. The other building, located west of the Yard House, appears to be a small shed. As in the earlier photograph, several car trucks are parked along the rail road tracks, inside the property.

East of the Site, the aerial photograph shows the rail marine terminal.

It can be observed that the adjacent land to the south was residential property, and did not appear to change from earlier photographs. Adjacent to the southeastern end of the Site, the 1959 aerial photograph shows what appears to be a large warehouse. Further east, the photograph shows a large building and with two ASTs.

The aerial photograph indicates that several of the barracks in the navy base located north and west of the Site have been removed, including several barracks located along the border of the Site.

1969 Aerial Photograph. The 1969 aerial photograph (scale 1" = 800") indicates that the vertical AST located inside the property near the railroad tracks has been removed. The hanging pipe running from the maintenance building to the white structure remains there. The maintenance building has a white and black colored roof. Soil piles are observed along the southwestern border. The buildings in the eastern side of the property appear to be the same as those from 1959.

No significant changes can be observed in the residential properties located south of the Site.

The land north of the site appears to be under development. Fill material was added and elevated the adjacent property a few feet above the Site level. All the barracks have been removed, vegetation has grown, and some of the property has been landscaped.

#### 4.3 SANBORN INSURANCE MAPS

Sanborn Fire Insurance Maps for the years 1897, 1948, 1950 and 1987 were provided by Environmental Data Resources, Inc. Maps were reviewed for the Property, and the findings are included below. Copies of the maps are provided in Appendix A.

**1897 Sanborn Insurance Map.** The 1897 maps (scale 1" = 65") indicate that the Site property was marshland. The map indicates that the land south of the Site was mostly undeveloped, with few residential houses.

1948 Sanborn Insurance Map. The 1948 maps (scale 1"= 65") also indicates that the Site property was marshland. However, the aerial photograph, and other historical sources, show that the rail tracks had been installed at the Site in 1918. New houses had been constructed in the residential area along the Southern side of the property. The maps shows the Alameda Box Co. warehouse in the corner of Sherman Street and the southern border of the Site.

1950 Saborn Insurance Map. The 1950 maps (scale 1" = 65') shows no significant modifications with respect to the 1948 maps.

1987 Saborn Insurance Map. The 1987 maps (scale 1" = 65') shows the Alameda Beltline yard. The map indicates that the yard is full of tracks, and does not show any other installation or construction within the yard. The property north of the Site is occupied by offices, and according to the map, some of the land was still under construction. A building indicated as heavy industrial is shown north and adjacent to the eastern end of the Site.

No significant changes can be observed in the residential area south of the Site, except for some more houses that had been constructed.

# 4.4 OTHER HISTORICAL SOURCES

# 4.4.1 U.S. Geological Survey

The U.S. Geological Survey Oakland West 7.5 minute geologic quadrangle map (Radbruch, 1957) shows that the edge of the former tidal land extended across the Site to the south edge of the site. This area was filled in the early 1900's. The USGS topographic map of the Oakland West quadrangle, 1959 and photo revised in 1980, shows the location of tracks as essentially unchanged since 1949 (the date of the base map for Radbruch, 1957). The latest topographic map (revised in 1980) shows that the area north of the Site was formerly industrial land serviced by rail spurs in 1949, and by 1980 was converted to a new commercial development with roadway access only.

# 4.4.2 City of Alameda Report

The Alameda Belt Line Railway, initially also known as the Industrial Railway or the Municipal Railway, was built in 1918 by the City of Alameda. Although initially it was to be operated by the City's Board of Public Utilities, it was operated from the beginning by Southern Pacific. The first phase of the railway extended from Broadway to the Alaska Packer's Association property on Grand Street along Clement Avenue. In January 1925, the City proposed to extend the Belt

Line west of Grand Street to the Encinal terminals. Western Pacific and Santa Fe bought the existing trackage, and acquire additional land for the expansion. Construction was delayed by the objections of the resident neighbors, but on February 1927 the City Council approved the Belt Line Extension. In the beginning of the operation and during war time, the belt line ran day or night, as needed. In the last years of operation, the belt run only from the late afternoon into the night. During the day, Southern Pacific collected cars in its Oakland yard and took them to the Belt Line across the Fruitvale Bridge. The Belt Line delivered them to individual customers and picked up loaded cars that Southern Pacific would take back to Oakland. The Belt Line carried box cars, open top gondolas, flat cars, and tank cars. Its principal customers on those years were within the network of spurs between Grand and Sherman Streets. The ferry slip is no longer in existence, and the tracks west of Constitution Way have been removed, and the industrial property along the Belt Line turned to other uses.

After the maintenance building, located in the west end side of the property, burned to the ground around 1980, the Belt Line has one principal building, the Yard House at 1925 Sherman Street. On September 1991, the City of Alameda Engineering Division requested a demolition permit to remove a portion of the existing Yard House as part of the proposed realignment of Sherman Street and redevelopment of the railroad parcel. On December 1991, the Historical Advisory Board of the City of Alameda approved the relocation of the Yard House out of the public right-of-way and renovation of the historic portion of the structure. On March 1992, the City of Alameda Engineering Division requested that the building moved from the west side of Sherman Street, to the East side of Sherman Street to accommodate the parking and storage facilities.

## 5.1 SITE RECONNAISSANCE

Mr. Albert Ridley and Mr. Marco Lobascio, of URSGWC, conducted a site reconnaissance on February 4, 1999 to identify current Site uses and potential sources of hazardous substances onsite and offsite.

## 5.1.1 Potable Water Supply, Stormwater, and Sanitary Sewage Disposal System

The onsite water is supplied by the East Bay Municipal Utility District. Historical use has been by public water, there were no onsite water supply wells on the Site. Runoff in the central portion or the railroad spur area is directed to an onsite drainage trench and then to underground drain lines. Sewage from the wood frame building is directed to the Alameda sanitary sewer system.

## 5.1.2 Solid Waste Disposal

Solid waste is picked up by the local commercial disposal company.

#### 5.1.3 Hazardous Substances

There were historically small quantities of hazardous substances and petroleum products used and stored by tenants on the Site. General categories of hazardous substances or petroleum products used or stored on the Site are as follows:

- Petroleum-based products including lubricating oil;
- Paint:
- Gasoline and diesel fuels;
- Possible small quantities of solvents.

#### 5.1.4 PCBs

There were no potential PCB-containing materials (i.e. transformers) observed on the Site. There are several underground vaults in the sidewalk on the opposite (east) side of Sherman Street at the east end of the site which contain transformers for electrical service to the Wind River Systems development. Previous communications with PG&E indicates that a program of removal of all PCB containing transformers has been completed for the Bay Area, and there are no known PCB containing transformers in their distribution system.

# 5.1.5 Underground Storage Tanks (USTs)

There were no USTs visible on the Site at the time of the site reconnaissance. Mr. Copple, of the Alameda Belt Line Railroad, stated that he does not recall the presence of any underground storage tanks at the site since 1968.

# 5.1.6 Aboveground Storage Tanks (ASTs)

There are no existing above ground storage tanks at the Site. Review of historical aerial photographs indicate that there was at least one AST near the former Maintenance Building at the west end of the site. Mr. Copple reports that this AST was used to store diesel fuel for the engines.

## 5.1.7 Heating and Cooling System

We did not enter the Yard House to inspect the heating system. The building is serviced with natural gas and it is anticipated that natural gas is used for heating. No evidence of cooling was observed from the exterior.

# 5.1.8 Pools of Liquids and Odors

There were no pools of liquids observed on the Site. Water was observed in the bottom of the maintenance pit. There was an oily sheen on the surface of that water.

#### 5.1.9 Surface Stains

There were petroleum product-based stains observed on the Site. Most of the stains appear to be the result of fluid leaks from vehicles parked on the Site. The following were areas of focused petroleum product-based staining:1) tenant spaces, 2) Yard House area, 3) Rail Yard, and 4) Maintenance Building area

#### 5.1.10 Wells

There are no reported wells on the site, or immediately adjacent to the site.

## 5.1.11 Pits, Ponds, Lagoons or Stressed Vegetation

There were no ponds or lagoons observed on the Site. Several concrete lined pits were observed at the west end of the site near the former Maintenance Building. Two pits appears to be maintenance pits to allow mechanics to work beneath the engines and rail cars. Another pit has a railing around it and it's use is unknown.

#### 5.2 INTERVIEWS

The following is a summary of information provided to URSGWC from interviews and telephone conversations. Records of these conversations are presented in Appendix C of this report.

# 5.2.1 Alameda County Department of Environmental Health

Ms. Madhulla Logan of the Alameda County Department of Environmental Health was interviewed regarding this site. Ms. Logan was not aware of any listed tanks or reported spills at

this site. Ms. Logan provided comments on the sampling plan for the Phase II ESA (Appendix C).

# 6.1 REGULATORY DATABASE REVIEW

At URSGWC's request, state, federal and some local database listings were also searched by EDR. A summary of the database search findings are provided below. The EDR Radius report is included in Appendix B. The database categories (e.g., NPL) are defined in the EDR report.

# 6.1.1 Subject Property

The subject property (the "Site") was not listed in the EDR report (a list of the searched regulatory databases is provided in Appendix B).

# 6.1.2 Surrounding Properties

According to the EDR report, there were no sites within the designated search area that were identified in the following databases:

Database*	Radius Search Distance (miles)
National Priority List (NPL)	1.250
National Priority List Deletions (Delisted NPL)	TP
RAATS	TP
Toxic Pits (Toxic Pits)	1.250
WSMUDS/SWAT	0.750
Comprehensive Environmental Response, Compensation, and Liability Information System (CERC-NFRAP)	TP
State Landfill (SWF/LF)	0.750
Aboveground Petroleum Storage Tank Facilities (AST)	TP
Hazardous Materials Information Reporting System (HMIRS) (Federal listing)	TP
PCB Activity Database System (PADS)	TP
Emergency Response Notification System (ERNS)	TP
Facility Index System (FINDS)	TP
Toxic Chemical Release Inventory System (TRIS)	TP
Toxic Substances Control Act (TSCA)	TP
Material Licensing Tracking System (MLTS)	TP
Federal Superfund List Liens (NPL Liens)	TP
Bond Expenditure Plan (Ca. BEP)	1.250
Records of Decision (ROD)	1.250

Database*	Radius Search Distance (miles)
Superfund (CERCLA) Consent Decrees (CONSENT)	1.250
Waste Discharge System (Ca. WDS)	TP
South Bay Region 2 (S Bay Reg. 2)	TP

TP = Refers to databases searched only for the target property.

Surrounding Properties listed in the EDR database search are as follows:

- There is 1 RCRIS-TSD site within approximately 1.25 mile of the Site.
- There are 8 CAL-SITES within approximately 1.25 mile of the Site.
- There are 8 Notify 65 sites within approximately 1.25 mile of the Site.
- There are 10 CHMIRS sites within approximately 1.25 mile of the Site.
- There are 35 Cortese sites within approximately 1.25 mile of the Site.
- There is 1 CORRACTS site approximately 1.25 mile of the Site.
- There are 47 LUST sites within approximately 0.75 miles of the Site.
- There are 21 UST sites within approximately 0.50 miles of the Site.
- There are 4 Ca. FID sites within approximately 0.50 miles of the Site.
- There are 19 HAZNET sites within approximately 0.50 miles of the Site.
- There are 11 RCRIS-SM sites within approximately 0.50 miles of the Site.
- There is 1 RCRIS-LQG site within approximately 0.50 miles of the Site.
- \* Database categories are defined in Appendix B.

Based on the hydrogeology of the area, as discussed in Section 3.3, the groundwater flow direction is approximately to the southeast. Consequently, the contaminated sites down-gradient or cross-gradient of the Site will not likely impact the Site. Sites with groundwater contamination that are up-gradient from the Site may potentially impact groundwater under the Site. Sites up-gradient of the Site found in the EDR database search are as follows:

- There are five Cortese sites within approximately 1 mile up-gradient of the Site.
- There are ten LUST sites within approximately 1 mile up-gradient of the Site.
- There are three UST sites within approximately 0. 5 miles up-gradient of the Site.
- There are two Ca. FID site within approximately 0.5 miles up-gradient of the Site

<sup>\*</sup> Database categories are defined in Appendix C.

- There are 13 HAZNET sites within approximately 0. 5 miles up-gradient of the Site.
- There are nine RCRIS-SM sites within approximately 0. 5 miles up-gradient of the Site.
- There is one RCRIS-LQG sites within approximately 0. 5 miles up-gradient of the Site.
- There are 13 FINDS sites within approximately 0. 5 miles up-gradient of the Site.
- There are six South Bay Region 2 sites within approximately 1 mile up-gradient of the Site.
- \* Database categories are defined in Appendix B.

Because the database information is based on historical documentation, some properties have been listed more than once in the database due to ownership changes.

#### Site F-Encinal Marina 2020 Sherman St.

Site F 18 listed in the EDR report as a CA SLIC case in Appendix B, is a listing for the former Encinal Terminal Site that has been remediated and redeveloped as the Wind River Systems development. URSGWC obtained closure for this case in 1996, that involved a release of solvents to soil and groundwater. The site is downgradient of the subject Site and because it is closed it does not present an environmental concern to the Site.

#### Site M 1802 Webster Street

Site M36 is a Chevron station that is located about 600 feet west, and cross-gradient from the site. It is a Chevron Station at 1802 Webster Street that is listed as a LUST site with a release of gasoline and diesel to groundwater in 1991. Six groundwater monitoring wells are reported at the site. The last review was in 1996. Since the Chevron site is at a significant distance and is cross-gradient from the Site there is a low potential for impact to groundwater beneath the Site from this reported release.

#### Site D 801 Buena Vista Avenue

Site D 10 is a private residence located about 1/4 mile upgradient from the Site. Site D 10 is listed on the LUST list. A gasoline release was reported in 1995. The status of the site is "Case Closed" on 2-15-95. Therefore, this site appears to present a low potential for being a significant environmental concern for the Site

#### Other Listed Sites

There are four other locations shown on the Overview Map in the EDR report in Appendix B that are within 1/4 mile of the Site. These are at locations A, B, C, and 7. All of these locations are downgradient of the Site and are not considered to be significant environmental concerns for the Site.

SECTIONSIX Records Review

There are about 45 other listed locations of sites in Alameda on the Overview Map in the EDR report. Since all of these sites are greater than 1/4 mile away they are not regarded at significant environmental concerns to the Site.

The discussion and conclusions presented below are based on interviews, records reviews and the reconnaissance performed for the Site. We have performed a Phase I ESA of the Site, in conformance with the scope and limitations of ASTM Practice E 1527. Exceptions to or deletions from this practice are described in the Scope of Services section of this report.

This assessment has revealed evidence of recognized environmental concern in connection with the property. The following recognized environmental concerns were observed during the site visit:

- Various minor quantities of hazardous substances and petroleum products were historically
  used and stored on the Site including: paint, gasoline and diesel fuel, waste oil, solvents, and
  lubricating fluids.
- The maintenance pit located at the west end of the site could be a location where petroleum products, solvents, or hazardous materials were released.
- Several dark areas that are aligned with the tracks entering the former Maintenance Building may be evidence of suspected petroleum stained surface soils.
- During the site visit, areas of visible signs of petroleum product based spills, stains, and odors were observed in the tenant spaces.
- Dark stains were observed in a number of areas of the ballast rock in the rail yard area.
- Stockpiles of soil along the north side of the Site contain concrete and other debris which suggest a potential for hazardous materials from construction debris.
- A boat and other marine equipment with possible "non-fouling" paint, that could contain heavy metals, were observed in one of the tenant spaces.
- There is a potential for past releases of fuel at the location of a former underground fuel tank.
- The records review has revealed evidence of recognized environmental impacts and conditions to the Site. The following main conclusions of the interviews and records review are: 1) diesel fuel was stored in an AST near the Maintenance Building, 2) petroleum and small quantities of fuels were used and stored in the tenant spaces, 3) petroleum lubricating oils were transported in rail cars through the rail yard.
- The Sanborn Maps indicate that: 1) the area north of the site was formerly Military Housing, 2) the area south of the site was residential housing since the earliest records (1897).
- Sites of reported fuel releases in the EDR report up-gradient from the Site at 801 Buena Vista Avenue is located more than 500 feet away, is listed as "Case Closed" and has a low potential for impacting the site.
- Sites of reported groundwater impacts located east of the site at 2020 Sherman Street have been closed do not represent a potential impact to the site.
- A reported fuel release at a Chevron Station at 1802 Webster Street, is one block west of the site and is cross-gradient, and has a low potential for impacting the Site.

URSGWC recommends the following for associated recognized environmental conditions on the Site that are to be incorporated into a Phase II investigation:

- We recommend a Phase II investigation work plan be prepared to including the following:
  - 1) A program of soil borings to collect shallow soil samples should be developed and performed to investigate potential petroleum, solvents, and metals contamination in the Tenant Spaces, the rail yard, and the former Mainenance Building area, and the former AST area.
  - 2) An evaluation of asbestos containing building materials should be performed prior to any demolition activities at the Yard House.
  - 3) Groundwater samples should be collected from the tenant spaces, the AST area, the Mainenance Building area, and the rail yard area and be analyzed for potential contamination from petroleum products, solvents, metals, and related contaminants.
  - 4) Samples of ballast rock should be collected for analysis for petroleum products, solvents, and metals
  - 5) Samples of soil piles should be collected for analysis for petroleum products, solvents, and metals.
- We recommend that the remaining boats, trucks, cranes, fork lifts and other junk be removed
  by the tenant (Art Hellwig) from the tenant space on the north side of the site. After removal
  the tenant space should be observed for evidence of spills and stains, and then possible
  additional sampling of surface soils should be performed if stains are observed.

URSGWC has performed its services for this project in accordance with the Master Agreement for Professional Services, and with ASTM Practice E 1527 for ESA investigations; no guarantees are either expressed or implied.

The records search was limited to information available from public sources; this information is changing continually and is frequently incomplete. Sampling and laboratory analyses were not conducted as part of the scope of work. No sampling or testing for potential asbestos containing materials was performed, nor was such testing part of the work scope. Information obtained from interviews or provided to URSGWC by EDR and Site personnel has been assumed to be correct and complete. URSGWC does not assume any liability for information that has been misrepresented to us or for items not visible, accessible, or present on the Site at the time of the site visit.

There is no investigation that is thorough enough to preclude the presence of materials on the Site that presently, or in the future, may be considered hazardous. Because regulatory evaluation criteria are constantly changing, concentrations of contaminants present and considered to be acceptable may, in the future, become subject to different regulatory standards and require remediation.

Where records indicate that prior tank removals have occurred, there is a risk that the work may not have been performed correctly or completely. In these cases, if the regulatory agency has approved the work performed, URSGWC has assumed that the work was done correctly and completely.

Options and judgments expressed herein, which are based on URSGWC's understanding and interpretation of current regulatory standards, should not be construed as legal opinions. Unless site conditions change, this document and the information contained herein are valid for a period of 180 days according to the ASTM Practice, and have been prepared solely for the use of Sun Country Partners, LLC. No third party shall have the right to rely on URSGWC's opinions included in this document without URSGWC's written consent and the third party's agreement to be bound to the same conditions and limitations as our client, Sun Country Partners, LLC.

**SECTION**TEN Qualifications

# 10.1 CORPORATE

URS Greiner Woodward-Clyde International-Americas, Inc. with over 60 offices worldwide, provides professional services in engineering and sciences applied to the earth and its environment. One of the areas of practice is Waste Management and Engineering, which involves the application of science and engineering to contamination assessment and cleanup; the management, minimization, treatment, and disposal of hazardous, solid and industrial waste; and regulatory compliance. Phase I ESAs are a part of this practice area and have been conducted by URSGWC nationwide.

#### 10.2 INDIVIDUAL

The qualifications of the Project Manager and the other Environmental Professionals involved in this ESA meet the URSGWC corporate requirements for performing ESAs. Resumes of these Environmental Professionals are provided in Appendix D.

Environmental Data Resources, Inc. (EDR). 1999. Aerial photographs (1949, 1959, and 1969).

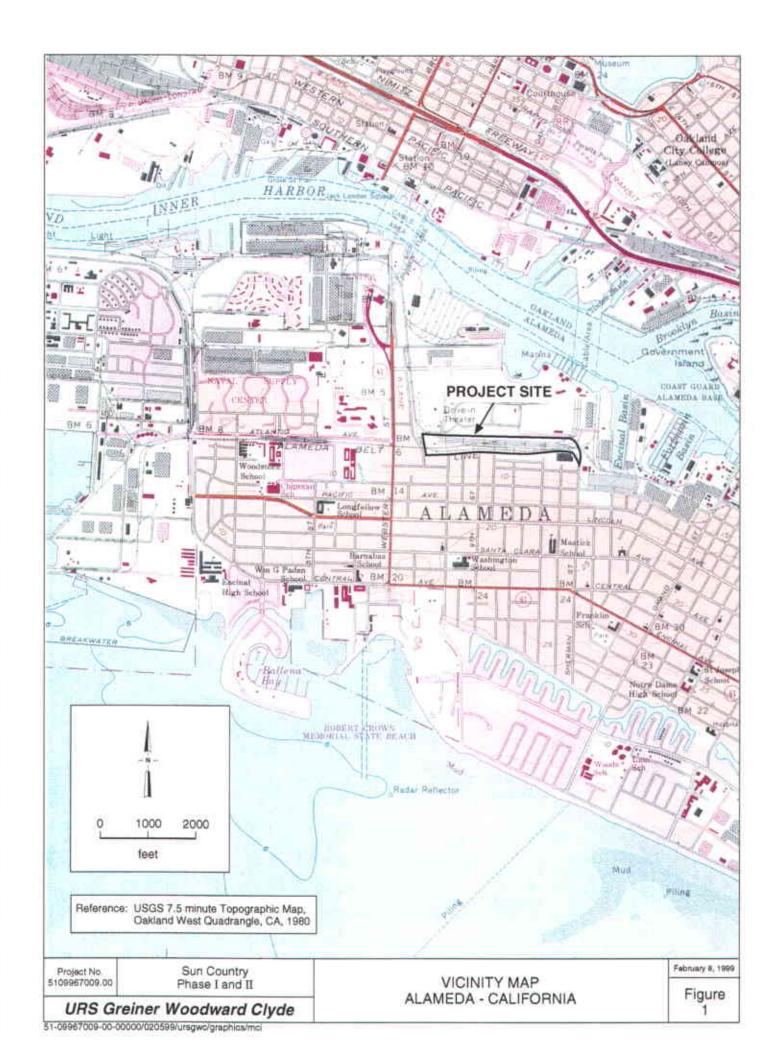
Environmental Data Resources, Inc. (EDR). 1999. Sanborn™ Maps (1897, 1948, 1950, 1987).

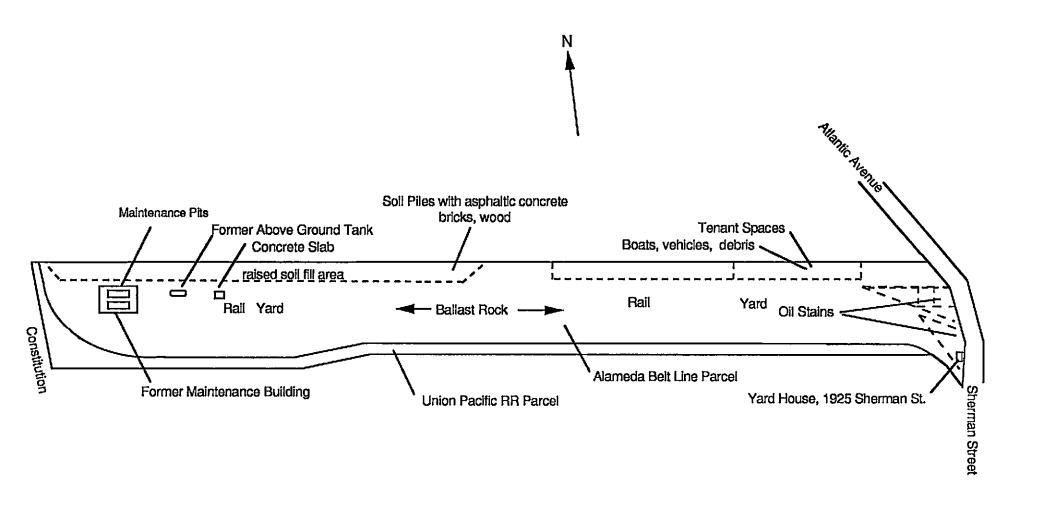
Radbruch, D. H., 1957, Aerial and Engineering Geology of the Oakland West Quadrangle, USGS, 1957

United States Geological Survey (USGS). 1980.Oakland West 7.5 minute Quadrangle. Scale 1:24,000.

#### Personal Communications

Phil Copple, February 5, 1999, Alameda Belt Line Railroad





Project No. 9751000041.01	SUN COUNTRY PARTNERS	Alameda Belt Line Yard	Feb. 1999
URS Grein	ner Woodward-Clyde	riumour beit bine Tuit	Fig 2

Appendix B Phase II Workplan Highlights

# **URS Greiner Woodward Clyde**

A Division of URS Corporation

500 12th Street, Suite 200 Oakland, CA 94607-4014 Tel: 510.893.3600 Fax: 510.874.3268 Offices Worldwide

February 10, 1999 9751000041.01

Ms. Madhulla Logan Hazardous Materials Specialist Alameda County Department of Environmental Health 1131 Harbor Bay Parkway Alameda, CA 94503

Subject:

Work Plan for Phase II Environmental Site Assessment of the Former

Alameda Belt Line 22-acre Parcel, Alameda, California

Dear Ms. Logan:

On behalf of Sun Country Partners, LLC (Sun Country), URS Greiner Woodward Clyde (URSGWC) is pleased to submit for your review and approval this work plan for a Phase II Environmental Site Assessment (ESA) of the Former Alameda Belt Line 22-acre Parcel (the site). It is our understanding that Sun Country intends to purchase and redevelop the site for residential use. The purpose of the ESA is to collect site-specific data and use the information to evaluate the potential for contamination of soil and groundwater that might impact the intended use of the site. The results of the evaluation will support decisions about the need (if any) and extent of remedial activities that may be warranted at the site. The remedial actions' goal is to satisfy the requirements of the Alameda County Department of Environmental Health (the County) and the City of Alameda (the City) for residential development of the site.

On February 9, 1999, Mr. Mike Valley of Sun Country and Messrs. Al Ridley and Marco Lobascio of URSGWC met with you in the County's offices to discuss the proposed work plan. As a result of this meeting, we have incorporated your recommendations in the scope described herein. Specifically, (1) we are planning two borings at the AST location instead of one, (2) we will apply random sampling for the areas not related to suspected potential contamination, and (3) we will evaluate the ratio of benzo(a)pyrene and naphthalene with respect to TPH-diesel by analyzing for PNAs in one, and up to three, samples found with high TPH.

The soil and groundwater sampling plan proposed for this ESA is based on preliminary site-specific information we have gathered so far, and on our experience with similar projects. We have made a preliminary site visit, and we have discussed the site history with Mr. Phil Copple of the Alameda Beltline Railway. We have also reviewed stereo pairs aerial photographs in our files showing the site area from 1945 to 1969.

We expect that the site environmental concerns are likely to involve the potential presence of areas with relatively high (with respect to background) concentrations in soil and/or shallow groundwater of the following chemical compounds:

Ms. Madhulla Logan February 10, 1999 Page 2

- metals (CAM-17, and lead in particular),
- total petroleum hydrocarbons (TPH-gas, -diesel, and -motor oil),
- chemicals commonly associated with fuels e.g., volatile organic compounds (VOCs) (benzene, toluene, ethyl benzene, and xylenes, namely the BTEX compounds), fuel additives(ie,MTBE), and semivolatile compounds such as the polynuclear aromatics (PNAs) benzo(a)pyrene and naphthalene,
- chlorinated VOCs associated with solvents used in degreasing and maintenance work, and possibly
- PCBs from transformers, and herbicides.

We have preliminarily identified several locations/areas (see Figure 1) that will likely need consideration in terms of investigation. These include:

- the maintenance pit area at the west end of the site,
- a former maintenance building, at west end of site, that burned to the ground,
- the former above ground tank site near maintenance building at west end of the site,
- the areas occupied by tenants,
- the soil stockpile areas, and
- the areas of ballast rock materials.

The above list of chemicals and areas of potential concern are based upon the results of the Phase I ESA activities. The proposed scope of work for the ESA is described below.

#### COMPLETED PHASE I ESA ACTIVITIES

A Phase I ESA was conducted in accordance with the American Society of Testing and Materials (ASTM) E-1527 standard for site assessments. The following activities were performed:

- Database search in the regulatory agencies electronic archives for listed sites within a 1 mile radius of the site, including leaking underground tank sites, hazardous waste generators, hazardous waste sites, landfills, Superfund sites, etc. The results will be shown on a map, and listed in tables.
- Review of Sanborn Insurance maps and aerial photographs to identify and evaluate features indicating past activities that may have released hazardous materials to the site soils or groundwater.
- Interviews of available Alameda Belt Line personnel with knowledge of the history of the site and the areas where hazardous materials were stored, used, and possibly disposed of.
- Site Reconnaissance to observe surface conditions and features that may suggest past storage, use, or release of hazardous materials both on-site and, to the extent practicable, at the adjacent properties, to evaluate possible impacts from off-site sources.
- Preparation of the Phase I ESA Report presenting the results of the above activities, our

Ms. Madhulla Logan February 10, 1999 Page 3

conclusions regarding the potential for a significant environmental concern at the site, and the recommendations for Phase II activities. The Phase I report is currently in preparation.

#### PROPOSED PHASE II ESA ACTIVITIES

## Task 1-Prepare Work Plan and Perform Site Exploration

Based upon the findings of Phase I we have developed this Phase II investigation work plan. The work plan identifies the locations of soil and groundwater sampling, laboratory testing methods, field procedures, and health and safety plan. Based upon our current knowledge of the site, we estimate that about twelve exploratory borings will be drilled and about five surface soil samples will be collected at the site (Figure 1) during Phase II. Borings will be drilled at the site using direct push methods. Using this method provides a snapshot of subsurface conditions at a fraction of the cost of installing monitoring wells. The borings will be located: near the maintenance building that burned down, near the maintenance pit, two in the area of the former above ground diesel fuel tank, at the tenant spaces, and at randomly selected locations in the rail yard area (see Figure 1).

We will mark the sampling locations and perform the necessary utility clearance activities. Then we plan to start the sampling work on February 15,1999. The direct push sampler will be advanced about three feet into the ground using hydraulic methods for each sampling run. Repeated sampling runs will be applied to advance the boring to the depth of shallow groundwater, expected to be about 6 to 10 feet below the ground surface. Surface soil samples will be collected from depths of 0 to 1 foot, and subsurface samples from 2 to 3 feet in each boring. Soil samples will be collected from within the sampler by removing the sample liners and capping the end of the liner. Groundwater samples will be collected from each boring by placing a temporary PVC well casing in the boring, and then using either a disposable bailer or clean plastic tubing and a peristaltic pump to retrieve the water sample and place it in a clean container. The soil and groundwater samples will be sealed, labeled and placed on ice in an ice chest. Surface soil samples and samples of ballast rock will be collected in plastic zip-lock bags, and will also be labeled and placed in the ice chest. The samples will be transported to a California certified analytical laboratory.

#### Task 2- Laboratory Analyses

Table 1 presents a summary of the proposed field sampling and analysis activities. We recommend analyzing all of the surface soil samples for Title 22 metals, TPH-motor oil, and TPH-diesel. Some of the surface samples will also be tested for PCBs and herbicides. Subsurface soil samples and shallow groundwater samples will be tested for VOCs and TPH-gasoline+BTEX/MtBE in addition to the metals, TPH-diesel and TPH-motor oil analyses. Instead of analyzing all of the samples for PNAs, we will estimate a conservative ratio of benzo(a)pyrene and naphthalene with respect to TPH-diesel by analyzing for PNAs in one, and up to three, samples found with high TPH.

# Task 3- Data Evaluation and Report

We will evaluate the laboratory analyses results in terms of exceedance of regulatory standards. Detected chemical concentrations is soil and shallow groundwater will be compared to

Ms. Madhulla Logan February 10, 1999 Page 4

appropriate screening level criteria, i.e., USEPA Region 9 Preliminary Remediation Goals (PRGs) for residential exposure scenario, California Maximum Contaminant Levels for drinking water, and tap water PRGs. We will prepare figures showing sampling locations and relevant results such as exceedances of PRGs. The Phase II report will include a discussion of the results of the comparisons, our conclusions and recommendations about the need (if any) and extent of further characterization or remedial activities at the site.

#### **CONCLUSION**

We look forward to receiving your comments on this work plan. If you have any questions, please call Al Ridley at (510) 874-3125 or Marco Lobascio at (510) 874-3254.

Sincerely,

**URS Greiner Woodward Clyde** 

Albert P. Ridley, C.E.G.

Project Manager

Marco C. Lobascio, P.E., R.E.A.

Project Engineer

#### Enclosures:

Table 1. Summary of Field Sampling and Analyses Activities

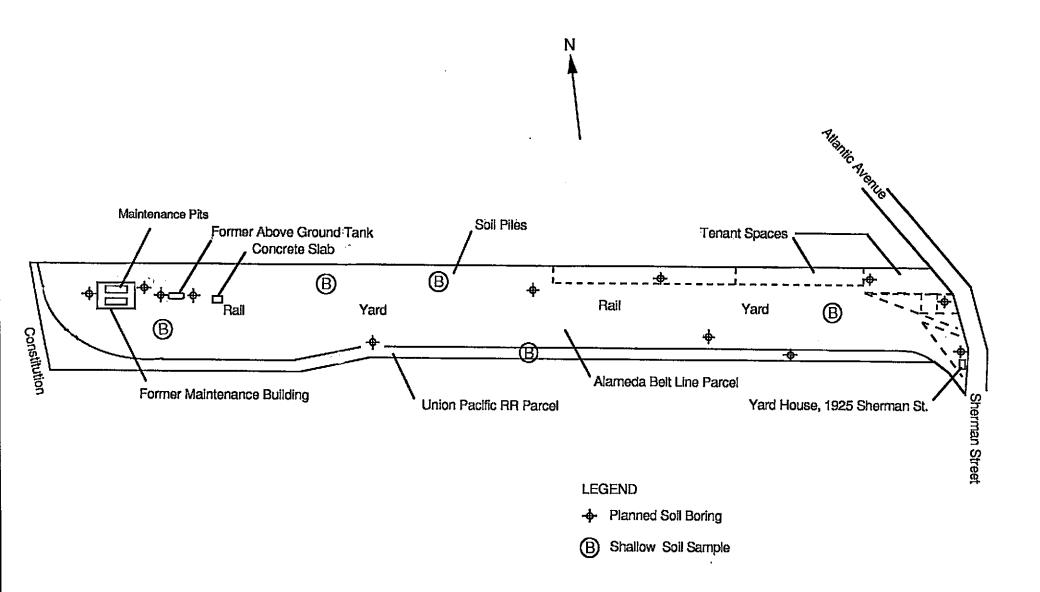
Figure 1. Site Map and Sampling Locations

# TABLE 1. SUMMARY OF FIELD SAMPLING AND ANALYSES ACTIVITIES

en e	Be to the property of the following the care of the control of the care of the	Prop	osed Analys	es of Soil and	Shallow Gro	undwater Sar	nples
SAMPLE CONTROL OF THE PROPERTY	PROPOSED ACTIVITY	EPA8015M TPH-diesel	EPA8015M TPH-gas+ BTEX+MtBE	EPA8015M TPH-motor oil	VOCs EPA8260	PCBs EPA8080	CAM 17 EPA6010- 7470/2
Surface samples for characterization of rock materials	Collect samples at 0-1 foot	5		5		5	5
Subsurface soil samples - analyze for BTEX/VOCs the deeper samples only, and for PCBs the near-surface ones only	Collect soil samples at 0- 1 and 2-3 feet	24	12	24	12	12	24
Shallow groundwater samples	One water sample per boring	12	12		12		12
Characterization of purge water (assumes three 55 gal drums)	Collect one sample per drum	3	3		3	<del>-</del>	3
Characterization of drill cuttings (assumes one 55 gal drum)	Collect one composite sample per drum	1	1		1	-	1
	Trip blank and duplicate	2	2		2		2 ′
	SUBTOTAL BY METHOD	47	30	29	30	17	47

TOTAL ANALYSES 224

Suncost5 - Sampling and Analyses pres.



Project No. 9751000041.01	SUN COUNTRY PARTNERS	PLANNED PHASE II EXPLORATION	Feb. 1999
URS Grein	er Woodward-Clyde	LOCATIONS	Fig 1

Appendix C Boring Logs

	DA BELI LINE, Alamed	a, Ca	יוווו	HIIIA			-	GRO	IND 9	SURF	ACF	ELEVA	TION (	ft):	
BORING LOCA		1						TOP (	OF W	ELL (	CASI	NG ELI 2/15/	EVATIO	N (ft): N/	Α
AGENCY DRILLING	Gregg Drilling	DRILLI	ER	N/A				DATE	FIN	ISHE	D:	2/15/		(ft)	**
EQUIPMENT DRILLING	Rhino		<del>,</del>		J			DEPT	HS			WELL	: N/A (f	ft)	
METHOD	Continuous Sample			?-1/4in			NG N				id Pol	ycarbon	ate Tube	s, Tefion Ta	pe and Endcaps
SIZE AND TYP OF CASING	Temporary 3/4"-dia. screened PV	C Used 1	for W	ater Sa	ampl	ing		NUME	LES	JF	SOIL			INDWATE	
TYPE OF PERFORATION		FRO	M :	2' T	0	12'		DEPT	H (ft)		ST:		COMPL		24 hr.: N/A
SIZE AND TYP OF PACK	N/A	FRO	M I	V/A		N/A		LOGG		_,	cheri	bak	B'	HECKED Y	A.Ridley
TYPE OF SEAL		TO   12' No. 3	3: N/A	TYI	PE			FR N/A	TO N/A			L	.OG	OF B-1	l
JEAL	No. 2: N/A N/A I	V/A No. 4			<u> </u>	 I an E		N/A	N/A SA	MPL	ES	INDE		t 1 of 1) PERTIES	<u>,                                     </u>
O DEPTH (freet) SOIL GRAPHIC	MATERIAL DESCRIPTION		ELEVATION (feet)	WELL GRAPHIC	OVM Reading (soil),ppm	OVM Reading (airspace), ppm	WATER LEVEL	DEPTH [feet]			SAMPLE ID		DRY DENSITY (pcf)	ر د م	NOTES
	ASPHALT / GRAVEL SANDY CLAY					0.0			*	1515					Start: 1510
	Gravel, mottled dark brown, low moisture, loose, angular gravel up to inch	3/8	:					-			0-1 SB-				Miniram - TWA - 0.03 mg/m*3 1515
5	SILTY SAND Light gray, moist, fine grained sand		-			0.0	Ā	5-	4	1516	1- 2-3				Miniram Spot Reading - 0.01 mg/m^3 1620
10 —								10-							
1	BOTTOM OF BORING AT 12 FEE	T						-							Groundwater Sampled 1530
15 —								15-				: :			End: 1620
-								-							
20 URS	S Greiner Woodward (	iyde				F	RO.	JECT	NO	. 51	-09	9670	09.00	Flg:	

		JA BELI LINE, Alameda .TION: B-2	, O	11110	11316	<u></u>								TION (		1A
DRILL AGEN		Gregg Drilling	DRILLI	ER	N/A				DATE	ST	ARTE	D:	2/15/ 2/15/	99	ON (ft): N	/A
DRILL		Rhino	1						COMI	PLET			BORING	G: 12.0 :: N/A (	) (ft) ft)	
DRILL	ING	Continuous Sample	DRILL	BIT 2	2-1/4ir	1	SAMPL	ING N	1		tles ar	nd Pol	•			pe and Endcaps
SIZE A	AND TYP	E Temporary 3/4*-dia. screened PVC	Used	for W	ater S	amp	oling		NUMI	BER (	)F	SOIL	: 2	GROU	JNDWATE	R: 9
TYPE		0.010in	FRO	M :	2' T	O	12'		WATI	ER	FIF	RST:	3.4 <sup>\(\nabla\)</sup>	COMPL	: 2.7	24 hr.: N/A
SIZE A	AND TYP	E N/A	FRO	M 1	N/A	то	N/A		LOGG			cher			HECKED	A.Ridley
	PE OF		O   2' No. 3	3: N/A	TY	PE			FR N/A	TO N/A	_		i	വര	OF B-2	
SE	EAL		/A No. 4				1 5		N/A	N/A		<u> </u>		(Shee	et 1 of 1)	
O DEPTH (foot)	SOIL GRAPHIC	MATERIAL DESCRIPTION		ELEVATION (feet)	WELL GRAPHIC	OVM Reading	(soil),ppm OVM Reading (airspace),ppm	WATER LEVEL	DEPTH (feet)	NUMBER C	TIME SAMPLED 72				UNCONFINED TO COMPRESSIVE TO STRENGTH TO	NOTES
		BALLAST Rail ballast at surface, basalt, coarse SANDY CLAY Dark brown, moist, soft					0.0			] [4	0830	SB-				Start: 0825
-	9	SILTY SAND Moist, light brown					0.0	Ž Ž	-		0830	SB- 2- 2-3		:		
5 -									5-							
10 — -		Saturated							10-							
-		BOTTOM OF BORING AT 12 FEET (0845)	r						-							End: 0840
15 — -									15-							
20 -	IIRS	Greiner Woodward C	lvde				P	PRO-	JECT	NO.	. 51	-09:	9670	09.00	Fig:	
	und	ureiner vvooqward C	yae	<u> </u>			P	'nU.	ルロビー	NU.	וס.	-U3	90/U	ບສ.ປປ	, Lia:	

		DA BELT LINE, Alar	nea	d, U	што	rnia	j			GPATT	NO S	1100	ACE	E1 E1/^	TION (	f+)+	
		TION: B-3								TOP C	)FW	ELL (	ASI	ng ele	VATIO	iti: )N (ft): N	Α
DRILLIN	Υ	Gregg Drilling		DRILL	ER	N/A				DATE	FINI	SHE	):	2/15/9 2/15/9	9		
DRILLIN EQUIPM		Rhino		•						COMP DEPTI	PLETI HS	ON	I	WELL:	3: 8.5 ( : N/A (f	(ft) ft)	
DRILLIN METHO		Continuous Sample		DRILL	BIT 2	2-1/4ir	1 8	SAMPLI	NG N	ETHOD:	Bott	les an	d Pol	ycarbona	ate Tube	s, Teflon Ta	pe and Endcaps
SIZE AN OF CAS	ND TYP SING	E Temporary 3/4"-dia. screen	ed PV	C Used	for W	ater S	amp	ling		NUME	ER C	F s	SOIL	.: 2	GROL	INDWATE	₹: 9
TYPE OF PERFOR	F ATION	0.010in		FRC	M :	2' T	O	8.5'		WATE	R I (ft)	FIR	ST: 4	‡ <u>∑</u> (	COMPL	.: 2.1	24 hr.: N/A
SIZE AN OF PAC	ID TYP			FRC	M	N/A	то	N/A		LOGG BY		P.Sc	heri	oak	CI	HECKED	A.Ridley
TYPE		TYPE		то		TY	PE			FR	то	_				-	_
SEA		No. 1: Portland Cement/Bentonite Mix No. 2: N/A		8.5' No. : N/A No. :	3: N/A 4: N/A					N/A N/A	N/A N/A	-		L		OF B-3 at 1 of 1)	3
		<del></del>			1		ğu	in d				MPL	S	INDE		PERTIES	
┰	S	MATERIAL			ELEVATION (feet)	₽	OVM Reading (soil) ppm	OVM Reading (airspace),ppn	WATER LEVEL	_	ا يو	<u>a</u>	щ	프		UNCONFINED COMPRESSIVE STRENGTH (psf)	
DEPTH (feat)	SOIL GRAPHIC	DESCRIPTIO			¥  ¥	WELL GRAPHIC		VM I	ATEF VEL	DEPTH (feet)	NUMBER TYPE	TIME SAMPLED	MPL	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	CON THEING	NOTES
0 -	জ <u>ত</u>	GRAVEL.			<u>  ⊡ €</u>	<b>≥</b> 5	O.	T	<u>≥</u> =	교육	14		SB-	≨ರ≗	223	<u> </u>	Start: 0850
		Silty clay, black, moist		∕ੈ	1			0.0				900	3- 0-1				
<b>1</b>		Dark brown, cohesive, sand,	concre	ete ,							11						Miniram - TWA - 0.06
2		fragments, moist		FILL		H		0.0	Ţ	-		900	SB- 3-				mg/m^3 0900
-		SILTY SAND Moist						0.0		-		,500	ુ. 2-3				
3 •									立								
		Saturated							-	7		Ì					
5 —										5—							
										1							
2																	
- g										1							
- 3										-							
	<u>,                                    </u>	<b>A</b>		_		<b>    -  </b>					$\dashv$						
		BOTTOM OF BORING AT (0905)	8-1/2	FEET													End: 0905
10										10-							
										-							
										7							
-										-							
15 —										15—							
										4							
-									ļ	4							
										-							
20 —	IIP:	Orojo - Mario		DZ -	<u> </u>	<u> </u>	L	<u> </u>							20.00		l
	UKS	Greiner Woodwa	rd L	Jyde				J.P	KO.	JECT	NO.	51.	·U9	JU70(	u <b>9.0</b> 0	Fig:	

BORING LOCA	DA BELT LINE, Alameda	d, Uð	шо	71112	1								ATION		
DRILLING	Gregg Drilling	DRILLI	:D	N/A				DATE	STA	ARTE	D:	2/15/	99	ON (ft): N	<u>'A</u>
AGENCY DRILLING		DRILLI	in .	N/A				COM				2/15/ BORIN	99 G: 12.0	) (ft)	· · · · · · · · · · · · · · · · · · ·
EQUIPMENT DRILLING	Rhino	T			.	m.a.s.em.		DEPT	HS			WELL	.: N/A (	ft)	
METHOD SIZE AND TY	Continuous Sample	DRILL						NUMI				•			pe and Endcaps
OF CASING TYPE OF	Temporary 5/4 -dia. screened FVC	<del></del>						SAMI	PLES		SOIL			UNDWATE:	
PERFORATION	N#	FRO	M :	2' 7	ro ——	11'		WAT!			ST:		COMPL	110000	24 hr.: N/A
SIZE AND TYI OF PACK	IV/A	FRO	M I	N/A	TO	N/A	4	BY			cher	bak		Y	A.Ridley
TYPE OF SEAL		2' No. 3	3: N/A	11	/PE			FR N/A	TO N/A	_		ı	.OG	OF B-4	ļ.
SEAL	No. 2: N/A N/A N	I/A No. 4	: N/A		Im	ImE		N/A	N/A	MPL	FS	LNDE		et 1 of 1) OPERTIES	1
DEPTH (feat) SOIL GRAPHIC	MATERIAL DESCRIPTION		ELEVATION (feet)	WELL	OVM Reading	(sou), ppm OVM Reading (airspace), ppn	WATER LEVEL	DEPTH (feet)		Œ]		MOISTURE CONTENT (%)	T	NED SSIVE	NOTES
0	SILTY SAND / GRAVEL At surface					0.0		-	- 2	1420	SB-				Start: 1420
_	SANDY CLAY	/						_			0-1	,			Miniram -
-8	Fine grained, light brown						Ž								TWA - 0.03
a						0.0			Y	1420					1420
-									Ħ		2-3				
-								-				}			
5 —	Moisture increase with depth							5							
	innistrie niciesse with rebtti														
								-							
-	•							-							
	SILTY SAND														
	Saturated, flowing sand, fine grained	i <u>.</u>													
	light gray			$  \exists $				-							
10 —								10							
	SILTY CLAY  Dark gray, natural in situ, highly plas	tic,													
	BOTTOM OF BORING AT 12 FEE	T													Groundwater Sampled
	(1430)														1440
								-							
15 —								15-							End: 1450
								-							
								-							
20 - IID	C Crainer Weedwerd C	lude					PRO	JECT	NO	<u>5</u> 1	-09	9670	09.00	) Fig:	
Uni	<u> S Greiner Woodward C</u>	ıyu6	,				7,0		110		-00	JU10	·	- Ia.	

ALAME	DA BELT LINE, Ala	meda	, Ca	lito	rnia		_		000		ė. ini	- A - Ch - C	<i>(</i>		e-1.	
BORING LOCA	ATION: B-5								TOP	OF V	/ELL	CASI	NG EL		nt): DN (ft): N	Ά
DRILLING AGENCY	Gregg Drilling		DRILL	ER	N/A				DATE DATE	FIN	IISHE	D:	2/15/ 2/15/	99		
DRILLING EQUIPMENT	Rhino								COM DEPT	PLET HS	ION		BORIN WELL	G: 12.0 .: N/A (	) (ft) ft)	
DRILLING METHOD	Continuous Sample		DRILL	BIT 2	2-1/4ir	า ธ	AMPL	ING N	RETHOD	): Bot	ties a	nd Po	ycarbon	ate Tub	es, Teflon Te	pe and Endcaps
SIZE AND TYP OF CASING	Temporary 3/4"-dia. screen	ned PVC	Used 1	for W	ater S	ampi	ing		NUM	BER PLES	OF	SOIL	.: 2	GRO	JNDWATE	R: 18
TYPE OF PERFORATION	0.010in		FRO	M :	2' T	O	12'		WAT			RST:	<b>4</b> ♀	COMPL	: 3.4	24 hr.: N/A
SIZE AND TYP OF PACK	PE N/A		FRC	M	N/A	то	N/A		LOGO			cher	bak	C	HECKED Y	A.Ridley
TYPE OF	ТҮРЕ	FR TO	<del>-                                    </del>		TY	'PE			FR	TC	→					<u> </u>
SEAL	No. 1: Portland Cement/Bentonite Mix No. 2: N/A	0 12 N/A N/A	No. 4	3: N/A 4: N/A					N/A N/A	N/A	_		L		OF B-!	
				z		ling	ling mad			SA	MPL	.ES	INDE	X PRO	DPERTIES	-
DEPTH (feet) SOIL GRAPHIC	MATERIAI DESCRIPTIO			ELEVATION (feet)	WELL	OVM Reading (soil), ppm	OVM Reading (airspace), ppm	WATER LEVEL	DEPTH (feet)	NUMBER TYPE	ME	SAMPLE ID	OISTURE DNTENT 6)	DRY DENSITY (pcf)	UNCONFINED COMPRESSIVE STRENGTH (psf)	NOTES
0 - 86	ASPHALT			ш ё	5 O	0.5		<b>5</b> 🗆	Ωŝ	¥	Ţ·	SB-	200	2009	2005	Start: 0915
	SILTY CLAY - FILL Gravel, sand, medium to loos	se angulai					0.0		_	-	0928	5- 0-1				Miniram -
	gravel / crushed concrete up	to 3/8 in	ch 📥												}	TWA - 0.05
	CLAY	natia lieb					0.0			V	0928	SB-				0930
	Dense, cohesive, highly pl gray, moist		ıt					Ţ	-	-		2-3				
	Interbedded with Silty Sar	nd 				İ		$\bar{\Sigma}$	-				<b>!</b>			
	Flowing saturated sand, dark	gray, silt	ty,						_							
5 —	medium to fine grained								5							
_									-					ł		
_s  • • • • • • • • • • • • • • • • • • •					B				_							
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10 - 1					ŀШ	!			10-							
									1							
	<b>A</b>	<del> </del>		1	H		-									
	BOTTOM OF BORING AT	12 FEET							_							End: 0930
	(0000)						}									
-									+							Duplicate Groundwater
15 -									15-							Sample also
																(DUPGW01)
]									-						<del> </del>	
							}									
20	· Auginau III.	and A	۔۔ الحدودا	L	<u></u>	<u> </u>	<u> </u>  -		IEOT	N/C	E	L CO	0670	00.00	) 	<u> </u>
UKS	Greiner Woodwa	ra G	yue	!			J.	'nÜ.	JEUT	NU	. ხ1	-09	90/U	09.00	) Fig:	

		DA BELT LINE, Alamed	a, Ca	IITO	rnia				GROU	IND :	SURF	ACE	ELEVA	TION (	ft):	
DRILL.	ING		D8" (	•••	NIZA				TOP (				NG ELI 2/15/		N (ft): N/	'A
AGEN	CY	Gregg Drilling	DRILLE	:K	N/A				DATE	FIN	ISHE	D:	2/15/		(fe)	
EQUIP	MENT	Rhino	<del></del>						DEPTI	HS			WELL	: N/A (1	ft)	
METH	OD	Continuous Sample	DRILL			!_		NG N	,			nd Pol	ycarbon	ate Tube	s, Teflon Ta	pe and Endcaps
OF CA		Temporary 3/4"-dia, screened PV	C Used f	or W	ater S	ampi	ing		NUME		JF 	SOIL	.: 2	GROU	INDWATE	₹: 9 ~
	PRATION	<del></del>	FRO	M :	2' T	0	12'		WATE DEPTI	H (ft)	FIF	RST:	3 ¥	COMPL	i	24 hr.: N/A
SIZE A	AND TYP	N/A	FRO	M !	V/A	то	N/A		LOGG BY	ED	P.S	cheri	bak	B,	HECKED Y	A.Ridley
	E OF		TO   12' No. 3	: N/A	TY	PE			FR N/A	TO N/A	_		1	OG	OF B-6	3
SE	AL		N/A No. 4		1				N/A	N/A				(Shee	t 1 of 1)	
				Į <sub>Z</sub>		OVM Reading (soil), ppm	OVM Reading (airspace),ppm			SA	MPL	1	INDE	X PRO	PERTIES	
ĮΞ	SOIL GRAPHIC	MATERIAL		ELEVATION (feet)	ː 꽃	Rea	Rea ace	œ.	ፗ	표	9	SAMPLE ID		≥	UNCONFINED COMPRESSIVE STRENGTH (psf)	
DEPTH (feat)	39 P	DESCRIPTION		E E	WELL GRAPHIC	NO.	VM airsp	WATER LEVEL	DEPTH (feet)	NUMBER TYPE	AME	₩.	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	NCO COMP THEN	NOTES
0 -		BALLAST		ш :	<u> </u>	0.5	0.0	<u> </u>	U &		1345	SB-	202	1003	2002	Start: 1335
-	A	Rail ballest, coarse aggregate SILTY SAND / CLAY				Ì	0.0		-		1340	6- 0-1				Miniram -
		Dark brown, moist														TWA - 0.03
•	(1)				Ħ		0.0		7	V	1345	\$B-				ngm s
-		SILTY SAND					}	立	4	ľ		2-3				
		Very fine grained, wet, silty, light br	own					Ţ								
	2											İ				
5 -									5							
-					İ				4							
									1			ļ				
-									4							
					. Ц											
10 –		SILTY CLAY Dark gray, plastic, moist, cohesive							10							
-		Saik Bray, hashe, most, collesive							4							
			_		Ħ											
		BOTTOM OF BORING AT 12 FEE	т			_										Groundwater
-		warranter beinge at 12 itt	"						4							Sampled 1350
-									_							Water level @
4-									,							1350: 3.6'
15 –	] ]								15							End: 1416
-									4							
l _																
									.]							
-									4							
-	-															
20 –	IIR	Greiner Woodward (	`[yrele		I	·	T <sub>P</sub>	RO.	JECT	NO	51	-099	9670	09.00	Fig:	,
<u> </u>	UN	orcinci Yyuuwalu L	riyut									504	U	JJ.04		

ALA	IME	DA BELT LINE, Alai	med	a, Ca	ilifo	rnia	ļ										
BORIN	G LOCA	TION: B-7													NTION ( EVATION	ft): )N (ft): N/	Ά.
DRILLI AGENO	NG CY	Gregg Drilling		DRILL	ER	N/A				DATE				2/15/ 2/15/			
DRILLI EQUIP	NG MENT	Rhino								COM		ION	1	BORIN WELL	G: 12.0 .: N/A (1	) (ft) ft)	
DRILLI METHO	NG OD	Continuous Sample	-	DRILL	BIT 2	2-1/4io	n s	AMPL	ING N	METHOD	: Bot	ties a	nd Pol	ycarbon	ate Tube	s, Teflon Ta	pe and Endcaps
SIZE A	ND TYP	E Temporary 3/4*-dia. screer	ed PV	C Used	for W	ater S	ampl	ing		NUM! SAM!	BER (	)F	SOIL	.: 2	GROU	JNDWATE	₹: 9
TYPE (	OF RATION	0.010in		FRO	M	2' T	0	12'		WAT	ER 'H (ft	FIF	RST:	5 Ž	COMPL	: 3.1	24 hr.: N/A
	ND TYP			FRC	M	N/A	то	N/A		LOGO			cher	bak	C	HECKED Y	A.Ridley
	E OF	TYPE	_	то		TY	PE			FR	ТО	-1				<del></del>	<u> </u>
	AL	No. 1: Portland Cement/Bentonite Mix No. 2: N/A	-		3: N/A 4: N/A					N/A N/A	N/A	_		L		OF B-7 at 1 of 1)	1
					7		OVM Reading (soil), ppm	ing Pod			SA	MPL	ES I	INDE	X PRO	DPERTIES	
Ţ	SOIL GRAPHIC	MATERIAL			ELEVATION (feet)	<u> </u> 2	Read To	Read rce),	_	_	  #:		щ	出り	,	UNCONFINED COMPRESSIVE STRENGTH (pst)	
DEPTH (feet)	PAP P	DESCRIPTION			E [	WELL GRAPHIC	<b>∑</b>	irsp.	ATE VEL	DEPTH (feet)	NUMBER TYPE	A ME	SAMPLE ID	OIST DNTE	DRY DENSITY (pcf)	NCON DMPR TRENC	NOTES
0 –	(1) (1)	SANDY CLAY			ш£	≶ છ	0.2	1	≤⊐	ΩĒ	12	1	SR	202	000	- 3000	Start: 0940
-		Moist, cohesive, dark brown angular, basaltic	, gravel,	•				0.0		_	-	0948	7- 0-1				Minirem -
		CLAY			1												TWA - 0.03
		Dense, dark gray, plastic, int with silty sand, 1 inch bands	erbedde	∌d		Face		0.0		-		0948	SB-				Ing/m 3
-									<b>ヹ</b> .	-			2-3				
_		g 7								_							
		SILTY SAND			-				立	_							
5 —		Saturated, light brown, medi- grained, quartz sand	um to fi	ine					"-X-	5-							
-	a .	S. a a dan er anna				H											
_										_							
						ΙĦ											
		FLOWING SAND Fine grained quartz sand and	eilt							-							
-		this granica quartz datio and	ont							-							
10 –						1 🗀				10							
,										-							
_	4:3:31	<u> </u>			-	<del>LE</del> L	-				$\vdash$		_			<u> </u>	
-		BOTTOM OF BORING AT	12 FEE	ŧΤ						_							End: 0955
		(0900)															
-										-							
15 —										15-						1	
-										-							
_										-							
20 –	III .	Oveles IIIs		26		<u> </u>		<u> </u>		IE~~	<u>                                     </u>			0670	00.00	Elec	<u> </u>
	UHS	Greiner Woodwa	ra L	Jyae	;			I <sup>P</sup>	'HU.	JECT	NO	. ๖ใ	-09	30/0	09.00	Fig:	

		DA BELT LINE, Ala	meda,	, Ca	ılifo	rnia	Î			GROI	IND :	SLIRE	ACE	FI FV	TION (	f+)-	
BORIN		TION: B-8	г			•					OF W	ELL (	CASI		EVATIO	ON (ft): N	<b>/A</b>
AGEN	CY	Gregg Drilling		DRILL	ER	N/A				DATE	FIN	ISHE	D:	2/15/	99	h 19-1	
DRILL EQUIP	MENT	Rhino	·							COM	HS	ION		WELL	G: 12.0 : N/A (	) (TE) ft)	<del></del>
DRILL METH	OD	Continuous Sample		DRILL	BIT 2	2-1/4i	n S	AMPLI	NG N				nd Pol	ycarbon	ate Tub	es, Teflon Te	pe and Endcaps
SIZE A	AND TYP	Temporary 3/4"-dia. screen	ned PVC	Jsed :	for W	ater S	ampl	ing		NUMI	BER ( PLES	OF .	SOIL			JNDWATE	
TYPE PERFO	OF DRATION	0.010in		FRC	M	1' T	0	12'		WAT! DEPT		FIF	RST:	<b>1</b> \(\frac{\text{Y}}{2}\)	COMPL	1	24 hr.: N/A
SIZE A	AND TYP	E N/A		FRC	M I	N/A	то	N/A	,	LOGO BY	ED	P.S	cher			HECKED	A.Ridley
TYP	E OF	TYPE No. 1: Portland Cement/Bentonite Mix	FR TC		3: N/A	TY	'PE			FR N/A	TO	_		1	00	OE D S	· •
SE	AL.	No. 2: N/A		No.						N/A	N/A				(Shee	OF B-8	
					z		ling	guit ppm			SA	MPL I	ES I	INDE	X PRO	DPERTIES	
DEPTH (feat)	SOIL	MATERIAI DESCRIPTIO			ELEVATION (feet)	WELL GRAPHIC	OVM Reading (soil),ppm	OVM Reading (airspace),ppm	VATER Evel	DEPTH (feet)	NUMBER TYPE	'IME 'AMPLED	AMPLE	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	UNCONFINED COMPRESSIVE STRENGTH (psf)	NOTES
0 –	7.57	BALLAST			ш =		03		۲∴	ΩE	14		SB-	20€	008	3005	Start: 1235
_		Rail ballast, coarse aggregate inches maximum diameter	e 1-1/4 to	<b>2</b> /	-			0.0	Ţ	-		1245	g. 0-1				Miniram -
		SANDY CLAY  Moist to wet, soft, fine grain	ned														TWA - 0.01 mg/m^3
		Light brown (as above), cla						0.0				1245	SB-				1315
-		content increases with de								-	-		2-3				
-										·							
_										_							
5 -										5-							
-										4							
_																	
-		CLAY Dark gray to black, very soft	moiet fi	•••													
_		grained, natural in situ mater		16						-							
10 —		fine quartz sand				ı ш				10-							
_										٦							
-		<b>A</b>				H					+						
_		BOTTOM OF BORING AT	12 FEET							-							Groundwater Sampled
_	]																1255
																	End: 1315
15 –										15-							
_					[					-							
-	]																
_						1											
-						İ				-							
_										4							
20 -						İ									L		
ZU -	URS	Greiner Woodwa	rd Cl	ude	)	•		P	RO.	JECT	NO	. 51	-09	9670	09.00	Fig:	
	-		u u uj	746													

SANDY CLAY-FILL Dark brown, moist, coheake, coarse grevel, angular, no odor  SILTY SAND Saturated, fine grained, light grey, no odor  FILL  Flowing sand - silty, fine grained  BOTTOM OF BORING AT 8 FEET (1026)  10 - 15 - 1020 9- 0-1  Minkem - TWA - 0.04 mg/m² 3 1018  Flowing sand - silty, fine grained  10 - 15 - 1020 9- 1020			TION: B-9	au, ou											TION (		Δ
BRILLING Contributus Sample  DRILLING Contributus Sample  PROM 1: TO 8' DRILLING SAMPLES SAMPLES SOIL: 2 GROUNDWATER 8  SAMPLES SOIL: 2 GROUNDWATER 8  SAMPLES SOIL: 2 GROUNDWATER 8  PROM 1: TO 8' DRIPTH (n) FIRST: 1 COMPL.: 133 2/4 hr: N/A DRIP			Gregg Drilling	DRILLE	:R	N/A				DATE	ST	ARTE	D:	2/15/9	99	<del></del>	
DRILLING Continuous Sample    Property 3/4"-dia. screened PVC Used for Water Sampling   NAMERO   Solida and Property 3/4"-dia. screened PVC Used for Water Sampling   NAMERO   Solida	DRILLI	NG	Rhino					•••		COM	LET			BORING	3: 8.0 (	ft) t}	
MATERIAL   Description   Secure   Description   Secure   Description   Secure   Description   Desc	DRILLI	NG	Continuous Sample	DRILL	BIT 2	2-1/4in	s	AMPLI	NG N	·		tles en	d Pol				pe and Endcaps
MATERIAL   DESCRIPTION   SAUTY EAVE   FROM N/A   N/A	SIZE A	ND TYP	E Temporary 3/4"-dia. screened P	VC Used f	or W	ater S	ampl	ing				OF ,	SOIL	.: 2	GROU	INDWATE	t: 9
Size AND TYPE   N/A   TYPE   FR   TYPE   FR   TYPE   FR   TYPE   FR   TYPE   FR   TYPE   FR   TYPE   FR   TYPE   FR   TYPE   FR   TYPE   FR   TYPE   FR   TYPE   FR   TYPE   FR   TYPE   FR   TYPE   FR   TYPE   FR   TYPE   FR   TYPE	TYPE (	DF	0.010in	FRO	M ·	1' T	0	8'		WATE	:R	FIR	ST:	1 <sup>©</sup> (	COMPL	.: 1.3	24 hr.: N/A
TYPE OF SEAL TYPE   FR   TO   TYPE   FR   TO   TYPE   FR   TO   TYPE   FR   TO   TYPE   FR   TO   TYPE   FR   TO   TYPE   FR   TO   TYPE   FR   TO   TYPE	SIZE A	ND TYP	r	FRO	M i	N/A	то	N/A		LOGG			cheri	ak			A.Ridley
MATERIAL DESCRIPTION  SAMPLES INDEX PROPERTIES DESCRIPTION  MATERIAL DESCRIPTION  SAMPLES INDEX PROPERTIES DESCRIPTION  SAMPLES INDEX PROPERTIES DESCRIPTION  SAMPLES INDEX PROPERTIES DESCRIPTION  SAMPLES INDEX PROPERTIES DESCRIPTION  NOTES  NOTES DESCRIPTION  NOTES DESCRIPTION  NOTES DESCRIPTION  NOTES DESCRIPTION  NOTES DESCRIPTION					). A1/A	TY	PE					_		1	ΩG	OE B.O	<u> </u>
Dank brown, molet, coheave, coerse grevel, anguler, no edor FILL SILTY SAND Saturated, fine grained, light gray, no edor FILL Flowing sand - silty, fine grained  BOTTOM OF BORING AT 8 FEET  10 −  BOTTOM OF BORING AT 8 FEET  10 −  15 −  15 −  15 −  15 −  16 −  16 −  16 −  16 −  17 −  18 −  18 −  10	SE	AL								N/A	N/A	Τ			(Shee	t 1 of 1)	, 
Dank brown, molet, coheave, coerse grevel, anguler, no edor FILL SILTY SAND Saturated, fine grained, light gray, no edor FILL Flowing sand - silty, fine grained  BOTTOM OF BORING AT 8 FEET  10 −  BOTTOM OF BORING AT 8 FEET  10 −  15 −  15 −  15 −  15 −  16 −  16 −  16 −  16 −  17 −  18 −  18 −  10	DEPTH	SOIL GRAPHIC			ELEVATION (feet)	WELL GRAPHIC	OVM Reading (soil), ppm	OVM Reading (airspace),ppn	water Level	DEPTH (feet)						UNCONFINED COMPRESSIVE STRENGTH	NOTES
BOTTOM OF BORING AT 8 FEET  10 —  15 —  15 —  16 —  17 —  18 —  18 —  19 —  10	0 — - - -		Dark brown, moist, cohesive, coa gravel, angular, no odor SILTY SAND Saturated, fine grained, light gray, odor	FILL,				0.0		-		1020	S 5 5 5 5 5 5 5				Minirem - TWA - 0.04 mg/m^3
10 — 10 — 10 — 15 — 15 — 15 — 15 — 15 —	-		<b>*</b>							-							End: 1025
20	10 -		(1025)							10-							
	15									15-							
narene ant authbor of westers of each and Maister and the company of the company	20 –	URS	Greiner Woodward	Clude	l }		!	F	RO.	JECT	NO	. 51	-09	9670	09.00	Fig:	

		TION: B-10	ua, Co	11110	IIIIQ		_							TION (		
DRILL	NG	Gregg Drilling	DRILLI	ED.	N/A				DATE	ST/	ARTE	D:	2/15/	99	N (ft): N/	<u> </u>
AGEN: DRILLI	NG	Rhino	DINEL	-	IN/M				COM	PLET			2/15/9 30RING	G: 8.5 (	(ft)	
EQUIP DRILLI	NG	Continuous Sample	DRILL	RIT 1	)_1 //i-	,   <sub>e</sub>	AMPI I	NG M	DEPT		the o		WELL	: N/A (1	it)	pe and Endcaps
METH SIZE A	ND TYP	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				•		inecs IV	NUM	BER C	\ <del>-</del>				<u> </u>	
OF CA	SING OF	O 010in							SAM	PLES ER		SOIL		COMPL	INDWATE	1: 9 24 hr.: N/A
PERFO	RATION ND TYP	-	FRO				3.5'		DEPT	H (ft)		ST:			HECKED	
OF PA	CK	N/A TYPE FR	FRC	rivi i	N/A TY	TO PE	N/A		BY	ТО		cherl	DAK	B		A.Ridley
	E OF	No. 1: Portland Cement/Bentonite Mix 0	8.5' No. 3	3: N/A					N/A	N/A			L		OF B-1	0
$\vdash$		No. 2: N/A N/A	N/A No. 4	1	1	g,	무통		N/A	N/A SA	MPL	ES	INDE		t 1 of 1) OPERTIES	]
O DEPTH (feat)	SOIL GRAPHIC	MATERIAL DESCRIPTION		ELEVATION (feet)	WELL GRAPHIC	OVM Reading (soil),ppm	OVM Readir (airspace),pp	WATER LEVEL	DEPTH (feet)	NUMBER TYPE	TIME SAMPLED	SAMPLE ID	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	UNCONFINED COMPRESSIVE STRENGTH (psf)	NOTES
-		SANDY CLAY - FILL Slightly moist, dark brown and gramottled SILTY SAND	FILL				0.0	₹	-		-	SB- 10- 0-1				Start: 1030 Miniram - TWA - 0.04 mg/m^3
5		Saturated, light gray, very fine gra	ined				0.0		5	***	1035	SB- 10- 2-3				1040
10 —		CLAY  Dense, dark gray, highly plastic, cohesive, (Bay Mud)  BOTTOM OF BORING AT 8-1/2 (1040)	2 FEET						10-							End: 1045
-									_							
_																
_																
],																
15 —									15—							
-									_							
_																
_									-							
-									_							
20 -					<u> </u>		ı									
	URS	Greiner Woodward	Ciyde	)			P	RO.	JECT	NO.	. 51	-09	9670	09.00	Fig:	

		DA BELT LINE, Alamed	a, C	ami	)TIIId				GROU	JND : OF W	SURF ÆLL	ACE CASI	ELEVA NG ELI	TION (	ft): )N (ft): N	/A
DRILLI AGENO	NG CY	Gregg Drilling	DRIL	LER	N/A				DATE	ST	ARTE	D:	2/15/ 2/15/	99		
DRILLI	NG	Rhino						-	COM	PLET			BORING	G: 18.0 : N/A (1	) (ft) ft)	
DRILLI METHO		Continuous Sample	DRIL	L BIT	2-1/4ir	n s	AMPL	ing N	<del>1 </del>		ties a	nd Pol				pe and Endcaps
	ND TYP	Temporary 3/4"-dia. screened PV	C Used	for V	vater S	ampli	ing		NUM	BER (	)F	SOIL	.: 3	GROU	JNDWATE	R: 9
TYPE (		0.010in	FR	ОМ	8° T	0	18'		WAT		FIF	RST:	12 <sup>▽</sup> (	COMPL	: 3	24 hr.: N/A
	ND TYP		FR	OM	N/A	то	N/A		LOGG			cheri	bak	C B	HECKED Y	A.Ridley
TYP	E OF	No. 1: Portland Cement/Bentonite Mix 0	TO 18' No N/A No	3: N/A	1	'PE			FR N/A N/A	TO N/A			L		OF B-1	1
DEPTH (feet)	SOIL GRAPHIC	MATERIAL DESCRIPTION		ELEVATION		OVM Reading (soil),ppm	OVM Reading (airspace),ppm	WATER LEVEL		SA	MPL				PERTIES e ≧	NOTES
U		BALLAST Coarse Aggregate, ??? mixed rock GRAVEL and SILT	/	<i>(</i> -			0.0		_	<b>₹</b>	1100	SB-				Start: 1055 Miniram -
1		Medium to coarse, angular, black sil slightly oily odor SANDY CLAY Dark gray, moist, cohesive, plastic, dense	<b>t,</b> /				0.0	Ā	_	X	1100	SB- 11- 2-3				TWA - 0.04 mg/m^3
5 -		Increasing moisture with depth							5-							Miniram - TWA - 0.03 mg/m^3 @1125
_ _ _		SANDY CLAY  Black, waxy appearance, oily odor, cohesive, soft, fine grained sand/qu	ertz				0.0		-	<b>Y</b>	1100	SB- 11- 7-8				Additional sample collected @ 7'-8'
0 -		SILTY SAND Light gray, medium to fine grained, to wet  Saturated sand	moist					立	10- - -							
- - 5 —									- - 15—							Advanced to 18 feet Hole collapsed from 15 to
5 –	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2								-					-		feet Well staked to 15 feet
		REFUSAL AT 18 FEET ON HARD SURFACE (1125) Polycarbonate Tube Shattered	)						-							End: 1125
20 →	IIRS	Greiner Woodward (	Mud	<u> </u>	1		F	RO.	JECT	NO.	. 51	-09	9670	09.00	Fig:	

$\overline{}$		DA BELT LINE, Alan	ileua, C	amic	IIIIa				GROU	ND S	SURF	ACE	ELEVA	TION (	ft):	
DRILL AGEN		Gregg Drilling	DRIL	LER	N/A				DATE	STA	ARTE	D:	2/15/ 2/15/	99	N (ft): N	<u>A</u>
DRILL		Rhino							COMP	LETI			BORING	G: 12.0 :: N/A (1	(ft)	
DRILL METH	ING	Continuous Sample	DRIL	BIT :	2-1/4in	ı S	AMPLII	NG M			ies en	wi Pol				pe and Endcaps
	AND TYP	E Temporary 3/4*-dia. screene	ed PVC Used	for W	ater Sa	ampli	ng -		NUME	ER C	)F	SOIL	.: 2	GROU	INDWATE	R: 9
TYPE		0.010in	FR	OM	2' T	<u> </u>	2'		WATE	R	FIR	ST:	3 <sup>\(\frac{1}{2}\)</sup>	COMPL	.: 3.2 ▼	24 hr.: N/A
	ND TYP	·	FR	OM	N/A	TO	N/A		LOGG			cheri			HECKED	A.Ridley
	E OF	· · · · · · · · · · · · · · · · · · ·	FR TO		TYI	PE			FR	TO	→				·	
SE	AL	No. 1: Portland Cement/Bentonite Mix  No. 2: N/A  No. 2: N/A	0 12' No. N/A N/A No.	3: N/A 4: N/A					N/A N/A	N/A N/A			L(		OF B-1 t 1 of 1)	2
DEPTH (feet)	SOIL	MATERIAL DESCRIPTIO	N	ELEVATION (feet)	WELL GRAPHIC	OVM Reading (soil),ppm	OVM Reading (airspace),ppm	WATER LEVEL	DEPTH (feet)	NUMBER TYPE S	TIME SAMPLED 7	Γ			UNCONFINED TO COMPRESSIVE TO STRENGTH TO COMPRESSIVE TO COMPRESSIV	NOTES
-		SANDY CLAY Gravel, loose, coarse ???, dry cohesive, light brown orange n clay, ??? sand					0.0		-	1		SR-				Start: 1135 Miniram - TWA - 0.03
5 —	3	SILTY SAND Fine grained, light brown, mois some clay clods, light gray, co					0.0	¥	5-	XX	1150	SB- 12- 2-3				mg/m <sup>2</sup> 3 1140  Miniram Spot Reading - 0.06 mg/m <sup>2</sup> 3 1145 No recovery ( to 4 feet
1		BOTTOM OF BORING AT 1 (1150)	2 FEET °						-							Groundwater Sampled 1200
15 -									15-							End: 1200
20 –	URS	Greiner Woodwar	d Clyde	<u> </u>			Pf	ROJ	ECT	NO.	51	-099	9670	09.00	Fig:	

Appendix D Analytical Laboratory Reports

Environmental Services (SDB)

March 9, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND 500 12th St., Suite 200 Oakland, CA 94607-4014

Attn: April Giangerelli

RE: Analysis for project 510996100900/2000.

#### REPORTING INFORMATION

Samples were received cold and in good condition on February 16, 1999. They were refrigerated upon receipt and analyzed as described in the attached report. ChromaLab followed EPA or equivalent methods for all testing reported.

No discrepancies were observed or difficulties encountered with the testing.

Client Sample ID	<u> Matrix</u>	Date collected	Sample #
ABL-GW-1	WTR	February 15, 1999	229099
ABL-GW-10	WTR	February 15, 1999	229106
Motor Oil was found in	sample ABL-G	W-10.	•
ABL-GW-11	WTR	February 15, 1999	229107
ABL-GW-12	WTR	February 15, 1999	229086
ABL-GW-2	WTR	February 15, 1999	229100
ABL-GW-3	WTR	February 15, 1999	229101
ABL-GW-4	WTR	February 15, 1999	229102
ABL-GW-5	WTR	February 15, 1999	229103
ABL-GW-6	WTR	February 15, 1999	229088
ABL-GW-7	WTR	February 15, 1999	229105
ABL-GW-8	WTR	February 15, 1999	229087
ABL-GW-9	WTR	February 15, 1999	229108
ABL-SB-1-0-1	SOIL	February 15, 1999	229091
ABL-SB-1-2-3	SOIL	February 15, 1999	229095
ABL-SB-10-0-1	SOIL	February 15, 1999	229074
ABL-SB-10-2-3	SOIL	February 15, 1999	229075
ABL-SB-11-0-1	SOIL	February 15, 1999	229076
ABL-SB-11-2-3	SOIL	February 15, 1999	229077
ABL-SB-11-7-8	SOIL	February 15, 1999	229090
ABL-SB-12-0-1	SOIL	February 15, 1999	229078
ABL-SB-12-2-3	SOIL	February 15, 1999	229079
ABL-SB-2-0-1	SOIL	February 15, 1999	229064
ABL-SB-2-2-3	SOIL	February 15, 1999	229065
ABL-SB-3-0-1	SOIL	February 15, 1999	229066
ABL-SB-3-2-3	SOIL	February 15, 1999	229067
ABL-SB-4-0-1	SOIL	February 15, 1999	229084
ABL-SB-4-2-3	SOIL	February 15, 1999	229085
ABL-SB-5-0-1	SOIL	February 15, 1999	229068

Environmental Services (SDB)

March 9, 1999

Submission #: 9902200 page 2

URS GREINER W&C OAKLAND 500 12th St., Suite 200 Oakland, CA 94607-4014

Attn: April Giangerelli

RE: Analysis for project 510996100900/2000, continued.

ABL-SB-5-2-3	SOIL	February 15,	1999	229069
ABL-SB-6-0-1	SOIL	February 15,		229080
ABL-SB-6-2-3	SOIL	February 15,	1999	229081
ABL-SB-7-0-1	SOIL	February 15,	1999	229070
ABL-SB-7-2-3	SOIL	February 15,	1999	229071
ABL-SB-8-0-1	SOIL	February 15,	1999	229082
ABL-SB-8-2-3	SOIL	February 15,	1999	229083
ABL-SB-9-0-1	SOIL	February 15,	1999	229072
ABL-SB-9-2-3	SOIL	February 15,	1999	229073
DUPGW01	WTR	February 15,	1999	229104
TBO1	WTR	February 15,	1999	229089

Afsaneh Salimpour Project Manager

**Environmental Services (SDB)** 

March 8, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND 500 12th St., Suite 200 Oakland, CA 94607-4014

Attn: April Giangerelli

RE: Analysis for project 510996100900/2000.

REPORTING INFORMATION

Samples were received cold and in good condition on February 16, 1999. They were refrigerated upon receipt and analyzed as described in the attached report. ChromaLab followed EPA or equivalent methods for all testing reported.

No discrepancies were observed or difficulties encountered with the testing.

Client Sample ID	Matrix	Date collected	<u>Sample #</u>
ABL-DC01	SOIL	February 16, 1999	229132
ABL-SS-1-0-1	SOIL	February 16, 1999	229127
ABL-SS-2-0-1	SOIL	February 16, 1999	229128
ABL-SS-3-0-1	SOIL	February 16, 1999	229129
ABL-SS-4-0-1	SOIL	February 16, 1999	229130
ABL-SS-5-0-1	SOIL	February 16, 1999	229131

Afsaneh Salimpour Project Manager

AFSANE 12:15:51 QCCQVER\_0318

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: 5 samples for TEPH analysis.

Method: EPA 8015M

Matrix: SOIL Sampled: February 16, 1999 Run#: 17492

Extracted: February 22, 1999

Analyzed: February 23, 1999

Diesel Motor Oil Spl# CLIENT SPL ID (mg/Kg) (mg/Kg) 229127 ABL-SS-1-0-1 3.5 N.D. Note: Hydrocarbon reported does not match the pattern of our Diesel Standard. 229128 ABL-SS-2-0-1 N.D. N.D. 229129 ABL-SS-3-0-1 11 N.D. Note: Hydrocarbon reported is in the late Diesel Range and does not match our Diesel Standard. 229130 ABL-SS-4-0-1 N.D. N.D. 229131 ABL-SS-5-0-1 N.D. N.D. Reporting Limits 1.0 50 Blank Result N.D. N.D. Blank Spike Result (%) 103

Carolin House Analyst

Bruce Havlik Analyst

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: 1 sample for TEPH analysis.

Method: EPA 8015M

Matrix: SOIL

Extracted: February 19, 1999

Sampled: February 15, 1999 Run#: 17479

Analyzed: February 20, 1999

	Diesel	Motor Oil
Spl# CLIENT SPL ID	(mq/Kq)	(mg/Kg)
229076 ABL-SB-11-0-1	36	280

Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.

Reporting Limits 2.0 100 Blank Result N.D. N.D. Blank Spike Result (%) 99.8

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Sampled: February 15, 1999

Project#: 510996100900/2000

re: 12 samples for TEPH analysis.

Method: EPA 8015M

Matrix: SOIL

Run#: 17479

Extracted: February 19, 1999

Analyzed: February 19, 1999

Spl# CLIENT SPL ID Diesel (mg/Kg) Motor Oil (mq/Kg)

229065 ABL-SB-2-2-3

5.8 N.D.

Note: Compound reported are in the Diesel Range. They do not have a pattern

characteristic of hydrocarbons.

229071 ABL-SB-7-2-3

5.0

Note: Compounds reported are in the Diesel Range. They do not have a pattern characteristic of hydrocarbons.

229073 ABL-SB-9-2-3

N.D.

Diesel

N.D.

Sampled: February 15, 1999

Matrix: SOIL Run#: 17479

Extracted: February 19, 1999

Analyzed: February 20, 1999

Motor Oil

CLIENT SPL ID 229066 ABL-SB-3-0-1

(mg/Kg) (mq/Kg)

Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.

229067 ABL-SB-3-2-3

6.2 N.D.

Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.

229069 ABL-SB-5-2-3

10

Compounds reported are in the Diesel Range. They do not have a pattern characteristic of hydrocarbons.

229070 ABL-SB-7-0-1

229072 ABL-SB-9-0-1

N.D.

N.D. 6.1 N.D.

229075 ABL-SB-10-2-3

Note: Hydrocarbon reported does not match the pattern of our Diesel Standard. 10

Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.

Sampled: February 15, 1999

Matrix: SOIL Run#:

Extracted: February 19, 1999

17479 Analyzed: February 22, 1999

CLIENT SPL ID

Diesel

Motor Oil

(mg/Kg)

(mg/Kg)

229074 ABL-SB-10-0-1

Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: 12 samples for TEPH analysis, continued.

Method: EPA 8015M

Matrix: SOIL

Extracted: February 19, 1999

Sampled: February 15, 1999

Run#: 17479

Analyzed: February 23, 1999

 Spl#
 CLIENT SPL ID
 Diesel
 Motor Oil

 229064
 ABL-SB-2-0-1
 6.8
 N.D.

Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.

229068 ABL-SB-5-0-1 16 66

Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.

Reporting Limits 1.0 50
Blank Result N.D. N.D.
Blank Spike Result (%) 99.8 --

Carolyn House

Analyst

Bruce Havlik

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

Project#: 510996100900/2000

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

re: 9 samples for TEPH analysis.

Method: EPA 8015M

Matrix: SOIL

Sampled: February 15, 1999 Run#: 17479 Extracted: February 19, 1999

Analyzed: February 19, 1999

Motor Oil

Motor Oil

(mg/Kg)

CLIENT SPL ID Spl#

(mg/Kg) (mg/Kg) 229081 ABL-SB-6-2-3 N.D.

Compounds reported are in the Diesel Range. They do not have a pattern

characteristic of hydrocarbons.

229083 ABL-SB-8-2-3

9.8 N.D. Note: Compounds reported are in the Diesel Range. They do not have a pattern

characteristic of hydrocarbons.

Matrix: SOIL

Extracted: February 19, 1999

Diesel

Diesel

(mg/Kg)

Sampled: February 15, 1999 Run#: 17479 Analyzed: February 20, 1999

CLIENT SPL ID

229077 ABL-SB-11-2-3 5.0 N.D.

Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.

229079 ABL-SB-12-2-3 4.6 N.D.

Compounds reported are in the Diesel Range. They do not have a pattern characteristic of hydrocarbons.

229080 ABL-SB-6-0-1 7.0

Compounds reported are in the Diesel Range. They do not have a pattern

characteristic of hydrocarbons.

229082 ABL-SB-8-0-1 5.1

Note: Compounds reported are in the Diesel Range. They do not have a pattern

characteristic of hydrocarbons.

Matrix: SOIL Extracted: February 19, 1999

Sampled: February 15, 1999 Run#: 17479 Analyzed: February 22, 1999

Diesel Motor Oil Spl# CLIENT SPL ID (mg/Kg) (mg/Kg) 229078 ABL-SB-12-0-1 180

Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.

*Matrix:* SOIL Extracted: February 22, 1999 Sampled: February 15, 1999 Run#: 17492 Analyzed: February 22, 1999

Diesel Motor Oil CLIENT SPL ID (mg/Kg) (mg/Kg)

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: 1 sample for TEPH analysis.

Method: EPA 8015M

Matrix: SOIL

Extracted: February 22, 1999

Sampled: February 15, 1999

Run#: 17492 Analyzed: February 23, 1999

Diesel

Spl# CLIENT SPL ID 229095 ABL-SB-1-2-3

Motor Oil (mg/Kg) (mg/Kg)

N.D. Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.

1.0 50

Reporting Limits

Blank Result

Blank Spike Result (%)

N.D.

N.D.

103

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

re: 1 sample for TEPH analysis.

Method: EPA 8015M

Matrix: SOIL

Sampled: February 15, 1999 Run#: 17492

Extracted: February 22, 1999

510996100900/2000

Analyzed: February 23, 1999

 Spl#
 CLIENT SPL ID
 Diesel (mg/Kg)
 Motor Oil (mg/Kg)

 229091
 ABL-SB-1-0-1
 39
 350

Note: Hydrocarbon reported is in the late Diesel Range and does not match our

Diesel Standard.

Reporting Limits

Blank Result

Blank Spike Result (%)

2.0 100 N.D.

Project#:

N.D. N.D. 103 --

Bruce Havlik

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#:

510996100900/2000

re: 9 samples for TEPH analysis, continued.

Method: EPA 8015M

Matrix: SOIL

Extracted: February 22, 1999

Sampled: February 15, 1999 Run#: 17492 Analyzed: February 22, 1999

CLIENT SPL ID

Diesel (mg/Kg) Motor Oil (mq/Kq)

N.D.

229084 ABL-SB-4-0-1

Matrix: SOIL

Run#: 17492 Extracted: February 22, 1999

Analyzed: February 23, 1999

CLIENT SPL ID

Sampled: February 15, 1999

(mg/Kg)

Motor Oil (mg/Kg)

229085 ABL-SB-4-2-3

Diesel

N.D.

Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.

Reporting Limits

Blank Result

Blank Spike Result (%)

1.0

50

N.D.

N.D.

103

n House

Bruce Ha

Environmental Services (SDB)

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for TEPH analysis.

Method: EPA 8015M

Matrix: SOIL

Lab Run#: 17492 Ir

Instrument:

Extracted: February 22, 1999

Analyzed: February 22, 1999

Spiked

Sample Spike Amt Amt Found Spike Recov Amount MS MSD MS MSD MS MSD Control Analyte (mg/Kg)(mg/Kg) (mg/Kg)(%) (%) Limits RPD Lim

DIESEL N.D. 83.3 82.7 79.3 81.9 95.2 99.0 60-130 3.91 25

Sample Spiked: 229084 Submission #: 9902200

Client Sample ID: ABL-SB-4-0-1

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for TEPH analysis.

Method: EPA 8015M

Matrix: SOIL

Lab Run#: 17479 Instrument: Analyzed: February 20, 1999

Spiked Amt Found Sample Spike Amt Spike Recov MSD MS Amount MS MSD MS MSD Control % RPD <u>Analyte</u> (mq/Kq)(mg/Kg) (mg/Kg)<u>(%)</u> (%) <u>Limits RPD Lim</u> DIESEL 6.2 82.5 93.0 93.2 60-130 0.21 25 83.3 82.9 83.8

Sample Spiked: 229067
Submission #: 9902200

Client Sample ID: ABL-SB-3-2-3

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for TEPH analysis.

Method: EPA 8015M

Matrix: SOIL

Lab Run#: 17492 Instrument:

Extracted: February 22, 1999

Instrument: Analyzed: February 22, 1999
Spiked

Sample Spike Amt Amt Found Spike Recov Amount MS MSD MS MSD MS MSD Control **Analyte** (mq/Kq)(mq/Kq)(mg/Kg) (왕) (%) Limits RPD Lim DIESEL N,D. 83.3 82.7 79.3 81.9 95.2 99.0 60-130 3.91 25

Sample Spiked: 229084 Submission #: 9902200

Client Sample ID: ABL-SB-4-0-1

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 5 samples for TEPH analysis.

Method: EPA 8015M Lab Run#: 17492 Matrix: SOIL

			% Recovery
Sample#	Client Sample ID	Surrogate	Recovered Limits
229127-1	ABL-SS-1-0-1	O-TERPHENYL	87.2 60-130
229128-1	ABL-SS-2-0-1	O-TERPHENYL	90.3 60-130
229129-1	ABL-SS-3-0-1	O-TERPHENYL	94.0 60-130
229130-1	ABL-SS-4-0-1	O-TERPHENYL	90.7 60-130
229131-1	ABL-SS-5-0-1	O-TERPHENYL	83.6 60-130
			% Recovery
Sample#	QC Sample Type	Surrogate	Recovered Limits
229732-1	Reagent blank (MDB)	O-TERPHENYL	92.0 60-130
229733-1	Spiked blank (BSP)	O-TERPHENYL	105 60-130
229734-1	Spiked blank duplicate	(BSD)O-TERPHENYL	107 60-130
229735-1	Matrix spike (MS)	O-TERPHENYL	106 60-130
229736-1	Matrix spike duplicate	(MSD)O-TERPHENYL	99.8 60-130

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**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 20 samples for TEPH analysis.

Method: EPA 8015M Lab Run#: 17479 Matrix: SOIL

			% Recovery
<u>Sample#</u>	Client Sample ID	Surrogate	Recovered Limits
229064-1	ABL-SB-2-0-1	O-TERPHENYL	86.8 60-130
229065-1	ABL-SB-2-2-3	O-TERPHENYL	79.8 60-130
229066-1	ABL-SB-3-0-1	O-TERPHENYL	88.7 60-130
229067-1	ABL-SB-3-2-3	O-TERPHENYL	85.1 60-130
229068-1	ABL-SB-5-0-1	O-TERPHENYL	92.8 60-130
229069-1	ABL-SB-5-2-3	O-TERPHENYL	87.3 60-130
229070-1	ABL-SB-7-0-1	O-TERPHENYL	78.2 60-130
229071-1	ABL-SB-7-2-3	O-TERPHENYL	83.7 60-130
229072-1	ABL-SB-9-0-1	O-TERPHENYL	82.3 60-130
229073-1	ABL-SB-9-2-3	O-TERPHENYL	80.5 60-130
229074-1	ABL-SB-10-0-1	O-TERPHENYL	111 60-130
229075-1	ABL-SB-10-2-3	O-TERPHENYL	88.0 60-130
229076-1	ABL-SB-11-0-1	O-TERPHENYL	93.6 60-130
229077-1	ABL-SB-11-2-3	O-TERPHENYL	85.8 60-130
229078-1	ABL-SB-12-0-1	O-TERPHENYL	103 60-130
229079-1	ABL-SB-12-2-3	O-TERPHENYL	89.6 60-130
229080-1	ABL-SB-6-0-1	O-TERPHENYL	87.2 60-130
229081-1	ABL-SB-6-2-3	O-TERPHENYL	85.6 60-130
229082-1	ABL-SB-8-0-1	O-TERPHENYL	87.0 60-130
229083-1	ABL-SB-8-2-3	O-TERPHENYL	88.9 60-130
			% Recovery
Sample#	QC Sample Type	Surrogate	Recovered Limits
229626-1	Reagent blank (MDB)	O-TERPHENYL	87.7 60-130
229627-1	Spiked blank (BSP)	O-TERPHENYL	95.3 60-130
229628-1	Spiked blank duplicate	(BSD)O-TERPHENYL	89.6 60-130
229629-1	Matrix spike (MS)	O-TERPHENYL	95.4 60-130
229630-1	Matrix spike duplicate	(MSD)O-TERPHENYL	93.5 60-130
	- -	· · · · · · · · · · · · · · · · · · ·	33.3 00 130

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Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 20 samples for TEPH analysis, continued.

Method: EPA 8015M Lab Run#: 17479

> S010 QCSURR1229 CMH 23-Feb-99 16:17

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 4 samples for TEPH analysis.

Method: EPA 8015M Lab Run#: 17492 Matrix: SOIL

а1-4	#11 · # #		% Recovery
Sample#	Client Sample ID	Surrogate	Recovered Limits
229084-1	ABL-SB-4-0-1	O-TERPHENYL	98.0 60-130
229085-1	ABL-SB-4-2-3	O-TERPHENYL	93.1 60-130
229091-1	ABL-SB-1-0-1	O-TERPHENYL	130 60-130
229095-1	ABL-SB-1-2-3	O-TERPHENYL	61.9 60-130
			% Recovery
			9 VECOVETA
Sample#	QC Sample Type	Surrogate	
<u>Sample#</u> 229732-1	Reagent blank (MDB)	Surrogate O-TERPHENYL	Recovered Limits
229732-1 229733-1	Reagent blank (MDB) Spiked blank (BSP)	O-TERPHENYL O-TERPHENYL	Recovered Limits 92.0 60-130
229732-1 229733-1 229734-1	Reagent blank (MDB) Spiked blank (BSP) Spiked blank duplicate	O-TERPHENYL O-TERPHENYL	Recovered Limits 92.0 60-130 105 60-130
229732-1 229733-1	Reagent blank (MDB) Spiked blank (BSP)	O-TERPHENYL O-TERPHENYL	Recovered Limits 92.0 60-130 105 60-130

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Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for TEPH analysis.

Method: EPA 8015M

Matrix: SOIL

Lab Run#: 17479

Analyzed: February 19, 1999

Spike Spike Amount Amount Found Spike Recov BSP BSP Dup **BSP** Dup Dup Control % RPD Analyte (mg/Kg) (mq/Kq) (왕) (%) Limits RPD Lim 83.3 76.3 DIESEL 83.3 83.1 99.8 91.6 60-130 8.57 25

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for TEPH analysis.

Method: EPA 8015M

Matrix: SOIL Lab Run#: 17492

Analyzed: February 22, 1999

	Spike							
Analyte	Spike BSP (mg/Ko	Amount Dup g)	Amoun BSP (mg/K	Dup	Spike BSP (%)	Recov Dup (%)	Control % Limits RPD	% RPD Lim
DIESEL	, 83.3	83.3	86.1	90.4	103	108	60-130 4.74	25

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: 1 sample for TPH - Diesel analysis.

Method: EPA 8015M

Matrix: SOIL

Extracted: February 22, 1999

Sampled: February 16, 1999

Run#:

17492

Analyzed: February 22, 1999

REPORTING

BLANK BLANK DILUTION

DIESEL

LIMIT

RESULT

SPIKE

CLIENT SPL ID

(mg/Kg)

(mg/Kg)

(mg/Kg)

FACTOR

229132 ABL-DC01

N.D.

1.0

(%)

Bruce Havlik

Environmental Services (SDB)

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 1 sample for TPH - Diesel analysis.

Method: EPA 8015M Lab Run#: 17492 Matrix: SOIL

Sample#	Client Sample ID	Surrogate	% Recovery Recovered Limits
229132-1	ABL-DC01	O-TERPHENYL	91.8 60-130 % Recovery
Sample#	OC Sample Type	Surrogate	Recovered Limits
229732-1	Reagent blank (MDB)	O-TERPHENYL	92.0 60-130
229733-1	Spiked blank (BSP)	O-TERPHENYL	105 60-130
229734-1	Spiked blank duplicate	· · · · · · · · · · · · · · · · · · ·	107 60-130_
229735-1 229736-1	Matrix spike (MS)	O-TERPHENYL	106 60-130
229/30-1	Matrix spike duplicate	(MSD)O-TERPHENYL	99.8 60-130

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Environmental Services (SDB)

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for TPH - Diesel analysis.

Method: EPA 8015M

Matrix: SOIL Lab Run#: 17492

Analyzed: February 22, 1999

	Spike							
	Spike	Amount	Amoun	t Found	Spike	Recov		8
Analyte	BSP (mg/K	Dup 7)	BSP (mg/K	Dup g)	BSP (%)	Dup (%)	Control % Limits RPD	RPD Lim
DIESEL	83.3	83.3	86.1	90.4	103	108	60-130 4.74	25

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: 9 samples for TPH - Diesel analysis.

Method: EPA 8015M

Matrix: WATER Extracted: February 18, 1999 Sampled: February 15, 1999 Run#: 17447 Analyzed: February 18, 1999

Spl# CLIENT SPL ID	DIESEL (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
229100 ABL-GW-2	N.D.	50	N.D.	118	1
229101 ABL-GW-3	N.D.	50	N.D.	118	ī
229102 ABL-GW-4	N.D.	50	N.D.	118	ī
229104 DUPGW01	N.D.	50	N.D.	118	ī
229105 ABL-GW-7	N.D.	50	N.D.	118	ī
229107 ABL-GW-11	N.D.	50	N.D.	118	ī

Matrix: WATER Extracted: February 18, 1999

Sampled: February 15, 1999 Analyzed: February 19, 1999 Run#: 17447

Spl# CLIENT SPL ID	DIESEL (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)		DILUTION FACTOR
229099 ABL-GW-1	N.D.	50	N.D.	118	1
229103 ABL-GW-5	100	50	N.D.	118	1
Note: Hydrocarbon re	eported does not	match the patte	rn of our	Diecel	Standard
229106 ABL-GW-10	3700 丁	50	N D	110	ocanuaru.

Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.

Surrogate Recoveries biased high due to Hydrocarbon co-elution.

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: 3 samples for TPH - Diesel analysis.

Method: EPA 8015M

Matrix: WATER

Extracted: February 18, 1999

Sampled: February 15, 1999

Run#: 17447

Analyzed: February 19, 1999

Spl# C	CLIENT SPL ID	DIESEL (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
229086 A	ABL-GW-12	N.D.	50	N.D.	118	1
229087 A	ABL-GW-8	N.D.	50	N.D.	118	1
229088 A	ABL-GW-6	99	50	N.D.	118	1

Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.

Carolyn House

Analyst

Bruce Haylik

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000
Received: February 16, 1999

re: Surrogate report for 12 samples for TPH - Diesel analysis.

Method: EPA 8015M Lab Run#: 17447 Matrix: WATER

a 7 11	<b></b>		% Recovery
Sample#	Client Sample ID	Surrogate	Recovered Limits
229086-1	ABL-GW-12	O-TERPHENYL	71.4 60-130
229087-1	ABL-GW-8	O-TERPHENYL	71.2 60-130
229088-1	ABL-GW-6	O-TERPHENYL	90.7 60-130
229099-1	ABL-GW-1	O-TERPHENYL	82.4 60-130
229100-1	ABL-GW-2	O-TERPHENYL	82.9 60-130
229101-1	ABL-GW-3	O-TERPHENYL	77.6 60-130
229102-1	ABL-GW-4	O-TERPHENYL	80.5 60-130
229103-1	ABL-GW-5	O-TERPHENYL	68.5 60-130
229104-1	DUPGW01	O-TERPHENYL	68.4 60-130
229105-1	ABL-GW-7	O-TERPHENYL	68-4 60-130
229106-1	ABL-GW-10	O-TERPHENYL	· · · · · · · · · · · · · · · · · · ·
229107-1	ABL-GW-11	O-TERPHENYL	
		OIDMIN	
Sample#	QC Sample Type	Surrogate	
229412-1	Reagent blank (MDB)	O-TERPHENYL	Recovered Limits
229413-1	Spiked blank (BSP)	O-TERPHENYL	84.0 60-130
229414-1	Spiked blank duplicate		111 60-130
227444 1	phired plank dubilicate	(BSD)O-TERPHENYL	110 60-130
			Ţ

S005 QCSURR1229 CMH 23-Feb-99 16:17

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for TPH - Diesel analysis.

Method: EPA 8015M

Matrix: WATER

Lab Run#: 17447 Analyzed: February 18, 1999

Analyte	Spike BSP (ug/L)	Amount Dup			Spike BSP (%)	Recov Dup (%)	Control % Limits RPD	% RPD Lim
DIESEL	2500	2500	2960	3040	118	122	60-130 3.33	25

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-SB-1-0-1

Spl#: 229091

Matrix: SOIL

Sampled: February 15, 1999 Run#:17513

Analyzed: February 23, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK DILUTION SPIKE FACTOR (%)
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	N.D. N.D. N.D. N.D. N.D.	1.0 0.0050 0.0050 0.0050 0.0050 0.0050	N.D. N.D. N.D. N.D. N.D. N.D.	89 1 85 1 92 1 90 1 92 1 95 1

Vincent Vancil

Analyst

Michael Verona

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

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re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-SB-2-0-1

Sp1#: 229064

Matrix: SOIL

Sampled: February 15, 1999 Run#:17514

Analyzed: February 23, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK DI SPIKE F (%)	LUTION ACTOR
GASOLINE	N.D.	1.0	N.D.	102	1
MTBE	N.D.	0.0050	N.D.	99	1
BENZENE	N.D.	0.0050	N.D.	96	1
TOLUENE	N.D.	0.0050	N.D.	96	1
ETHYL BENZENE	N.D.	0.0050	N.D.	95	1
XYLENES	N.D.	0.0050	N.D.	94	1

Vincent Vancil

Analyst

Michael Verona

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-SB-3-0-1

Spl#: 229066

Matrix: SOIL

Sampled: February 15, 1999 Run#:17514

Analyzed: February 23, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK DILUTION SPIKE FACTOR (%)
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	N.D. N.D. N.D. N.D. N.D. N.D.	1.0 0.0050 0.0050 0.0050 0.0050	N.D. N.D. N.D. N.D. N.D. N.D.	102 1 99 1 96 1 96 1 95 1 94 1

Incent Vancil

Analyst

Michael Verone

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-SB-4-0-1

Sp1#: 229084

Matrix: SOIL

Sampled: February 15, 1999 Run#:17537

Analyzed: February 23, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mq/Kg)	BLANK RESULT (mg/Kg)	BLANK DILUTION SPIKE FACTOR (%)	
GASOLINE	N.D.	1.0	N.D.	102 1	
MTBE	N.D.	0.0050	N.D.	98 1	
BENZENE	N.D.	0.0050	N.D.	102 1	
TOLUENE	N.D.	0.0050	N.D.	102 1	
ETHYL BENZENE	N.D.	0.0050	N.D.	$\overline{1}\overline{0}\overline{2}$ $\overline{1}$	
XYLENES	N.D.	0.0050	N.D.	100 1	

Craig Huntzinger

Analyst

Michael Verona

Laboratory Operations Manager

VINCE 18:35

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#:

510996100900/2000

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-SB-5-0-1

Sp1#: 229068

Matrix: SOIL

Sampled: February 15, 1999 Run#:17514

Analyzed: February 23, 1999

ANALYTE	RESULT	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK : SPIKE (%)	DILUTION FACTOR
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	 N.D. N.D. N.D. N.D. N.D.	1.0 0.0050 0.0050 0.0050 0.0050 0.0050	N.D. N.D. N.D. N.D. N.D. N.D.	102 99 96 96 95 94	1 1 1 1 1

Vincent Vancií

Analyst

Michael Verona

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-SB-6-0-1

Spl#: 229080 Matrix: SOIL Sampled: February 15, 1999 Run#:17537

un#:17537 Analyzed: February 23, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK DI SPIKE F. (%)	LUTION ACTOR
GASOLINE	N.D.	1.0	N.D.	102	1
MTBE	N.D.	0.0050	N.D.	98	1
BENZENE	N.D.	0.0050	N.D.	102	1
TOLUENE	N.D.	0.0050	N.D.	102	1
ETHYL BENZENE	N.D.	0.0050	N.D.	102	1
XYLENES	N.D.	0.0050	N.D.	100	1

Craig Huntzinger

Analyst

Michael Verona

Laboratory Operations Manager

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-SB-7-0-1

*Sp1#:* 229070

Matrix: SOIL

Sampled: February 15, 1999 Run#:17513

Analyzed: February 23, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK DILUTION SPIKE FACTOR (%)	
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	N.D. N.D. N.D. N.D. N.D. N.D.	1.0 0.0050 0.0050 0.0050 0.0050 0.0050	N.D. N.D. N.D. N.D. N.D. N.D.	89 1 85 1 92 1 90 1 92 1 95 1	

Vincent Vancil

Analyst

Michael Verona

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-SB-8-0-1

Sp1#: 229082

Matrix: SOIL

Sampled: February 15, 1999 Run#:17514

Analyzed: February 23, 1999

ANALYTE	RESULT	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK D SPIKE (%)	ILUTION FACTOR
GASOLINE	N.D.	1.0	N.D.	102	1
MTBE	N.D.	0.0050	N.D.	99	1
BENZENE	N.D.	0.0050	N.D.	96	1
TOLUENE	N.D.	0.0050	N.D.	96	1
ETHYL BENZENE	N.D.	0.0050	N.D.	95	1
XYLENES	N.D.	0.0050	N.D.	94	1

Vincent Vancil

Analyst

Michael Verona

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-SB-9-0-1

Sp1#: 229072

Matrix: SOIL

Sampled: February 15, 1999 Run#:17537

Analyzed: February 23, 1999

ANALYTE		RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK DILUTION SPIKE FACTOR (%)
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	e	N.D. N.D. N.D. N.D. N.D. N.D.	1.0 0.0050 0.0050 0.0050 0.0050	N.D. N.D. N.D. N.D. N.D. N.D.	102 1 98 1 102 1 102 1 102 1 100 1

Craig Huntzinger

Analyst

Michael Verora

Laboratory Operations Manager

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-SB-10-0-1

Spl#: 229074

Matrix: SOIL

Sampled: February 15, 1999 Run#:17513

Analyzed: February 23, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK DILU SPIKE FAC (%)	TION TOR
GASOLINE	N.D.	1.0	N.D.	89 1	
MTBE	N.D.	0.0050	N.D.	85 1	
BENZENE	N.D.	0.0050	N.D.	92 1	
TOLUENE	N.D.	0.0050	N.D.	90 1	
ETHYL BENZENE	N.D.	0.0050	N.D.	92 1	
XYLENES	N.D.	0.0050	N.D.	95 <b>1</b>	

Vincent Vancil

Analyst

Michael Vergna

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-SB-11-0-1

Spl#: 229076

Matrix: SOIL

Sampled: February 15, 1999 Run#:17514

Analyzed: February 23, 1999

ANALYTE	-	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK I SPIKE (%)	DILUTION FACTOR
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	1.5	N.D. N.D. N.D. N.D. N.D. N.D.	1.0 0.0050 0.0050 0.0050 0.0050 0.0050	N.D. N.D. N.D. N.D. N.D. N.D.	102 99 96 96 95 94	1 1 1 1 1

Vincent Vancil

Analyst

Michael Vergna

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-SB-12-0-1

Spl#: 229078

Matrix: SOIL

Sampled: February 15, 1999 Run#:17514

Analyzed: February 23, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK DILUTION SPIKE FACTOR (%)
GASOLINE MTBE	N.D.	1.0	N.D.	102 1
BENZENE	N.D. N.D.	0.0050 0.0050	N.D. N.D.	99 1 _ 96 1
TOLUENE ETHYL BENZENE	N.D. N.D.	0.0050 0.0050	N.D. N.D.	96 1 95 1
XYLENES	N.D.	0.0050	N.D.	$94$ $\overline{1}$

Vincent Vancil

Analyst

Michael Veroxa

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-DC01

Spl#: 229132

Matrix: SOIL

Sampled: February 16, 1999 Run#:17514

Analyzed: February 23, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK I SPIKE (%)	DILUTION FACTOR	
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	N.D. N.D. N.D. N.D. N.D. N.D.	1.0 0.0050 0.0050 0.0050 0.0050	N.D. N.D. N.D. N.D. N.D. N.D.	102 99 96 96 95 94	1 1 1 1	,

Vincent Vancil

Analyst

**Environmental Services (SDB)** 

March 9, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: SOIL

Lab Run#: 17514 Instrument: 3400-4 Analyzed: February 23, 1999

Spiked Spike Recov Spike Amt Amt Found Sample % RPD MS MSD Control MSD MSD MS Amount MS (%) Limits RPD Lim (%) (mg/Kg)(mg/Kg)(mg/Kg)<u>Analyte</u> 52.2 73.8 51.7 69.7 65-135 0.257 GASOLINE N.D. 0.466 0.492 0.241 5.71 65-135 35 0.0650 0.0726 0.0933 0.0984 MTBE N.D. 65-135 0.64 62.0 35 0.0933 0.0984 0.0582 0.0610 62.4 N.D. BENZENE 54.6 65-135 57.7 35 0.0537 0.0933 0.0984 N.D. 0.0538 TOLUENE 51.1 47.4 65-135 7.51 0.0984 0.0477 0.0466 N.D. 0.0933 ETHYL BENZENE 50.7 46.1 65-135 9.50 0.295 0.142 0.136 0.280 N.D. XYLENES

Sample Spiked: 229078
Submission #: 9902200

Client Sample ID: ABL-SB-12-0-1

**Environmental Services (SDB)** 

March 9, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: SOIL

Lab Run#: 17537 Instrument: 3400-4 Analyzed: February 24, 1999

Analyte	Spiked Sample Spike Amt Amount MS MSD (mg/Kg) (mg/Kg)	Amt Found MS MSD (mg/Kg)	Spike Reco MS MSD (%) (%)	v % Control % RPD Limits RPD Lim
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	N.D. 0.497 0.54 N.D. 0.0994 0.10 N.D. 0.0994 0.10 N.D. 0.0994 0.10 N.D. 0.0994 0.10 N.D. 0.298 0.32	9 0.0708 0.0890 9 0.0724 0.0765 9 0.0724 0.0760 9 0.0715 0.0723	71.2 81.6 72.8 70.2 72.8 69.7 771.9 66.7	65-135 14.1 35 65-135 13.6 35 65-135 3.64 35 65-135 4.35 35 65-135 7.50 35 65-135 7.02 35

Sample Spiked: 229987 Submission #: 9902283 Client Sample ID: 109-IR46-24

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: SOIL

Lab Run#: 17514 Instrument: 3400-4 Analyzed: February 23, 1999

	Spiked									
	Sample	Spike	Amt	Amt F	ound	Spike	Reco	v		%
	Amount	MS	MSD	MS	MSD	MS	MSD	Contro	L %	RPD
<u>Analyte</u>	(mq/Kq)	(mg	/Kg)	(mcr/K	<u>q)</u>	(%)	(%)	Limits	RPD	<u>Lim</u>
GASOLINE	N.D.	0.466	0.492	0.241	0.257	51.7	52.2	65-135	0.96	35
MTBE	N.D.	0.0933	0.0984	0.0650				65-135		
BENZENE	N.D.	0.0933						65-135		
TOLUENE	N.D.							65-135		
ETHYL BENZENE	N.D.	0.0933	0.0984	0.0477	0.0466	51.1	47.4	65-135	7.51	. 35
XYLENES	N.D.	0.280	0.295	0.142	0.136	50.7	46.1	65-135	9.50	35

Sample Spiked: 229078
Submission #: 9902200

Client Sample ID: ABL-SB-12-0-1

Environmental Services (SDB)

March 9, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 6 samples for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Lab Run#: 17514 Matrix: SOIL

				Recovery
<u>Sample#</u>	Client Sample ID	Surrogate	Recovered	
229064-1	ABL-SB-2-0-1	TRIFLUOROTOLUENE	79.0	53-125
229064-1	ABL-SB-2-0-1	4-BROMOFLUOROBENZENE	55.8	58-124
229066-1	ABL-SB-3-0-1	TRIFLUOROTOLUENE	82.9	
229066-1	ABL-SB-3-0-1	4-BROMOFLUOROBENZENE	57.9	58-124
229068-1	ABL-SB-5-0-1	TRIFLUOROTOLUENE	63.3	53-125
229068-1	ABL-SB-5-0-1	4-BROMOFLUOROBENZENE	37.1	58-124
229076-1	ABL-SB-11-0-1	TRIFLUOROTOLUENE	63.3	53-125
229076-1	ABL-SB-11-0-1	4-BROMOFLUOROBENZENE	33.7	58-124
229078-1	ABL-SB-12-0-1	TRIFLUOROTOLUENE	61.3	53-125
229078-1	ABL-SB-12-0-1	4-BROMOFLUOROBENZENE	41.1	58-124
229082-1	ABL-SB-8-0-1	TRIFLUOROTOLUENE	88.8	53-125
229082-1	ABL-SB-8-0-1	4-BROMOFLUOROBENZENE	60.4	58-124
				Recovery
Sample#	QC Sample Type	Surrogate	Recovered	
229872-1	Reagent blank (MDB)	TRIFLUOROTOLUENE	98.2	53-125
229872-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	84.0	58-124
229873-1	Spiked blank (BSP)	TRIFLUOROTOLUENE	99.3	53-125
229873-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	91.1	58-124
229874-1	Spiked blank duplicate		96.4	53-125
229874-1	Spiked blank duplicate	(BSD)4-BROMOFLUOROBENZENE	85.8	58-124
229876-1	Matrix spike (MS)	TRIFLUOROTOLUENE	64.4	53-125
229876-1	Matrix spike (MS)	4-BROMOFLUOROBENZENE	47.4	58-124
229878-1	Matrix spike duplicate	(MSD) TRIFLUOROTOLUENE	60.1	53-125
229878-1	Matrix spike duplicate		45.1	58-124
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V132 LEV2 QCSURR1229 AFSANEH 09-Mar-99

**Environmental Services (SDB)** 

March 9, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 6 samples for Gasoline BTEX MTBE analysis. Method: SW846 8020A Nov 1990 / 8015Mod

Lab Run#: 17513 Matrix: SOIL

				lecovery
Sample#	Client Sample ID	Surrogate	Recovered	
229070-1	ABL-SB-7-0-1	TRIFLUOROTOLUENE	57.3	53-125
229070-1	ABL-SB-7 <u>-</u> 0-1	4-BROMOFLUOROBENZENE	45.5	58-124
229072-1	ABL-SB-9-0-1	TRIFLUOROTOLUENE	10.1	53-125
229072-1	ABL-SB-9-0-1	4-BROMOFLUOROBENZENE	1.02	58-124
229074-1	ABL-SB-10-0-1	TRIFLUOROTOLUENE	61.1	53-125
229074-1	ABL-SB-10-0-1	4-BROMOFLUOROBENZENE	52.5	58-124
229080-1	ABL-SB-6-0-1	TRIFLUOROTOLUENE	40.0	53-125
229080-1	ABL-SB-6-0-1	4-BROMOFLUOROBENZENE	38.0	58-124
229084-1	ABL-SB-4-0-1	TRIFLUOROTOLUENE	0.126	53-125
229084-1	ABL-SB-4-0-1	4-BROMOFLUOROBENZENE	0.254	58-124
229091-1	ABL-SB-1-0-1	TRIFLUOROTOLUENE	74.1	53-125
229091-1	ABL-SB-1-0-1	4-BROMOFLUOROBENZENE	70.3	58-124
				Recovery
Sample#	QC Sample Type	Surrogate	Recovered	
229867-1	Reagent blank (MDB)	TRIFLUOROTOLUENE	90.0	53-125
229867-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	93.2	58-124
229868-1	Spiked blank (BSP)	TRIFLUOROTOLUENE	99.8	53-125
229868-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	97.8	58-124
229869-1	Spiked blank duplicate	(BSD) TRIFLUOROTOLUENE	96.1	53-125
229869-1	Spiked blank duplicate	(BSD)4-BROMOFLUOROBENZENE	94.3	58-124
229870-1	Matrix spike (MS)	TRIFLUOROTOLUENE	96.9	53-125
229870-1	Matrix spike (MS)	4-BROMOFLUOROBENZENE	97.9	58-124
229871-1	Matrix spike duplicate	(MSD) 4-BROMOFLUOROBENZENE	90.0	58-124

V132 LEVZ QCSURR1229 AFSANEH 09-Mar-99 1

**Environmental Services (SDB)** 

March 9, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 3 samples for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Lab Run#: 17537 Matrix: SOIL

			· %	Recovery
Sample#	Client Sample ID	Surrogate	Recovered	
229072-2	ABL-SB-9-0-1	TRIFLUOROTOLUENE	90.1	53-125
229072-2	ABL-SB-9-0-1	4-BROMOFLUOROBENZENE	74.3	58-124
229080-2	ABL-SB-6-0-1	TRIFLUOROTOLUENE	89.6	53-125
229080-2	ABL-SB-6-0-1	4-BROMOFLUOROBENZENE	71.2	58-124
229084-2	ABL-SB-4-0-1	TRIFLUOROTOLUENE	87.9	53-125
229084-2	ABL-SB-4-0-1	4-BROMOFLUOROBENZENE	66.3	58-124
			8	Recovery
Sample#	QC Sample Type	Surrogate	Recovered	l Limits
230078-1	Reagent blank (MDB)	TRIFLUOROTOLUENE	69.0	53-125
230078-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	58.0	58-124
230079-1	Spiked blank (BSP)	TRIFLUOROTOLUENE	106	53-125
230079-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	88.7	58-124
230080-1	Spiked blank duplicate	(BSD)TRIFLUOROTOLUENE	98.1	53-125
230080-1	Spiked blank duplicate	(BSD)4-BROMOFLUOROBENZENE	69.4	58-124
230104-1	Matrix spike (MS)	TRIFLUOROTOLUENE	73.9	53-125
230104-1	Matrix spike (MS)	4-BROMOFLUOROBENZENE	71.7	58-124
230105-1	Matrix spike duplicate	(MSD) TRIFLUOROTOLUENE	78.5	53-125
230105-1	Matrix spike duplicate	(MSD) 4-BROMOFLUOROBENZENE	70.9	58-124

V132 LEV2 QCSURR1229 AFSANEH 09-Mar-99

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 1 sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Lab Run#: 17514 Matrix: SOIL

			% Recovery
Sample#	Client Sample ID	Surrogate	Recovered Limits
229132-1	ABL-DC01	TRIFLUOROTOLUENE	82.8 53-125
229132-1	ABL-DC01	4-BROMOFLUOROBENZENE	52.9 58-124
			% Recovery
Sample#	OC Sample Type	Surrogate	Recovered Limits
229872-1	Reagent blank (MDB)	TRIFLUOROTOLUENE	98.2 53-125
229872-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	84.0 58-124
229873-1	Spiked blank (BSP)	TRIFLUOROTOLUENE	99.3 53-125
229873-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	91.1 58-124
229874-1	Spiked blank duplicate	(BSD)TRIFLUOROTOLUENE	96.4 53-125
229874-1	Spiked blank duplicate	(BSD)4-BROMOFLUOROBENZENE	85.8 58-124
229876-1	Matrix spike (MS)	TRIFLUOROTOLUENE	64.4 53-125
229876-1	Matrix spike (MS)	4-BROMOFLUOROBENZENE	47.4 58-124
229878-1	Matrix spike duplicate	(MSD)TRIFLUOROTOLUENE	60.1 53-125
229878-1	Matrix spike duplicate	(MSD) 4-BROMOFLUOROBENZENE	45.1 58-124

V132 LEVZ QCSURR1229 CRAIG 24-Feb-99 11:1

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: SOIL Lab Run#: 17514

Analyzed: February 23, 1999

•			., acar a	ary 20, root	
Analyte	Spike Amount BSP Dup (mg/Kg)	Spike Amount Found S BSP Dup (mg/Kg)	Spike Recov BSP Dup (%) (%)	Control % R	% PD
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	0.500 0.500 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.300 0.300	0.0985 0.0885 0.0958 0.0882 0.0956 0.0876 0.0950 0.0884	95.8 88.2 95.6 87.6	75-125 3.39 3 75-125 10.7 3 77-123 8.26 3 78-122 8.73 3 70-130 7.20 3 75-125 6.59 3	5555

**Environmental Services (SDB)** 

March 9, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: SOIL Lab Run#: 17513

Analyzed: February 23, 1999

Analyte	Spike Amount BSP Dup (mg/Kg)	Spike Amount Found BSP Dup (mg/Kg)	Spike Recov BSP Dup (%) (%)	Control % Limits RPD	% RPD Lim
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	0.500 0.500 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.300 0.300	0.444 0.438 0.0850 0.0839 0.0923 0.0900 0.0899 0.0877 0.0921 0.0897 0.285 0.271	92.3 90.0 89.9 87.7	75-125 1.36 75-125 1.30 77-123 2.52 78-122 2.48 70-130 2.64 75-125 5.07	35 35 35 35

**Environmental Services (SDB)** 

March 9, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: SOIL Lab Run#: 17537

Analyzed: February 24, 1999

Analyte	Spike Amount BSP Dup (mg/Kg)	Spike Amount Found BSP Dup (mg/Kg)	Spike Recov BSP Dup (%) (%)	Control % Limits RPD	% RPD Lim
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	0.500 0.500 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.300 0.300	0.509 0.383 0.0982 0.0899 0.102 0.102 0.102 0.103 0.102 0.104 0.301 0.306	102 76.6 98.2 89.9 102 102 102 103 102 104 100 102	75-125 28.4 75-125 8.82 77-123 0 78-122 0.97 70-130 1.94 75-125 1.98	35 35 35 35

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: SOIL Lab Run#: 17514

Analyzed: February 23, 1999

Analyte	Spike Amount BSP Dup (mg/Kg)	Spike Amount Found BSP Dup (mg/Kg)	Spike Recov BSP Dup (%) (%)	Control % Limits RPD	% RPD Lim
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	0.500 0.500 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.300 0.300	0.512 0.493 0.0985 0.0885 0.0958 0.0882 0.0956 0.0876 0.0950 0.0884 0.282 0.264	95.8 88.2 95.6 87.6	75-125 3.39 75-125 10.7 77-123 8.26 78-122 8.73 70-130 7.20 75-125 6.59	35 35 35 35

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-GW-1

Spl#: 229099

Matrix: WATER

Sampled: February 15, 1999

Run#:17501

Analyzed: February 22, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE MTBE BENZENE	79 62	50 5.0	N.D. N.D.	87 87	1 1
TOLUENE ETHYL BENZENE	N.D. N.D. N.D.	0.50 0.50	N.D. N.D.	90 92	1
XYLENES	N.D.	0.50 0.50	N.D. N.D.	90 90	1 1

Note: Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline

Profile.

Vincent Vancil

Analyst

Michael Veroma

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: DUPGW01

Spl#: 229104

Matrix: WATER

Sampled: February 15, 1999

Run#:17501

Analyzed: February 22, 1999

	RESULT	REPORTING LIMIT	BLANK RESULT	BLANK SPIKE	DILUTION FACTOR	ſ
ANALYTE	(ug/L)	(ug/L)	(ug/L)	(%)		
GASOLINE	52	50	N.D.	87	1	
MTBE	N.D.	5.0	N.D.	87	1	
BENZENE	N.D.	0.50	N.D.	90	1	
TOLUENE	N.D.	0.50	N.D.	92	1	
ETHYL BENZENE	N.D.	0.50	N.D.	90	1	
XYLENES	N.D.	0.50	N.D.	90	1	

Note: Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline Profile.

Vincent Vancil

Analyst

Michael Verøra

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-GW-2

*Spl#:* 229100

Matrix: WATER

Sampled: February 15, 1999

Run#:17501

Analyzed: February 22, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK DILUTION SPIKE FACTOR (%)
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	N.D. N.D. N.D. N.D. N.D.	50 5.0 0.50 0.50 0.50 0.50	N.D. N.D. N.D. N.D. N.D. N.D.	87 1 87 1 90 1 92 1 90 1 90 1

Vincent Vancil

Analyst

Michael Verona

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-GW-3

Spl#: 229101 Sampled: February 15, 1999

Matrix: WATER Run#:17501

Analyzed: February 22, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK : SPIKE (%)	DILUTION FACTOR
GASOLINE MTBE BENZENE	160 N.D. N.D.	50 5.0 0.50	N.D. N.D. N.D.	87 87	1
TOLUENE ETHYL BENZENE	N.D. N.D.	0.50 0.50	N.D. N.D.	90 92 90	1 1 1
XYLENES	N.D.	0.50	N.D.	90	1

Note: Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline

Profile.

Vincent Vancil

Analyst

Michael Verona

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-GW-4

*Spl#:* 229102

Matrix: WATER

Sampled: February 15, 1999 Run#:17501

Analyzed: February 22, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	87	1
MTBE BENZENE	N.D. N.D.	5.0 0.50	N.D. N.D.	87 90	1
TOLUENE	N.D.	0.50	N.D.	92	i
ETHYL BENZENE XYLENES	N.D. N.D.	0.50 0.50	N.D. N.D.	90 90	1 1

Vincent Vancil

Analyst

Michael Verøna

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-GW-5

Spl#: 229103

Matrix: WATER

Sampled: February 15, 1999 Run#:17501

Analyzed: February 22, 1999

ANALYTE		RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK DILUTI SPIKE FACTO (%)	
GASOLINE MTBE BENZENE		N.D. N.D. N.D.	50 5.0 0.50	N.D. N.D. N.D.	87 1 87 1 90 <b>1</b>	
TOLUENE ETHYL BENZENE XYLENES	r *	N.D. N.D. N.D.	0.50 0.50 0.50	N.D. N.D. N.D.	92 1 90 1 90 1	

Vincent Váncil

Analyst

Michael Verona

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 5109961

510996100900/2000

• •

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-GW-6

Sp1#: 229088

Matrix: WATER

Sampled: February 15, 1999

Run#:17547

Analyzed: February 22, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK DIL SPIKE FA (%)	UTION CTOR
GASOLINE	110	50	N.D.	84 1	·
MTBE BENZENE	Ŋ.D.	5.0	N.D.	92 1	
TOLUENE	N.D.	0.50	N.D.	92 1	
ETHYL BENZENE	N.D.	0.50	N.D.	91 1	
XYLENES	N.D.	0.50	N.D.	91 1	
VITTEMES	N.D.	0.50	N.D.	92 1	

Note: Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline Profile.

Vincent Vancil

Analyst

Michael Verona

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 51

510996100900/2000

Received: February 16, 1999

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-GW-7

Spl#: 229105

Matrix: WATER

Sampled: February 15, 1999

Run#:17501

Analyzed: February 22, 1999

ANALYTE	RESULT	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK DILUTION SPIKE FACTOR (%)
GASOLINE	N.D.	50	N.D.	87 1
MTBE	N.D.	5.0	N.D.	87 <b>1</b>
BENZENE	N.D.	0.50	N.D.	90 1
TOLUENE	N.D.	0.50	N.D.	92 <b>1</b>
ETHYL BENZENE	N.D.	0.50	N.D.	90 <b>1</b>
XYLENES	N.D.	0.50	N.D.	90 <b>1</b>

Vincent Vancil

Analyst

Michael Verona

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-GW-8

Spl#: 229087

Matrix: WATER

Sampled: February 15, 1999 Run#:17501

Analyzed: February 22, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK DILUTION SPIKE FACTOR (%)	í
GASOLINE MTBE	55	50	N.D.	87 1	
BENZENĖ	Ŋ.D.	5.0	N.D.	87 1	
TOLUENE	N.D.	0.50	N.D.	90 1	
ETHYL BENZENE	N.D.	0.50	N.D.	92 1	
XYLENES	N.D.	0.50	N.D.	90 1	
17 T T T T T T T T T T T T T T T T T T T	2.4	0.50	N.D.	90 1	

Note: Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline Profile.

Vincent Vancil

Analyst

Michael Verona

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-GW-9

Spl#: 229108 Sampled: February 15, 1999

Matrix: WATER

Run#:17501

Analyzed: February 22, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	92	50	N.D.	87	1
MTBE	17	5.0	N.D.	87	1
BENZENE	N.D.	0.50	N.D.	90	1
TOLUENE	N.D.	0.50	N.D.	92	1
ETHYL BENZENE	N.D.	0.50	N.D.	90	1
XYLENES	N.D.	0.50	N.D.	90	1

Note: Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline

Profile. MTBE result is draft pending GC/MS conformation.

Vincent Vancil

Analyst

Michael Verona

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-GW-10

SpI#: 229106

Matrix: WATER

Sampled: February 15, 1999

Run#:17501

Analyzed: February 22, 1999

ANALYTE GASOLINE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK DILUTION SPIKE FACTOR (%)	ſ,
MTBE BENZENE	430 N.D. N.D.	50 5.0 0.50	N.D. N.D. N.D.	87 1 87 1 90 1	
TOLUENE ETHYL BENZENE XYLENES	N.D. N.D. N.D.	0.50 0.50 0.50	N.D. N.D. N.D.	92 1 90 1 90 1	

Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline *Note:* 

Profile.

Vincent Vancil

Analyst

Michael Verona

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-GW-11

Spl#: 229107

Matrix: WATER

Sampled: February 15, 1999 Run#:17501

Analyzed: February 22, 1999

ANALYTE		RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK I SPIKE (%)	DILUTION FACTOR	
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	ş d	N.D. N.D. N.D. N.D. N.D.	50 5.0 0.50 0.50 0.50	N.D. N.D. N.D. N.D. N.D.	87 90 92 90	1 1 1 1 1	,

Vincent Vancil

Analyst

Michael Verona

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: ABL-GW-12

Sp1#: 229086

Matrix: WATER

Sampled: February 15, 1999 Run#:17501

Analyzed: February 22, 1999

ANALYTE GASOLINE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK DILUTION SPIKE FACTOR (%)	ſ
MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	N.D. N.D. N.D. N.D. N.D.	50 5.0 0.50 0.50 0.50	N.D. N.D. N.D. N.D. N.D. N.D.	87 1 87 1 90 1 92 1 90 1 90 1	

Vincent Vancil

Analyst

Michael Verona

Environmental Services (SDB)

March 9, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: WATER

Analyzed: February 24, 1999 Lab Run#: 17547 Instrument: 3400-1

Analyte	Spiked Sample Amount (ug/L)	Spike Amt MS MSD (ug/L)	Amt Found MS MSD (ug/L)	Spike Reco MS MSD (%) (%)	v % Control % RPD <u>Limits RPD Lim</u>
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	N.D. N.D. N.D. N.D. N.D.	500 500 100 100 100 100 100 100 100 100 300 300	460 390 83.2 86.9 92.9 89.0 93.2 88.4 91.6 87.7 204 262	83.2 86.9 92.9 89.0 93.2 88.4 91.6 87.7	65-135 16.5 20 65-135 4.35 20 65-135 4.29 20 65-135 5.29 20 65-135 4.35 20 65-135 24.8 20

Sample Spiked: 229512 Submission #: 9902247 Client Sample ID: BE 2/18

Environmental Services (SDB)

March 9, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: WATER

Lab Run#: 17501 Analyzed: February 22, 1999 Instrument: 3400-1

Analyte	Spiked Sample Amount (ug/L)	MS	e Amt MSD g/L)	Amt 1 MS (ug/1	Found MSD L)	Spike MS (%)	Reco MSD (%)	v Control Limits		% RPD Lim
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	140 14 19 6.3 3.1 0.98	500 100 100 100 100 300	500 100 100 100 100 300	558 78.5 112 100 91.3 264	589 88.6 102 93.3 83.8 244	64.5 93.0 93.7 88.2	74.6 83.0 87.0 80.7	65-135 65-135 65-135 65-135 65-135	14.5 11.4 7.42 8.88	20 20 20 20

Sample Spiked: 228666 Submission #: 9902161 Client Sample ID: PZ-1

Environmental Services (SDB)

March 9, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 2 samples for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Lab Run#: 17547
Matrix: WATER

				Recovery
Sample#	Client Sample ID	Surrogate	Recovered	
229088-2	ABL-GW-6	TRIFLUOROTOLUENE	99.7	58-124
229088-2	ABL-GW-6	4-BROMOFLUOROBENZENE	94.7	50-150
229102-2	ABL-GW-4	TRIFLUOROTOLUENE	99.6	58-124
229102-2	ABL-GW-4	4-BROMOFLUOROBENZENE	99.2	50-150
			% ]	Recovery
Sample#	QC Sample Type	Surrogate	Recovered	Limits
230106-1	Reagent blank (MDB)	TRIFLUOROTOLUENE	71.6	58-124
230106-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	72.7	50-150
230107-1	Spiked blank (BSP)	TRIFLUOROTOLUENE	98.1	58-124
230107-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	101	50-150
230108-1	Spiked blank duplicate	(BSD) TRIFLUOROTOLUENE	98.0	58-124
230108-1	Spiked blank duplicate	(BSD) 4-BROMOFLUOROBENZENE	102	50-150
230109-1	Matrix spike (MS)	TRIFLUOROTOLUENE	102	58-124
230109-1	Matrix spike (MS)	4-BROMOFLUOROBENZENE	111	50-150
230110-1	Matrix spike duplicate	(MSD) TRIFLUOROTOLUENE	98.3	58-124
230110-1	Matrix spike duplicate	(MSD) 4-BROMOFLUOROBENZENE	95.1	50-150

V132 **LEV2** QCSURR1229 AFSANEH 09-Mar-99 1

Environmental Services (SDB)

March 9, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 13 samples for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Lab Run#: 17501 Matrix: WATER

			%	Recovery
Sample#	Client Sample ID	Surrogate	Recovered	
229086-1	ABL-GW-12	TRIFLUOROTOLUENE	11.8	58-124
229086-1	ABL-GW-12	4-BROMOFLUOROBENZENE	12.7	50- <b>150</b>
229086-2	ABL-GW-12	TRIFLUOROTOLUENE	85.6	58-124
229086-2	ABL-GW-12	4-BROMOFLUOROBENZENE	95.9	50-150
229087-1	ABL-GW-8	TRIFLUOROTOLUENE	81.1	58-124
229087-1	ABL-GW-8	4-BROMOFLUOROBENZENE	90.3	
229088-1	ABL-GW-6	TRIFLUOROTOLUENE	<del>-</del> -	58-124
229088-1	ABL-GW-6	4-BROMOFLUOROBENZENE	0.078	
229099-1	ABL-GW-1	TRIFLUOROTOLUENE	92.2	58-124
229099-1	ABL-GW-1	4-BROMOFLUOROBENZENE	101	50-150
229100-1	ABL-GW-2	TRIFLUOROTOLUENE	89.9	58-124
229100-1	ABL-GW-2	4-BROMOFLUOROBENZENE	91.9	50-150
229101-1	ABL-GW-3	TRIFLUOROTOLUENE	86.2	58-124
229101-1	ABL-GW-3	4-BROMOFLUOROBENZENE	98.0	50-150
229102-1	ABL-GW-4	TRIFLUOROTOLUENE	23.9	58-124
229102-1	ABL-GW-4	4-BROMOFLUOROBENZENE	25.1	50-150
229103-1	ABL-GW-5	TRIFLUOROTOLUENE	84.4	58-124
229103-1	ABL-GW-5	4-BROMOFLUOROBENZENE	93.6	50-150
229104-1	DUPGW01	TRIFLUOROTOLUENE	88.9	58-124
229104-1	DUPGW01	4-BROMOFLUOROBENZENE	95.8	50-150
229105-1	ABL-GW-7	TRIFLUOROTOLUENE	60.0	58-124
229105-1	ABL-GW-7	4-BROMOFLUOROBENZENE	69.1	50-150
229106-1	ABL-GW-10	TRIFLUOROTOLUENE	74.1	58-124
229106-1	ABL-GW-10	4-BROMOFLUOROBENZENE	80.0	50-150
229107-1	ABL-GW-11	TRIFLUOROTOLUENE	84.3	58-124
229107-1	ABL-GW-11	4-BROMOFLUOROBENZENE	91.0	50-150
229108-1	ABL-GW-9	TRIFLUOROTOLUENE	82.7	58-124
229108-1	ABL-GW-9	4-BROMOFLUOROBENZENE	90.2	50-150

V132 LEVZ QCSURR1229 AFSANEH 09-Mar-99

Environmental Services (SDB)

March 9, 1999

Submission #: 9902200 page 2

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 13 samples for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Lab Run#: 17501

	<b>.</b>		% ]	Recovery
Sample#	QC Sample Type	Surrogate	<u>Recovered</u>	
229789-1	Reagent blank (MDB)	TRIFLUOROTOLUENE	74.9	58-124
229789-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	80.1	50-150
229790-1	Spiked blank (BSP)	TRIFLUOROTOLUENE	98.7	58-124
229790-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	107	50-150
229791-1	Spiked blank duplicate	(BSD) TRIFLUOROTOLUENE	95.0	58-124
229791-1	Spiked blank duplicate	(BSD) 4-BROMOFLUOROBENZENE	108	50-150
229792-1	Matrix spike (MS)	TRIFLUOROTOLUENE	97.6	58-124
229792-1	Matrix spike (MS)	4-BROMOFLUOROBENZENE	97.6	50-150
229793-1	Matrix spike duplicate	(MSD) TRIFLUOROTOLUENE	99.4	58-124
229793-1	Matrix spike duplicate	(MSD) 4-BROMOFLUOROBENZENE	110	50-150

V132 **LEV2** QCSURR1229 AFSANEH 09-Mar-99 1

**Environmental Services (SDB)** 

March 9, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: WATER
Lab Run#: 17547

Analyzed: February 24, 1999

Analyte	Spike BSP (ug/L)	Amount Dup		ke Found Dup	Spike BSP (%)	Recov Dup (%)	Control %	% RPD Lim
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	500 100 100 100 100 300	500 100 100 100 100 300	421 92.2 92.3 91.2 91.2	423 83.2 89.7 91.2 88.7 268	84.2 92.2 92.3 91.2 91.2	84.6 83.2 89.7 91.2 88.7 89.3	75-125 0.47 75-125 10.3 77-123 2.86 78-122 0 70-130 2.78 75-125 2.98	20 20 20 20

**Environmental Services (SDB)** 

March 9, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: WATER

Lab Run#: 17501 Analyzed: February 22, 1999

				ike				
Analyte	Spike BSP (ug/L)	Amount Dup	Amoun BSP (ug/L	t Found Dup )	Spike BSP (%)	Recov Dup (%)	Control % Limits RPD	% RPD Lim
GASOLINE MTBE BENZENE TOLUENE ETHYL BENZENE XYLENES	500 100 100 100 100 300	500 100 100 100 100 300	434 87.4 89.5 92.2 89.6 271	449 80.0 86.7 89.2 86.5 263	86.8 87.4 89.5 92.2 89.6 90.3	89.8 80.0 86.7 89.2 86.5 87.7	75-125 3.40 75-125 8.84 77-123 3.18 78-122 3.31 70-130 3.52 75-125 2.92	20 20 20 20

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

Analyzed: February 22, 1999

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-1-0-1

Spl#: 229091 Matrix: SOIL

Sampled: February 15, 1999 Run#: 17505

	RESULT	REPORTING LIMIT	BLANK RESULT	BLANK : SPIKE	DILUTION FACTOR
ANALYTE	(ug/Kg)	(ug/Kg)	(ug/Kg)	(%)	
ACETONE	N.D.	50	N.D.		1
BENZENE BROMODI GIJI ODOMERIJANIA	Ŋ.D.	5.0	N.D.	89.4	1
BROMODICHLOROMETHANE	N.D.	5.0	N.D.		1
BROMOFORM BROMOMETILANE	N.D.	5.0	N.D.		1 1 1 1 1 1 1
BROMOMETHANE	N.D.	10	N.D.		1
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	<del>-</del> -	1
CHLOROBENZENE	N.D.	5.0	N.D.	89.7	1
CHLOROETHANE	N.D.	10	N.D.	<del></del> .	1
2-BUTANONE (MEK)	N.D.	50	N.D.		1
2-CHLOROETHYLVINYLETHER	N.D.	50	N.D.		1
CHLOROFORM CHLOROMETHANE	N.D.	5.0	N.D.		1 '
CHEOROME THANK	N.D.	10	N.D.		1 '
DIBROMOCHLOROMETHANE	Ŋ.D.	5.0	N.D.		1
1,2-DICHLOROBENZENE	N.D.	5.0	N.D.		1 1
1,3-DICHLOROBENZENE 1,4-DICHLOROBENZENE	N.D.	5.0	N.D.		<u> 1</u> /
	N.D.	5.0	N.D.		1
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	50	N.D.		1
1,2-DIBROMOETHANE DIBROMOMETHANE	N.D.	10	Ŋ.D.		1 1 1
DIEROMOMETHANE DICHLORODIFLUOROMETHANE	N.D.	10	N.D.	<del>-</del> -	1 '
1,1-DICHLOROETHANE	N.D.	10	N.D.		l i
1,1-DICHLOROETHANE 1,2-DICHLOROETHANE	N.D.	5.0	Ŋ.D.		1
1,1-DICHLOROETHANE 1,1-DICHLOROETHENE	N.D.	5.0	Ŋ.D.		1
1,1-DICHEOKOBIMENE (CIC)	N.D.	5.0	Ŋ.D.	89.1	1
1,2-DICHLOROETHENE (CIS) 1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.		1
1,2-DICHLOROPROPANE	N.D.	5.0	Ŋ.D.		1 '
CIS-1,3-DICHLOROPROPENE	N.D.	5.0	Ŋ.D.		1
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	Ŋ.D.	·	1
ETHYLBENZENE	N.D.	5.0	Ŋ.D.	- <del>-</del>	1 1
2-HEXANONE	N.D.	5.0	N.D.		1 '
METHYLENE CHLORIDE	N.D.	50	Ŋ.D.	<del>-</del> -	1.
4-METHYL-2-PENTANONE (MIBK)	N.D.	5.0	N.D.		1
NAPHTHALENE (MIBK)	N.D.	50	N.D.		1
STYRENE	N.D.	50	N.D.	<del>-</del> -	1 '
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	~ -	1.
TETRACHLOROETHANE TETRACHLOROETHENE	N.D.	5.0	N.D.		1
TOLUENE	N.D.	5.0	N.D.		1
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	84.0	1 1
1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.		1.
TRICHLOROETHANE TRICHLOROETHENE	N.D.	5.0	N.D.	01.0	1 1
1 1 1 2 TETRACII ODODUIAND	N.D.	5.0	N.D.	81.2	1

VÍNÝL ACETATE

VINYL CHLORIDE

1,1,1,2-TETRACHLOROETHANE

N.D.

N.D.

N.D.

5.0

50

5.0

N.D.

N.D.

N.D.

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-1-0-1

Spl#: 229091 Matrix: SOIL

Sampled: February 15, 1999 Run#:

17505

Analyzed: February 22, 1999

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	10	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.		1
CARBON DISULFIDE	N.D.	5.0	N.D.		. 1
ISOPROPYLBENZENE	N.D.	5.0	N.D.		î ·
BROMOBENZENE	N.D.	5.0	N.D.		$\bar{\mathtt{1}}$
BROMOCHLOROMETHANE	N.D.	20	N.D.		1
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.		1

June Zhao Analyst

Michael Verona

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-2-0-1

Spl#: 229064 Matrix: SOIL

Sampled: February 15, 1999 Run#: 17503 Analyzed: February 19, 1999

<del>-</del>			7		., _,_,
		REPORTING	BLANK	BLANK	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(ug/Kg)	(ug/Kg)	(ug/Kg)	(%)	IACION
ACETONE	N.D.	50	N.D.	<u> </u>	
BENZENE	N.D.	5.0	N.D.	84.2	1
BROMODICHLOROMETHANE	N.D.	5.0		04.2	1
BROMOFORM	N.D.	5.0	N.D.		<u>_</u>
BROMOMETHANE	N.D.	10	N.D.		<u>_</u>
CARBON TETRACHLORIDE	N.D.		N.D.		1
CHLOROBENZENE	N.D.	5.0 5.0	N.D.	 05 0	1 1 1 1 1 1 1
CHLOROETHANE	N.D.		N.D.	95.2	Ţ
2-BUTANONE (MEK)	N.D.	10	N.D.		1
2-CHLOROETHYLVINYLETHER	N.D.	50	N.D.		1
CHLOROFORM		50	N.D.		1.
CHLOROMETHANE	N.D.	5.0	Ŋ.D.		1
DIBROMOCHLOROMETHANE	N.D.	10	N.D.		1
1,2-DICHLOROBENZENE	N.D.	5.0	N.D.		1 1
1,3-DICHLOROBENZENE 1,3-DICHLOROBENZENE	N.D.	5.0	N.D.		1
1,4-DICHLOROBENZENE	N.D.	5.0	N.D.		1 1
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	5.0	N.D.		1
1,2-DIBROMO-3-CHLOROPROPANE 1,2-DIBROMOETHANE	N.D.	50	N.D.		1 '
DIBROMOMETHANE	N.D.	10	$N \cdot D$ .		1
DICHLORODIFLUOROMETHANE	N.D.	10	N.D.		1
1,1-DICHLOROETHANE	N.D.	10	N.D.		1
1,2-DICHLOROETHANE	Ŋ.D.	5.0	N.D.		1 '
1,1-DICHLOROETHENE	N.D.	5.0	Ŋ.D.	_ = = _	1 1
1,2-DICHLOROETHENE (CIS)	Ŋ.D.	5.0	N.D.	78.5	1
1,2-DICHLOROETHENE (CIS) 1,2-DICHLOROETHENE (TRANS)	Ŋ.D.	5.0	N.D.		1
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.		Ĩ '
CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.		1
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.		1
ETHYLBENZENE	N.D.	5.0	N.D.		1
2-HEXANONE	Ŋ.D.	5.0	N.D.	- <del>-</del>	1 4
METHYLENE CHLORIDE	Ŋ.D.	50	N.D.		1
A MEDIKI O DENUNMOND (MIDE)	N.D.	5.0	N.D.	<del></del>	1 1
4-METHYL-2-PENTANONE (MIBK) NAPHTHALENE	N.D.	50	N.D.		1
STYRENE	Ŋ.D.	50	N.D.		1
	N.D.	5.0	N.D.		1
1,1,2,2-TETRACHLOROETHANE TETRACHLOROETHENE	N.D.	5.0	N.D.		1
TOLUENE	N.D.	5.0	N.D.		1
	N.D.	5.0	N.D.	82.5	1
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	<del>-</del> -	1
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.		1.
TRICHLOROETHENE	N.D.	5.0	N.D.	84.1	1
1,1,1,2-TETRACHLOROETHANE VINYL ACETATE	Ŋ.D.	5.0	N.D.		1
VINYL CHLORIDE	N.D.	50	N.D.		1
ATMID CUDOKIDE	N.D.	5.0	N.D.		1

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-2-0-1

Spl#: 229064

Matrix: SOIL

Sampled: February 15, 1999 Run#:

17503

Analyzed: February 19, 1999

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK : SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	10	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.		1
CARBON DISULFIDE	N.D.	5.0	N.D.		1
ISOPROPYLBENZENE	N.D.	5.0	N.D.		1
BROMOBENZENE	N.D.	5.0	N.D.		1
BROMOCHLOROMETHANE	N.D.	20	N.D.		1
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.		1

Analyst

Michael Verbna

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-3-0-1

Spl#: 229066 Matrix: SOIL

Sampled: February 15, 1999 Run#: 17503 Analyzed: February 19, 1999

ANALYTE
BENZENE
BROMODICHLOROMETHANE
BROMOMETHANE
BROMOMETHANE
1,1-DICHLOROETHENE 1,2-DICHLOROETHENE (CIS) N.D. 5.0 N.D 1 1,2-DICHLOROETHENE (TRANS) N.D. 5.0 N.D 1 1,2-DICHLOROPROPANE N.D. 5.0 N.D 1 CIS-1,3-DICHLOROPROPENE N.D. 5.0 N.D 1 TRANS-1,3-DICHLOROPROPENE N.D. 5.0 N.D 1 ETHYLBENZENE N.D. 5.0 N.D 1 2-HEXANONE N.D. 5.0 N.D 1 METHYLENE CHLORIDE N.D. 5.0 N.D 1 4-METHYL-2-PENTANONE (MIBK) N.D. 50 N.D 1
1,1-DICHLOROETHENE 1,2-DICHLOROETHENE (CIS) N.D. 5.0 N.D 1 1,2-DICHLOROETHENE (TRANS) N.D. 5.0 N.D 1 1,2-DICHLOROPROPANE N.D. 5.0 N.D 1 CIS-1,3-DICHLOROPROPENE N.D. 5.0 N.D 1 TRANS-1,3-DICHLOROPROPENE N.D. 5.0 N.D 1 ETHYLBENZENE N.D. 5.0 N.D 1 2-HEXANONE N.D. 5.0 N.D 1 METHYLENE CHLORIDE N.D. 5.0 N.D 1 4-METHYL-2-PENTANONE (MIBK) N.D. 50 N.D 1
1,1-DICHLOROETHENE 1,2-DICHLOROETHENE (CIS) N.D. 5.0 N.D 1 1,2-DICHLOROETHENE (TRANS) N.D. 5.0 N.D 1 1,2-DICHLOROPROPANE N.D. 5.0 N.D 1 CIS-1,3-DICHLOROPROPENE N.D. 5.0 N.D 1 TRANS-1,3-DICHLOROPROPENE N.D. 5.0 N.D 1 ETHYLBENZENE N.D. 5.0 N.D 1 2-HEXANONE N.D. 5.0 N.D 1 METHYLENE CHLORIDE N.D. 5.0 N.D 1 4-METHYL-2-PENTANONE (MIBK) N.D. 50 N.D 1
1,1-DICHLOROETHENE 1,2-DICHLOROETHENE (CIS) N.D. 5.0 N.D 1 1,2-DICHLOROETHENE (TRANS) N.D. 5.0 N.D 1 1,2-DICHLOROPROPANE N.D. 5.0 N.D 1 CIS-1,3-DICHLOROPROPENE N.D. 5.0 N.D 1 TRANS-1,3-DICHLOROPROPENE N.D. 5.0 N.D 1 ETHYLBENZENE N.D. 5.0 N.D 1 2-HEXANONE N.D. 5.0 N.D 1 METHYLENE CHLORIDE N.D. 5.0 N.D 1 4-METHYL-2-PENTANONE (MIBK) N.D. 50 N.D 1
1,1-DICHLOROETHENE 1,2-DICHLOROETHENE (CIS) N.D. 5.0 N.D 1 1,2-DICHLOROETHENE (TRANS) N.D. 5.0 N.D 1 1,2-DICHLOROPROPANE N.D. 5.0 N.D 1 CIS-1,3-DICHLOROPROPENE N.D. 5.0 N.D 1 TRANS-1,3-DICHLOROPROPENE N.D. 5.0 N.D 1 ETHYLBENZENE N.D. 5.0 N.D 1 2-HEXANONE N.D. 5.0 N.D 1 METHYLENE CHLORIDE N.D. 5.0 N.D 1 4-METHYL-2-PENTANONE (MIBK) N.D. 50 N.D 1
1,1-DICHLOROETHENE 1,2-DICHLOROETHENE (CIS) N.D. 5.0 N.D 1 1,2-DICHLOROETHENE (TRANS) N.D. 5.0 N.D 1 1,2-DICHLOROPROPANE N.D. 5.0 N.D 1 CIS-1,3-DICHLOROPROPENE N.D. 5.0 N.D 1 TRANS-1,3-DICHLOROPROPENE N.D. 5.0 N.D 1 ETHYLBENZENE N.D. 5.0 N.D 1 2-HEXANONE N.D. 5.0 N.D 1 METHYLENE CHLORIDE N.D. 5.0 N.D 1 4-METHYL-2-PENTANONE (MIBK) N.D. 50 N.D 1
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**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

page 2

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-3-0-1

Spl#: 229066 Matrix: SOIL

Sampled: February 15, 1999 Run#: 17503

Analyzed: February 19, 1999

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	10	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.		1
CARBON DISULFIDE	N.D.	5.0	N.D.		1
ISOPROPYLBENZENE	N.D.	5.0	N.D.		1
BROMOBENZENE	N.D.	5.0	N.D.		1
BROMOCHLOROMETHANE	N.D.	20	N.D.		1
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.		1

Alex Tam Analyst

Michael Verona Operations Manager

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-4-0-1

Spl#: 229084 Matrix: SOIL

Sampled: February 15, 1999 Run#: 17505 Analyzed: February 22, 1999

			_	-	•
		REPORTING	BLANK	BLANK	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	
ANALYTE	(ug/Kg)	(ug/Kg)	(ug/Kg)	(%)	<b></b>
ACETONE	N.D.	50	N.D.		1
BENZENE	N.D.	5.0	N.D.	89.4	i
BROMODICHLOROMETHANE	N.D.	5.0	N.D.		ī
BROMOFORM	N.D.	5.0	N.D.		ī
BROMOMETHANE	N.D.	10	N.D.		1 1 1 1
CARBON TETRACHLORIDE	N.D.	5.0	N.D.		ī
CHLOROBENZENE	N.D.	5.0	N.D.	89.7	
CHLOROETHANE	N.D.	10	N.D.	- 	1 1 1
2-BUTANONE (MEK)	N.D.	50	N.D.		$ar{ extsf{1}}$
2-CHLOROETHYLVINYLETHER	N.D.	50	N.D.		1
CHLOROFORM	N.D.	5.0	N.D.	- <del>-</del>	1
CHLOROMETHANE	N.D.	10	N.D.		1
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.		1
1,2-DICHLOROBENZENE	N.D.	5.0	N.D.		1 ,
1,3-DICHLOROBENZENE	N.D.	5.0	N.D.		1
1,4-DICHLOROBENZENE	N.D.	5.0	N.D.		1
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	50	N.D.		1
1,2-DIBROMOETHANE	Ŋ.D.	10	N.D.		1
DIBROMOMETHANE	N.D.	10	N.D.		1
DICHLORODIFLUOROMETHANE	N.D.	10	N.D.		1
1,1-DICHLOROETHANE	N.D.	5.0	N.D.	-	1
1,2-DICHLOROETHANE	N.D.	5.0	N.D.		Ī
1,1-DICHLOROETHENE	N.D.	5.0	Ŋ.D.	89.1	1 1 1
1,2-DICHLOROETHENE (CIS) 1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.		1 !
1,2-DICHLOROETHENE (TRANS) 1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	<del>-</del> -	1
CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.		1.
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.		1
ETHYLBENZENE	N.D.	5.0	N.D.		1 1
2-HEXANONE	N.D.	5.0	N.D.		1
METHYLENE CHLORIDE	N.D. N.D.	50	N.D.		1 1
4-METHYL-2-PENTANONE (MIBK)	N.D. N.D.	5.0	N.D.	<del></del>	± 1
NAPHTHALENE	N.D. N.D.	50 50	N.D.		1
STYRENE	N.D. N.D.	5.0	N.D. N.D.		1 '
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D. N.D.	<b>-</b> -	1
TETRACHLOROETHENE	N.D.	5.0	N.D. N.D.		1 1
TOLUENE	N.D.	5.0	N.D.	84.0	1 l
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	84.0	1
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.		1 1
TRICHLOROETHENE	N.D.	5.0	N.D.	81.2	1
1,1,1,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	01.4	1 1
VINYL ACETATE	N.D.	50	N.D.		1
VINYL CHLORIDE	N.D.	5.0	N.D.		1 4
	11.2.	5.0	14.1.		* 1

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

page 2

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-4-0-1

Spl#: 229084

Matrix: SOIL

Sampled: February 15, 1999

Run#: 17505

Analyzed: February 22, 1999

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	10	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.		1
CARBON DISULFIDE	N.D.	5.0	N.D.		1
ISOPROPYLBENZENE	N.D.	5.0	N.D.		1
BROMOBENZENE	N.D.	5.0	N.D.		1
BROMOCHLOROMETHANE	N.D.	20	N.D.		1
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.		1

June Zhao

June Zhao Analyst Michael Verona

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-5-0-1

Spl#: 229068 Matrix: SOIL

Sampled: February 15, 1999 Run#: 17516 Analyzed: February 22, 1999

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	=	REPORTING	BLANK	BLANK D	
	RESULT	LIMIT	RESULT		FACTOR
ANALYTE	(ug/Kg)	(ug/Kg)	(ug/Kg)	(%)	i
ACETONE	N.D.	50	N.D.		1
BENZENE BROMODICHI OROMERUANA	N.D.	5.0	N.D.	99.9	1
BROMODICHLOROMETHANE	N.D.	5.0	N.D.		1
BROMOFORM	N.D.	5.0	N.D.	<del>-</del> -	1 (
BROMOMETHANE	N.D.	10	N.D.	. <u></u>	1
CARBON TETRACHLORIDE	N.D.	5.0	N.D.		1 ,
CHLOROBENZENE	N.D.	5.0	N.D.	108	1
CHLOROETHANE	N.D.	10	N.D.		1
2-BUTANONE (MEK)	N.D.	50	N.D.		1
2-CHLOROETHYLVINYLETHER	N.D.	50	N.D.		1 .
CHLOROFORM	N.D.	5.0	N.D.		1
CHLOROMETHANE	N.D.	10	N.D.		1
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.		1 1
1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE	N.D.	5.0	N.D.		1
1,3-DICHLOROBENZENE	N.D.	5.0	N.D.		1
1,4-DICHLOROBENZENE	N.D.	5.0	N.D.		1 1
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	50	N.D.		1
1,2-DIBROMOETHANE	N.D.	10	N.D.		1
DIBROMOMETHANE	N.D.	10	N.D.	<del>-</del>	1
DICHLORODIFLUOROMETHANE	N.D.	10	N.D.		1
1,1-DICHLOROETHANE 1,2-DICHLOROETHANE	N.D.	5.0	N.D.		1 '
1,2-DICHLOROETHANE	N.D.	5.0	N.D.		1
1,1-DICHLOROETHENE 1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D.	89.5	1
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D.		1
1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.		1 '
1,2-DICHLOROPROPANE CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.		1
CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.		1 1 1
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.		1
ETHYLBENZENE	N.D.	5.0	N.D.		ī
2-HEXANONE	N.D.	50	N.D.		1
METHYLENE CHLORIDE	N.D.	5.0	N.D.		1 1
4-METHYL-2-PENTANONE (MIBK)	N.D.	50	N.D.		1
NAPHTHALENE	N.D.	50	N.D.		1 "
STYRENE	N.D.	5.0	N.D.		$\bar{1}$
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.		1
TETRACHLOROETHENE	N.D.	5.0	N.D.		1
TOLUENE	Ŋ.D.	5.0	N.D.	103	ı •
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.		1 1 1 1
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.		1.
TRICHLOROETHENE	N.D.	5.0	N.D.	95.0	1 1
1,1,1,2-TETRACHLOROETHANE	N.D.	5.0	N.D.		1 •
VINYL ACETATE	N.D.	50	N.D.		1
VINYL CHLORIDE	N.D.	5.0	N.D.		1 1
					7

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

page 2

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-5-0-1

Sp1#: 229068

*Matrix:* SOIL

Sampled: February 15, 1999 Run#: 17516

Analyzed: February 22, 1999

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	10	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.		1 .
CARBON DISULFIDE	N.D.	5.0	N.D.		1
ISOPROPYLBENZENE	N.D.	5.0	N.D.		1
BROMOBENZENE	N.D.	5.0	N.D.		1
BROMOCHLOROMETHANE	N.D.	20	N.D.		1
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.		1

June Zhao Analyst

Michael Veron

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

Project#: 510996100900/2000

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-6-0-1

Sp1#: 229080

Matrix: SOIL

Sampled: February 15, 1999 Run#: 17524 Analyzed: February 23, 1999

					-,
		REPORTING	BLANK	BLANK	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(ug/Kg)	(ug/Kg)	(ug/Kg)	(%)	FACTOR
ACETONE	N.D.	50	N.D.	<u> </u>	1
BENZENE	N.D.	5.0	N.D.	105	
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	102	1
BROMOFORM	N.D.	5.0	N.D.		1
BROMOMETHANE	N.D.	10	N.D.		1 1 1 1
CARBON TETRACHLORIDE	N.D.	5.0	N.D.		1
CHLOROBENZENE	N.D.	5.0	N.D.	102	<u>.</u> 1
CHLOROETHANE	N.D.	10	N.D.	102	1
2-BUTANONE (MEK)	N.D.	50	N.D.		1 1
2-CHLOROETHYLVINYLETHER	N.D.	50	N.D.		i
CHLOROFORM	N.D.	5.0	N.D.		Ť '
CHLOROMETHANE	N.D.	10	N.D.	<del>-</del> -	i '
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.		ī
1,2-DICHLOROBENZENE	N.D.	5.0	N.D.		1 1 1 1
1,3-DICHLOROBENZENE	N.D.	5.0	N.D.		ī'
1,4-DICHLOROBENZENE	N.D.	5.0	N.D.		1 1
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	50	N.D.		7
1,2-DIBROMOETHANE	N.D.	10	N.D.		1 1
DIBROMOMETHANE	N.D.	10	N.D.		ī '
DICHLORODIFLUOROMETHANE	N.D.	10	N.D.		1 1
1,1-DICHLOROETHANE	N.D.	5.0	N.D.		1
1,2-DICHLOROETHANE	N.D.	5.0	N.D.		1 .
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	105	ī
1,2-DICHLOROETHENE (CIS) 1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.		1 -
1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.		1
1,2-DICHLOROPANE	N.D.	5.0	N.D.		1 .
CIB-I,3-DICHTOROPROPENE	N.D.	5.0	N.D.		1 1
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.		1 /
ETHYLBENZENE	N.D.	5.0	N.D.		1 1
2-HEXANONE	N.D.	50	N.D.		1 .
METHYLENE CHLORIDE	N.D.	5.0	N.D.		1
4-METHYL-2-PENTANONE (MIBK) NAPHTHALENE	N.D.	50	N.D.		1
NAPHTHALENE STYRENE	Ŋ.D.	50	N.D.		1 '
	N.D.	5.0	N.D.		1.
1,1,2,2-TETRACHLOROETHANE TETRACHLOROETHENE	Ŋ.Đ.	5.0	N.D.		1
TOLUENE TOLUENE	N.D.	5.0	N.D.	<b></b>	1 /
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	98.2	1   1 1
1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	- <del>-</del>	1
TRICHLOROETHENE	N.D.	5.0	N.D.		ī
1,1,1,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	94.2	$\begin{bmatrix} \bar{1} \\ 1 \end{bmatrix}$
VINYL ACETATE	N.D.	5.0	Ŋ.D.		1
VINYL CHLORIDE	N.D. N.D.	50 5.0	N.D.		ī.
VINIE CHECKIDE	и.р.	5.0	N.D.		1

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-6-0-1

Spl#: 229080

Matrix: SOIL

Sampled: February 15, 1999 Run#: 17524

Analyzed: February 23, 1999

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	10	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.		$ec{ exttt{1}}$
CARBON DISULFIDE	N.D.	5.0	N.D.		ī
ISOPROPYLBENZENE	N.D.	5.0	N.D.		ī
BROMOBENZENE	N.D.	5.0	N.D.		$ar{ extbf{i}}$
BROMOCHLOROMETHANE	N.D.	20	N.D.		ī
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.		ī

June Zhao Analyst

Michael Verora

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-7-0-1

Sampled: February 15, 1999 Run#: 17516 Analyzed: February 22, 1999

ANALYTE	RESULT	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK D SPIKE (%)	ILUTION FACTOR
ACETONE	N.D.	50	N.D.	<u> </u>	1
BENZENE	N.D.	5.0	N.D.	99.9	î,
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	<i>99.9</i>	i
BROMOFORM	N.D.	5.ŏ	N.D.		1
BROMOMETHANE	N.D.	10	N.D.		
CARBON TETRACHLORIDE	N.D.	5.0	N.D.		<u> </u>
CHLOROBENZENE	N.D.	5.0	N.D.	108	1 1 1 1
CHLOROETHANE	N.D.	10	N.D.	100	<b>†</b>
2-BUTANONE (MEK)	N.D.	50	N.D.		<u> </u>
2-CHLOROETHYLVINYLETHER	N.D.	50	N.D.		1
CHLOROFORM	N.D.	5.0	N.D.		1 1 1
CHLOROMETHANE	N.D.	10	N.D.		<u>†</u>
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.		1 ·
1,2-DICHLOROBENZENE	N.D.	5.0	N.D.		i.
1,3-DICHLOROBENZENE	N.D.	5.0	N.D.		i,
1,4-DICHLOROBENZENE	N.D.	5.0	N.D.		il
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	50	N.D.		± 1
1,2-DIBROMOETHANE	N.D.	10	N.D.		1
DIBROMOMETHANE	N.D.	10	N.D.		1 1 1 1
DICHLORODIFLUOROMETHANE	N.D.	10	N.D.		÷ 1
1,1-DICHLOROETHANE	N.D.	5.0	N.D.		
1,2-DICHLOROETHANE	N.D.	5.0	N.D.		1 1 1
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	89.5	<b>1</b>
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D.		1
1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.		<b>†</b> ■
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.		<b>†</b>
CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.		1 \ 1 1
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	 	<u>+</u>
ETHYLBENZENE	N.D.	5.0	N.D.		1 1
2-HEXANONE	N.D.	50	N.D.		1 _
METHYLENE CHLORIDE	N.D.	5.0	N.D.		1
4-METHYL-2-PENTANONE (MIBK)	N.D.	50	N.D.		$\stackrel{\mathtt{l}}{1}$
NAPHTHALENE	N.D.	50	N.D.		
STYRENE	N.D.	5.0	N.D.		1 <sup>-</sup> 1
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.		1
TETRACHLOROETHENE	N.D.	5.0	N.D.		
TOLUENE	N.D.	5.0	N.D.	103	1
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D. N.D.	102	1 -
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	<b></b>	. 1
TRICHLOROETHENE	N.D.	5.0	N.D.	0E 0	1
1,1,1,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	95.0	1
VINYL ACETATE	N.D.	50	N.D.		1 "
VINYL CHLORIDE	N.D.	5.0	N.D. N.D.		1
	N.D.	5.0	IN.D.		1

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-7-0-1

Spl#: 229070

Matrix: SOIL

Sampled: February 15, 1999

Run#: 17516

Analyzed: February 22, 1999

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK I SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	10	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.		1
CARBON DISULFIDE	N.D.	5.0	N.D.		1
ISOPROPYLBENZENE	N.D.	5.0	N.D.		1
BROMOBENZENE	N.D.	5.0	N.D.		1
BROMOCHLOROMETHANE	N.D.	20	N.D.		1
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.		1

June Zhao Analyst

Michael Verona

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-8-0-1

Spl#: 229082 Matrix: SOIL

Sampled: February 15, 1999 Run#: 17516 Analyzed: February 22, 1999

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT	SPIKE	DILUTION FACTOR
ACETONE	N.D.	50	(ug/Kg) N.D.	(%)	
BENZENE	N.D.	5.0	N.D. N.D.		1
BROMODICHLOROMETHANE	N.D.	5.0	N.D. N.D.	99.9	1
BROMOFORM	N.D.	5.0	N.D. N.D.		1
BROMOMETHANE	N.D.	10	N.D. N.D.		1 1 1 1 1 1 1 1 1 1
CARBON TETRACHLORIDE	N.D.	5.0			<u> </u>
CHLOROBENZENE	N.D.	5.0	N.D.	7 0 0	<del> </del>
CHLOROETHANE	N.D.	10	N.D.	108	<u> </u>
2-BUTANONE (MEK)	N.D.	50	N.D.		<u> </u>
2-CHLOROETHYLVINYLETHER	N.D.	50 50	N.D.		<u> </u>
CHLOROFORM	N.D.		N.D.		Ţ
CHLOROMETHANE	N.D. N.D.	5.0	N.D.		Ţ
DIBROMOCHLOROMETHANE	N.D.	10	N.D.		Ţ
1,2-DICHLOROBENZENE	N.D. N.D.	5.0	N.D.		1
1,3-DICHLOROBENZENE	N.D. N.D.	5.0	N.D.		1
1,4-DICHLOROBENZENE	N.D. N.D.	5.0	N.D.		Ţ
1,2-DIBROMO-3-CHLOROPROPANE	N.D. N.D.	5.0	N.D.		1
1,2-DIBROMO-3-CHLOROPROPANE 1,2-DIBROMOETHANE	N.D.	50	N.D.		1
DIBROMOMETHANE	N.D.	10	N.D.		1 1
DICHLORODIFLUOROMETHANE	N.D.	10	N.D.	~ -	1
1,1-DICHLOROETHANE	N.D.	10	N.D.		111111111111111111111111111111111111111
1,1-DICHLOROETHANE 1,2-DICHLOROETHANE	N.D.	5.0	N.D.		1
1,1-DICHLOROETHENE	N.D.	5.0	N.D.		1
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D.	89.5	1
1,2-DICHLOROETHENE (CIS) 1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.		1
1,2-DICHLOROETHENE (TRANS) 1,2-DICHLOROPROPANE	N.D.	5.0	N.D.		1
CIS-1,3-DICHLOROPROPANE	N.D.	5.0	N.D.		1
CTO-T'O-DICTION OBODEOUS	N.D.	5.0	Ŋ.D.		1
TRANS-1,3-DICHLOROPROPENE ETHYLBENZENE	Ŋ.D.	5.0	N.D.		1
2-HEXANONE	N.D.	5.0	N.D.		1
	Ŋ.D.	50	N.D.		1
METHYLENE CHLORIDE	Ŋ.D.	5.0	N.D.		1 '
4-METHYL-2-PENTANONE (MIBK) NAPHTHALENE	N.D.	50	N.D.		.1
NAPHTHALENE STYRENE	N.D.	50_	N.D.	<del>-</del> -	1 '
	N.D.	5.0	N.D.		1
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.		1 !
TETRACHLOROETHENE	Ŋ.D.	5.0	N.D.		1
TOLUENE	N.D.	5.0	N.D.	103	1
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.		1
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.		1
TRICHLOROETHENE	N.D.	5.0	N.D.	95.0	1
1,1,1,2-TETRACHLOROETHANE	N.D.	5.0	N.D.		1 '
VINYL ACETATE	N.D.	50	N.D.		ī
VINYL CHLORIDE	N.D.	5.0	N.D.		ī
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**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#:

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-8-0-1

Sp1#: 229082

Matrix: SOIL

Sampled: February 15, 1999

Run#: 17516

Analyzed: February 22, 1999

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	10	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.		1
CARBON DISULFIDE	N.D.	5.0	N.D.		1
ISOPROPYLBENZENE	N.D.	5.0	N.D.		1
BROMOBENZENE	N.D.	5.0	N.D.		1
BROMOCHLOROMETHANE	N.D.	20	N.D.		1
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.		1

re: One sample for Volatile Organics by GC/MS analysis, continued.

June Zhao Analyst

Michael Verona

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-9-0-1

Spl#: 229072 Matrix: SOIL

Sampled: February 15, 1999 Run#: 17524 Analyzed: February 23, 1999

ANALYTE	RESULT (ug/Kq)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
ACETONE	N.D.	50	N.D.		1
BENZENE	N.D.	5.0	N.D.	105	ĩ
BROMODICHLOROMETHANE	N.D.	5.0	N.D.		ī
BROMOFORM	N.D.	5.0	N.D.		ī
BROMOMETHANE	N.D.	10	N.D.		ī
CARBON TETRACHLORIDE	N.D.	5.0	N.D.		1 1
CHLOROBENZENE	N.D.	5.0	N.D.	102	<u>†</u> 1
CHLOROETHANE	N.D.	10	N.D.		1 1
2-BUTANONE (MEK)	N.D.	50	N.D.		i
2-CHLOROETHYLVINYLETHER	N.D.	50	N.D.	<b>-</b> -	i,
CHLOROFORM	N.D.	5.0	N.D.		il
CHLOROMETHANE	N.D.	10	N.D.		1
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.		1
1,2-DICHLOROBENZENE	N.D.	5.0	N.D.	- <b>-</b>	1.
1,3-DICHLOROBENZENE	N.D.	5.0	N.D.	- <del>-</del>	
1,4-DICHLOROBENZENE	N.D.	5.0	N.D.		1
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	50	N.D.		1 (
1,2-DIBROMOETHANE	N.D.	10	N.D.	<del></del>	1
DIBROMOMETHANE	N.D.	10	N.D.		1
DICHLORODIFLUOROMETHANE	N.D.	10	N.D.	<b></b>	1
1,1-DICHLOROETHANE	N.D.	5.0	N.D.		1 (
1,2-DICHLOROETHANE	N.D.	5.0	N.D.		1
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	105	1
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D.	102	1
1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.		1 1
	N.D.	5.0	N.D.		
CIS-1,3~DICHLOROPROPENE	N.D.	5.0	N.D.		1,
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.		1
ETHYLBENZENE	N.D.	5.0	N.D. N.D.	<del>-</del> -	1
2-HEXANONE	N.D.	5.0	N.D.		ļ.
METHYLENE CHLORIDE	N.D.	5.0	N.D.		1
4-METHYL-2-PENTANONE (MIBK)	N.D.	5.0 50			1
NAPHTHALENE	N.D.	50 50	N.D.		. 1
STYRENE	N.D.	5.0	N.D.		1 '
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.		1.
TETRACHLOROETHENE	N.D.		N.D.		1 1
TOLUENE	N.D.	5.0	N.D.		1 :
1,1,1-TRICHLOROETHANE	N.D. N.D.	5.0	N.D.	98.2	1 •
1,1,2-TRICHLOROETHANE	N.D. N.D.	5.0	N.D.		1
TRICHLOROETHENE	M.D.	5.0	N.D.		1
1,1,1,2-TETRACHLOROETHANE	N.D. N.D.	5.0	N.D.	94.2	1
VINYL ACETATE		5.0	N.D.	~ -	1
VINYL CHLORIDE	N.D.	50	N.D.		1
variable composition	N.D.	5.0	N.D.		1

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-9-0-1

Spl#: 229072

Matrix: SOIL

Sampled: February 15, 1999

Run#: 17524

Analyzed: February 23, 1999

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	10	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.		ĩ
CARBON DISULFIDE	N.D.	5.0	N.D.		ī
ISOPROPYLBENZENE	N.D.	5.0	N.D.		ī
BROMOBENZENE	N.D.	5.0	N.D.		ī
BROMOCHLOROMETHANE	N.D.	20	N.D.		ī
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.		ĩ

June Zhao Analyst

Michael Veropa

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-10-0-1

Spl#: 229074 Matrix: SOIL

Sampled: February 15, 1999 Run#: 17524 Analyzed: February 23, 1999

			•	<b>-</b>	-,
		REPORTING	BLANK	BLANK	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(ug/Kg)	(ug/Kg)	(ug/Kg)	(%)	*****
ACETONE	N.D.	50	N.D.		1
BENZENE	N.D.	5.0	N.D.	105	i
BROMODICHLOROMETHANE	N.D.	5.0	N.D.		ī '
BROMOFORM	N.D.	5.0	N.D.		1 1 1
BROMOMETHANE	N.D.	10	N.D.		<b>1</b>
CARBON TETRACHLORIDE	N.D.	5.0	N.D.		i
CHLOROBENZENE	N.D.	5.0	N.D.	102	1 1 1
CHLOROETHANE	N.D.	10	N.D.		ī
2-BUTANONE (MEK)	N.D.	50	N.D.		ī
2-CHLOROETHYLVINYLETHER	N.D.	50	N.D.	<del></del>	$\bar{1}$
CHLOROFORM	N.D.	5.0	N.D.	- <b>-</b>	ī '
CHLOROMETHANE	N.D.	10	Ñ.D.		ī'
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.		ī
1,2-DICHLOROBENZENE	N.D.	5.0	N.D.		ī
1,3-DICHLOROBENZENE	N.D.	5.0	N.D.		1 1 1 1 1
1,4-DICHLOROBENZENE	N.D.	5.0	N.D.		īi
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	50	N.D.		1
1,2-DIBROMOETHANE	N.D.	10	N.D.		1 .
DIBROMOMETHANE DICHLORODIELHOROMETHAND	Ŋ.D.	10	N.D.		1
DICHLORODIFLUOROMETHANE	N.D.	10	N.D.		1
1,1-DICHLOROETHANE	N.D.	5.0	N.D.		1
1,2-DICHLOROETHANE	N.D.	5.0	N.D.		1 .
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	105	1
1,2-DICHLOROETHENE (CIS) 1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.	- <del>-</del>	1
	N.D.	5.0	N.D.	<del>-</del> -	1
1,2-DICHLOROPROPANE CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.		1 .
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.		, 1
ETHYLBENZENE	N.D.	5.0	N.D.		1
2-HEXANONE	N.D.	5.0	N.D.	<del>-</del> -	1
METHYLENE CHLORIDE	N.D.	50	N.D.		1,
4-METHYL-2-PENTANONE (MIBK)	N.D.	5.0	N.D.		1
NAPHTHALENE	N.D.	50	N.D.		1
STYRENE	N.D.	50	N.D.	- <del>-</del>	1.
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.		1
TETRACHLOROETHENE	N.D. N.D.	5.0	N.D.		1 1
TOLUENE	N.D. N.D.	5.0	N.D.		1
1,1,1-TRICHLOROETHANE	N.D. N.D.	5.0 5.0	N.D.	98.2	1 '
1,1,2-TRICHLOROETHANE	N.D. N.D.	5.0	N.D.		1
TRICHLOROETHENE	N.D.	5.0	N.D.		1
1,1,1,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	94.2	1
VINYL ACETATE	N.D. N.D.	5.0 50	N.D.	- <b>-</b>	1
VINYL CHLORIDE	N.D.	5.0	N.D.		1.
	м.р.	<b>⇒.</b> ∪	N.D.		1

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-10-0-1

Spl#: 229074

*Matrix:* SOIL

Sampled: February 15, 1999

Run#: 17524

Analyzed: February 23, 1999

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK I SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	10	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.		1
CARBON DISULFIDE	N.D.	5.0	N.D.		ī
ISOPROPYLBENZENE	N.D.	5.0	N.D.		ī
BROMOBENZENE	N.D.	5.0	N.D.		1
BROMOCHLOROMETHANE	N.D.	20	N.D.		· 1
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.		1

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June Zhao Analyst Michael Verona

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-11-0-1

Spl#: 229076 Matrix: SOIL

Sampled: February 15, 1999 Run#: 17516 Analyzed: February 22, 1999

			, 2041 10	cordary 2	2, 1555
		REPORTING	BLANK	BLANK	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(ug/Kg)	(ug/Kg)	(ug/Kg)	(%)	1
ACETONE	N.D.	50	N.D.		1
BENZENE	N.D.	5.0	N.D.	99.9	i
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	JJ.J	i
BROMOFORM	N.D.	5.0 5.0	N.D.		<b>i</b>
BROMOMETHANE	N.D.	10	N.D.		1 1
CARBON TETRACHLORIDE	N.D.	5.0	N.D.		<b>1</b> .
CHLOROBENZENE	N.D.	5.0	N.D.	108	1
CHLOROETHANE	N.D.	10	N.D.		7
2-BUTANONE (MEK)	N.D.	50	N.D.		1 1
2-CHLOROETHYLVINYLETHER	N.D.	50	N.D.		i,
CHLOROFORM	N.D.	5.0	N.D.		<b>†</b> !
CHLOROMETHANE	N.D.	10	N.D.		1
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.		1
1,2-DICHLOROBENZENE	N.D.	5.0	N.D.		,1,
1,3-DICHLOROBENZENE	N.D.	5.0	N.D.	<b>-</b> -	
1,4-DICHLOROBENZENE	N.D.	5.0	N.D.		1 1
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	50	N.D.		1
1,2-DIBROMOETHANE	N.D.	10	N.D.		i.
DIBROMOMETHANE	N.D.	10	N.D.	<b></b> _	il
DICHLORODIFLUOROMETHANE	N.D.	10	N.D.		i
1,1-DICHLOROETHANE	N.D.	5.0	N.D.		i.
1,2-DICHLOROETHANE	N.D.	5.0	N.D.		ī
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	89.5	ī <b>!</b>
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D.		i l
1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.		ī "
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.		1 1 1 1
CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.		î
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.		i,
ETHYLBENZENE	N.D.	5.0	N.D.		i '
2-HEXANONE	N.D.	50	N.D.		1
METHYLENE CHLORIDE	N.D.	5.0	N.D.		ī
4-METHYL-2-PENTANONE (MIBK)	N.D.	50	N.D.		ī
NAPHTHALENE	N.D.	50	N.D.		1 "
STYRENE	N.D.	5.0	N.D.		ī
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.		īf
TETRACHLOROETHENE	N.D.	5.0	N.D.		1 1
TOLUENE	N.D.	5.0	N.D.	103	1 *
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.		ī
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.		ī
TRICHLOROETHENE	N.D.	5.0	N.D.	95.0	$\bar{1}$
1,1,1,2-TETRACHLOROETHANE	N.D.	5.0	N.D.		ī •
VINYL ACETATE	N.D.	50	N.D.		ī
VINYL CHLORIDE	N.D.	5.0	N.D.		1 ■

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-11-0-1

Spl#: 229076

Matrix: SOIL

Sampled: February 15, 1999

Run#: 17516

Analyzed: February 22, 1999

>>>>	RESULT	REPORTING LIMIT	BLANK RESULT	SPIKE	DILUTION FACTOR
<u>ANALYTE</u>	(ug/Kg)	(ug/Kg)	(uq/Kq)	(%)	
TOTAL XYLENES	N.D.	10	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.		1
CARBON DISULFIDE	N.D.	5.0	N.D.		1
ISOPROPYLBENZENE	N.D.	5.0	N.D.		1
BROMOBENZENE	N.D.	5.0	N.D.		1
BROMOCHLOROMETHANE	N.D.	20	N.D.		1
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.		1

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June Zhao Analyst Michael Verøpa

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-12-0-1

Spl#: 229078 Matrix: SOIL

Sampled: February 15, 1999 Run#: 17516 Analyzed: February 22, 1999

ANALYTE	RESULT	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
ACETONE	N.D.	50	N.D.		1
BENZENE	N.D.	5.0	N.D.	99.9	ī
BROMODICHLOROMETHANE	N.D.	5.0	N.D.		ī
BROMOFORM	N.D.	5.0	N.D.	- <b>-</b>	i
BROMOMETHANE	N.D.	10	N.D.		i
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	<del></del>	i.
CHLOROBENZENE	N.D.	5.0	N.D.	108	1
CHLOROETHANE	N.D.	10	N.D.	100	<u> </u>
2-BUTANONE (MEK)	N.D.	50	N.D.	- <u>-</u>	
2-CHLOROETHYLVINYLETHER	N.D.	50	N.D.		1
CHLOROFORM	N.D.	5.0	N.D.		1
CHLOROMETHANE	N.D.	10	N.D.		1
DIBROMOCHLOROMETHANE	N.D.	5.0			<u>1</u> l
1,2-DICHLOROBENZENE	N.D.	5.0	N.D.		1
1,3-DICHLOROBENZENE	N.D.	5.0	N.D.		1
1,4-DICHLOROBENZENE	N.D.	5.0	N.D.		1
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	5.0 50	N.D.		1 1
1,2-DIBROMOETHANE	N.D.		N.D.		1
DIBROMOMETHANE	N.D.	10	N.D.		$\bar{1}$
DICHLORODIFLUOROMETHANE	N.D.	10	N.D.		1
1,1-DICHLOROETHANE	N.D.	10	N.D.		1
1,2-DICHLOROETHANE		5.0	N.D.		1
1,1-DICHLOROETHENE	N.D.	5.0	N.D.		1 .
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	Ŋ.D.	89.5	1 1
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D.		1
	N.D.	5.0	N.D.		1 -
1,2-DICHLOROPROPANE CIS-1,3-DICHLOROPROPENE	Ŋ.D.	5.0	N.D.		1 _
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.		1.
ETHYLBENZENE	N.D.	5.0	N.D.	<b></b> ,	1
2-HEXANONE	N.D.	5.0	N.D.		1 ~
METHYLENE CHLORIDE	N.D.	50	N.D.		1 _
4-METHYL-2-PENTANONE (MIBK)	N.D.	5.0	N.D.		1 1 1
NAPHTHALENE (MIBK)	N.D.	50	N.D.		1
STYRENE	N.D.	50	N.D.		1 -
	N.D.	5.0	N.D.		1
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	<del></del>	1
TETRACHLOROETHENE	N.D.	5.0	N.D.		1 1 1
TOLUENE	N.D.	5.0	N.D.	103	ī •
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	<del></del>	ī
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.		ī
TRICHLOROETHENE	N.D.	5.0	N.D.	95.0	ī
1,1,1,2-TETRACHLOROETHANE	N.D.	5.0	N.D.		ī
VINYL ACETATE	N.D.	50	N.D.		ī
VINYL CHLORIDE	N.D.	5.0	N.D.		<u>ī</u> <b>1</b>
					— <u>1</u>

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Volatile Organics by GC/MS analysis, continued. Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-SB-12-0-1

Spl#: 229078

Matrix: SOIL

Sampled: February 15, 1999 Run#:

17516

Analyzed: February 22, 1999

RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
N.D.	10	N.D.		1
N.D.	5.0	N.D.		ĺ
N.D.	5.0	N.D.		$ar{ exttt{1}}$
N.D.	5.0	N.D.		ī
N.D.	5.0	N.D.		ī
				ī
N.D.	5.0	N.D.		ī
	N.D. N.D. N.D. N.D. N.D. N.D.	RESULT         LIMIT           (ug/Kq)         (ug/Kq)           N.D.         5.0           N.D.         5.0           N.D.         5.0           N.D.         5.0           N.D.         5.0           N.D.         20	RESULT         LIMIT         RESULT           (ug/Kq)         (ug/Kg)         (ug/Kg)           N.D.         10         N.D.           N.D.         5.0         N.D.           N.D.         5.0         N.D.           N.D.         5.0         N.D.           N.D.         5.0         N.D.           N.D.         20         N.D.	RESULT         LIMIT         RESULT         SPIKE           (ug/Kq)         (ug/Kq)         (%)           N.D.         10         N.D.            N.D.         5.0         N.D.            N.D.         5.0         N.D.            N.D.         5.0         N.D.            N.D.         5.0         N.D.            N.D.         20         N.D.

Internal Std. were outside QA/QC Limits due to Matrix interference.

Results bias high.

June Zhao Analyst

Michael Verong

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-DC01

Sp1#: 229132 Matrix: SOIL

Sampled: February 16, 1999 Run#: 17505 Analyzed: February 22, 1999

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK I SPIKE (%)	DILUTION FACTOR
ACETONE	N.D.	50	N.D.		1
BENZENE	N.D.	5.0	N.D.	89.4	
BROMODICHLOROMETHANE	N.D.	5.0	N.D.		1
BROMOFORM	N.D.	5.0	N.D.		i
BROMOMETHANE	N.D.	10	N.D.		i
CARBON TETRACHLORIDE	N.D.	5.0	N.D.		1
CHLOROBENZENE	N.D.	5.0	N.D.	89.7	<u> </u>
CHLOROETHANE	N.D.	10	N.D.	09.1	± 1
2-BUTANONE (MEK)	N.D.	50	N.D.		± 1
2-CHLOROETHYLVINYLETHER	N.D.	50	N.D.		±
CHLOROFORM	N.D.	5.0	N.D.		± 7
CHLOROMETHANE	N.D.	10	N.D.		
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.		±
1,2-DICHLOROBENZENE	N.D.	5.0	N.D.	<del></del>	<u> </u>
1,3-DICHLOROBENZENE	N.D.	5.0	N.D. N.D.		<u> </u>
1,4-DICHLOROBENZENE	N.D.	5.0	N.D. N.D.	<del></del>	
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	50	N.D. N.D.		
1,2-DIBROMOETHANE	N.D.	10	N.D. N.D.		<u> </u>
DIBROMOMETHANE	N.D.	10	N.D. N.D.	<b></b>	1
DICHLORODIFLUOROMETHANE	N.D.	10	N.D. N.D.		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1,1-DICHLOROETHANE	N.D.	5.0	N.D. N.D.	<b></b>	1 1
1,2-DICHLOROETHANE	N.D.	5.0	N.D. N.D.	<b></b>	1
1,1-DICHLOROETHENE	N.D.	5.0	N.D. N.D.	89.1	<u>.</u>
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D. N.D.	07.1	<u> </u>
1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D. N.D.		<u> </u>
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	<b></b>	1 1 1 1 1
CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.		1 1
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	<del></del>	<b>1</b>
ETHYLBENZENE	N.D.	5.0	N.D. N.D.	<del></del>	± 1
2-HEXANONE	N.D.	50	N.D.	 	<u> </u>
METHYLENE CHLORIDE	N.D.	5.0	N.D. N.D.	<del>-</del> -	<u> </u>
4-METHYL-2-PENTANONE (MIBK)	N.D.	50	N.D. N.D.	<del></del>	1 1 1 1 1 1
NAPHTHALENE	N.D.	50 50	N.D.	<del></del>	<u>†</u> !
STYRENE	N.D.	5.0	N.D. N.D.		1
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.		1 1
TETRACHLOROETHENE	N.D.	5.0	N.D.		1 1 1
TOLUENE	N.D.	5.0	N.D.	94 0	± 1
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	84.0	1
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.		1 1
TRICHLOROETHENE	N.D.	5.0	N.D.	81.2	
1,1,1,2-TETRACHLOROETHANE	N.D.	5.0	N.D. N.D.	81.∠	1 1
VINYL ACETATE	N.D.	5.0 50	N.D.		
VINYL CHLORIDE	N.D.	5.0	N.D.	<del></del>	1
	14.10.	5.0	IN.D.		1

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902205

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 51

510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-DC01

Spl#: 229132

Matrix: SOIL

Sampled: February 16, 1999

Run#: 17505

Analyzed: February 22, 1999

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	10	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.		1
CARBON DISULFIDE	N.D.	5.0	N.D.		1
ISOPROPYLBENZENE	N.D.	5.0	N.D.		1
BROMOBENZENE	N.D.	5.0	N.D.		1
BROMOCHLOROMETHANE	N.D.	20	N.D.		1
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.		1

June Zhao Analyst

Michael Verona

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Matrix: SOIL

Lab Run#: 17503 Instrument:

Analyzed: February 19, 1999

Analyte	Spiked Sample Amount (ug/Kg)		Amt MSD /Kg)	Amt F MS (ug/K	MSD	Spike MS (%)	MSD	, Control Limits	_	% RPD Lim
BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE	N.D. N.D. N.D.	95.2 95.2 95.2	97.5 97.5 97.5	81.4 89.6 84.4	84.9 92.8 86.7	94.1	95.2	69-129 61-121 65-125	1.16	20
TOLUENE TRICHLOROETHENE	N.D. N.D.	95.2 95.2	97.5 97.5	81.0 79.1	82.9 81.6	85.1 83.1	85.0 83.7	70-130 74-134	0.11 0.71	20 20

Sample Spiked: 229031 Submission #: 9902194 Client Sample ID: B-25-10.5

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Matrix: SOIL

Lab Run#: 17505 Instrument:

Analyzed: February 22, 1999

Analyte	Spiked Sample Amount (ug/Kg)	Spike MS (ug	Amt MSD /Kq)	Amt Fo MS (ug/Ko	MSD	Spike MS (%)	Recor MSD (%)	/ Control Limits		% RPD Lim
BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE	N.D. N.D. N.D.	99.4 99.4 99.4	100 100 100	93.8 92.8 88.2	92.9 90.0 84.6	93.4	90.0	69-129 61-121 65-125	3.71	. 20
TOLUENE TRICHLOROETHENE	N.D. N.D.	99.4 99.4	100 100	91.1 82.3	88.9 80.1			70-130 74-134		

Sample Spiked: 229270 Submission #: 9902218 Client Sample ID: B-36-3.0

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000
Received: February 16, 1999

re: Matrix spike report for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Matrix: SOIL

Lab Run#: 17516 Instrument:

Analyzed: February 22, 1999

Analyte	Spiked Sample Amount (ug/Kg)	Spike MS (ug)	Amt MSD (Kg)	Amt I MS (ug/I	Found MSD	Spike MS	Recov MSD	Control	L %	% RPD Lim
BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE	N.D. N.D. N.D.	88.6 88.6 88.6	83.3 83.3 83.3	84.2 87.8 82.2	83.5 88.4 78.1	95.0 99.1 92.8	106	69-129 61-121 65-125	6.73	20
TOLUENE TRICHLOROETHENE	N.D. N.D.	88.6 88.6	83.3 83.3	84.2 77.7	84.5 75.4	95.0 87.7		70-130 74-134		

Sample Spiked: 229068
Submission #: 9902200
Client Sample ID: ABL-SB-5-0-1

Environmental Services (SDB)

March 8, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Matrix: SOIL

Lab Run#: 17524 Instrument: Analyzed: February 23, 1999

Spiked Sample Spike Amt Amt Found Spike Recov Amount MSD MS MSD MS MSD MS Control % RPD **Analyte** (ug/Kg) (ug/Kg) (ug/Kg) (%) (융) Limits RPD Lim BENZENE N.D. 100 100 113 128 113 128 69-129 12.4 99.3 114 CHLOROBENZENE N.D. 100 100 99.3 114 61-121 13.8 20 133 1,1-DICHLOROETHENE N.D. 122 /133 65-125 8.63 20 100 100 122 244 118 70-130 69.6 20 80.8 74.9 74-134 7<del>.5</del>8 20 TOLUENE 120 100 100 364 238 TRICHLOROETHENE N.D. 100 100 80.8 74.9

> Sample Spiked: 229385 Submission #: 9902231 Client Sample ID: 199103



Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Matrix: WATER

Lab Run#: 17456 Instrument:

Analyzed: February 18, 1999

Analyte	Spiked Sample Amount (ug/L)	Spike MS (ug	MSD	Amt F MS (ug/L	MSD	Spike MS (%)	MSD	/ Control Limits		% RPD Lim
BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE	N.D. N.D. N.D.	50.0 50.0 50.0	50.0 50.0 50.0	50.2 56.3 45.6	47.7 57.8 48.0	100 112 91.2	116	69-129 61-121 65-125	3.51	20
TOLUENE TRICHLOROETHENE	N.D. N.D.	50.0 50.0	50.0 50.0	48.2 47.2	46.6 45.7			70-130 74-134		

Sample Spiked: 229020 Submission #: 9902193 Client Sample ID: LF-3

Environmental Services (SDB)

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Matrix: SOIL

Lab Run#: 17505 Instrument:

Analyzed: February 22, 1999

<u>Analyte</u>	Spiked Sample Amount (ug/Kg)	Spike MS (ug	Amt MSD /Kg)	Amt Fo MS (ug/Ko	MSD	Spike MS (%)	Recov MSD (%)	/ Control Limits		% RPD Lim
BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE	N.D. N.D. N.D.	99.4 99.4 99.4	100 100 100	93.8 92.8 88.2	92.9 90.0 84.6	93.4	90.0	69-129 61-121 65-125	3.71	20
TOLUENE TRICHLOROETHENE	N.D. N.D.	99.4 99.4	100 100	91.1 82.3	88.9 80.1			70-130 74-134		

Sample Spiked: 229270 Submission #: 9902218 Client Sample ID: B-36-3.0

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 2 samples for Volatile Organics by GC/MS

analysis.

Method: SW846 Method 8260A Sept 1994

Lab Run#: 17503 Matrix: SOIL

G1-#	<b>71</b>			Recovery
Sample#	Client Sample ID	Surrogate	Recovered	Limits
229064-1	ABL-SB-2-0-1	4-BROMOFLUOROBENZENE	104	74-121
229064-1	ABL-SB-2-0-1	D4-1,2-DICHLOROETHANE	88.3	70-121
229064-1	ABL-SB-2-0-1	D8-TOLUENE	91.2	81-117
229066-1	ABL-SB-3-0-1	4-BROMOFLUOROBENZENE	98.3	74-121
229066-1	ABL-SB-3-0-1	D4-1,2-DICHLOROETHANE	97.1	70-121
229066-1	ABL-SB-3-0-1	D8-TOLUENE	87.9	81-117
				Recovery
Sample#	OC Sample Type	Surrogate	Recovered	
229819-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	99.7	74-121
229819-1	Reagent blank (MDB)	D4-1,2-DICHLOROETHANE	90.8	70-121
229819-1	Reagent blank (MDB)	D8-TOLUENE	96.6	81-117
229820-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	97.1	74-121
229820-1	Spiked blank (BSP)	D4-1,2-DICHLOROETHANE	73.9	70-121
229820-1	Spiked blank (BSP)	D8-TOLUENE	90.9	81-117
229821-1	Spiked blank duplicate	(BSD) 4-BROMOFLUOROBENZENE	93.5	
229821-1	Spiked blank duplicate	(BSD) D4-1,2-DICHLOROETHANE		74-121
229821-1	Spiked blank duplicate	(BSD) D8 - TOLUENE	115	70-121
229906-1	Matrix spike (MS)		89.5	81-117
229906-1	Matrix spike (MS)	4-BROMOFLUOROBENZENE	99.7	74-121
229906-1	Matrix spike (MS)	D4-1,2-DICHLOROETHANE	100	70-121
229907-1		D8-TOLUENE	95.8	81-117
229907-1	Matrix spike duplicate	(MSD) 4 - BROMOFLUOROBENZENE	97.7	74-121
229907-1	Matrix spike duplicate	(MSD) D4-1, 2-DICHLOROETHANE	111	70-121
2233U1-I	Matrix spike duplicate	(MSD) D8-TOLUENE	91.6	81-117_

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Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 2 samples for Volatile Organics by GC/MS

analysis.

Method: SW846 Method 8260A Sept 1994

Lab Run#: 17505 Matrix: SOIL

			%	Recovery
Sample#	Client Sample ID	Surrogate	Recovered	<u>Limits</u>
229084-1	ABL-SB-4-0-1	4-BROMOFLUOROBENZENE	103	74-121
229084-1	ABL-SB-4-0-1	D4-1,2-DICHLOROETHANE	79.4	70-121
229084-1	ABL-SB-4-0-1	D8-TOLUENE	91.3	81-117
229091-1	ABL-SB-1-0-1	<ul> <li>4-BROMOFLUOROBENZENE</li> </ul>	100	74-121
229091-1	ABL-SB-1-0-1	D4-1,2-DICHLOROETHANE	78.8	70-121
229091-1	ABL-SB-1-0-1	D8-TOLUENE	93.0	81-117
			%	Recovery
Sample#	QC Sample Type	Surrogate	Recovered	Limits
229829-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	97.9	74-121
229829-1	Reagent blank (MDB)	D4-1,2-DICHLOROETHANE	88.4	70-121
229829-1	Reagent blank (MDB)	D8-TOLUENE	92.1	81-117
229830-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	97.2	74-121
229830-1	Spiked blank (BSP)	D4-1,2-DICHLOROETHANE	83.3	70-121
229830-1	Spiked blank (BSP)	D8-TOLUENE	88.8	81-117
229833-1	Spiked blank duplicate	(BSD) 4 - BROMOFLUOROBENZENE	99.0	74-121
229833-1	Spiked blank duplicate	(BSD) D4-1, 2-DICHLOROETHANE	85.2	70-121
229833-1	Spiked blank duplicate	(BSD) D8-TOLUENE	91.8	81-117
229837-1	Matrix spike (MS)	4-BROMOFLUOROBENZENE	105	74-121
229837-1	Matrix spike (MS)	D4-1,2-DICHLOROETHANE	87.4	70-121
229837-1	Matrix spike (MS)	D8-TOLUENE	92.0	81-117
229839-1	Matrix spike duplicate	(MSD) 4-BROMOFLUOROBENZENE	105	74-121
229839-1	Matrix spike duplicate	(MSD) D4-1, 2-DICHLOROETHANE	82.8	70-121
229839-1	Matrix spike duplicate	(MSD) D8-TOLUENE	90.0	81-117

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000
Received: February 16, 1999

re: Surrogate report for 4 samples for Volatile Organics by GC/MS

analysis.

Method: SW846 Method 8260A Sept 1994

Lab Run#: 17516 Matrix: SOIL

Camm1 a#	aliant annua an	_		Recovery_
<u>Sample#</u> 229068-1	Client Sample ID	Surrogate	Recovered	
	ABL-SB-5-0-1	4-BROMOFLUOROBENZENE	113	74-121
229068-1	ABL-SB-5-0-1	D4-1,2-DICHLOROETHANE	85.5	70-121
229068-1	ABL-SB-5-0-1	D8-TOLUENE	93.9	81-117
229070-1	ABL-SB-7-0-1	4-BROMOFLUOROBENZENE	103	74-121
229070-1	ABL-SB-7-0-1	D4-1,2-DICHLOROETHANE	76.6	70-121
229070-1	ABL-SB-7-0-1	D8-TOLUENE	92.3	81-117
229076-1	ABL-SB-11-0-1	4-BROMOFLUOROBENZENE	102	74-121
229076-1	ABL-SB-11-0-1	D4-1,2-DICHLOROETHANE	88.5	70-121
229076-1	ABL-SB-11-0-1	D8-TOLUENE	89.2	81-117
229082-1	ABL-SB-8-0-1	4-BROMOFLUOROBENZENE	103	74-121
229082-1	ABL-SB-8-0-1	D4-1,2-DICHLOROETHANE	78.8	70-121
229082-1	ABL-SB-8-0-1	D8-TOLUENE	85.5	81-117
<b>5 3</b> - <b>4</b>				Recovery
Sample#	QC Sample Type	Surrogate	Recovered	Limits
229882-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	97.2	74-121
229882-1	Reagent blank (MDB)	D4-1,2-DICHLOROETHANE	85.5	70-121
229882-1	Reagent blank (MDB)	D8-TOLUENE	90.6	81-117
229884-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	114	74-121
229884-1	Spiked blank (BSP)	D4-1,2-DICHLOROETHANE	87.2	70-121
229884-1	Spiked blank (BSP)	D8-TOLUENE	94.4	81-117
229887-1	Spiked blank duplicate	(BSD) 4-BROMOFLUOROBENZENE	115	74-121
229887-1	Spiked blank duplicate	(BSD) D4-1,2-DICHLOROETHANE	90.9	70-121
229887-1	Spiked blank duplicate	(BSD) D8-TOLUENE	99.8	81-117
229890-1	Matrix spike (MS)	4-BROMOFLUOROBENZENE	111	74-121
229890-1	Matrix spike (MS)	D4-1,2-DICHLOROETHANE	92.9	70-121
229890-1	Matrix spike (MS)	D8-TOLUENE	90.3	81-117_
229893-1	Matrix spike duplicate	(MSD) 4-BROMOFLUOROBENZENE	116	74-121
229893-1	Matrix spike duplicate	(MSD) D4-1, 2-DICHLOROETHANE	90.3	70-121
229893-1	Matrix spike duplicate	(MSD) D8-TOLUENE	92.3	81-117
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**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 4 samples for Volatile Organics by GC/MS

analysis.

Method: SW846 Method 8260A Sept 1994

Lab Run#: 17516

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 3 samples for Volatile Organics by GC/MS

analysis.

Method: SW846 Method 8260A Sept 1994

Lab Run#: 17524 Matrix: SOIL

Sample#	Client Sample ID	Surrogate	% Recovered	Recovery
229072-1	ABL-SB-9-0-1	4-BROMOFLUOROBENZENE	92.4	74-121
229072-1	ABL-SB-9-0-1	D4-1,2-DICHLOROETHANE		70-121
229072-1	ABL-SB-9-0-1	D8-TOLUENE	83.8	81-117
229074-1	ABL-SB-10-0-1	4-BROMOFLUOROBENZENE	89.9	74-121
229074-1	ABL-SB-10-0-1	D4-1,2-DICHLOROETHANE		70-121
229074-1	ABL-SB-10-0-1	D8-TOLUENE	85.9	
229080-1	ABL-SB-6-0-1	4-BROMOFLUOROBENZENE	92.3	81-117
229080-1	ABL-SB-6-0-1	D4-1,2-DICHLOROETHANE	78.8	74-121
229080-1	ABL-SB-6-0-1	D8-TOLUENE	89.5	70-121
		DO TOBOBRE	09.5	81-117 <u>-</u>
			Q. 1	D = = = = =
Sample#	OC Sample Type	Surrogate		Recovery
<u>Sample#</u> 229940-1	QC Sample Type Reagent blank (MDB)	Surrogate 4-BROMOFILIOPORFNZENE	Recovered	Limits •
	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	Recovered 99.3	<b>Limits</b> 74-121
229940-1	Reagent blank (MDB) Reagent blank (MDB)	4-BROMOFLUOROBENZENE D4-1,2-DICHLOROETHANE	99.3 94.0	Limits 74-121 70-121
229940-1 229940-1	Reagent blank (MDB) Reagent blank (MDB) Reagent blank (MDB)	4-BROMOFLUOROBENZENE D4-1,2-DICHLOROETHANE D8-TOLUENE	99.3 94.0 95.7	Timits 74-121 70-121 81-117
229940-1 229940-1 229940-1	Reagent blank (MDB) Reagent blank (MDB) Reagent blank (MDB) Spiked blank (BSP)	4-BROMOFLUOROBENZENE D4-1,2-DICHLOROETHANE D8-TOLUENE 4-BROMOFLUOROBENZENE	99.3 94.0 95.7 96.6	Timits 74-121 70-121 81-117 74-121
229940-1 229940-1 229940-1 229941-1 229941-1	Reagent blank (MDB) Reagent blank (MDB) Reagent blank (MDB) Spiked blank (BSP) Spiked blank (BSP)	4-BROMOFLUOROBENZENE D4-1,2-DICHLOROETHANE D8-TOLUENE 4-BROMOFLUOROBENZENE D4-1,2-DICHLOROETHANE	99.3 94.0 95.7 96.6 80.5	Timits 74-121 70-121 81-117 74-121 70-121
229940-1 229940-1 229940-1 229941-1 229941-1 229941-1	Reagent blank (MDB) Reagent blank (MDB) Reagent blank (MDB) Spiked blank (BSP) Spiked blank (BSP) Spiked blank (BSP)	4-BROMOFLUOROBENZENE D4-1,2-DICHLOROETHANE D8-TOLUENE 4-BROMOFLUOROBENZENE D4-1,2-DICHLOROETHANE D8-TOLUENE	99.3 94.0 95.7 96.6 80.5 88.3	Timits 74-121 70-121 81-117 74-121 70-121 81-117
229940-1 229940-1 229940-1 229941-1 229941-1 229941-1 229950-1	Reagent blank (MDB) Reagent blank (MDB) Reagent blank (MDB) Spiked blank (BSP) Spiked blank (BSP) Spiked blank (BSP) Spiked blank (BSP) Spiked blank duplicate	4-BROMOFLUOROBENZENE D4-1,2-DICHLOROETHANE D8-TOLUENE 4-BROMOFLUOROBENZENE D4-1,2-DICHLOROETHANE D8-TOLUENE (BSD)4-BROMOFLUOROBENZENE	99.3 94.0 95.7 96.6 80.5 88.3 99.5	Timits 74-121 70-121 81-117 74-121 70-121 81-117 74-121
229940-1 229940-1 229940-1 229941-1 229941-1 229941-1	Reagent blank (MDB) Reagent blank (MDB) Reagent blank (MDB) Spiked blank (BSP) Spiked blank (BSP) Spiked blank (BSP)	4-BROMOFLUOROBENZENE D4-1,2-DICHLOROETHANE D8-TOLUENE 4-BROMOFLUOROBENZENE D4-1,2-DICHLOROETHANE D8-TOLUENE	99.3 94.0 95.7 96.6 80.5 88.3	Timits 74-121 70-121 81-117 74-121 70-121 81-117

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 1 sample for Volatile Organics by GC/MS

analysis.

Method: SW846 Method 8260A Sept 1994

Lab Run#: 17505 Matrix: SOIL

			%	Recovery
Sample#	Client Sample ID	Surrogate	Recovered	Limits
229132-1	ABL-DC01	4-BROMOFLUOROBENZENE	100	74-121
229132-1	ABL-DC01	D4-1,2-DICHLOROETHANE	82.8	70-121
229132-1	ABL-DC01	D8-TOLUENE	94.5	81-117
			8	Recovery
Sample#	QC Sample Type	Surrogate	Recovered	<u>Limits</u>
229829-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	97.9	74-121
229829-1	Reagent blank (MDB)	D4-1,2-DICHLOROETHANE	88.4	70-121
229829-1	Reagent blank (MDB)	D8-TOLUENE	92.1	81-117
229830-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	97.2	74-121
229830-1	Spiked blank (BSP)	D4-1,2-DICHLOROETHANE	83.3	70-121
229830-1	Spiked blank (BSP)	D8-TOLUENE	88.8	81-117
229833-1	Spiked blank duplicate	(BSD) 4-BROMOFLUOROBENZENE	99.0	74-121
229833-1	Spiked blank duplicate	(BSD) D4-1,2-DICHLOROETHANE	85.2	70-121
229833-1	Spiked blank duplicate	(BSD) D8-TOLUENE	91.8	81-117
229837-1	Matrix spike (MS)	4-BROMOFLUOROBENZENE	105	74-121
229837-1	Matrix spike (MS)	D4-1,2-DICHLOROETHANE	87.4	70-121
229837-1	Matrix spike (MS)	D8-TOLUENE	92.0	81-117
229839-1	Matrix spike duplicate	(MSD) 4-BROMOFLUOROBENZENE	105	74-121
229839-1	Matrix spike duplicate	(MSD) D4-1,2-DICHLOROETHANE	82.8	70-121
229839-1	Matrix spike duplicate	(MSD) D8-TOLUENE	90.0	81-117

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000
Received: February 16, 1999

re: Blank spike and duplicate report for Volatile Organics by GC/MS analysi

Method: SW846 Method 8260A Sept 1994

Matrix: SOIL Lab Run#: 17505

Analyzed: February 22, 1999

Analyte	Spike BSP (ug/K	Amount Dup	_	ike t Found Dup g)	Spike BSP (%)	Recov Dup (%)	Control %	% RPD Lim
BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE TOLUENE TRICHLOROETHENE	100 100 100 100 100	100 100 100 100	89.4 89.7 89.1 84.0 81.2	92.0 92.5 90.7 91.8 85.0	89.4 89.7 89.1 84.0 81.2	92.0 92.5 90.7 91.8 85.0	69-129 2.87 61-121 3.07 65-125 1.78 70-130 8.87 74-134 4.57	20 20 20

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for Volatile Organics by GC/MS analysi

Method: SW846 Method 8260A Sept 1994

Matrix: SOIL Lab Run#: 17503

Analyzed: February 19, 1999

Spike Spike Amount Amount Found Spike Recov **BSP BSP** BSP RPD Dup Dup Dup Control % <u>Analyte</u> (ug/Kg) <u>(ug/Kg)</u> (%) (%) Limits RPD 84.2 84.8 100 84.8 69-129 0.71 BENZENE 100 84.2 96.2 95.2 96.2 20 20 20 100 95.2 CHLOROBENZENE 100 61-121 1.04 1,1-DICHLOROETHENE 100 100 78.5 89.9 78.5 89.9 65-125 13.5 82.5 82.8 82.8 70-130 0.36 TOLUENE 100 100 82.5 100 84.1 82.6 82.6 74-134 1.80 20 TRICHLOROETHENE 100 84.1

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for Volatile Organics by GC/MS analys:

Method: SW846 Method 8260A Sept 1994

Matrix: SOIL Lab Run#: 17505

Analyzed: February 22, 1999

Analyte	Spike BSP (ug/K	Amount Dup g)	_	ike t Found Dup g)	Spike BSP (%)	Recov Dup (%)	Control Limits	_	% RPD Lim
BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE TOLUENE TRICHLOROETHENE	100 100 100 100 100	100 100 100 100 100	89.4 89.7 89.1 84.0 81.2	92.0 92.5 90.7 91.8 85.0	89.4 89.7 89.1 84.0 81.2	92.0 92.5 90.7 91.8 85.0	69-129 61-121 65-125 70-130 74-134	3.07 1.78 8.87	20 20 20

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for Volatile Organics by GC/MS analysi

Method: SW846 Method 8260A Sept 1994

Matrix: SOIL Lab Run#: 17516

Analyzed: February 22, 1999

			Spi	i <b>ke</b>				
	_	Amount		Found				8
Analyte	BSP (ug/Kg	Dup	BSP (ug/Ko	Dup	BSP (%)	Dup (%)	Control % Limits RPD	RPD Lim
BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE TOLUENE TRICHLOROETHENE	100 100 100 100	100 100 100 100	99.9 108 89.5 103 95.0	106 111 98.2 108 98.2	99.9 108 89.5 103 95.0	106 111 98.2 108 98.2	69-129 5.9 61-121 2.7 65-125 9.2 70-130 4.7 74-134 3.3	4 20 7 20 4 20

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for Volatile Organics by GC/MS analys

Method: SW846 Method 8260A Sept 1994

Matrix: SOIL Lab Run#: 17524

Analyzed: February 23, 1999

Analyte	Spike BSP (ug/K	Dup	_	ike t Found Dup g)	Spike BSP (%)	Recov Dup (%)	Control % Limits RPD	% RPD Lim
BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE TOLUENE TRICHLOROETHENE	100 100 100 100	100 100 100 100 100	105 102 105 98.2 94.2	106 101 108 102 95.4	105 102 105 98.2 94.2	106 101 108 102 95.4	69-129 0.94 61-121 0.98 65-125 2.82 70-130 3.80 74-134 1.26	20 20 20

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-1

Spl#: 229099 Sampled: February 15, 1999 Run#:

Matrix: WATER

17456

Analyzed: February 18, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK DILUTIO SPIKE FACTOR (%)	
ACETONE	N.D.	50	N.D.		<del></del>
BENZENE	N.D.	0.50	N.D.	91.2	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	71.2	1 1
BROMOFORM	N.D.	0.50	N.D.		1
BROMOMETHANE	N.D.	1.0	N.D.	<del></del>	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.		<u> </u>
CHLOROBENZENE	N.D.	0.50	N.D.	107	<del>+</del>
CHLOROETHANE	N.D.	1.0	N.D.		1 1 1 1
2-BUTANONE (MEK)	N.D.	50	N.D.		i
2-CHLOROETHYLVINYLETHER	N.D.	0.50	N.D.		i
CHLOROFORM	N.D.	0.50	N.D.		i
CHLOROMETHANE	N.D.	1.0	N.D.		i
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.		i
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	<del></del>	ī
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	<del></del>	ī
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	<del></del>	1
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	5.0	N.D.		_ 1
1,2-DIBROMOETHANE	N.D.	0.50	N.D.		1
DIBROMOMETHANE	N.D.	0.50	N.D.		1
DICHLORODIFLUOROMETHANE	N.D.	0.50	N.D.		1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	<del></del>	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	<del></del>	1111111111
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	89.8	1
1,2-DICHLOROETHENE (CIS)	N.D.	0.50	N.D.	<del></del>	1
1,2-DICHLOROETHENE (TRANS)	N.D.	0.50	N.D.		1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	<del></del>	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	<del></del>	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		1
ETHYLBENZENE	N.D.	0.50	N.D.		1
2-HEXANONE	N.D.	50	N.D.		1
METHYLENE CHLORIDE	N.D.	5.0	N.D.		1
4-METHYL-2-PENTANONE (MIBK) NAPHTHALENE	N.D.	50	N.D.		1 1
STYRENE	N.D. N.D.	1.0 0.50	N.D. N.D.	<del></del>	<u>1</u>
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	<b></b>	i
TETRACHLOROETHENE	N.D.	0.50	N.D.		i
TOLUENE	N.D.	0.50	N.D.	92.2	ī
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.		ī
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	<del></del>	ī
TRICHLOROETHENE	N.D.	0.50	N.D.	87.7	1 1
1,1,1,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		ī
VÍNÝL ACETATE	N.D.	5.0	N.D.		ī
VINYL CHLORIDE	N.D.	0.50	N.D.		ī

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Volatile Organics by GC/MS analysis, continued. Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-1

Spl#: 229099

Matrix: WATER

Sampled: February 15, 1999 Run#: 17456

Analyzed: February 18, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	1.0	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.		1 ,
CARBON DISULFIDE ISOPROPYLBENZENE	N.D.	1.0	N.D.		1
BROMOBENZENE BROMOBENZENE	N.D.	0.50	N.D.		1 、
BROMOCHLOROMETHANE	N.D.	0.50	Ŋ.D.		1
TRICHLOROFLUOROMETHANE	N.D.	1.0	N.D.		1
INICHDOROF DOOROME [HAME	N.D.	0.50	N.D.		1 ,

Alex Tam Analyst

Michael Verona

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: DUPGW01

Spl#: 229104 Matrix: WATER

Sampled: February 15, 1999 Run#: 17546 Analyzed: February 19, 1999

-	RESULT	REPORTING LIMIT	BLANK RESULT	BLANK DILUTION SPIKE FACTOR	
ANALYTE	(uq/L)	(ug/L)	(ug/L)	(%)	
ACETONE	N.D.	50	N.D.	1	_
BENZENE	N.D.	0.50	N.D.	94.1 1	
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	1	
BROMOFORM	N.D.	0.50	N.D.	1	
BROMOMETHANE	N.D.	1.0	N.D.	1 1 1	
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	7- 1	
CHLOROBENZENE	N.D.	0.50	N.D.	106 1 1 1 1	
CHLOROETHANE	N.D.	1.0	N.D.	1	
2-BUTANONE (MEK)	Ŋ.D.	50_	N.D.	1	
2-CHLOROETHYLVINYLETHER	Ŋ.D.	0.50	N.D.	1	
CHLOROFORM	N.D.	0.50	Ŋ.D.	1	
CHLOROMETHANE DIBROMOCHLOROMETHANE	N.D.	1.0	N.D.	<u>1</u> 1	
1 1 DICH ODODENSENE	N.D.	0.50	N.D.	<u>1</u>	
1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	1 1	
1,4-DICHLOROBENZENE	N.D. N.D.	0.50 0.50	N.D. N.D.	1	
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	5.0	N.D.	<u>1</u>	
1,2-DIBROMOETHANE	N.D.	0.50	N.D.	<u>_</u>	
DIBROMOMETHANE	N.D.	0.50	N.D.		
DICHLORODIFLUOROMETHANE	N.D.	0.50	N.D.	1 1 1 1 87.0 1 1 1 1 1 1 1 1 -	
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	1	
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	1	
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	87.0	
1,2-DICHLOROETHENE (CIS)	N.D.	0.50	N.D.	1	
1,2-DICHLOROETHENE (TRANS)	N.D.	0.50	N.D.	1	
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	<u>ī</u>	
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	ī	
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	<u>ī</u>	
ETHYLBENZENE	N.D.	0.50	N.D.	<u>1</u>	
2-HEXANONE	N.D.	50	N.D.	<u>1</u>	
METHYLENE CHLORIDE	N.D.	5.0	N.D.	î	
4-METHYL-2-PENTANONE (MIBK)	N.D.	50	N.D.	1	
NAPHTHALENE	N.D.	1.0	N.D.	1	
STYRENE	N.D.	0.50	N.D.	1	
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	1	
TETRACHLOROETHENE	N.D.	0.50	N.D.	<u>1</u>	
TOLUENE	N.D.	0.50	N.D.	93.3 <u>1</u> 1	Ċ
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.	1	
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	$$ $\frac{1}{1}$ 89.5 1	
TRICHLOROETHENE	N.D.	0.50	N.D.	89.5 1 1	
1,1,1,2-TETRACHLOROETHANE VINYL ACETATE	N.D.	0.50	N.D.	1 1	
VINYL ACETATE VINYL CHLORIDE	N.D. N.D.	5.0 0.50	N.D. N.D.	<u>1</u>	
ATMIN CUROKIDE	и. D.	0.50	M.D.	+	

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: DUPGW01

Spl#: 229104

Matrix: WATER

Sampled: February 15, 1999 Run#: 17546

Analyzed: February 19, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	1.0	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	<del>-</del> -	1.
CARBON DISULFIDE	1.2	1.0	N.D.		1
ISOPROPYLBENZENE	N.D.	0.50	N.D.		1
BROMOBENZENE	N.D.	0.50	N.D.		1
BROMOCHLOROMETHANE	N.D.	1.0	N.D.	<del></del>	1 ,
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.		1 /

Analyst

Michael Verona

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-2

Spl#: 229100 Matrix: WATER

Sampled: February 15, 1999 Run#: 17456 Analyzed: February 18, 1999

	140221/	1,120	.urybout re		.0,
		REPORTING	BLANK		DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(ug/L)	(ug/L)	(ug/L)	(%)	
ACETONE	N.D.	50	N.D.		1
BENZENE	N.D.	0.50	N.D.	91.2	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.		ī
BROMOFORM	N.D.	0.50	N.D.		า
BROMOMETHANE	N.D.	1.0	N.D.		1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.		1
CHLOROBENZENE	N.D.	0.50	N.D.	107	<b>†</b>
CHLOROETHANE	N.D.	1.0	N.D.	107	1 1 1
2-BUTANONE (MEK)	N.D.	50	N.D.		± 1 ·
2-CHLOROETHYLVINYLETHER	N.D.	0.50	N.D.		1
CHLOROFORM .					1
CHLOROFORM CHLOROMETHANE	N.D.	0.50	N.D.		<u>+</u>
	N.D.	1.0	N.D.		1 1 1 1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.		Ţ
1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE	N.D.	0.50	N.D.		1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.		1 .
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.		<u>1</u>
1,2-DIBROMO-3-CHLOROPROPANE	Ŋ.D.	5.0	N.D.		1
1,2-DIBROMOETHANE	N.D.	0.50	N.D.		1
DIBROMOMETHANE	N.D.	0.50	N.D.		1
DICHLORODIFLUOROMETHANE	N.D.	0.50	N.D.		1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.		1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.		1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	89.8	1
1,2-DICHLOROETHENE (CIS)	N.D.	0.50	N.D.		1
1,2-DICHLOROETHENE (TRANS)	N.D.	0.50	N.D.		ī
1.2-DICHLOROPROPANE	N.D.	0.50	N.D.		ī
CÍS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		ī
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		ī
ETHYLBENZENE	N.D.	0.50	N.D.		1 1 1 1
2-HEXANONE	N.D.	50	N.D.		ī
METHYLENE CHLORIDE	N.D.	5.0	N.D.		ī
4-METHYL-2-PENTANONE (MIBK)	N.D.	50	N.D.	- <del>-</del>	ī
NAPHTHALENE	N.D.	1.0	N.D.		
STYRENE	N.D.	0.50	N.D.		1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		1
TETRACHLOROETHENE	N.D.	0.50	N.D.		<b>†</b>
TOLUENE	N.D.	0.50	N.D.	92.2	<b>+</b>
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.	24.4	1
1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE	N.D.		N.D.		1
TRICHLOROETHENE	N.D.	0.50		87.7	÷
	N.D.	0.50	N.D.	01.1	1 1 1 1 1 1 1
1,1,1,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		1.
VINYL ACETATE	N.D.	5.0	N.D.		1
VINYL CHLORIDE	N.D.	0.50	N.D.		1

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-2

Spl#: 229100

Matrix: WATER

Sampled: February 15, 1999 Run#: 17456

Analyzed: February 18, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	1.0	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.		1
CARBON DISULFIDE	N.D.	1.0	N.D.		1
ISOPROPYLBENZENE	N.D.	0.50	N.D.		1
BROMOBENZENE	N.D.	0.50	N.D.		1
BROMOCHLOROMETHANE	N.D.	1.0	N.D.		1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.		1

Analyst

Michael Verona

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-3

Spl#: 229101 Matrix: WATER

Sampled: February 15, 1999 Run#: 17546 Analyzed: February 19, 1999

	RESULT	REPORTING LIMIT	BLANK RESULT		LUTION ACTOR
ANALYTE	(ug/L)	( <u>ug/L)</u>	(ñã\T)	(%)	
ACETONE	N.D.	50	N.D.		1
BENZENE BROMODICHLOROMETHANE	N.D.	0.50	N.D.	94.1	1
BROMOFORM  BROMOFORM	N.D.	0.50	N.D.		1
BROMOMETHANE	N.D.	0.50	N.D. N.D.		1 1
CARBON TETRACHLORIDE	N.D. N.D.	1.0 0.50	N.D. N.D.		<u>+</u>
CHLOROBENZENE	N.D.	0.50	N.D.	106	1 1
CHLOROETHANE	N.D.	1.0	N.D.	100	1
2-BUTANONE (MEK)	N.D.	50	N.D.		ī
2-CHLOROETHYLVINYLETHER	N.D.	0.50	N.D.		i
CHLOROFORM	N.D.	0.50	N.D.		ī
CHLOROMETHANE	N.D.	1.0	N.D.		. 1 1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	<b>-</b> -	ī
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.		ī.
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.		ī
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.		ī
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	5.0	N.D.		1
1,2-DIBROMOETHANE	N.D.	0.50	N.D.		1 1 1 1
DIBROMOMETHANE	N.D.	0.50	N.D.		1
DICHLORODIFLUOROMETHANE	N.D.	0.50	N.D.		1 1 1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.		1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.		1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	87.0	1 1 1 1 1
1,2-DICHLOROETHENE (CIS)	N.D.	0.50	N.D.		1
1,2-DICHLOROETHENE (TRANS)	N.D.	0.50	N.D.		1
1,2-DICHLOROPROPANE	N.D.	0.50	Ŋ.D.		1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	Ŋ.D.		1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	Ŋ.D.		Ţ
ETHYLBENZENE	N.D.	0.50	N.D.		<u> </u>
2-HEXANONE	N.D.	50	N.D.		Ţ.
METHYLENE CHLORIDE 4-METHYL-2-PENTANONE (MIBK)	N.D. N.D.	5.0 50	N.D. N.D.		1 1 1 1 1
NAPHTHALENE	N.D.	1.0	N.D. N.D.	<del></del>	<u> </u>
STYRENE	N.D.	0.50	N.D.		1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		<u> </u>
TETRACHLOROETHENE	N.D.	0.50	N.D.		1 1
TOLUENE	N.D.	0.50	N.D.	93.3	ī
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.		ī
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.		ī
TRICHLOROETHENE	N.D.	0.50	N.D.	89.5	ī
1,1,1,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		ī
VINYL ACETATE	N.D.	5.0	N.D.		ī
VINYL CHLORIDE	N.D.	0.50	N.D.		1

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-3

Spl#: 229101

Matrix: WATER

Sampled: February 15, 1999 Run#: 17546

Analyzed: February 19, 1999

ANALYTE	RESULT	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	1.0	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.		ī
CARBON DISULFIDE	N.D.	1.0	N.D.		ī
ISOPROPYLBENZENE	N.D.	0.50	N.D.		1
BROMOBENZENE	N.D.	0.50	N.D.		1
BROMOCHLOROMETHANE	N.D.	1.0	N.D.		1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.		i
					1

Alex Tam Analyst

Michael Veropa

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-4

Sampled: February 15, 1999 Run#: 17546 Analyzed: February 19, 1999

ANALYTE	RESULT	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK DI SPIKE F (%)	
ACETONE					
BENZENE	N.D. N.D.	50 0.50	N.D. N.D.	9 <b>4.1</b>	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	7 <del>4</del> .1	<u> </u>
BROMOFORM	N.D.	0.50	N.D.		<b>†</b>
BROMOMETHANE	N.D.	1.0	N.D.		<b>+</b>
CARBON TETRACHLORIDE	N.D.	0.50	N.D.		1
CHLOROBENZENE	N.D.	0.50	N.D.	106	1
CHLOROETHANE	N.D.	1.0	N.D.	100	1
2-BUTANONE (MEK)	N.D.	50	N.D.		7
2-CHLOROETHYLVINYLETHER	N.D.	0.50	N.D.		Ť
CHLOROFORM	N.D.	0.50	N.D.		Ť
CHLOROMETHANE	N.D.	1.0	N.D.		ī
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.		<u> </u>
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	<b>'</b>	ī
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.		ī
1,4-DICHLOROBENZENE	N.D. N.D.	0.50	N.D.		ī
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	5.0	N.D.		ī
1,2-DIBROMOETHANE	N.D. N.D.	0.50	N.D.		ī
DÍBROMOMETHANE	N.D.	0.50	N.D.		ī
DICHLORODIFLUOROMETHANE	N.D. N.D.	0.50	N.D.		1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.		1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.		1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	87.0	1
1,2-DICHLOROETHENE (CIS)	N.D. N.D.	0.50	N.D.		1
1,2-DICHLOROETHENE (TRANS)	N.D.	0.50	N.D.		1
1,2-DICHLOROPROPANE CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	Ŋ.D.		1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		1
ETHYLBENZENE	N.D.	0.50	N.D.		1
2-HEXANONE	N.D.	50	Ŋ.D.	<b></b>	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.		<u> </u>
4-METHYL-2-PENTANONE (MIBK)	N.D.	50	N.D.		1
NAPHTHALENE	N.D.	1.0	N.D.		1
STYRENE 1,1,2,2-TETRACHLOROETHANE	N.D. N.D.	0.50	N.D. N.D.	<b></b>	± +
TETRACHLOROETHENE	N.D.	0.50 0.50	N.D.		<b>†</b>
TOLUENE	N.D.	0.50	N.D.	93.3	†
1 1 1-TRICHLOROFTHANE	N.D.	0.50	N.D.		ī
1 1 2-TRICHLOROETHANE	N.D.	0.50	N.D.		î
1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE TRICHLOROETHENE	N.D.	0.50	N.D.	89.5	111111111111111111111111111111111111111
1,1,1,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		ī
VINYL ACETATE	N.D.	5.0	N.D.		ī
VINYL CHLORIDE	N.D.	0.50	N.D.		ī
		<del>-</del> -			

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#:

510996100900/2000

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-4

Spl#: 229102

Matrix: WATER

Sampled: February 15, 1999 Run#:

17546

Analyzed: February 19, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	1.0	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.		ī
CARBON DISULFIDE	N.D.	1.0	N.D.		î
ISOPROPYLBENZENE	N.D.	$\bar{0}.50$	N.D.		1
BROMOBENZENE	N.D.	0.50	N.D.		1
BROMOCHLOROMETHANE	N.D.	1.0	N.D.		<u>+</u>
TRICHLOROFLUOROMETHANE	Ñ.D.	0.50			<u>_</u>
	14.17.		N.D.		1

Analyst

Michael Verona

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-5

Spl#: 229103 Matrix: WATER

Sampled: February 15, 1999 Run#: Analyzed: February 19, 1999 17546

	RESULT	REPORTING LIMIT	BLANK RESULT		LUTION ACTOR
ANALYTE	(ug/L)	(uq/L)	(ug/L)	(%)	
ACETONE	N.D.	50_	N.D.		1.
BENZENE	N.D.	0.50	Ŋ.D.	94.1	<u>ļ</u>
BROMODICHLOROMETHANE	N.D.	0.50	Ŋ.D.		1
BROMOFORM BROMOMETHANE	N.D.	0.50	N.D.		1
CARBON TETRACHLORIDE	N.D.	1.0	N.D.		1
CHLOROBENZENE	N.D. N.D.	0.50 0.50	N.D. N.D.	106	
CHLOROETHANE	N.D.	1.0	N.D.	106	1 1 1
2-BUTANONE (MEK)	N.D.	50	N.D.		1
2-CHLOROETHYLVINYLETHER	N.D.	0.50	N.D.		i
CHLOROFORM	N.D.	0.50	N.D.		1.
CHLOROMETHANE	N.D.	1.0	N.D.		1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.		<b>†</b>
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.		1 1 1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.		Ť
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.		ī
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	5.0	N.D.		ī
1,2-DIBROMOETHANE	N.D.	0.50	N.D.		1 1 1 1 1
DIBROMOMETHANE	N.D.	0.50	N.D.		ī
DICHLORODIFLUOROMETHANE	N.D.	0.50	N.D.		ī
1,1-DICHLOROETHANE	N.D.	0.50	N.D.		1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.		1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	87.0	1
1,2-DICHLOROETHENE (CIS)	N.D.	0.50	N.D.		1
1,2-DICHLOROETHENE (TRANS)	N.D.	0.50	N.D.		1 1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.		1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		1 1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		1
ETHYLBENZENE	N.D.	0.50	N.D.		1
2-HEXANONE	N.D.	50	N.D.		1
METHYLENE CHLORIDE	N.D.	5.0	N.D.		1
4-METHYL-2-PENTANONE (MIBK)	N.D.	50	N.D.		1 1
NAPHTHALENE	N.D.	1.0	N.D.		1
STYRENE	N.D.	0.50	Ŋ.D.		1 1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		<u> </u>
TÉTRACHLOROETHENE TOLUENE	N.D. N.D.	0.50	N.D.	02.2	1 1
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D. N.D.	93.3	$\stackrel{1}{1}$ .
1,1,2-TRICHLOROETHANE	N.D.	0.50 0.50	N.D.	<b></b>	1 .
TRICHLOROETHENE	N.D.	0.50	N.D.	89.5	1 1
1,1,1,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	09.3	1
VINYL ACETATE	N.D.	5.0	N.D.		
VINYL CHLORIDE	N.D.	0.50	N.D.		i
, zi, zii Giimortabii	. بد . ۲۰	0.50	14 + 12 .		_

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-5

Spl#: 229103 Matrix: WATER Sampled: February 15, 1999

Run#: 17546 Analyzed: February 19, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	1.0	N.D.		7
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.		ī
CARBON DISULFIDE	2.4	1.0	N.D.		ī
ISOPROPYLBENZENE	N.D.	0.50	N.D.		1
BROMOBENZENE	N.D.	0.50	N.D.	** **	1
BROMOCHLOROMETHANE	N.D.	1.0	N.D.		1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.		<b>†</b> 1
· ·		= =			_

Analyst

Michael Verona

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-6

Sampled: February 15, 1999 Run#: 17456 Analyzed: February 18, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK DI SPIKE F. (%)	
ACETONE					<del></del>
BENZENE	N.D. N.D.	50 0.50	N.D. N.D.	 91,2	1
BROMODICHLOROMETHANE	N.D.	0.50			1
BROMOFORM	N.D.	0.50	N.D. N.D.	 	1 1
BROMOMETHANE	N.D.	1.0	N.D.		1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	<b></b>	i
CHLOROBENZENE	N.D.	0.50	N.D.	107	
CHLOROETHANE	N.D.	1.0	N.D.		1 1 1 1
2-BUTANONE (MEK)	N.D.	50	N.D.	- <del>-</del>	1
2-CHLOROETHYLVINYLETHER	N.D.	0.50	N.D.		i
CHLOROFORM	N.D.	0.50	N.D.		1
CHLOROMETHANE	N.D.	1.0	N.D.		1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.		<b>1</b>
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.		1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.		<b>†</b>
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.		Ť
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	5.0	N.D.		Ŧ
1,2-DIBROMOETHANE	N.D.	ŏ.5o	N.D.		Ŧ
DIBROMOMETHANE	N.D.	0.50	N.D.		ī
DICHLORODIFLUOROMETHANE 1,1-DICHLOROETHANE 1,2-DICHLOROETHANE	N.D.	0.50	N.D.		111111111111111111111111111111111111111
1.1-DICHLOROETHANE	N.D.	0.50	N.D.		ī
1,2-DICHLOROETHANE	N.D.	0.50	N.D.		ī
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	89.8	ī
1,2-DICHLOROETHENE (TRANS)	4.2	0.50	N.D.		ī.
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.		ī
1,2-DICHLOROPROPANE CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		ĩ
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		ī
ETHYLBENZENE	N.D.	0.50	N.D.		ĩ
2-HEXANONE	N.D.	50	N.D.		$\bar{1}$
METHYLENE CHLORIDE	N.D.	5.0	N.D.		ī
4-METHYL-2-PENTANONE (MIBK)	N.D.	50	N.D.		1
NAPHTHALENE	N.D.	1.0	N.D.		1
STYRENE	N.D.	0.50	N.D.		1 1 1 1 1 1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		1
TETRACHLOROETHENE	N.D.	0.50	N.D.		1
TOLUENE	N.D.	0.50	N.D.	92.2	1
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.		1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.		1
TRICHLOROETHENE	2.9	0.50	N.D.	87.7	1 1
1,1,1,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		1
VINYL ACETATE	N.D.	5.0	N.D.	<del></del>	1
VINYL CHLORIDE	N.D.	0.50	N.D.		1
TOTAL XYLENES	N.D.	1.0	N.D.		1

**Environmental Services (SDB)** 

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-6

Spl#: 229088

Matrix: WATER

Sampled: February 15, 1999 Run#: 17456

Analyzed: February 18, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
TRICHLOROTRIFLUOROETHANE	${ t N}.{ t D}.$	0.50	N.D.		1
CARBON DISULFIDE	N.D.	1.0	N.D.		1
ISOPROPYLBENZENE	N.D.	0.50	N.D.		1
BROMOBENZENE	N.D.	0.50	N.D.		1
BROMOCHLOROMETHANE	N.D.	1.0	N.D.		1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.		1
1,2-DICHLOROETHENE (CIS)	110	2.5	N.D.		5

Alex Tam Analyst

Michael Verona

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-7

Sampled: February 15, 1999 Run#: 17546 Analyzed: February 19, 1999

	,	REPORTING	BLANK	BLANK DILUTION
	RESULT	LIMIT	RESULT	SPIKE FACTOR
ANALYTE	(ug/L)	(ug/L)	(ug/L)	(%)
ACETONE	N.D.	50	N.D.	<del></del> 1
BENZENE	N.D.	0.50	N.D.	94.1 1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	<u>1</u>
BROMOFORM	N.D.	0.50	N.D.	<u>1</u>
BROMOMETHANE	N.D.	1.0	N.D.	<u>ī</u>
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	<u>ī</u>
CHLOROBENZENE	N.D.	0.50	N.D.	1 1 1 106 1
CHLOROETHANE	N.D.	1.0	N.D.	<u>1</u>
2-BUTANONE (MEK)	N.D.	50	N.D.	Ī ·
2-CHLOROETHYLVINYLETHER	Ñ.D.	0.50	N.D.	<u>1</u>
CHLOROFORM	N.D.	0.50	N.D.	<u>1</u>
CHLOROMETHANE	N.D.	1.0	N.D.	<u>1</u>
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	<u>1</u>
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	<u>1</u>
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	<u>1</u>
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	5.0	N.D.	<u>1</u>
1,2-DIBROMOETHANE	N.D.	0.50	N.D.	<b>ī</b>
DIBROMOMETHANE	N.D.	0.50	N.D.	<u>1</u>
DICHLORODIFLUOROMETHANE	N.D.	0.50	N.D.	~- <u>1</u>
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	<u>1</u>
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	1 1 87.0 1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	87.0 $\bar{1}$
1,2-DICHLOROETHENE (CIS)	N.D.	0.50	N.D.	1
1,2-DICHLOROETHENE (TRANS)	N.D.	0.50	N.D.	<u>1</u>
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	<u>ī</u>
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	1 1 1
ETHYLBENZENE	N.D.	0.50	N.D.	<u>1</u>
2-HEXANONE	N.D.	50	N.D.	<u> </u>
METHYLENE CHLORIDE	N.D.	5.0	N.D.	<del>-</del> - 1
4-METHYL-2-PENTANONE (MIBK)	N.D.	50	N.D.	<b></b>
NAPHTHALENE	N.D.	1.0	N.D.	1
STYRENE	N.D.	0.50	N.D.	<u>ī</u>
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	
TETRACHLOROETHENE	N.D.	0.50	N.D.	1
TOLUENE	N.D.	0.50	N.D.	93.3
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	1
TRICHLOROETHENE	N.D.	0.50	N.D.	1 93.3 1 1 89.5 1
1,1,1,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	<u>1</u>
VINYL ACETATE	N.D.	5.0	N.D.	1
VINYL CHLORIDE	N.D.	0.50	N.D.	1

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-7

Spl#: 229105

Matrix: WATER

Sampled: February 15, 1999 Run#: 17546

Analyzed: February 19, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK I SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	1.0	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.		1
CARBON DISULFIDE	N.D.	1 0	N.D.		1
ISOPROPYLBENZENE	N.D.	0.50	N.D.		<u></u>
BROMOBENZENE	N.D.	0.50			Ţ
BROMOCHLOROMETHANE		7 7 7	N.D.		Ţ
	Ŋ.D.	1.0	N.D.		1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	<del>-</del> -	1

Analyst

Michael Verona

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-8

Spl#: 229087 Matrix: WATER

Sampled: February 15, 1999 Run#: 17456 Analyzed: February 18, 1999

• •	.,		2	<b>-</b>	•
		REPORTING	BLANK	BLANK	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(uq/L)	(ug/L)	(ug/L)	(%)	
ACETONE	N.D.	50	N.D.		1
BENZENE	N.D.	0.50	N.D.	91.2	i
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	71.2	
BROMOFORM	N.D.	0.50	N.D.		1
BROMOMETHANE	N.D.	1.0	N.D.		1 1 1 1 1
CARBON TETRACHLORIDE	N.D.				<u> </u>
		0.50	N.D.		<u> </u>
CHLOROBENZENE	N.D.	0.50	N.D.	107	Ţ
CHLOROETHANE	N.D.	1.0	N.D.	- <del>-</del>	Ţ
2-BUTANONE (MEK)	N.D.	50_	N.D.		Ţ
2-CHLOROETHYLVINYLETHER	N.D.	0.50	N.D.		1
CHLOROFORM	N.D.	0.50	N.D.		1
CHLOROMETHANE	N.D.	1.0	N.D.		1 1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.		1
1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE	N.D.	0.50	N.D.		1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.		1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.		1
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	5.0	N.D.		1
1,2-DIBROMOETHANE	N.D.	0.50	N.D.		1
DÍBROMOMETHANE	N.D.	0.50	N.D.		1
DICHLORODIFLUOROMETHANE	N.D.	0.50	N.D.		ī
1,1-DICHLOROETHANE	N.D.	0.50	N.D.		1 1 1 1 1 1 1 1 1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.		ī
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	89.8	ī
1,2-DICHLOROETHENE (CIS)	N.D.	0.50	N.D.		ī
1,2-DICHLOROETHENE (TRANS)	N.D.	0.50	N.D.		ī
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.		<b>1</b>
1,2-DICHLOROPROPANE CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		<u>+</u>
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		<u> </u>
ETHYLBENZENE	N.D.	0.50	N.D.		1
2-HEXANONE	N.D.	50	N.D.		<u>+</u>
METHYLENE CHLORIDE	N.D. N.D.		N.D.		1
4-METHYL-2-PENTANONE (MIBK)	M.D.	5.0		- <del>-</del>	<u> </u>
	N.D.	50	N.D.		<u>+</u>
NAPHTHALENE	N.D.	1.0	N.D.		1
STYRENE	N.D.	0.50	N.D.		<u></u>
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	Ŋ.D.		1
TETRACHLOROETHENE	N.D.	0.50	N.D.		<u></u>
TOLUENE	N.D.	0.50	N.D.	92.2	1
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.		1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.		1
TRICHLOROETHENE	N.D.	0.50	N.D.	87.7	1 1 1 1 1 1 1 1
1,1,1,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		1
VÎNÝL ACETATE	N.D.	5.0	N.D.		$ar{ exttt{1}}$
VINYL CHLORIDE	N.D.	0.50	N.D.		1

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-8

Spl#: 229087

Matrix: WATER

Sampled: February 15, 1999 Run#: 17456

Analyzed: February 18, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	1.9	1.0	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.		ī
CARBON DISULFIDE	1.1	1.0	N.D.		$ar{f 1}$ '
ISOPROPYLBENZENE	N.D.	0.50	N.D.		1
BROMOBENZENE	N.D.	0.50	N.D.		$\overline{f 1}$
BROMOCHLOROMETHANE	N.D.	1.0	N.D.		1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.		ī

Analyst

Michael Verona

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-10

Spl#: 229106 Matrix: WATER

Sampled: February 15, 1999 Run#: 17552 Analyzed: February 22, 1999

•			4	-	
		REPORTING	BLANK	BLANK I	ILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
					PACIOR
ANALYTE	(ug/L)	(ug/L)	(ug/L)	(%)	
ACETONE	N.D.	5 <b>0</b>	N.D.		1
BENZENE	N.D.	0.50	N.D.	94.7	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.		1
BROMOFORM	N.D.	0.50	N.D.		1
BROMOMETHANE	N.D.	1.0	N.D.		1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.		ī
CHLOROBENZENE	N.D.	0.50	N.D.	105	ī
CHLOROETHANE	N.D.	1.0	N.D.	103	1
	M.D.		N.D.		1
2-BUTANONE (MEK)	N.D.	50	N.D.		1
2-CHLOROETHYLVINYLETHER	N.D.	0.50	N.D.		1
CHLOROFORM	N.D.	0.50	N.D.	~ **	1
CHLOROMETHANE	N.D.	1.0	N.D.		1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.		1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.		1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.		ī
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.		Ť
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	5.0	N.D.		1
	N.D.				<u>+</u>
1,2-DIBROMOETHANE	N.D.	0.50	N.D.		<u>+</u>
DIBROMOMETHANE	N.D.	0.50	N.D.		<u> </u>
DICHLORODIFLUOROMETHANE	N.D.	0.50	N.D.		1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.		1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.		1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	78.2	1
1,2-DICHLOROETHENE (CIS)	N.D.	0.50	N.D.		ī
1,2-DICHLOROETHENE (TRANS)	N.D.	0.50	N.D.		î
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.		<b>†</b>
CIS-1,3-DICHLOROPROPENE	N.D.				1
UDANO 1 2 DIGHIODODDODENE	N.D.	0.50	Ŋ.D.		‡
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		
ETHYLBENZENE	N.D.	0.50	N.D.		Ţ
2-HEXANONE	N.D.	50	N.D.		1
METHYLENE CHLORIDE	N.D.	5.0	N.D.		1
4-METHYL-2-PENTANONE (MIBK)	N.D.	50	N.D.		1
NAPHTHALENE	N.D.	1.0	N.D.		1
STYRENE	N.D.	0.50	N.D.		ī
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		1
TETRACHLOROETHENE	N.D.	0.50	N.D.		1
TOLUENE	N.D.	0.50	N.D.	89.5	<u>+</u>
	N.D.			09.5	+
1,1,1-TRICHLOROETHANE	N.D.	0.50	Ŋ.D.		Ţ
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.		Ţ
TRICHLOROETHENE	N.D.	0.50	N.D.	89.7	111111111111111111111111111111111111111
1,1,1,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		1
VINYL ACETATE	N.D.	5.0	N.D.		1
VINYL CHLORIDE	N.D.	0.50	N.D.		1
					<del>-</del>

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-10

Spl#: 229106

Matrix: WATER

Sampled: February 15, 1999 Run#: 17552

Analyzed: February 22, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	1.0	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.		<u>1</u>
CARBON DISULFIDE	N.D.	1.0	N.D.		1
ISOPROPYLBENZENE	N.D.	0.50	N.D.		<b>†</b>
BROMOBENZENE	N.D.	0.50	N.D.		± -
BROMOCHLOROMETHANE	N.D.	1.0	N.D.		± -
TRICHLOROFLUOROMETHANE	N.D.				Ţ
THE CHILDROT DOCKOMET HAME	N.D.	0.50	N.D.		1

Álex Tam

Analyst

Michael Veroma

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-11

Spl#: 229107 Matrix: WATER

Sampled: February 15, 1999 Run#: 17546 Analyzed: February 19, 1999

•	RESULT	REPORTING LIMIT	BLANK RESULT	BLANK DII SPIKE FA	LUTION ACTOR
ANALYTE	(ug/L)	(ug/L)	(ug/L)	(%)	CIOR
ACETONE	N.D.	50	N.D.		1
BENZENE	N.D.	0.50	N.D.	94.1	$\overline{\mathtt{1}}$
BROMODICHLOROMETHANE	N.D.	0.50	N.D.		ī
BROMOFORM	N.D.	0.50	N.D.		ī
BROMOMETHANE	N.D.	1.0	N.D.		ī
CARBON TETRACHLORIDE	N.D.	0.50	N.D.		ĩ
CHLOROBENZENE	N.D.	0.50	N.D.	106	ī
CHLOROETHANE	N.D.	1.0	N.D.		1 1
2-BUTANONE (MEK)	N.D.	50	N.D.	<b>-</b> -	†
2-CHLOROETHYLVINYLETHER	N.D.	0.50	N.D.		1 1 1
			N.D.		<b>†</b>
CHLOROFORM	N.D.	0.50	N.D.		<u>+</u>
CHLOROMETHANE	N.D.	1.0			<u></u>
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	<del>-</del> -	1 1 1 1 1
1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE	N.D.	0.50	N.D.		<u> </u>
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.		Ţ
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.		1
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	5.0	N.D.		
1,2-DIBROMOETHANE	N.D.	0.50	N.D.		1
DIBROMOMETHANE	N.D.	0.50	N.D.		1
DICHLORODIFLUOROMETHANE	N.D.	0.50	N.D.		1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.		1 1 1 1 1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.		1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	87.0	1
1,2-DICHLOROETHENE (CIS)	N.D.	0.50	N.D.		1
1,2-DICHLOROETHENE (TRANS)	N.D.	0.50	N.D.		1
1.2-DICHLOROPROPANE	N.D.	0.50	N.D.		1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		1
ETHYLBENZENE	N.D.	0.50	N.D.		ī
2-HEXANONE	N.D.	50	N.D.		1
METHYLENE CHLORIDE	N.D.	5.0	N.D.		ī
4-METHYL-2-PENTANONE (MIBK)	N.D.	50	N.D.		ī
NAPHTHALENE	N.D.	1.0	N.D.		ī
STYRENE	N.D.	0.50	N.D.		ī
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		Ť.
TETRACHLOROETHENE	N.D.	0.50	N.D.		1
TOLUENE	N.D.	0.50	N.D.	93.3	1
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.	93.3	1
	M.D.	0.50	N.D.		+ 1
1,1,2-TRICHLOROETHANE	N.D.	0.50		00 E	<u></u>
TRICHLOROETHENE	N.D.	0.50	N.D.	89.5	1 1 1 1 1 1 1 1 1
1,1,1,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		<u> </u>
VÍNÝL ACETATE	N.D.	5.0	N.D.		
VINYL CHLORIDE	N.D.	0.50	N.D.		1

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-11

Spl#: 229107

Matrix: WATER

Sampled: February 15, 1999 Run#: 17546

Analyzed: February 19, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	1.0	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.		ĩ
CARBON DISULFIDE	N.D.	1.0	N.D.		- <del>-</del> 1
ISOPROPYLBENZENE	N.D.	0.50	N.D.		<u>-</u>
BROMOBENZENE	N.D.	0.50	N.D.		ī
BROMOCHLOROMETHANE	N.D.	1.0	N.D.		ī
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.		ī
<i>(</i> * * * * * * * * * * * * * * * * * * *			1 1		_

Analyst

Michael Verona

Operations Manager

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-12

Spl#: 229086 Matrix: WATER

Sampled: February 15, 1999 Run#: 17456 Analyzed: February 18, 1999

			-	• •	
		REPORTING	BLANK	BLANK DIL	
	RESULT	LIMIT	RESULT	SPIKE FA	CTOR
ANALYTE	(uq/L)	(ug/L)	(ug/L)	(%)	
ACETONE	N.D.	50	N.D.		1
BENZENE	N.D.	0.50	N.D.	91.2	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.		ī
BROMOFORM	N.D.	0.50	N.D.		ī
BROMOMETHANE	N.D.	1.0	N.D.		1 1 1 1 1 1 1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.		1
CHLOROBENZENE	N.D.	0.50	N.D.	107	Ť
CHLOROETHANE	N.D.	1.0	N.D.	107	1
2-BUTANONE (MEK)	N.D.	50	N.D.		- 1
2-BUIANONE (MEK)			N.D.	<del></del>	<u> </u>
2-CHLOROETHYLVINYLETHER	Ŋ.D.	0.50		<del></del>	<u> </u>
CHLOROFORM	N.D.	0.50	N.D.		Ţ
CHLOROMETHANE	Ŋ.D.	1.0	N.D.		ī 1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.		1
1,2-DICHLOROBENZENE	N.D.	0.50	Ŋ.D.		1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.		1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.		1
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	5.0	N.D.		1
1,2-DIBROMOETHANE	N.D.	0.50	N.D.		1
DÍBROMOMETHANE	N.D.	0.50	N.D.		1
DICHLORODIFLUOROMETHANE	N.D.	0.50	N.D.		ī
1,1-DICHLOROETHANE	N.D.	0.50	N.D.		1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.		1 1 1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	89.8	ī
1,2-DICHLOROETHENE (CIS)	N.D.	0.50	N.D.		ī
1,2-DICHLOROETHENE (TRANS)	N.D.	0.50	N.D.		ī
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.		ī
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		ī
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		ī
ETHYLBENZENE	N.D.	0.50	N.D.		ī
2-HEXANONE	N.D.	50	N.D.		<b>†</b>
					1 1
METHYLENE CHLORIDE	N.D.	5.0	N.D.		1
4-METHYL-2-PENTANONE (MIBK)	N.D.	50	N.D.		4
NAPHTHALENE	N.D.	1.0	N.D.		1
STYRENE	N.D.	0.50	N.D.		1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		1
TETRACHLOROETHENE	N.D.	0.50	N.D.		1
TOLUENE	N.D.	0.50	N.D.	92.2	1 1
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.		1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.		1
TŔICHLOROETHENE	N.D.	0.50	N.D.	87.7	1 1 1
1,1,1,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	·	l
VINYL ACETATE	N.D.	5.0	N.D.		1
VINYL CHLORIDE	N.D.	0.50	N.D.		1

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: ABL-GW-12

Spl#: 229086

Matrix: WATER

Sampled: February 15, 1999 Run#: 17456

Analyzed: February 18, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	1.0	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.		$ar{ exttt{1}}$
CARBON DISULFIDE	N.D.	1.0	N.D.		$ar{ extbf{1}}$ '
ISOPROPYLBENZENE	N.D.	0.50	N.D.		_ ,
BROMOBENZENE	N.D.	0.50	N.D.		<u> </u>
BROMOCHLOROMETHANE	N.D.	1.0	N.D.		ī
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.		ī
					,

Alex Tam Analyst

Michael Verona

Operations Manager

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: TB01

Sampled: February 15, 1999 Run#: 17456 Analyzed: February 18, 1999

	2102277	1,100	1012/2001		·,
		REPORTING	BLANK	BLANK	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
					FACIOR
ANALYTE	(ug/L)	(ug/L)	(ug/L)	(%)	
ACETONE	N.D.	50	N.D.		1
BENZENE	N.D.	0.50	N.D.	91.2	1 1 1 1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	, <b></b>	1
BROMOFORM	N.D.	0.50	N.D.	· <b>-</b> -	1
BROMOMETHANE	N.D.	1.0	N.D.		ī
CARBON TETRACHLORIDE	N.D.	0.50	N.D.		ī
CHLOROBENZENE	N.D.	0.50	N.D.	107	ī
CHLOROETHANE	N.D.		N.D.		
		1.0			1 1 1 1
2-BUTANONE (MEK)	N.D.	50	N.D.		Ţ
2-CHLOROETHYLVINYLETHER	N.D.	0.50	N.D.		Ţ
CHLOROFORM	N.D.	0.50	N.D.		1
CHLOROMETHANE	N.D.	1.0	N.D.		1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.		1 1 1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.		1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.		$\overline{\overset{1}{1}}$
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.		ī
1,2-DIBROMO-3-CHLOROPROPANE	N.D.	5.0	N.D.	<b></b>	ĩ
				<del></del>	i
1,2-DIBROMOETHANE	N.D.	0.50	N.D.		<u> </u>
DIBROMOMETHANE	N.D.	0.50	N.D.		1 1 1 1
DICHLORODIFLUOROMETHANE	Ŋ.D.	0.50	Ŋ.D.		Ŧ
1,1-DICHLOROETHANE	N.D.	0.50	N.D.		1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.		1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	89.8	1 .
1,2-DICHLOROETHENE (CIS)	N.D.	0.50	N.D.		1
1,2-DICHLOROETHENE (TRANS)	N.D.	0.50	N.D.		1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	- <del>-</del>	ī
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		ī
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.		1
ETHYLBENZENE			N.D.		±
	N.D.	0.50			1
2-HEXANONE	N.D.	50	N.D.		Ţ
METHYLENE CHLORIDE	N.D.	5.0	N.D.		1
4-METHYL-2-PENTANONE (MIBK)	N.D.	50	N.D.		. 1
NAPHTHALENE	N.D.	1.0	N.D.		1
STYRENE	N.D.	0.50	N.D.		1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		1
TETRACHLOROETHENE	N.D.	0.50	N.D.		1
TOLUENE	N.D.	0.50	N.D.	92.2	ī
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.		ī
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.		<del>+</del>
T, I, Z-IRICHHOROEIRANE	M.D.			87.7	± ±
TRICHLOROETHENE	N.D.	0.50	N.D.	01.1	1 1 1 1 1 1 1 1 1 1
1,1,1,2-TETRACHLOROETHANE	N.D.	0.50	N.D.		Ţ
VINYL ACETATE	N.D.	5.0	N.D.		1
VINYL CHLORIDE	N.D.	0.50	N.D.		1

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 Method 8260A Sept 1994

Client Sample ID: TB01

Spl#: 229089

Matrix: WATER

Sampled: February 15, 1999 Run#:

Run#: 17456

Analyzed: February 18, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
TOTAL XYLENES	N.D.	1.0	N.D.		1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	<del>-</del> -	ī
CARBON DISULFIDE	N.D.	1.0	N.D.		$ar{ exttt{1}}$ :
ISOPROPYLBENZENE	N.D.	0.50	N.D.		$ar{ extbf{1}}$ '
BROMOBENZENE	N.D.	0.50	N.D.		<u></u>
BROMOCHLOROMETHANE	N.D.	1.0	N.D.		ī
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.		ī

Alex Tam Analyst Michael Verøna

Operations Manager

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for Volatile Organics by GC/MS analysi

Method: SW846 Method 8260A Sept 1994

Matrix: WATER
Lab Run#: 17456

Analyzed: February 18, 1999

	Spike									
	_	Amount		t_Found	_			_	8	
Analyte	BSP (ug/L)	Dup	BSP (ug/L	Dup )	8SP (%)	Dup (%)	Control Limits	_	RPD Lim	
BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE TOLUENE TRICHLOROETHENE	50.0 50.0 50.0 50.0 50.0	50.0 50.0 50.0 50.0	45.6 53.4 44.9 46.1 43.8	47.2 56.6 46.1 45.8 45.1	91.2 107 89.8 92.2 87.7	94.5 113 92.2 91.5 90.2	69-129 61-121 65-125 70-130 74-134	5.45 2.64 0.76	20 20 20	

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Matrix: WATER

Lab Run#: 17552 Instrument:

Analyzed: February 22, 1999

Analyte	Spiked Sample Amount (ug/L)	Spike MS (ug	MSD	Amt F MS (ug/L	MSD	Spike MS (%)	MSD	, Control Limits	_ •	% RPD Lim
BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE	N.D. N.D. N.D.	50.0 50.0 50.0	50.0 50.0 50.0	48.6 54.8 44.2	51.3 60.6 45.4	97.2 110 88.5	121	69-129 61-121 65-125	9.52	20
TOLUENE TRICHLOROETHENE	N.D. N.D.	50.0 50.0	50.0 50.0	48.2 46.8	49.2 47.6	96.4 93.6	98.5 95.1	70-130 74-134	2.15 1.59	20 20

Sample Spiked: 229106 Submission #: 9902200 Client Sample ID: ABL-GW-10

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 6 samples for Volatile Organics by GC/MS

analysis.

Method: SW846 Method 8260A Sept 1994

Lab Run#: 17546
Matrix: WATER

				Recovery
<u>Sample#</u>	Client Sample ID	Surrogate	Recovered	
229101-1	ABL-GW-3	4-BROMOFLUOROBENZENE	109	86-115
229101-1	ABL-GW-3	D4-1,2-DICHLOROETHANE	83.0	76-114
229101-1	ABL-GW-3	D8-TOLUENE	95 <b>.4</b>	88-110
229102-1	ABL-GW-4	4-BROMOFLUOROBENZENE	114	86-115
229102-1	ABL-GW-4	D4-1,2-DICHLOROETHANE	86.2	76-114
229102-1	ABL-GW-4	D8-TOLUENE	96.8	88-110
229103-1	ABL-GW-5	4-BROMOFLUOROBENZENE	113	86-115
229103-1	ABL-GW-5	D4-1,2-DICHLOROETHANE	94.4	76-114
229103-1	ABL-GW-5	D8-TOLUENE	98.8	88-110
229104-1	DUPGW01	4-BROMOFLUOROBENZENE	110	86-115
229104-1	DUPGW01	D4-1,2-DICHLOROETHANE	84.8	76-114
229104-1	DUPGW01	D8-TOLUENE	96.2	88-110
229105-1	ABL-GW-7	4-BROMOFLUOROBENZENE	110	86-115
229105-1	ABL-GW-7	D4-1,2-DICHLOROETHANE	100	76-114
229105-1	ABL-GW-7	D8-TOLUENE	101	88-110
229107-1	ABL-GW-11	4-BROMOFLUOROBENZENE	111	86-115
229107-1	ABL-GW-11	D4-1,2-DICHLOROETHANE	82.6	76-114
229107-1	ABL-GW-11	D8-TOLUENE	96.4	88-110
				Recovery
Sample#	QC Sample Type	Surrogate	Recovered	
230101-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	113	86-115
230101-1	Reagent blank (MDB)	D4-1,2-DICHLOROETHANE	93.8	76-114
230101-1	Reagent blank (MDB)	D8-TOLUENE	94.8	88-110
230102-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	113	86-115
230102-1	Spiked blank (BSP)	D4-1,2-DICHLOROETHANE	83.4	76-114
230102-1	Spiked blank (BSP)	D8-TOLUENE	98.6	88-110
230103-1	Spiked blank duplicate		113	86-115
230103-1	Spiked blank duplicate		92.8	76-114
230103-1	Spiked blank duplicate	(BSD) D8-TOLUENE	93.6	88-110

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 6 samples for Volatile Organics by GC/MS

analysis.

Method: SW846 Method 8260A Sept 1994

Lab Run#: 17456 Matrix: WATER

Sample#	Client Comple TD	_	8	Recovery
229086-1	Client Sample ID	Surrogate	Recovered	
229086-1	ABL-GW-12	4-BROMOFLUOROBENZENE	109	86-115 <b>"</b>
229086-1	ABL-GW-12	D4-1,2-DICHLOROETHANE	77.6	76-1 <b>14</b> _
= -	ABL-GW-12	D8-TOLUENE	98.4	88-110
229087-1 229087-1	ABL-GW-8	4-BROMOFLUOROBENZENE	114	86-115
	ABL-GW-8	D4-1,2-DICHLOROETHANE	103	76-114
229087-1	ABL-GW-8	D8-TOLUENE	100	88-110
229088-1	ABL-GW-6	4-BROMOFLUOROBENZENE	114	86-115
229088-1	ABL-GW-6	D4-1,2-DICHLOROETHANE	92.4	76-114
229088-1	ABL-GW-6	D8-TOLUENE	95.2	88-110_
229088-2	ABL-GW-6	4-BROMOFLUOROBENZENE	115	86-115
229088-2	ABL-GW-6	D4-1,2-DICHLOROETHANE	101	76-114
229088-2	ABL-GW-6	D8-TOLUENE	108`	88-110
229089-1	TBO1	4-BROMOFLUOROBENZENE	114	86-115
229089-1	TBO1	D4-1,2-DICHLOROETHANE	85.8	76-114
229089-1	TBO1	D8-TOLUENE	99.0	88-110
229099-1	ABL-GW-1	4-BROMOFLUOROBENZENE	115	86-115
229099-1	ABL-GW-1	D4-1,2-DICHLOROETHANE	86.2	76-114
229099-1	ABL-GW-1	D8-TOLUENE	99.4	88-110
229100-1	ABL-GW-2	4-BROMOFLUOROBENZENE	111	86-115
229100-1	ABL-GW-2	D4-1,2-DICHLOROETHANE	99.4	76-114
229100-1	ABL-GW-2	D8-TOLUENE	102	88-110
				Recovery
Sample#	OC Sample Type	Surrogate	Recovered	
229457-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	110	86-115
229457-1	Reagent blank (MDB)	D4-1,2-DICHLOROETHANE	96.2	76-114
229457-1	Reagent blank (MDB)	D8-TOLUENE	99.6	88-110_
229458-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	112	86-115
229458-1	Spiked blank (BSP)	D4-1,2-DICHLOROETHANE	95.8	76-114
229458-1	Spiked blank (BSP)	D8-TOLUENE	94.4	88-110
	•	· · · <del>- ·</del>		300

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

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URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 6 samples for Volatile Organics by GC/MS

analysis.

Method: SW846 Method 8260A Sept 1994

methoa:	Sw846 Method 8	szeuA sept	1994		
Lab Run#:	17456				
229459-1	Spiked blank	duplicate	(BSD)4-BROMOFLUOROBENZENE	113	86-115
229459-1	Spiked blank	duplicate	(BSD) D4-1,2-DICHLOROETHANE	98.2	76-114
229459-1	Spiked blank	duplicate	(BSD) D8-TOLUENE	97.8	88-110
229966-1	Matrix spike	(MS)	4-BROMOFLUOROBENZENE	114	86-115
229966-1	Matrix spike	(MS)	D4-1,2-DICHLOROETHANE	103	76-114
229966-1	Matrix spike	(MS)	D8-TOLUENE	102	88-110
229967-1	Matrix spike	duplicate	(MSD) 4-BROMOFLUOROBENZENE	113	86-115
229967-1	Matrix spike	duplicate	(MSD) D4-1,2-DICHLOROETHANE	90.4	76-114
229967-1	Matrix spike	duplicate	(MSD) D8-TOLUENE	98.2	88-110

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 1 sample for Volatile Organics by GC/MS

analysis.

Method: SW846 Method 8260A Sept 1994

Lab Run#: 17552 Matrix: WATER

Sample#	Client Sample ID	Surrogate		Recovery
229106-1	ABL-GW-10	4-BROMOFLUOROBENZENE	Recovered 110	86-115
229106-1	ABL-GW-10	D4-1,2-DICHLOROETHANE		76-114
229106-1	ABL-GW-10	D8-TOLUENE	94.6	88-110
		20 10202112		Recovery
Sample#	QC Sample Type	Surrogate	Recovered	
230128-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	111	86-115
230128-1	Reagent blank (MDB)	D4-1,2-DICHLOROETHANE	95.6	76-114
230128-1	Reagent blank (MDB)	D8-TOLUENE	96.4	88-110
230129-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	115	86-115_
230129-1	Spiked blank (BSP)	D4-1,2-DICHLOROETHANE	96.4	76-114
230129-1	Spiked blank (BSP)	D8-TOLUENE	101	88-110
230130-1	Spiked blank duplicate	(BSD)4-BROMOFLUOROBENZENE	115	86-115
230130-1	Spiked blank duplicate	(BSD) D4-1, 2-DICHLOROETHANE	94.2	76-114
230130-1	Spiked blank duplicate	(BSD) D8-TOLUENE	97.6	88-110
230131-1	Matrix spike (MS)	4-BROMOFLUOROBENZENE	122	86-115
230131-1	Matrix spike (MS)	D4-1,2-DICHLOROETHANE	84.6	76-114
230131-1	Matrix spike (MS)	D8-TOLUENE	94.6	88-110
230132-1	Matrix spike duplicate	(MSD) 4-BROMOFLUOROBENZENE	127	86-115
230132-1	Matrix spike duplicate	(MSD) D4-1,2-DICHLOROETHANE	87.6	76-114
230132-1	Matrix spike duplicate	(MSD) D8-TOLUENE	98.8	88-110
		,, =	20.0	OO IIO

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

 $\it re: Blank \ spike \ and \ duplicate \ report \ for \ Volatile \ Organics \ by \ GC/MS \ analysi$ 

Method: SW846 Method 8260A Sept 1994

Matrix: WATER Lab Run#: 17546

Analyzed: February 19, 1999

Spike									
	Spike A	Amount	Amount	Found	Spike	Recov			ક્ષ
_	BSP	Dup		Dup	BSP	Dup	Control	_	RPD
Analyte	(ug/L)		(ug/L)		(%)	(%)	Limits	RPD	Lim
BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE TOLUENE TRICHLOROETHENE	50.0 50.0 50.0 50.0	50.0 50.0 50.0 50.0	47.0 53.1 43.5 46.7 44.8	46.3 55.8 43.6 43.9 43.8	94.1 106 87.0 93.3 89.5	92.7 112 87.1 87.8 87.6	69-129 61-121 65-125 70-130 74-134	5.50 0.11 6.07	20 20 20

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for Volatile Organics by GC/MS analysi

Method: SW846 Method 8260A Sept 1994

Matrix: WATER Lab Run#: 17552

Analyzed: February 22, 1999

Analyte	Spike A BSP (ug/L)	Amount Dup	_	ike t Found Dup )	Spike BSP (%)	Recov Dup (%)	Control %	% RPD Lim
BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE TOLUENE TRICHLOROETHENE	50.0 50.0 50.0 50.0 50.0	50.0 50.0 50.0 50.0	47.3 52.7 39.1 44.8 44.8	45.0 50.1 37.4 42.5 44.0	94.7 105 78.2 89.5 89.7	90.1 100 74.7 84.9 88.0	69-129 4.98 61-121 4.88 65-125 4.58 70-130 5.28 74-134 1.91	3 20 3 20 3 20

Environmental Services (SDB)

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SS-1-0-1

Spl#: 229127

Matrix: SOIL Extracted: February 19, 1999

Sampled: February 16, 1999 Run#: 17425 Analyzed: February 23, 1999

	RESULT	REPORTING LIMIT	BLANK RESULT	BLANK SPIKE	DILUTION FACTOR
ANALYTE	(mg/Kg)	(mg/Kg)	(mg/Kg)	(%)	
AROCLOR 1016	N.D.	0.10	N.D.	107	1
AROCLOR 1221	N.D.	0.10	N.D.		1
AROCLOR 1232	N.D.	0.10	N.D.		1
AROCLOR 1242	N.D.	0.10	N.D.		1
AROCLOR 1248	N.D.	0.10	N.D.	<del>-</del> -	ī
AROCLOR 1254	N.D.	0.10	N.D.		ī
AROCLOR 1260	0.11	0.10	N.D	120	ĩ

eg Mentson kene Boongaling

Analyst

clas Cufor Michael Verona

#### **Environmental Services (SDB)**

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SS-2-0-1

Spl#: 229128

*Matrix:* SOIL

Extracted: February 19, 1999

Sampled: February 16, 1999 Run#:

Run#: 17425

Analyzed: February 20, 1999

ANALYTE		 	<u>.</u>		RESULT	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR					N.D.	0.10	N.D.	107	1
AROCLOR					N.D.	0.10	N.D.		1
AROCLOR					N.D.	0.10	N.D.		<u> </u>
AROCLOR	1242				N.D.	0.10	N.D.		<u>.</u>
AROCLOR	1248	•			N.D.	0.10	N.D.	- <b>-</b>	<u>.</u>
AROCLOR	1254	•			N.D.	0.10			1 ,
AROCLOR					N.D.		Ŋ.D.		1
/	00	/	1	,	N.D.	0.10	N.D.	120	1 1

For Old Vlucther Rene Boongaling

Analyst

Michael Verona

Environmental Services (SDB)

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SS-3-0-1

Spl#: 229129

Matrix: SOIL Extracted: February 19, 1999

Sampled: February 16, 1999

Run#: 17425

Analyzed: February 20, 1999

·	RESULT	REPORTING LIMIT	BLANK RESULT	SPIKE	DILUTION FACTOR
ANALYTE	(mg/Kg)	(mg/Kg)	(mg/Kg)	(%)	
AROCLOR 1016	N.D.	0.10	N.D.	107	1
AROCLOR 1221	N.D.	0.10	N.D.		1
AROCLOR 1232	N.D.	0.10	N.D.		1
AROCLOR 1242	N.D.	0.10	N.D.		1
AROCLOR 1248	N.D.	0.10	N.D.		1
AROCLOR 1254	N.D.	0.10	N-D-		1
AROCLOR 1260	N.D.	0.10	N.D.	120	1
for Oleg Newson				ر و ک	ete li
Rene Boongaling		Mic	hael Verona		188

Analyst

#### **Environmental Services (SDB)**

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SS-4-0-1

Spl#: 229130

Extracted: February 19, 1999

 Spl#: 229130
 Matrix: SOIL

 Sampled: February 16, 1999
 Run#: 17425

 Analyzed: February 23, 1999

ANALYTE		RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	FACTOR
AROCLOR 1016		N.D.	0.10	N.D.	107	7
AROCLOR 1221		N.D.	0.10	N.D.		ī
AROCLOR 1232	*	N.D.	0.10	N.D.		1
AROCLOR 1242	•	N.D.	0.10	N.D.		<u> </u>
AROCLOR 1248		N.D.	0.10	N.D.		i /
AROCLOR 1254		N.D.	0.10	N.D.		ī
AROCLOR 1260		N.D.	0.10	N.D.	120	i
	, ,		and a second			

Kleg Naudsov

Analyst

Michael Verona

Environmental Services (SDB)

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SS-5-0-1

*Spl#:* 229131

Matrix: SOIL

Extracted: February 19, 1999

Sampled: February 16, 1999

Run#: 17425

Analyzed: February 23, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.10	N.D.	107	1
AROCLOR 1221	N.D.	0.10	N.D.		1
AROCLOR 1232	N.D.	0.10	N.D.		1
AROCLOR 1242	N.D.	0.10	N.D.		1
AROCLOR 1248	N.D.	0.10	N.D.		1
AROCLOR 1254	N.D.	0.10	N.D.		1
AROCLOR 1260	N.D.	0.10	N.D.	120	1

for Oly Whitson

Analyst

Michael Verona

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SB-1-0-1

Spl#: 229091

*Matrix:* SOIL

Extracted: February 19, 1999

Sampled: February 15, 1999 Run#: 17425

Analyzed: February 23, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.66	N.D.	107	20
AROCLOR 1221	N.D.	0.66	N.D.		20
AROCLOR 1232	N.D.	0.66	N.D.		20
AROCLOR 1242					
AROCLOR 1248					
		0.66	N.D	120	20
	N.D. N.D. N.D. N.D.	0.66 0.66 0.66 0.66	N.D. N.D. N.D.	  120	20 20 20

Rene Boongaling

Analyst

Michael Verona

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SB-2-0-1

Spl#: 229064

Matrix: SOIL Extracted: February 17, 1999

Sampled: February 15, 1999 Run#: 17425

Analyzed: February 22, 1999

	RESULT	REPORTING LIMIT	BLANK RESULT	SPIKE	DILUTION FACTOR
ANALYTE	(mq/Kq)	(mg/Kg)	(mg/Kg)	(%)	
AROCLOR 1016	N.D.	0.10	N.D.	107	1
AROCLOR 1221	N.D.	0.10	N.D.		1
AROCLOR 1232	N.D.	0.10	N.D.		ī
AROCLOR 1242	N.D.	0.10	N.D.		ī
AROCLOR 1248	N.D.	0.10	N.D.		ī
AROCLOR 1254	N.D.	0.10	N.D.		า
AROCLOR 1260	N.D.	0.10	N.D.)	120	ĩ

- Oleg Newson Rene Boongaling

Analyst

Michael Verona

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SB-3-0-1

Sp1#: 229066

Extracted: February 17, 1999

Spl#: 229066 Matrix: SOIL Sampled: February 15, 1999 Run#: 17425

Analyzed: February 22, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.10	N.D.	107	1
AROCLOR 1221	N.D.	0.10	N.D.		Ť
AROCLOR 1232	N.D.	0.10	N.D.		± +
AROCLOR 1242	N.D	0.10	N.D.	_	<u></u>
AROCLOR 1248	N.D.	0.10	N.D.		<u>+</u> ,
AROCLOR 1254	N.D.	0.10	N.D.		<u>,</u> ,
AROCLOR 1260	N.D.	0.10	<del>N.D.</del>	120	1
AROCLOR 1260	N.D.	0.10	N.D.	120	1

Rene Boongaling

TO Oleg Newson

Analyst

Michael Verona

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

-- 1*C* 1000

Project#:

REPORTING

LIMIT

(mg/Kg)

510996100900/2000

Received: February 16, 1999

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SB-4-0-1

Spl#: 229084

*Matrix:* SOIL

RESULT

(mg/Kg)

Extracted: February 19, 1999

Sampled: February 15, 1999

Run#: 17425

Analyzed: February 20, 1999

ANALYTE
AROCLOR 1016
AROCLOR 1221
AROCLOR 1232
AROCLOR 1242
AROCLOR 1248
AROCLOR 1254
AROCLOR 1260

N.D. 0.10 N.D. 0.10 N.D. 0.10 N.D. 0.10 N.D. 0.10 N.D. 0.10 N.D. 0.10 N.D.
N.D.
N.D.
N.D.
N.D.
N.D.
N.D.

BLANK

(mg/Kg)

RESULT

----120

SPIKE

107

(왕)

BLANK DILUTION

FACTOR

1

1

Rene Boongaling

Analyst

Michael Verona

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SB-5-0-1

Sp1#: 229068

*Matrix:* SOIL

Extracted: February 19, 1999

Sampled: February 15, 1999 Run#: 17425

Analyzed: February 23, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/kg)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.66	N.D.	107	20
AROCLOR 1221	N.D.	0.66	N.D.		20
AROCLOR 1232	N.D.	0.66	N.D.		20
AROCLOR 1242	N.D.	0.66	N.D.		20
AROCLOR 1248	N.D.	0.66	N.D.		
AROCLOR 1254	N.D.	0.66	N.D.		20
AROCLOR 1260	N.D.		N.D.	100	20
Note: Surrogator dil		0.66		120	20

Surrogates diluted out

Rene Boongaling

Analyst

Michael Verona

Laboratory Operations Manager

alle Ho

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SB-6-0-1

Spl#: 229080

Matrix: SOIL Extracted: February 19, 1999

Sampled: February 15, 1999 Run#: 17425 Analyzed: February 20, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mq/Kq)	BLANK RESULT (mg/Kg)	BLANK : SPIKE (%)	FACTOR
AROCLOR 1016	N.D.	0.10	N.D.	107	1
AROCLOR 1221	N.D.	0.10	N.D.		1
AROCLOR 1232	N.D.	0.10	N.D.	· <b></b>	1
AROCLOR 1242	N.D.	0.10	N.D.		1
AROCLOR 1248	N.D.	0.10	N.D.		1
AROCLOR 1254	N.D.	0.10	N.D		1
AROCLOR 1260	N.D.	0.10	-N.D.	120	ï

Rene Boongaling

Analyst

Michael Verona

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SB-7-0-1

Spl#: 229070

*Matrix:* SOIL

Extracted: February 19, 1999

Sampled: February 15, 1999 Run#: 17425 Analyzed: February 22, 1999

DEDODMENT

ANALYTE		RESULT (mg/Kg)	LIMIT (mg/Kg)	RESULT (mg/Kg)	BLANK SPIKE (%)	FACTOR
AROCLOR 1016		N.D.	0.10	N.D.	107	1
AROCLOR 1221	•	N.D.	0.10	N.D.		ī
AROCLOR 1232		N.D.	0.10	N.D.		<del>-</del>
AROCLOR 1242	•	N.D.	0.10	N.D.		1
AROCLOR 1248	<i>t</i> *	N.D.	0.10	N.D.		1
AROCLOR 1254	•	N.D.	0.10	N.D.		<u> </u>
AROCLOR 1260		N.D.	0.10	N.D.	120	1
_	<i>n</i> ,					

for Oleg Vludsov Rene Boongaling

Analyst

Michael Verona

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SB-8-0-1

Sp1#: 229082

Matrix: SOIL Extracted: February 19, 1999

Sampled: February 15, 1999 Run#: 17425

Analyzed: February 20, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK : SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.10	N.D.	107	1
AROCLOR 1221	N.D.	0.10	N.D.		1
AROCLOR 1232	N.D.	0.10	N.D.		1
AROCLOR 1242	N.D.	0.10	N.D.		1
AROCLOR 1248	N.D.	0.10	N.D.		1
AROCLOR 1254	N.D.	0.10	N-D		1
AROCLOR 1260	N.D.	0.10	N.D.	120	1

Rene Boongaling

Analyst

Michael Verona

Laboratory Operations Manager

Calle Hor

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SB-9-0-1

Spl#: 229072

*Matrix:* SOIL

Extracted: February 19, 1999

Sampled: February 15, 1999 Run#: 17425

Analyzed: February 22, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mq/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.10	N.D.	107	7
AROCLOR 1221	N.D.	0.10	N.D.		า้
AROCLOR 1232	N.D.	0.10	N.D.	<u> </u>	
AROCLOR 1242	N.D.	0.10	N.D.		± 1
AROCLOR 1248	N.D.	0.10	N.D.		1
AROCLOR 1254	N.D.	0.10	N.D.		<u> </u>
AROCLOR 1260	N.D.	0.10	N.D.	120	ī
^					

Rene Boongaling

Analyst

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SB-10-0-1

Spl#: 229074 Matrix: SOIL Extracted: February 19, 1999
Sampled: February 15, 1999 Run#: 17425 Analyzed: February 20, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.10	N.D.	107	1
AROCLOR 1221	N.D.	0.10	N.D.		ī
AROCLOR 1232	N.D.	0.10	N.D.		วิ
AROCLOR 1242	N.D.	0.10	N.D.		า๋
AROCLOR 1248	N.D.	0.10	N.D.		ī
AROCLOR 1254	N.D.	0.10	N.D.		1
AROCLOR 1260	N.D.	0.10	N.D.	120	1
			- Andrews		

Dey Neudson Rene Boongaling

Analyst

Michael Verona

#### **Environmental Services (SDB)**

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SB-11-0-1

*Spl#:* 229076

Matrix: SOIL

Extracted: February 19, 1999

Sampled: February 15, 1999 Run#: 17425 Analyzed: February 20, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mq/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.10	N.D.	107	1
AROCLOR 1221	N.D.	0.10	N.D.		ī
AROCLOR 1232	N.D.	0.10	N.D.		ī
AROCLOR 1242	N.D.	0.10	N.D.		1 1
AROCLOR 1248	N.D.	0.10	N.D.		า
AROCLOR 1254	N.D.	0.10	N.D.		ī
AROCLOR 1260	N.D.	سر 0.10	N.D.	120	1
4			*****	120	-

Rene Boongaling

Analyst

Michael Verona

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Client Sample ID: ABL-SB-12-0-1

 Spl#: 229078
 Matrix: SOIL
 Extracted: February 19, 1999

 Sampled: February 15, 1999
 Run#: 17425
 Analyzed: February 20, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.10	N.D.	107	1
AROCLOR 1221	N.D.	0.10	N.D.		1
AROCLOR 1232	N.D.	0.10	N.D.		1
AROCLOR 1242	N.D.	0.10	N.D.		1
AROCLOR 1248	N.D.	0.10	N.D.		1
AROCLOR 1254	N.D.	0.10	N.D.		ī
AROCLOR 1260	N.D.	0.10	N.D.	120	ī

for Oly Woulfor Rene Boongaling

Analyst

class beefor Michael Verona

Environmental Services (SDB)

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Matrix: SOIL

Lab Run#: 17425 Instrument: Analyzed: February 22, 1999

Spiked Sample Spike Amt Amt Found Spike Recov Amount MS MSD MS MSD MS MSD Control % RPD **Analyte** (mg/Kg)(mg/Kg) (mg/Kg) Limits RPD Lim (왕) (왕) AROCLOR 1016 N.D. 66.6 84.7 89.7 66.4 80.0 120 128 65-135 6.45 30 AROCLOR 1260 66.6 66.4 65-135 6.11 30 84.6 127 135

Sample Spiked: 229064
Submission #: 9902200

Client Sample ID: ABL-SB-2-0-1

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for Polychlorinated Biphenyls (PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Matrix: SOIL

Lab Run#: 17425 Instrument: Analyzed: February 22, 1999

Spiked Sample Spike Amt Amt Found Spike Recov MSD Amount MS MSD MS MS MSD Control % RPD <u>Analyte</u> (mq/Kq)(mg/Kg) (mg/Kg) (%) (%) Limits RPD Lim AROCLOR 1016 N.D. 66.6 66.4 80.0 84.7 120 128 65-135 6.45 30 AROCLOR 1260 N.D. 66.6 84.6 127 66.4 89.7 135 65-135 6.11 30

Sample Spiked: 229064
Submission #: 9902200

Client Sample ID: ABL-SB-2-0-1

Environmental Services (SDB)

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 5 samples for Polychlorinated Biphenyls

(PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Lab Run#: 17425 Matrix: SOIL

"			. %	Recovery
Sample#	Client Sample ID	Surrogate	Recovered	Limits
229127-1	ABL-SS-1-0-1	S1 2,4,5,6-TETRACHLO	DROXYL 94.3	65-135
229127-1	ABL-SS-1-0-1	S2 DECACHLOROBIPHENY	<i>(</i> L 129	65-135
22 <u>9</u> 128-1	ABL-SS-2-0-1	S1 2,4,5,6-TETRACHLO	DROXYL 99.0	65-135
229128-1	ABL-SS-2-0-1	S2 DECACHLOROBIPHENY	/L 109	65-135
229129-1	ABL-SS-3-0-1	S1 2,4,5,6-TETRACHLO		65-135
229129-1	ABL-SS-3-0-1	S2 DECACHLOROBIPHENY		65-135 _
229130-1	ABL-SS-4-0-1	S1 2,4,5,6-TETRACHLO		65-135
229130-1	ABL-SS-4-0-1	S2 DECACHLOROBIPHENY		65-135
229131-1	ABL-SS-5-0-1	S1 2,4,5,6-TETRACHLO		65-135
229131-1	ABL-SS-5-0-1	S2 DECACHLOROBIPHENY		65-135 <b>[</b>
		or promonentiality		Recovery
Sample#	00 0 1 -			recovery
рашрте#	<u>OC Sample Type</u>	Surrogate	Recovered	Limita
229188-1	OC Sample Type Reagent blank (MDB)	Surrogate S1 2.4.5.6-TETRACHLO	Recovered	
	Reagent blank (MDB)	S1 2,4,5,6-TETRACHLO	ROXYL 92.1	65-135
229188-1	Reagent blank (MDB) Reagent blank (MDB)	S1 2,4,5,6-TETRACHLO S2 DECACHLOROBIPHENY	PROXYL 92.1 L 86.9	65-135 65-135
229188-1 229188-1	Reagent blank (MDB) Reagent blank (MDB) Spiked blank (BSP)	S1 2,4,5,6-TETRACHLC S2 DECACHLOROBIPHENY S1 2,4,5,6-TETRACHLO	PROXYL 92.1 PROXYL 86.9 PROXYL 101	65-135 65-135 65-135
229188-1 229188-1 229189-1	Reagent blank (MDB) Reagent blank (MDB) Spiked blank (BSP) Spiked blank (BSP)	S1 2,4,5,6-TETRACHLO S2 DECACHLOROBIPHENY S1 2,4,5,6-TETRACHLO S2 DECACHLOROBIPHENY	PROXYL 92.1 TL 86.9 PROXYL 101 TL 105	65-135 65-135 65-135 65-135
229188-1 229188-1 229189-1 229189-1	Reagent blank (MDB) Reagent blank (MDB) Spiked blank (BSP) Spiked blank (BSP) Spiked blank duplicate	S1 2,4,5,6-TETRACHLO S2 DECACHLOROBIPHENY S1 2,4,5,6-TETRACHLO S2 DECACHLOROBIPHENY (BSD)S1 2,4,5,6-TETRACHLO	PROXYL 92.1 FL 86.9 PROXYL 101 FL 105 PROXYL 103	65-135 65-135 65-135 65-135 65-135
229188-1 229188-1 229189-1 229189-1 229190-1 229190-1	Reagent blank (MDB) Reagent blank (MDB) Spiked blank (BSP) Spiked blank (BSP) Spiked blank duplicate Spiked blank duplicate	S1 2,4,5,6-TETRACHLO S2 DECACHLOROBIPHENY S1 2,4,5,6-TETRACHLO S2 DECACHLOROBIPHENY (BSD)S1 2,4,5,6-TETRACHLO (BSD)S2 DECACHLOROBIPHENY	PROXYL 92.1 PROXYL 101 PROXYL 105 PROXYL 103 PROXYL 103 PROXYL 94.1	65-135 65-135 65-135 65-135 65-135
229188-1 229188-1 229189-1 229189-1 229190-1 229190-1 229191-1	Reagent blank (MDB) Reagent blank (MDB) Spiked blank (BSP) Spiked blank (BSP) Spiked blank duplicate Spiked blank duplicate Matrix spike (MS)	S1 2,4,5,6-TETRACHLO S2 DECACHLOROBIPHENY S1 2,4,5,6-TETRACHLO S2 DECACHLOROBIPHENY (BSD)S1 2,4,5,6-TETRACHLO (BSD)S2 DECACHLOROBIPHENY S1 2,4,5,6-TETRACHLO	PROXYL 92.1 PROXYL 101 PROXYL 105 PROXYL 103 PROXYL 94.1 PROXYL 83.1	65-135 65-135 65-135 65-135 65-135 65-135
229188-1 229188-1 229189-1 229189-1 229190-1 229190-1 229191-1 229191-1	Reagent blank (MDB) Reagent blank (MDB) Spiked blank (BSP) Spiked blank (BSP) Spiked blank duplicate Spiked blank duplicate Matrix spike (MS) Matrix spike (MS)	S1 2,4,5,6-TETRACHLO S2 DECACHLOROBIPHENY S1 2,4,5,6-TETRACHLO S2 DECACHLOROBIPHENY (BSD)S1 2,4,5,6-TETRACHLO (BSD)S2 DECACHLOROBIPHENY S1 2,4,5,6-TETRACHLO S2 DECACHLOROBIPHENY	PROXYL 92.1 PROXYL 101 PROXYL 105 PROXYL 103 PROXYL 94.1 PROXYL 83.1 PROXYL 83.4	65-135 65-135 65-135 65-135 65-135 65-135 65-135
229188-1 229188-1 229189-1 229189-1 229190-1 229190-1 229191-1	Reagent blank (MDB) Reagent blank (MDB) Spiked blank (BSP) Spiked blank (BSP) Spiked blank duplicate Spiked blank duplicate Matrix spike (MS)	S1 2,4,5,6-TETRACHLO S2 DECACHLOROBIPHENY S1 2,4,5,6-TETRACHLO S2 DECACHLOROBIPHENY (BSD)S1 2,4,5,6-TETRACHLO (BSD)S2 DECACHLOROBIPHENY S1 2,4,5,6-TETRACHLO	PROXYL 92.1 PROXYL 101 PROXYL 105 PROXYL 103 PROXYL 94.1 PROXYL 83.1 PROXYL 83.4 PROXYL 93.4	65-135 65-135 65-135 65-135 65-135 65-135

S051 QCSURR1229 CMH 23-Feb-99 17:49

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 12 samples for Polychlorinated Biphenyls

(PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Lab Run#: 17425 Matrix: SOIL

						Recovery
	Sample#	Client Sample ID				Limits
	229064-1	ABL-SB-2-0-1	S1	2,4,5,6-TETRACHLOROXYL	99.1	65-135
	229064-1	ABL-SB-2-0-1		DECACHLOROBIPHENYL	109	65-135
١	229066-1	ABL-SB-3-0-1	S1	2,4,5,6-TETRACHLOROXYL	87.7	65-135
	229066-1	ABL-SB-3-0-1		DECACHLOROBIPHENYL	85.6	65-135
ļ	229070-1	ABL-SB-7-0-1	S1	2,4,5,6-TETRACHLOROXYL	96.1	65-135
	229070-1	ABL-SB-7-0-1		DECACHLOROBIPHENYL	104	65-135
	229072-1	ABL-SB-9-0-1	S1	2,4,5,6-TETRACHLOROXYL	75.9	65-135
	229072-1	ABL-SB-9-0-1	S2	DECACHLOROBIPHENYL	78.0	65-135
	229074-1	ABL-SB-10-0-1	S1	2,4,5,6-TETRACHLOROXYL	87.8	65-135
i	229074-1	ABL-SB-10-0-1	S2	DECACHLOROBIPHENYL	89.6	65-135
	229076-1	ABL-SB-11-0-1	. S1	2,4,5,6-TETRACHLOROXYL	94.7	65-135
	229076-1	ABL-SB-11-0-1	S2	DECACHLOROBIPHENYL	120	65-135
	229078-1	ABL-SB-12-0-1	S1	2,4,5,6-TETRACHLOROXYL	94.3	65-135
	229078-1	ABL-SB-12-0-1	S2	DECACHLOROBIPHENYL	98.2	65-135
l	229080-1	ABL-SB-6-0-1	S1	2,4,5,6-TETRACHLOROXYL	99.4	65-135
	229080-1	ABL-SB-6-0-1	S2	DECACHLOROBIPHENYL	109	65-135
1	229082-1	ABL-SB-8-0-1	S1	2,4,5,6-TETRACHLOROXYL	104	65-135
١.	229082-1	ABL-SB-8-0-1	S2	DECACHLOROB! PHENYL	117	65-135
	229084-1	ABL-SB-4-0-1	S1	2,4,5,6-TETRACHLOROXYL	104	65-135
1	229084-1	ABL-SB-4-0-1	S2	DECACHLOROBIPHENYL	98.7	65-135
						Recovery
	Sample#	OC Sample Type				<u>Limits</u>
	229188-1	Reagent blank (MDB)		2,4,5,6-TETRACHLOROXYL		
	229188-1	Reagent blank (MDB)	•	DECACHLOROBIPHENYL	86.9	65-135
j	229189-1	Spiked blank (BSP)	S1	2,4,5,6-TETRACHLOROXYL		65-135
	229189-1	Spiked blank (BSP)		DECACHLOROBIPHENYL	105	65-135
1	229190-1	Spiked blank duplicate		2,4,5,6-TETRACHLOROXYL	103	65-135
	229190-1	Spiked blank duplicate	( <i>BSD</i> ) S2	DECACHLOROBIPHENYL	94.1	65-135
-	229191-1	Matrix spike (MS)	S1	2,4,5,6-TETRACHLOROXYL	83.1	65-135
_						

S051 QCSURR1229 RENE 24-Feb-99 09:15

**Environmental Services (SDB)** 

February 24, 1999

Submission #: 9902200

page 2

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Surrogate report for 12 samples for Polychlorinated Biphenyls

(PCBs) analysis.

Method: SW846 Method 8080A Sept 1994

Lab Run#: 17425

229191-1 Matrix spike (MS) S2 DECACHLOROBIPHENYL 83.4 65-135 229192-1 Matrix spike duplicate (MSD)S1 2,4,5,6-TETRACHLOROXYL 93.4 65-135

229192-1 Matrix spike duplicate (MSD)S2 DECACHLOROBIPHENYL 88.7 65-135

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for Polychlorinated Biphenyls (PCBs)

analysis.

Method: SW846 Method 8080A Sept 1994

Matrix: SOIL
Lab Run#: 17425

Analyzed: February 22, 1999

	Spike					%		
	Spike	Amount	Amount	Found	Spike	Recov	Control %	RPD
	BSP	Dup	BSP	Dup	BSP	Dup		
Analyte	(mg/K	g)	(mg/Kg	1)	(%)	(%)	Limits RPD	Lim
AROCLOR 1016	66.7	66.7	71.3	70.9	107	106	65-135 0.93	
AROCLOR 1260	66.7	66.7	80.1	76.8	120	115	65-135 4.26	30

Environmental Services (SDB)

February 24, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for Polychlorinated Biphenyls (PCBs)

analysis.

Method: SW846 Method 8080A Sept 1994

Matrix: SOIL Lab Run#: 17425

Lau Rull#:	1/4/2	Analyzed. rebluary 22, 1999					
		Spike Amount	Spikè Amount Found	Spike Re	cov Control %	% RPD	
Analyte	·	BSP Dup (mg/Kg)	BSP Dup (mq/Kq)		up %) Limits RPD	Lim	
AROCLOR 1016 AROCLOR 1260	. 1	66.7 66.7 66.7 66.7	71.3 70.9 80.1 76.8	107 1	06 65-135 0.9 15 65-135 4.2	3 30	

Environmental Services (SDB)

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SS-1-0-1

Spl#: 229127

*Matrix:* SOIL

Extracted: February 18, 1999

Sampled: February 16, 1999 Run#:

Run#: 17454

Analyzed: February 20, 1999

		REPORTING	BLANK	BLANK	<b>DILUTION</b>
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mq/Kq)	(mg/Kg)	(mg/Kg)	(%)	
ANTIMONY	5.0	2.0	N.D.	89.0	1
ARSENIC	12	1.0	N.D.	91.8	. 1
BARIUM	120	1.0	N.D.	92.6	1
BERYLLIUM	N.D.	0.50	N.D.	88.8	1
CADMIUM	3.9	0.50	N.D.	92.1	1
CHROMIUM	35	1.0	N.D.	95.2	1
COBALT	6.2	1.0	N.D.	92.2	1
COPPER	160	1.0	N.D.	93.2	1
LEAD	380	1.0	N.D.	91.7	1
MOLYBDENUM	1.5	1.0	N.D.	91.2	1
NICKEL	47	1.0	N.D.	90.8	1
SELENIUM	3.5	2.0	N.D.	87.0	1
SILVER	N.D.	1.0	N.D.	88.2	1
THALLIUM	N.D.	1.0	N.D.	92.0	1
VANADIUM	22	1.0	N.D.	94.8	1
ZINC	460	1.0	N.D.	88.1	1
MERCURY	0.26	0.050	N.D.	97.2	1

Mercury extracted on and analyzed on February 23, 1999.

Shafi Barekzai

Analyst

Midhael Verona

Environmental Services (SDB)

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SS-2-0-1

Spl#: 229128

*Matrix:* SOIL

Extracted: February 18, 1999

Sampled: February 16, 1999 Run#: 17454

Analyzed: February 20, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	6.3	1.0	N.D.	91.8	1
BARIUM	60	1.0	N.D.	92.6	1
BERYLLIUM	Ŋ.D.	0.50	N.D.	88.8	ī
CADMIUM	N.D.	0.50	N.D.	92.1	ī
CHROMIUM	21	1.0	N.D.	95.2	ī
COBALT	4.6	1.0	N.D.	92.2	ī
COPPER	16	1.0	N.D.	93.2	ī
LEAD	41	1.0	N.D.	91.7	ī
MOLYBDENUM	N.D.	1.0	N.D.	91.2	ī.
NICKEL	24	1.0	N.D.	90.8	ī
SELENIUM	N.D.	2.0	N.D.	87.0	ī
SILVER	N.D.	1.0	N.D.	88.2	ī
THALLIUM	N.D.	1.0	N.D.	92.0	- 1
VANADIUM	18	1.0	N.D.	94.8	์ 1
ZINC	52	1.0	N.D.	88.1	ī
MERCURY	0.24	0.050	N.D.	97.2	ī
Mercury extracted on	and analyzed on R	Chrusty 22	1000	- ' • -	

and analyzed on February 23, 1999.

Shafi Barek

Analyst

Environmental Services (SDB)

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SS-3-0-1

*S*pl#: 229129

*Matrix:* SOIL

Extracted: February 18, 1999

Sampled: February 16, 1999 Run#: 17454 Analyzed: February 20, 1999

		REPORTING	BLANK	BLANK I	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	_(mg/Kg)	(mg/Kg)	(mg/Kg)	(%)	
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	3.4	1.0	N.D.	91.8	1
BARIUM	160	1.0	N.D.	92.6	1
BERYLLIUM	N.D.	0.50	N.D.	88.8	1
CADMIUM	0.79	0.50	N.D.	92.1	1
CHROMIUM	18	1.0	N.D.	95.2	1
COBALT	15	1.0	N.D.	92.2	1
COPPER	15	1.0	N.D.	93.2	1
LEAD	64	1.0	N.D.	91.7	1
MOLYBDENUM	N.D.	1.0	N.D.	91.2	1
NICKEL	18	1.0	N.D.	90.8	1
SELENIUM	N.D.	2.0	N.D.	87.0	1
SILVER	N.D.	$\overline{1.0}$	N.D.	88.2	1
THALLIUM	N.D.	$\bar{1.0}$	N.D.	92.0	1
VANADIUM	85	1.0	N.D.	94.8	1
ZINC	$\bar{7}\bar{2}$	1.0	N.D.	88.1	ī
MERCURY	0.18	0.050	N.D.	97.2	1

Mercury extracted on and analyzed on February 23, 1999.

Shafi Barekzai

Analyst

Michael Verona

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SS-4-0-1

Spl#: 229130

*Matrix:* SOIL

Extracted: February 18, 1999

Sampled: February 16, 1999 Run#: 17454 Analyzed: February 20, 1999

	RESULT	REPORTING LIMIT	BLANK RESULT	BLANK SPIKE	DILUTION FACTOR
ANALYTE	(mq/Kg)	(mg/Kg)	(mg/Kg)	(%)	FACTOR
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC BARIUM	2.5	1.0	N.D.	91.8	1
BERYLLIUM	46_	1.0	N.D.	92.6	1
CADMIUM	N.D.	0.50	N.D.	88.8	1
CHROMIUM	N.D.	0.50	и.р.	92.1	1
COBALT	28 5.2	1.0	Ŋ.D.	95.2	1
COPPER	5.∠ 15	1.0	N.D.	92.2	1 :
LEAD	11	1.0 1.0	N.D. N.D.	93.2	. 1
MOLYBDENUM	Ñ.D.	1.0	N.D.	91.7 91.2	<u> </u>
NICKEL	32	1.0	N.D.	90.8	<u> </u>
SELENIUM	$\overline{\mathtt{N}}.\mathtt{D}.$	2.0	N.D.	87.0	<b>†</b> •
SILVER	N.D.	$\overline{1.0}$	N.D.	88.2	<del>1</del> 1
THALLIUM	N.D.	1.0	N.D.	92.0	ī
VANADIUM	23	1.0	N.D.	94.8	ī
ZINC	29	1.0	N.D.	88.1	ī
MERCURY	0.21	0.050	N.D.	97.2	ī

Mercury extracted on and analyzed on February 23, 1999.

Shafi Barek

Analyst

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SS-5-0-1

Spl#: 229131

*Matrix:* SOIL

Extracted: February 18, 1999

Sampled: February 16, 1999

Run#: 17454

Analyzed: February 20, 1999

		REPORTING	BLANK	BLANK	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mg/Kg)	(mg/Kg)	(mg/Kg)	(%)	
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	3.1	1.0	N.D.	91.8	1
BARIUM	62	1.0	N.D.	92.6	1
BERYLLIUM	N.D.	0.50	N.D.	88.8	1.
CADMIUM	N.D.	0.50	N.D.	92.1	1
CHROMIUM	29	1.0	N.D.	95.2	1
COBALT	7.1	1.0	N.D.	92.2	1
COPPER	17	1.0	N.D.	93.2	1
LEAD	36	1.0	N.D.	91.7	1
MOLYBDENUM	N.D.	1.0	N.D.	91.2	1
NICKEL	45	1.0	N.D.	90.8	1
SELENIUM	2.2	2.0	N.D.	87.0	1
SILVER	N.D.	1.0	N.D.	88.2	1
THALLIUM	N.D.	1.0	N.D.	92.0	1
VANADIUM	20	1.0	N.D.	94.8	1
ZINC	46	1.0	N.D.	88.1	1
MERCURY	0.071	0.050	N.D.	97.2	1

Mercury extracted on and analyzed on February 23, 1999.

Shafi Barekza Analyst

Michael Verona

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-1-0-1

Spl#: 229091 Sampled: February 15, 1999 Run#: 17454

*Matrix:* SOIL

Extracted: February 18, 1999

Analyzed: February 20, 1999

	RESULT	REPORTING LIMIT	BLANK RESULT	BLANK SPIKE	DILUTION FACTOR
ANALYTE	(mg/Kg)	(mg/Kg)	(mg/Kg)	(%)	FACIOR
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	3.1	1.0	N.D.	91.8	ī
BARIUM	57	1.0	N.D.	92.6	ī
BERYLLIUM	N.D.	0.50	N.D.	88.8	ī
CADMIUM	N.D.	0.50	N.D.	92.1	1
CHROMIUM	29	1.0	N.D.	95.2	ī
COBALT	4.5	1.0	N.D.	92.2	$\bar{1}$
COPPER	12	1.0	N.D.	93.2	1
LEAD	65	1.0	N.D.	91.7	1
MOLYBDENUM	N.D.	1.0	N.D.	91.2	$\bar{1}$
NICKEL	30	1.0	N.D.	90.8	ī
SELENIUM	N.D.	2.0	N.D.	87.0	ı
SILVER	N.D.	1.0	N.D.	88.2	. 1
THALLIUM	N.D.	1.0	N.D.	92.0	1
VANADIUM	22	1.0	N.D.	94.8	1
ZINC	210	. 1.0	N.D.	88.1	ī
MERCURY	N.D.	0.050	N.D.	97.2	ī
Mercury extracted on	and analyzed on F	ebruary 23, 19	999.		_

Analyst

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

rved: represely to, 1999

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-1-2-3

Sp1#: 229095

Matrix: SOIL

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17454 Analyzed: February 20, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kq)	BLANK RESULT (mg/Kg)	BLANK I SPIKE (%)	DILUTION FACTOR
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	1.7	1.0	N.D.	91.8	1
BARIUM	15	1.0	N.D.	92,6	1
BERYLLIUM	N.D.	0.50	N.D.	88.8	1
CADMIUM	N.D.	0.50	N.D.	92.1	1
CHROMIUM	22	1.0	N.D.	95.2	1
COBALT	2.8	1.0	N.D.	92.2	1
COPPER	3.7	1.0	N.D.	93.2	1
LEAD	2.4	1.0	N.D.	91.7	1
MOLYBDENUM	N.D.	1.0	N.D.	91.2	1
NICKEL	24	1.0	N.D.	90.8	1
SELENIUM	N.D.	2.0	N.D.	87.0	1
SILVER	N.D.	1.0	N.D.	88.2	1
THALLIUM	N.D.	1.0	N.D.	92.0	1
VANADIUM	14	1.0	N.D.	94.8	1
ZINC	12	1.0	N.D.	88.1	1
MERCURY	N.D.	0.050	N.D.	97.2	1

Mercury extracted on and analyzed on February 23, 1999.

Shafi Barekzai

Analyst

Michael Verona

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-2-0-1

Spl#: 229064

*Matrix:* SOIL

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17453

Analyzed: February 19, 1999

		REPORTING	BLANK	BLANK	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mg/Kg)	(mq/Kq)	(mq/Kq)	(%)	
ANTIMONY	N.D.	2.0	N.D.	92.5	1
ARSENIC	N.D.	1.0	N.D.	96.3	ī
BARIUM	11	1.0	N.D.	95.7	ī
BERYLLIUM	N.D.	0.50	N.D.	92.2	$ar{ exttt{1}}$
CADMIUM	N.D.	0.50	N.D.	93.6	<b>1</b> .
CHROMIUM	17	1.0	N.D.	96.6	ī
COBALT	2.5	1.0	N.D.	96.7	1
COPPER	3.0	1.0	N.D.	96.5	1
LEAD	1.6	1.0	N.D.	95.4	1
MOLYBDENUM	N.D.	1.0	N.D.	99.0	1
NICKEL	19_	1.0	N.D.	94.6	1
SELENIUM	Ŋ.D.	2.0	N.D.	89.8	1
SILVER	N.D.	1.0	N.D.	91.0	1
THALLIUM	N.D.	1.0	N.D.	93.0	1
VANADIUM	10	1.0	N.D.	98.5	1
ZINC	10_	1.0	N.D.	96.2	1
MERCURY	N.D.	0.050	N.D.	99.2	1
Mercury extracted on	and analyzed on F	ebruary 19, 199	99.		

Analyst

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-2-2-3

Spl#: 229065 Extracted: February 18, 1999 Matrix: SOIL

Analyzed: February 19, 1999 Sampled: February 15, 1999 Run#: 17453

		REPORTING	BLANK	BLANK I	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mg/Kg)	(mg/Kg)	(mq/Kq)	(%)	
ANTIMONY	N.D.	2.0	N.D.	92.5	1
ARSENIC	N.D.	1.0	N.D.	96.3	1
BARIUM	11	1.0	N.D.	95.7	1
BERYLLIUM	N.D.	0.50	N.D.	92.2	1
CADMIUM	N.D.	0.50	N.D.	93.6	1
CHROMIUM	16	1.0	N.D.	96.6	1
COBALT	1.8	1.0	N.D.	96.7	1
COPPER	3.2	1.0	N.D.	96.5	1
LEAD	6.6	1.0	N.D.	95.4	1
MOLYBDENUM	N.D.	1.0	N.D.	99.0	1
NICKEL	15	1.0	N.D.	94.6	1
SELENIUM	N.D.	2.0	N.D.	89.8	1
SILVER	N.D.	1.0	N.D.	91.0	1
THALLIUM	N.D.	1.0	N.D.	93.0	1
VANADIUM	9.6	1.0	N.D.	98.5	1
ZINC	12	1.0	N.D.	96.2	1
MERCURY	$\bar{\mathtt{N}}.\mathtt{D}$ .	0.050	N.D.	99.2	1

Mercury extracted on and analyzed on February 19, 1999.

Shafi Barek

Analyst

ael Verona Operations Manager

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-3-0-1

Sp1#: 229066

*Matrix:* SOIL

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17453

Analyzed: February 19, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
ANTIMONY	N.D.	2.0	N.D.	92.5	1
ARSENIC BARIUM	2.7	1.0	N.D.	96.3	1
	68_	1.0	N.D.	95.7	1
BERYLLIUM	Ŋ.D.	0.50	N.D.	92.2	1
CADMIUM	N.D.	0.50	N.D.	93.6	1
CHROMIUM	26	1.0	N.D.	96.6	1
COBALT	6.6	1.0	N.D.	96.7	1
COPPER	52	1.0	N.D.	96.5	. 1
LEAD	50	1.0	N.D.	95.4	. 1
MOLYBDENUM	N.D.	1.0	N.D.	99.0	ī
NICKEL	32	1.0	N.D.	94.6	ī
SELENIUM	2.0	2.0	N.D.	89.8	$\bar{1}$
SILVER	N.D.	1.0	N.D.	91.0	$ar{ extbf{1}}$
THALLIUM	N.D.	1.0	N.D.	93.0	$\overline{1}$
VANADIUM	24	1.0	N.D.	98.5	<u> </u>
ZINC	120	1.0	N.D.	96.2	<u> </u>
MERCURY	0.11	0.050	N.D.	99.2	1
Mercury extracted on	and analyzed on :	Fahruaru 10	1000		_

tracted on and analyzed on February 19, 1999.

Shafi (Bare) Analyst

Verona

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-3-2-3

Spl#: 229067

Matrix: SOIL

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: Analyzed: February 19, 1999 17453

ANALYTE	RESULT	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK I SPIKE (%)	DILUTION FACTOR
ANTIMONY	N.D.	2.0	N.D.	92.5	1
ARSENIC	1.2	1.0	N.D.	96.3	1
BARIUM	24	1.0	N.D.	95.7	1
BERYLLIUM	N.D.	0.50	N.D.	92.2	1
CADMIUM	N.D.	0.50	N.D.	93.6	1
CHROMIUM	22	1.0	N.D.	96.6	1
COBALT	4.4	1.0	N.D.	96.7	1
COPPER	21	1.0	N.D.	96.5	1
LEAD	5.5	1.0	N.D.	95.4	1
MOLYBDENUM	N.D.	1.0	N.D.	99.0	1 '
NICKEL	20	1.0	N.D.	94.6	1
SELENIUM	N.D.	2.0	N.D.	89.8	1
SILVER	N.D.	1.0	N.D.	91.0	1
THALLIUM	N.D.	1.0	N.D.	93.0	1
VANADIUM	19	1.0	N.D.	98.5	1
ZINC	16	1.0	N.D.	96.2	1
MERCURY	N.D.	0.050	N.D.	99.2	1

Mercury extracted on and analyzed on February 19, 1999.

Shafi Barekza

Analyst

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996

510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-4-0-1

*Spl#*: 229084

229084

*Matrix:* SOIL

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17454 Analyzed: February 20, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	3.8	1.0	N.D.	91.8	. 1
BARIUM	40	1.0	N.D.	92.6	1
BERYLLIUM	N.D.	0.50	N.D.	88.8	1
CADMIUM	N.D.	0.50	N.D.	92.1	1
CHROMIUM	28	1.0	N.D.	95.2	1
COBALT	4.6	1.0	N.D.	92.2	1
COPPER	20	1.0	N.D.	93.2	Ī
LEAD	88	1.0	N.D.	91.7	ī
MOLYBDENUM	N.D.	1.0	N.D.	91.2	ī
NICKEL	28	1.0	N.D.	90.8	ī
SELENIUM	2.0	2.0	N.D.	87.0	ī
SILVER	N.D.	1.0	N.D.	88.2	ī
THALLIUM	N.D.	1.0	N.D.	92.0	ī
VANADIUM	20	1.0	N.D.	94.8	ī
ZINC	70	1.0	N.D.	88.1	· 1
MERCURY	0.14	0.050	N.D.	97.2	ī
Mercuri cut vo at a d	·		·· <b>-</b> -·•	- 7 . 4	_

Mercury extracted on and analyzed on February 23, 1999.

Shafi Barek: Analyst

Michael Verona

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-4-2-3

Sp1#: 229085

Matrix: SOIL

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17454 Analyzed: February 20, 1999

		REPORTING	BLANK	BLANK 1	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mg/Kg)	(mg/Kg)	(mg/Kg)	(%)	
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	1.8	1.0	N.D.	91.8	1
BARIUM	51	1.0	N.D.	92.6	1
BERYLLIUM	N.D.	0.50	N.D.	88.8	1
CADMIUM	N.D.	0.50	N.D.	92.1	1
CHROMIUM	34	1.0	N.D.	95.2	1
COBALT	6.1	1.0	N.D.	92.2	1
COPPER	9.6	1.0	N.D.	93.2	1.
LEAD	4.3	1.0	N.D.	91.7	1
MOLYBDENUM	N.D.	1.0	N.D.	91.2	1
NICKEL	41	1.0	N.D.	90.8	1
SELENIUM	N.D.	2.0	N.D.	87.0	1.
SILVER	N.D.	1.0	N.D.	88.2	1
THALLIUM	N.D.	1.0	N.D.	92.0	1
VANADIUM	21	1.0	N.D.	94.8	1
ZINC	19	1.0	N.D.	88.1	1
MERCURY	N.D.	0.050	N.D.	97.2	1

Mercury extracted on and analyzed on February 23, 1999.

Shafi Barekza Analyst Ichael Verona

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-5-0-1

Spl#: 229068

*Matrix:* SOIL

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17453

Analyzed: February 19, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
ANTIMONY	N.D.	2.0	N.D.	92.5	1
ARSENIC	1.6	1.0	N.D.	96.3	1
BARIUM	62	1.0	N.D.	95.7	1 .
BERYLLIUM .	N.D.	0.50	N.D.	92.2	1.
CADMIUM .	N.D.	0.50	N.D.	93.6	ī
CHROMIUM	28	1.0	N.D.	96.6	ī
COBALT	9.2	1.0	N.D.	96.7	ĩ
COPPER ·	45	1.0	N.D.	96.5	ī
LEAD	50	1.0	N.D.	95.4	์ เ
MOLYBDENUM	N.D.	1.0	N.D.	99.0	ī
NICKEL	33	1.0	N.D.	94.6	ī,
SELENIUM	2.7	2.0	N.D.	89.8	īſ
SILVER	N.D.	1.0	N.D.	91.0	ī
THALLIUM	N.D.	1.0	N.D.	93.0	ĩ
VANADIUM	33	1.0	N.D.	98.5	ī,
ZINC	51	1.0	N.D.	96.2	ī:
MERCURY	0.097	0.050	N.D.	99.2	<u> </u>
Mercury extracted on	and analyzed on	February 10	7000		_

and analyzed on February 19, 1999.

Shafi Barekza

Analyst

chael Verona

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-5-2-3

*Spl#:* 229069

*Matrix:* SOIL

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17453 Analyzed: February 19, 1999

		REPORTING	BLANK	BLANK	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mg/Kg)	(mg/Kg)	(mg/Kg)	(%)	
ANTIMONY	N.D.	2.0	N.D.	92.5	1
ARSENIC	2.0	1.0	N.D.	96.3	1
BARIUM	32	1.0	N.D.	95.7	1
BERYLLIUM	N.D.	0.50	N.D.	92.2	1
CADMIUM	N.D.	0.50	N.D.	93.6	1
CHROMIUM	30	1.0	N.D.	96.6	1
COBALT	3.4	1.0	N.D.	96.7	1
COPPER	14	1.0	N.D.	96.5	1
LEAD	30	1.0	N.D.	95.4	1
MOLYBDENUM	N.D.	1.0	N.D.	99.0	1
NICKEL	20	1.0	N.D.	94.6	1
SELENIUM	2.5	2.0	N.D.	89.8	1
SILVER	${ t N.D.}$	1.0	N.D.	91.0	1
THALLIUM	N.D.	1.0	N.D.	93.0	1
VANADIUM	22	1.0	N.D.	98.5	1
ZINC	26	1.0	N.D.	96.2	1
MERCURY	N.D.	0.050	N.D.	99.2	1

Mercury extracted on and analyzed on February 19, 1999.

Shafi Barekzai

Analyst

ichael Verona

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-6-0-1

Spl#: 229080 Matrix: SOIL

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17454 Analyzed: February 20, 1999

		REPORTING	BLANK	BLANK	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mq/Kg)	(mg/Kg)	(mg/Kg)	(%)	
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	2.2	1.0	N.D.	91.8	ī
BARIUM	47	1.0	N.D.	92.6	ī
BERYLLIUM	N.D.	0.50	N.D.	88.8	ī
CADMIUM	N.D.	0.50	N.D.	92.1	ī
CHROMIUM	27	1.0	N.D.	95.2	ī
CODALI	4.2	1.0	N.D.	92.2	1
COPPER	14	1.0	N.D.	93.2	. 1
LEAD	29	1.0	N.D.	91.7	ī
MOLYBDENUM	N.D.	1.0	N.D.	91.2	ī
NICKEL	29	1.0	N.D.	90.8	ī
SELENIUM	N.D.	2.0	N.D.	87.0	1
SILVER	N.D.	1.0	N.D.	88.2	$\overline{f 1}$
THALLIUM	N.D.	1.0	N.D.	92.0	ī
VANADIUM	19	1.0	N.D.	94.8	ī
ZINC	41	1.0	N.D.	88.1	ī
MERCURY	N.D.	0.050	N.D.	97.2	ī
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Mercury extracted on and analyzed on February 23, 1999.

Shafi Barekzai

Analyst

Nichael Verona Operations Manager

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-6-2-3

Spl#: 229081 Matri

Matrix: SOIL Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17454 Analyzed: February 20, 1999

	RESULT	REPORTING LIMIT	BLANK RESULT	BLANK I SPIKE	DILUTION FACTOR
ANALYTE	(mg/Kg)	(mg/Kg)	(mg/Kg)	(%)	
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	N.D.	1.0	N.D.	91.8	1
BARIUM	9.1	1.0	N.D.	92.6	1
BERYLLIUM	N.D.	0.50	N.D.	88.8	1
CADMIUM	N.D.	0.50	N.D.	92.1	. 1
CHROMIUM	21	1.0	N.D.	95.2	1
COBALT	2.2	1.0	N.D.	92.2	1
COPPER	2.6	1.0	N.D.	93.2	1
LEAD	1.2	1.0	N.D.	91.7	1
MOLYBDENUM	N.D.	1.0	N.D.	91.2	1
NICKEL	17	1.0	N.D.	90.8	1
SELENIUM	N.D.	2.0	N.D.	87.0	1
SILVER	N.D.	1.0	N.D.	88.2	1
THALLIUM	N.D.	1.0	N.D.	92.0	1
VANADIUM	13	1.0	N.D.	94.8	1
ZINC	10	1.0	N.D.	88.1	1
MERCURY	N.D.	0.050	N.D.	97.2	1
	المحال مسالين	7-b	0.0		

Mercury extracted on and analyzed on February 23, 1999.

Shafi Barekzai

Analyst

Verona

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-7-0-1

Spl#: 229070

*Matrix:* SOIL

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17453

Analyzed: February 19, 1999

	<b></b>	REPORTING			DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mg/Kg)	(mg/Kg)	(mg/Kg)	(%)	
ANTIMONY	N.D.	2.0	N.D.	92.5	1
ARSENIC	2.8	1.0	N.D.	96.3	$ar{ extbf{1}}$
BARIUM	40	1.0	N.D.	95.7	$\bar{1}$ 4
	N.D.	0.50	N.D.	92.2	<u>.</u>
CADMIUM	N.D.	0.50	N.D.	93.6	
CHROMIUM	21	1.0	N.D.	96.6	<u>-</u>
COBALT	7.5	1.0	N.D.	96.7	1 1
COPPER	62	1.0	N.D.	96.5	1
LEAD	24	1.0	N.D.	95.4	1
MOLYBDENUM	N.D.	1.0	N.D.	99.0	ī
NICKEL	22	1.0	N.D.	94.6	
SELENIUM	N.D.	2.0	N.D.	89.8	- i
SILVER	N.D.	1.0	N.D.	91.0	1 1
THALLIUM	N.D.`	1.0	N.D.	93.0	ī
VANADIUM	23	1.0	N.D.	98.5	ī.
ZINC	30	1.0	N.D.	96.2	ī
MERCURY	0.20	0.050	N.D.	99.2	7 1
Mercury extracted				JJ.2	<b>-</b>

Shafi Barekzai Analyst

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-7-2-3

Spl#: 229071

Matrix: SOIL Extracted: February 18, 1999

Sampled: February 15, 1999 Analyzed: February 19, 1999 Run#: 17453

		REPORTING	BLANK	BLANK	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE ·	(mg/Kg)	(mg/Kg)	(mg/Kg)	(%)	
ANTIMONY	N.D.	2.0	N.D.	92.5	1
ARSENIC	1.2	1.0	N.D.	96.3	1
BARIUM	48	1.0	N.D.	95.7	1 .
BERYLLIUM	N.D.	0.50	N.D.	92.2	1
CADMIUM	N.D.	0.50	N.D.	93.6	1
CHROMIUM	20	1.0	N.D.	96.6	1
COBALT	5.0	1.0	N.D.	96.7	1
COPPER	9.3	1.0	N.D.	96.5	1
LEAD	4.3	1.0	N.D.	95.4	1
MOLYBDENUM	N.D.	1.0	N.D.	99.0	1 '
NICKEL	32	1.0	N.D.	94.6	1
SELENIUM	N.D.	2.0	N.D.	89.8	1
SILVER	N.D.	1.0	N.D.	91.0	1
THALLIUM	N.D.	1.0	N.D.	93.0	1
VANADIUM	13	1.0	N.D.	98.5	1
ZINC	18	1.0	N.D.	96.2	. 1
MERCURY	N.D.	0.050	N.D.	99.2	1
Moraure autropted on	and analoged on t	Johnson 70	7.000		

Mercury extracted on and analyzed on February 19, 1999.

Shafi Barekzai

Analyst

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-8-0-1

Sp1#: 229082

*Matrix:* SOIL

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17454

Analyzed: February 20, 1999

	RESULT	REPORTING LIMIT	BLANK RESULT	BLANK SPIKE	
ANALYTE	(mg/Kg)	(mg/Kg)	(mg/Kg)	_ (%)	FACTOR
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	22	1.0	N.D.	91.8	ī
BARIUM	28	1.0	N.D.	92.6	ī
BERYLLIUM	N.D.	0.50	N.D.	88.8	า๋
CADMIUM	N.D.	0.50	N.D.	92.1	ī
CHROMIUM	27	1.0	N.D.	95.2	7
COBALT	17	ī.ŏ	N.D.	92.2	_ 1
COPPER	25	1.0	N.D.	93.2	
LEAD	7.9	1.0	N.D.	91.7	1
MOLYBDENUM	N.D.	1.0	N.D.	91.2	1
NICKEL	24	1.0	N.D.	90.8	· †
SELENIUM	$\frac{1}{2}$ .0	$\frac{1}{2}.0$	N.D.	87.0	<b>†</b>
SILVER	N.D.	1.0	N.D.	88.2	1
THALLIUM	N.D.	1.0	N.D.	92.0	1
VANADIUM	26	1.Ŏ	N.D.	94.8	1
ZINC	43	1.0	N.D.	88.1	1 1
MERCURY	0.057	0.050	N.D.	97.2	1
Mercury extracted on	and analyzed on F			31.2	7

Shafi Barekzai

Analyst

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-8-2-3

Sp1#: 229083

Matrix: SOIL

Extracted: February 18, 1999

Sampled: February 15, 1999

Run#: 17454 Analyzed: February 20, 1999

		REPORTING	BLANK	BLANK I	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mg/Kg)	(mg/Kg)	(mg/Kg)	(%)	
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	3.5	1.0	N.D.	91.8	1
BARIUM	34	1.0	N.D.	92.6	1
BERYLLIUM .	N.D.	0.50	N.D.	88.8	1
CADMIUM	N.D.	0.50	N.D.	92.1	1
CHROMIUM	30	1.0	N.D.	95.2	1
COBALT	11	1.0	N.D.	92.2	1
COPPER	. 18	1.0	N.D.	93.2	1
LEAD	6.8	1.0	N.D.	91.7	1
MOLYBDENUM	N.D.	1.0	N.D.	91.2	1
NICKEL	21	1.0	N.D.	90.8	1
SELENIUM	2.0	2.0	N.D.	87.0	1
SILVER	N.D.	1.0	N.D.	88.2	1
THALLIUM	N.D.	1.0	N.D.	92.0	. 1
VANADIUM	24	1.0	N.D.	94.8	1
ZINC	34	1.0	N.D.	88.1	1
MERCURY	N.D.	0.050	N.D.	97.2	1
Mercury extracted on a	nd analyzed on F	Cehruary 23 19	99		

Mercury extracted on and analyzed on February 23, 1999.

Shafi Barekzai

Analyst

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-9-0-1

Spl#: 229072

Matrix: SOIL

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17453 Analyzed: February 19, 1999

	RESULT	REPORTING LIMIT	BLANK RESULT	BLANK SPIKE	DILUTION FACTOR
ANALYTE	(mg/Kg)	(mg/Kg)	(mg/Kg)	(%)	
ANTIMONY	N.D.	2.0	N.D.	92.5	1
ARSENIC	3.4	1.0	N.D.	96.3	ī
BARIUM	190	1.0	N.D.	95.7	ī
BERYLLIUM .	N.D.	0.50	N.D.	92.2	า
CADMIUM	N.D.	0.50	N.D.	93.6	ī
CHROMIUM	21	1.0	N.D.	96.6	ī
COBALT	9.9	1.0	N.D.	96.7	ī
COPPER	14	1.0	N.D.	96.5	. 1
LEAD	9.7	1.0	N.D.	95.4	- ī
MOLYBDENUM	N.D.	1.0	N.D.	99.0	ī
NICKEL	42	1.0	N.D.	94.6	ī
SELENIUM	N.D.	2.0	N.D.	89.8	
SILVER	N.D.	1.0	N.D.	91.0	ī '
THALLIUM	N.D.	1.0	N.D.	93.0	ī
VANADIUM	16	1.0	N.D.	98.5	ĩ
ZINC	25	1.0	N.D.	96.2	ī
MERCURY	N.D.	0.050	N.D.	99.2	ī
Magazina			•		_

Mercury extracted on and analyzed on February 19, 1999.

Shafi Barekza

Analyst

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 51099610

510996100900/2000

Received: February 16, 1999

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-9-2-3

*Spl#:* 229073

*Matrix:* SOIL

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17454 Analyzed: February 20, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK : SPIKE (%)	DILUTION FACTOR
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	1.6	1.0	N.D.	91.8	1
BARIUM	11	1.0	N.D.	92.6	1
BERYLLIUM	N.D.	0.50	N.D.	88.8	1
CADMIUM	N.D.	0.50	N.D.	92.1	1
CHROMIUM	18	1.0	N.D.	95.2	1
COBALT	2.4	1.0	N.D.	92.2	1
COPPER	5.0	1.0	N.D.	93.2	. 1
LEAD	6.4	1.0	N.D.	91.7	1
MOLYBDENUM	N.D.	1.0	N.D.	91.2	1
NICKEL	19	1.0	N.D.	90.8	1
SELENIUM	2.1	2.0	N.D.	87.0	1
SILVER	N.D.	1.0	N.D.	88.2	1
THALLIUM	N.D.	1.0	N.D.	92.0	1
VANADIUM	12	1.0	N.D.	94.8	1
ZINC	9.7	1.0	N.D.	88.1	1
MERCURY	N.D.	0.050	N.D.	97.2	1

Mercury extracted on and analyzed on February 23, 1999.

Shafi Barekz

Analyst

ichael Verona

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-10-0-1

Spl#: 229074

*Matrix:* SOIL Sampled: February 15, 1999 Run#: 17454 Extracted: February 18, 1999

Analyzed: February 20, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	4.0	1.0	N.D.	91.8	1
BARIUM BERYLLIUM	240	1.0	N.D.	92.6	1
	N.D.	0.50	N.D.	88.8	1
CADMIUM	N.D.	0.50	N.D.	92.1	1
CHROMIUM	47	1.0	N.D.	95.2	1
COBALT	17	1.0	N.D.	92.2	1
COPPER	19	1.0	N.D.	93.2	1
LEAD	9.6	1.0	N.D.	91.7	1
MOLYBDENUM	Ŋ.D.	1.0	N.D.	91.2	1
NICKEL	99	1.0	N.D.	90.8	1
SELENIUM	2.2	2.0	N.D.	87.0	1
SILVER	N.D.	1.0	N.D.	88.2	1
THALLIUM	Ŋ.D.	1.0	N.D.	92.0	1
VANADIUM	20	1.0	N.D.	94.8	1
ZINC	54	1.0	N.D.	88.1	1
MERCURY	0.052	0.050	N.D.	97.2	ī
Mercury extracted on	and analyzed on E	Obritaria 22 1	1000		

extracted on and analyzed on February 23, 1999.

Shafi Barek Analyst

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 5

510996100900/2000

Received: February 16, 1999

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-10-2-3

*Sp1#:* 229075

*Matrix:* SOIL

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17454 Analyzed: February 20, 1999

•		REPORTING	BLANK	BLANK D	ILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mg/Kg)	(mg/Kg)	(mg/Kg)	(%)	
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	N.D.	1.0	N.D.	91.8	1
BARIUM	9.6	1.0	N.D.	92.6	1
BERYLLIUM	N.D.	0.50	N.D.	88.8	1
CADMIUM	N.D.	0.50	N.D.	92.1	1
CHROMIUM	22	1.0	N.D.	95.2	1
COBALT	2.0	1.0	N.D.	92.2	1
COPPER	2.7	1.0	N.D.	93.2	1
LEAD	1.9	1.0	N.D.	91.7	1
MOLYBDENUM	N.D.	1.0	N.D.	91.2	-1
NICKEL	17	1.0	N.D.	90.8	. 1
SELENIUM	N.D.	2.0	N.D.	87.0	1
SILVER	N.D.	1.0	N.D.	88.2	1
THALLIUM	N.D.	1.0	N.D.	92.0	1
VANADIUM	14	1.0	N.D.	94.8	1
ZINC	10	1.0	N.D.	88.1	1
MERCURY	N.D.	0.050	N.D.	97.2	1

Mercury extracted on and analyzed on February 23, 1999.

Shafi Barekzai

Analyst

Michael Verona

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-11-0-1

Spl#: 229076 Matrix: SOIL Sampled: February 15, 1999 Run#: 17454

Extracted: February 18, 1999

Run#: 17454 Analyzed: February 20, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	4.0	1.0	N.D.	91.8	1
BARIUM	76	1.0	N.D.	92.6	ī.
BERYLLIUM	N.D.	0.50	N.D.	88.8	1 1
CADMIUM	1.1	0.50	N.D.	92.1	Ŧ ;
CHROMIUM	38	1.0	N.D.	95.2	ī
COBALT	9.1	1.0	N.D.	92.2	า้ เ
COPPER	81	1.0	N.D.	93.2	7
LEAD	93	1.0	N.D.	91.7	<b>†</b> :
MOLYBDENUM	N.D.	1.0	N.D.	91.2	1
NICKEL	59	1.0	N.D.	90.8	1 1
SELENIUM	2.6	2.0	N.D.	87.0	<b>†</b> 1
SILVER	N.D.	1.0	N.D.	88.2	÷ 4
THALLIUM	N.D.	1.0	N.D.	92.0	± 1
VANADIUM	28	1.0	N.D.	94.8	± 7 .
ZINC	230	1.0	N.D.	88.1	+ 1
MERCURY	0.058	0.050	N.D.	97.2	<u>+</u>
Mercury extracted on	and analyzed on t		11.1.	31.4	Τ.

Mercury extracted on and analyzed on February 23, 1999.

Shafi Bare Analyst Michael Verona Operations Manager

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#:

510996100900/2000

Received: February 16, 1999

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-11-2-3

Spl#: 229077 *Matrix:* SOIL Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17454 Analyzed: February 20, 1999

		REPORTING	BLANK	<del></del>	ILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mq/Kq)	(mg/Kg)	(mg/Kg)	(왕)	
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	2.2	1.0	N.D.	91.8	1
BARIUM	25	1.0	N.D.	92.6	1
BERYLLIUM	N.D.	0.50	N.D.	88.8	1
CADMIUM	N.D.	0.50	N.D.	92.1	1.
CHROMIUM	29	1.0	N.D.	95.2	1
COBALT	3.0	1.0	N.D.	92.2	1
COPPER '	10	1.0	N.D.	93.2	1
LEAD	12	1.0	N.D.	91.7	1
MOLYBDENUM	N.D.	1.0	N.D.	91.2	1
NICKEL	26	1.0	N.D.	90.8	1
SELENIUM	N.D.	2.0	N.D.	87.0	1
SILVER	N.D.	1.0	N.D.	88.2	1
THALLIUM	N.D.	1.0	N.D.	92.0	1
VANADIUM	23	1.0	N.D.	94.8	1
ZINC	25	1.0	N.D.	88.1	1
MERCURY	0.067	0.050	N.D.	97.2	1

Mercury extracted on and analyzed on February 23, 1999.

Shafi Barekzai Molfr Analyst

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-12-0-1

Spl#: 229078

*Matrix:* SOIL

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17454 Analyzed: February 20, 1999

		REPORTING	BLANK	BLANK	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mg/Kg)	(mg/Kg)	(mg/Kg)	(%)	
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	2.2	1.0	N.D.	91.8	1
BARIUM	39	1.0	N.D.	92.6	1
BERYLLIUM	N.D.	0.50	N.D.	88.8	1
CADMIUM	N.D.	0.50	N.D.	92.1	1
CHROMIUM	27	1.0	N.D.	95.2	1
COBALT	4.4	1.0	N.D.	92.2	1
COPPER	9.5	1.0	N.D.	93.2	. 1
LEAD	5.5	1.0	N.D.	91.7	1
MOLYBDENUM	N.D.	1.0	N.D.	91.2	1
NICKEL	24_	1.0	N.D.	90.8	1
SELENIUM	N.D.	2.0	N.D.	87.0	1
SILVER	N.D.	1.0	N.D.	88.2	1
THALLIUM	N.D.	1.0	N.D.	92.0	1
VANADIUM	20	1.0	N.D.	94.8	1
ZINC	20	1.0	N.D.	88.1	1
MERCURY	N.D.	0.050	N.D.	97.2	1
Mercury extracted on	and analyzed on F	ebruary 23, 19	99.		

Shafi Barekza

Analyst

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-SB-12-2-3

Sp1#: 229079 M

Matrix: SOIL Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17454 Analyzed: February 20, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK D SPIKE (%)	ILUTION FACTOR
ANTIMONY	N.D.	2.0	N.D.	89.0	1
ARSENIC	2.1	1.0	N.D.	91.8	1
BARIUM	14	1.0	N.D.	92.6	1
BERYLLIUM	N.D.	0.50	N.D.	88.8	1
CADMIUM	N.D.	0.50	N.D.	92.1	1
CHROMIUM	25	1.0	N.D.	95.2	1
COBALT	2.4	1.0	N.D.	92.2	1
COPPER	4.2	1.0	N.D.	93.2	1
LEAD	3.2	1.0	N.D.	91.7	· 1
MOLYBDENUM	N.D.	1.0	N.D.	91.2	1
NICKEL	17	1.0	N.D.	90.8	1
SELENIUM	N.D.	2.0	N.D.	87.0	1
SILVER	N.D.	1.0	N.D.	88.2	1
THALLIUM	N.D.	1.0	N.D.	92.0	1
VANADIUM	18	1.0	N.D.	94.8	1
ZINC	13	1.0	N.D.	88.1	1 .
MERCURY	N.D.	0.050	N.D.	97.2	1

Mercury extracted on and analyzed on February 23, 1999.

Shafi Barekzai

Analyst

ichael Verona

Environmental Services (SDB)

February 23, 1999

Submission #: 9902205

Project#: 510996100900/2000

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

re: One sample for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Client Sample ID: ABL-DC01

Spl#: 229132

Sampled: February 16, 1999 Run#: 17459

Matrix: SOIL

Extracted: February 19, 1999

Analyzed: February 19, 1999

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	SPIKE (%)	DILUTION FACTOR
ANTIMONY ARSENIC	Ŋ.D.	2.0	N.D.	85.9	1
BARIUM	1.3	1.0	N.D.	91.9	1
BERYLLIUM	22_	1.0	N.D.	90.0	1
CADMIUM	N.D.	0.50	N.D.	85.0	1
CHROMIUM	<u>N.</u> D.	0.50	N.D.	87.1	1
COBALT	17_	1.0	N.D.	88.2	1
COPPER	2.5	1.0	N.D.	91.0	1
LEAD	5.5	1.0	N.D.	90.7	1
<del></del>	$\frac{2.7}{}$	1.0	N.D.	88.5	1
MOLYBDENUM NICKEL	N.D.	1.0	N.D.	90.3	1
SELENIUM	12_	1.0	N.D.	87.8	1
SILVER	Ŋ.D.	2.0	N.D.	85.8	1
	Ŋ.D.	1.0	N.D.	84.2	1
THALLIUM	Ŋ.D.	1.0	N.D.	89.2	1
VANADIUM ZINC	13	1.0	N.D.	91.4	1
· · · · · · · · · · · · · · · · · · ·	11	1.0	N.D.	89.1	1
MERCURY	N.D.	0.050	N.D.	103	1
Mercury extracted on	and analyzed on	Cohruster 10 1	000		

and analyzed on February 19, 1999.

Christopher' Analyst

Verona

Environmental Services (SDB)

March 4, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Matrix: SOIL

Analyzed: February 20, 1999 Lab Run#: 17454 Instrument:

2020 20022,70 2002	Spiked								
Analyte	Sample Amount (mg/Kg)	Spike MS (mg	Amt MSD /Kg)	Amt F MS (mg/K	MSD	Spike MS (%)	Reco MSD (%)	Control	% L % RPD RPD Lim
ANTIMONY ARSENIC BARIUM BERYLLIUM CADMIUM CHROMIUM COBALT COPPER LEAD MOLYBDENUM NICKEL SELENIUM SILVER THALLIUM VANADIUM ZINC MERCURY	N.D. 1.6 11 N.D. N.D. 18 2.4 5.0 6.4 N.D. 19 2.1 N.D. N.D. 19 2.1 N.D.	100 100 100 100 100 100 100 100 100 100	100 100 100 100 100 100 100 100 100 100	78.4 87.2 96.3 83.3 86.3 105 88.8 91.5 83.7 102 82.7 85.3 991.1 0.472	76.7 85.0 94.1 81.8 84.2 102 86.3 881.7 99.6 81.7 99.6 83.1 99.3 83.5 84.5	80.6 81.7 85.3 87.1	83.1 81.8 84.2 84.0 84.5 88.3 81.7 80.1 77.5 81.3 83.1 84.5	80-120 80-120 80-120 80-120 80-120 80-120 80-120 80-120 80-120 80-120 80-120 80-120 80-120	2.60 20 2.61 20 1.82 20 2.46 20 3.51 20 2.22 20 2.41 20 6.40 20 2.42 20 3.56 20 3.92 20 0.49 20 2.61 20

Sample Spiked: 229073 Submission #: 9902200

Client Sample ID: ABL-SB-9-2-3

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Matrix: SOIL

Lab Run#: 17453 Instrument: Analyzed: February 19, 1999

	you. Tabladly 15, 1555									
	Sample	_		Amt E		Spike	Reco	<b>v</b>		%
3	Amount		MSD	MS	MSD	MS	MSD	Contro		RPD
<u>Analyte</u>	(mg/Kg	) (mo	<u>(/Kg)</u>	(mg/F	<u>(g)</u>	(%)	(왕)	<u>Limits</u>	RPD	<u>Lim</u>
ANTIMONY ARSENIC BARIUM BERYLLIUM CADMIUM CHROMIUM COBALT COPPER LEAD MOLYBDENUM NICKEL SELENIUM SILVER THALLIUM VANADIUM ZINC MERCURY	N.D. 3.5 160 N.D. 19 6.2 16 4.4 N.D. 31 2.4 N.D. N.D. 14 0.D.	100 100 100 100 100 100 100 100 100 100	100 100 100 100 100 100 100 100 100 100	53.8 89.0 82.0 82.5 105.8 109.8 109.8 113.8 81.4 75.3 102 240 0.407	55.8 88.4 198 82.4 105 89.5 89.5 86.8 112.9 84.5 78.5 100 221 0.4 05	86.0 82.0 82.5 86.0 83.6 93.0 79.8 82.0 78.4 75.3 80.0	84.9 38.0 82.4 86.0 83.2 99.0 82.2 80.8 81.0 76.5 84.5 75.5 86.0	80-120 80-120 80-120 80-120 80-120 80-120 80-120 80-120	31.4 0.1 1.2 0.1 1.2 0.1 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1	200000000000000000000000000000000000000

Sample Spiked: 229017 Submission #: 9902193 Client Sample ID: MW-2

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Matrix: SOIL Extracted: February 19, 1999 Lab Run#: 17459

Instrument: Analyzed: February 19, 1999

	Spiked							,,		
Analyte	Sample Amount (mg/Kg	Spike MS	Amt MSD /Kg)	Amt F MS (mg/K	MSD	Spike MS (%)	Recov MSD (%)	v Contro Limits		% RPD <u>Lim</u>
ANTIMONY ARSENIC BARIUM BERYLLIUM CADMIUM CHROMIUM COBALT COPPER LEAD MOLYBDENUM NICKEL SELENIUM SILVER THALLIUM VANADIUM ZINC MERCURY	N.D. 4.9 55 N.D. 17 7.5 14 88 N.D. 22 2.4 N.D. N.D. 23 53 N.D.	100 100 100 100 100 100 100 100 100 100	100 100 100 100 100 100 100 100 100 100	52.9 91.2 149 84.5 85.2 110 95.0 1139 77.0 113.9 747 119 142 0.509	47.4 89.6 136 84.2 117 92.2 125 196 75.7 110 80.1 78.1 114 132 0.511	86.3 94.0 84.5	84.7 81.0 84.2 84.2 100 84.7 111 108 75.7 88.0 77.7	80-120 80-120 80-120 80-120	1.87 14.8 0.35 1.18 7.25 3.25 8.45 33.20 3.35 4.95 1.35 11.9	20 20 20 20 20 20 20 20 20 20 20 20 20 2

Sample Spiked: 229309 Submission #: 9902221 Client Sample ID: ST2

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Matrix: SOIL

Lab Run#: 17454 Instrument: Analyzed: February 20, 1999

Analyte	Spiked Sample Amount (mg/Kg)	Spike MS	Amt MSD /Kg)	Amt F MS (mg/K	MSD	Spike MS (%)	Reco MSD (%)	v Contro Limits		% RPD Lim
ANTIMONY ARSENIC BARIUM BERYLLIUM CADMIUM CHROMIUM COBALT COPPER LEAD MOLYBDENUM NICKEL SELENIUM SILVER THALLIUM VANADIUM ZINC MERCURY	N.D. 1.6 11 N.D. 18 2.4 5.0 6.4 N.D. 2.1 N.D. 19 2.1 N.D.	100 100 100 100 100 100 100 100 100 100	100 100 100 100 100 100 100 100 100 100	78.4 87.2 96.3 83.3 86.3 105 88.8 91.5 83.7 102 82.7 85.3 991.1 0.472	76.7 85.0 94.8 84.2 102.9 93.1 81.7 79.6 81.7 79.3 83.1 96.4 9.445	85.6 85.3 83.3 86.3 87.0 86.4 86.2 87.1 83.7 83.6 81.7 85.3	83.4 83.1 81.8 84.2 84.0 84.5 88.3 81.7 80.1 77.5 81.3 83.1 84.5	80-120 80-120 80-120 80-120 80-120 80-120 80-120 80-120 80-120 80-120	2.60 2.61 1.82	200000000000000000000000000000000000000

Sample Spiked: 229073
Submission #: 9902200

Client Sample ID: ABL-SB-9-2-3

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Matrix: SOIL Lab Run#: 17454

Analyzed: February 19, 1999

Dun Mani, Till					ary aca.	LCDIG	ury ro, roo	_
			Spi	.ke				
	Spike	Amount	Amount	Found	Spike	Recov		%
	BSP	Dup	BSP	Dup	BSP	Dup	Control %	RPD
Analyte	(mg/Kg		(mq/Ka	7)	(%)	(%)	Limits RPD	Lim
					•		•	
ANTIMONY	100	100	89.0	87.8	89.0	87.8	80-120 1.3	6 20
ARSENIC	100	100	91.8	90.4	91.8	90.4	80-120 1.5	
BARIUM	100	100	92.6	92.7	92.6	92.7	80-120 0.1	
BERYLLIUM	100	100	88.8	88.9	88.8	88.9	80-120 0.1	
CADMIUM	100	100	92.1	90.4	92.1	90.4	80-120 1.8	
CHROMIUM	100	100	95.2	94.1	95.2	941	80-120 1.1	
COBALT	100	100	92.2	91.6	92.2	91.6	80-120 0.6	
COPPER	100	100	93.2	91.4	93.2	91.4	80-120 1.9	
LEAD	100	100	91.7	90.3	91.7	90.3	80-120 1.5	
MOLYBDENUM	. 100	100	91.2	90.4	91.2	90.4	80-120 0.8	
NICKEL	100	100	90.8	90.2	90.8	90.2	80-120 0.6	
SELENIUM	100	100	87.0	85.5	87.0	85.5	80-120 1.7	
SILVER	100	100	88.2	87.2	88.2	87.2	80-120 1.1	
THALLIUM	100	100	92.0	90.7	92.0	90.7	80-120 1.4	
VANADIUM	100	100	94.8	93.4	94.8	93.4	80-120 1.4	
ZINC	100	100	88.1	87.4	88.1	87.4	80-120 0.7	
MERCURY	0.500	0.500	0.486	0.478	97.2	95.6	85-115 1.6	6 20

**Environmental Services (SDB)** 

March 4, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Matrix: SOIL Lab Run#: 17453

Analyzed: February 19, 1999

							cury LD, LDD.	,
	•		Spi	lke				
	Spike	Amount		Found	Spike	Recov		શ્રુ
	BSP	Dup	BSP	Dup	BSP	Dup	Control %	RPD
<u>Analyte</u>	(mg/Kg		(mg/Kg		(%)	(%)	Limits RPD	_ Lim
			, <u></u> <u></u>	77		( 0 /	_ HIMILOS KID	<u> </u>
ANTIMONY	100	100	92.5	90.9	92.5	90.9	80-120 1.74	1 20
ARSENIC	100	100	96.3	94.6	96.3	94.6	80-120 1.78	
BARIUM	100	100	95.7	94.6	95.7	94.6	80-120 1.76	
BERYLLIUM	100	100	92.2	91.9	92.2	91.9	80-120 0.32	
CADMIUM	100	100	93.6	92.2	93.6	92.2	80-120 0.3	
CHROMIUM	100	100	96.6	95.8	96.6	95.8	80-120 0.83	
COBALT	100	100	96.7	94.6	96.7	94.6	80-120 2.20	
COPPER	100	100	96.5	95.3	96.5	95.3	80-120 2.20	
LEAD	100	100	95.4	93.7	95.4	93.7	80-120 1.80	
MOLYBDENUM	100	100	99.0	97.1	99.0	97.1	80-120 1.80	
NICKEL	100	100	94.6	92.9	94.6	92.9	80-120 1.94	
SELENIUM	100	100	89.8	88.3	89.8	88.3	80-120 1.68	
SILVER	100	100	91.0	89.5	91.0	89.5	80-120 1.66	
THALLIUM	100	100	93.0	92.1	93.0	92.1	80-120 0.97	
VANADIUM	100	100	98.5	96.8	98.5	96.8	80-120 0.9	
ZINC	100	100	96.2	92.8	96.2	92.8	80-120 3.60	
MERCURY	0.500	0.500	0.496	0.491	99.2	98.2	85-115 1.01	
						· -	I.U.	0

Environmental Services (SDB)

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Matrix: SOIL Lab Run#: 17459

Analyzed: February 19, 1999

				Spi	ke					
		Spike	Amount	Amount	Found	Spike	Recov			ૠ
		BSP	Dup	BSP	Dup	BSP	Dup	Control	શ્રુ	RPD
Analyte		_(mg/Kg		(mg/Kg		(%)	(왕 <mark>)</mark>	Limits F	RPD	Lim
		,								
ANTIMONY	<i>y</i> +	100	100	85.9	92.6	85.9	92.6	80-120 7	7.51	20
ARSENIC		100	100	91.9	98.4	91.9	98.4	80-120 6	5.83	20
BARIUM		100	100	90.0	97.0	90.0	97.0	80-120 7	7.49	20
BERYLLIUM		100	100	85.0	91.1	85.0	91.1		5.93	20
CADMIUM		100	100	87.1	93.9	87.1	93.9		7.51	20
CHROMIUM		100	100	88.2	95.4	88.2	95.4		7.84	20
COBALT		100	100	91.0	97.9	91.0	97.9		7.30	20
COPPER		100	100	90.7	97.3	90.7	97.3		7.02	
LEAD		100	100	88.5	95.3	88.5	95.3		7.40	20
MOLYBDENUM		100	100	90.3	97.0	90.3	97.0		7.15	20
NICKEL		100	100	87.8	94.6	87.8	94.6		7.46	
SELENIUM		100	100	85.8	91.7	85.8	91.7		5.65	20
SILVER		100	100	84.2	90.1	84.2	90.1		5.77	20
THALLIUM		100	100	89.2	95.9	89.2	95.9			20
VANADIUM		100	100	91.4	98.3	91.4	98.3		7.27	20
ZINC		100	100	89.1	95.5	89.1	95.5		5.93	20
MERCURY		0.500	0.500	0.514	0.528	103	106	85-115 2	2.87	20

Environmental Services (SDB)

February 23, 1999

Submission #: 9902205

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for CAM 17 METALS analysis.

Method: EPA 3050A/6010A/7471A Nov 1990

Matrix: SOIL Lab Run#: 17454

Analyzed: February 19, 1999

			Spi	.ke				
		Amount	Amount	Found	Spike	Recov		9્ઠ
	BSP	Dup	BSP	Dup	BSP	Dup	Control %	RPD
Analyte	(mg/Kg	1)	(mg/Kg		(왕)	(% <u>)</u>	Limits RPD	
		_	-					
ANTIMONY	100	100	89.0	87.8	89.0	87.8	80-120 1.36	- 20 <sup>'</sup>
ARSENIC	100	100	91.8	90.4	91.8		80-120 1.54	
BARIUM	100	100	92.6	92.7	92.6		80-120 0.10	
BERYLLIUM	100	100	88.8	88.9	88.8	88.9	80-120 0.11	
CADMIUM	100	100	92.1	90.4	92.1	90.4	80-120 1.86	
CHROMIUM	100	100	95.2	94.1	95.2		80-120 1.16	1
COBALT	100	100	92.2	91.6	92.2		80-120 0.65	
COPPER	100	100	93.2	91.4	93.2		80-120 1.95	
LEAD	100	100	91.7	90.3	91.7	90.3	80-120 1.54	
MOLYBDENUM	100	100	91.2	90.4	91.2	90.4	80-120 0.88	
NICKEL	100	100	90.8	90.2	90.8	90.2	80-120 0.66	
SELENIUM	100	100	87.0	85.5	87.0	85.5	80-120 1.74	
SILVER	100	100	88.2	87.2	88.2	87.2	80-120 1.74	
THALLIUM	100	100	92.0	90.7	92.0	90.7	80-120 1.14	
VANADI <b>UM</b>	100	100	94.8	93.4	94.8	93.4	80-120 1.42	
ZINC	100	100	88.1	87.4	88.1	87.4	80-120 1.49	
MERCURY	0.500	0.500	0.486	0.478	97.2	95.6	85-115 1.66	
			0.100	0.1,0	21.2	22.0	02-112 1.00	20

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#:

510996100900/2000

re: One sample for Soluble Miscellaneous Metals with Mercury analysis.

Method: EPA 3005A/6010A/7470A Nov 1990

Client Sample ID: ABL-GW-1

Spl#: 229099

Matrix: WATER

Extracted: February 18, 1999

Sampled: February 15, 1999 Analyzed: February 18, 1999 Run#: 17437

		REPORTING	BLANK	BLANK	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mq/L)	(mg/L)	(mg/L)	(%)	
ANTIMONY	N.D.	0.0050	N.D.	93.8	1
ARSENIC	N.D.	0.0050	N.D.	98.6	1
BARIUM	0.081	0.0050	N.D.	95.6	1
BERYLLIUM .	N.D.	0.0050	N.D.	95.2	1
CADMIUM .	N.D.	0.0020	N.D.	95.4	1 .
CHROMIUM	N.D.	0.0050	N.D.	95.6	1
COBALT	N.D.	0.0050	N.D.	95.2	1
COPPER	0.023	0.0050	N.D.	94.6	1
LEAD	Ŋ.D.	0.0050	N.D.	95.8	1
MOLYBDENUM	N.D.	0.0050	N.D.	94.8	1
NICKEL	0.053	0.0050	N.D.	94.8	1
SELENIUM	N.D.	0.0050	N.D.	96.0	1
SILVER	N.D.	0.0050	N.D.	91.4	1
THALLIUM	N.D.	0.0050	N.D.	96.0	1
VANADIUM	N.D.	0.0050	N.D.	95.6	1
ZINC	0.011	0.010	N.D.	95.4	1
MERCURY /	N.D.	0.00050	N.D.	109	1
Mercury extracted on	and analyzed on B	ebruary 18, 199	9.		

Christopher Arndt

Analyst

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Soluble Miscellaneous Metals with Mercury analysis.

Method: EPA 3005A/6010A/7470A Nov 1990

Client Sample ID: DUPGW01

*Spl#:* 229104

Sampled: February 15, 1999

Matrix: WATER Run#: 17437

Extracted: February 18, 1999

Analyzed: February 18, 1999

RESIII.T	REPORTING	BLANK Preiit.T		DILUTION FACTOR
(mg/L)				FACIOR
N.D.	0.0050	N.D.		1
	0.0050	N.D.	98.6	ī
	0.0050	N.D.	95.6	ī
	0.0050	N.D.	95.2	1
			95.4	1
				1
				1
			94.6	1
				1
				1
				1
				1
				1
				1
				1
				1
			109	1
	N.D. N.D. 0.026 N.D. N.D. N.D. N.D. N.D. 0.0083 0.043 N.D. N.D. 0.016 N.D.	RESULT (mg/L) (mg/L)  N.D. 0.0050	RESULT	RESULT (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) (%)           N.D. 0.0050 N.D. 93.8           N.D. 0.0050 N.D. 98.6           0.026 0.0050 N.D. 95.6           N.D. 0.0050 N.D. 95.2           N.D. 0.0050 N.D. 95.4           N.D. 0.0050 N.D. 95.6           N.D. 0.0050 N.D. 95.6           N.D. 0.0050 N.D. 95.6           N.D. 0.0050 N.D. 95.2           N.D. 0.0050 N.D. 94.6           N.D. 0.0050 N.D. 94.8           0.0083 0.0050 N.D. 94.8           0.043 0.0050 N.D. 96.0           N.D. 0.0050 N.D. 96.0           N.D. 0.0050 N.D. 95.6           N.D. 0.0050 N.D. 95.4           N.D. 0.010 N.D. 95.4           N.D. 0.0050 N.D. 95.4

Christopher Arndt

Analyst

Michael Verona

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Project#: 510996100900/2000

Received: February 16, 1999

re: One sample for Soluble Miscellaneous Metals with Mercury analysis.

Method: EPA 3005A/6010A/7470A Nov 1990

Client Sample ID: ABL-GW-2

Spl#: 229100

Matrix: WATER

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17437 Analyzed: February 18, 1999

		REPORTING	BLANK	BLANK	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mg/L)	(mg/L)	(mg/L)	(%)	
ANTIMONY	0.0057	0.0050	N.D.	93.8	1
ARSENIC	N.D.	0.0050	N.D.	98.6	1
BARIUM	0.022	0.0050	N.D.	95.6	1
BERYLLIUM	N.D.	0.0050	N.D.	95.2	1
CADMIUM	N.D.	0.0020	N.D.	95.4	1
CHROMIUM	N.D.	0.0050	N.D.	95.6	1
COBALT	N.D.	0.0050	N.D.	95.2	1
COPPER	0.033	0.0050	N.D.	94.6	. 1
LEAD	N.D.	0.0050	N.D.	95.8	1
MOLYBDENUM	N.D.	0.0050	N.D.	94.8	1
NICKEL	0.0075	0.0050	N.D.	94.8	. 1
SELENIUM	N.D.	0.0050	N.D.	96.0	1
SILVER	N.D.	0.0050	N.D.	91.4	1
THALLIUM	N.D.	0.0050	N.D.	96.0	1
VANADIUM	N.D.	0.0050	N.D.	95.6	1
ZINC	0.036	0.010	N.D.	95.4	1
MERCURY	N.D.	0.00050	N.D.	109	1
Mercury extracted on	and analyzed on F	ebruary 18, 199	99.		

Christopher Arndt

Analyst

el Verona

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Soluble Miscellaneous Metals with Mercury analysis.

Method: EPA 3005A/6010A/7470A Nov 1990

Client Sample ID: ABL-GW-3

Spl#: 229101 Sampled: February 15, 1999

Matrix: WATER Run#: 17437

Extracted: February 18, 1999

Analyzed: February 18, 1999

ANALYTE	RESULT (mg/L)	REPORTING LIMIT (mg/L)	BLANK RESULT (mg/L)	BLANK SPIKE (%)	DILUTION FACTOR
ANTIMONY	N.D.	0.0050	N.D.	93.8	1
ARSENIC	N.D.	0.0050	N.D.	98.6	1
BARIUM	0.055	0.0050	N.D.	95.6	1
BERYLLIUM	N.D.	0.0050	N.D.	95.2	1
CADMIUM	Ŋ.D.	0.0020	N.D.	95.4	1
CHROMIUM	Ŋ.D.	0.0050	N.D.	95.6	1
COBALT	Ŋ.D.	0.0050	N.D.	95.2	1
COPPER	0.043	0.0050	N.D.	94.6	1
LEAD	N.D.	0.0050	N.D.	95.8	1
MOLYBDENUM	N.D.	0.0050	N.D.	94.8	1
NICKEL	0.012	0.0050	N.D.	94.8	1
SELENIUM	0.0073	0.0050	N.D.	96.0	1
SILVER	N.D.	0.0050	N.D.	91.4	1
THALLIUM	N.D.	0.0050	N.D.	96.0	1
VANADIUM	N.D.	0.0050	N.D.	95.6	. 1
ZINC	0.013	0.010	N.D.	95.4	ī
MERCURY	N.D.	0.00050	N.D.	109	ī
Mercury extracted on	and analyzed on F	ebruary 18 199	19		_

Christopher Arndt

Analyst

Michael Verona

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Soluble Miscellaneous Metals with Mercury analysis.

Method: EPA 3005A/6010A/7470A Nov 1990

Client Sample ID: ABL-GW-4

Spl#: 229102 Matrix: WATER Extracted: February 18, 1999 Sampled: February 15, 1999 Run#: 17437 Analyzed: February 18, 1999

REPORTING BLANK BLANK DILUTION RESULT RESULT LIMIT SPIKE **FACTOR** ANALYTE (mg/L)(mg/L)(mg/L) (왕) ANTIMONY 0.0098 0.0050 N.D. 93.8 1 0.0050 98.6 ARSENIC N.D. N.D. 1 BARIUM 0.067 95.6 1 0.0050 N.D. 95.2 BERYLLIUM N.D. 0.0050 N.D. 1 0.0020 95.4 CADMIUM 1 N.D. N.D. CHROMIUM N.D. 0.0050 N.D. 95.6 COBALT N.D. 0.0050 N.D. 95.2 94.6 COPPER 0.032 0.0050 N.D. LEAD 95.8 N.D. 0.0050 N.D. MOLYBDENUM N.D. 0.0050 N.D. NICKEL N.D. 94.8 0.0069 0.0050 0.0050 SELENIUM N.D. N.D. 96.0 SILVER N.D. 0.0050 N.D. 91.4 THALLIUM N.D. 96.0 0.0050 N.D. N.D. 95.6 VANADIUM 0.0050 N.D. ZINC 0.018 0.010 N.D. 95.4 MERCURY N.D. 0.00050 109

Mercury extracted on and analyzed on February 18, 1999.

Christopher Arndt

Analyst

Michael Verona Operations Manager

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Soluble Miscellaneous Metals with Mercury analysis.

Method: EPA 3005A/6010A/7470A Nov 1990

Client Sample ID: ABL-GW-5

Sp1#: 229103

Sampled: February 15, 1999

Matrix: WATER

Run#: 17437 Extracted: February 18, 1999

Analyzed: February 18, 1999

ANALYTE	RESULT	REPORTING LIMIT	BL <b>AN</b> K RESULT	SPIKE	DILUTION FACTOR
	(mg/L)	(mg/L)	(mq/L)	(%)	
ANTIMONY	N.D.	0.0050	N.D.	93.8	1
ARSENIC	N.D.	0.0050	N.D.	98.6	1
BARIUM	0.022	0.0050	N.D.	95.6	1
BERYLLIUM	N.D.	0.0050	N.D.	95.2	ī
CADMIUM	0.0023	0.0020	N.D.	95.4	ī
CHROMIUM	N.D.	0.0050	N.D.	95.6	ī
COBALT	N.D.	0.0050	N.D.	95.2	ī
COPPER	N.D.	0.0050	N.D.	94.6	ī
LEAD	N.D.	0.0050	N.D.	95.8	ī
MOLYBDENUM	N.D.	0.0050	N.D.	94.8	ī
NICKEL	N.D.	0.0050	N.D.	94.8	ī
SELENIUM	0.051	0.0050	N.D.	96.0	ī
SILVER	N.D.	0.0050	N.D.	91.4	1
THALLIUM	N.D.	0.0050	N.D.	96.0	<b>1</b>
VANADIUM	0.019	0.0050	N.D.	95.6	<b>†</b>
ZINC	N.D.	0.010	N.D.	95.4	1
MERCURY	N.D.	0.00050	N.D.	109	1
Mercury, extracted on			9.	-45	+

Christopher Arndt

Analyst

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#:

510996100900/2000

re: One sample for Soluble Miscellaneous Metals with Mercury analysis.

Method: EPA 3005A/6010A/7470A Nov 1990

Client Sample ID: ABL-GW-6

Spl#: 229088

Matrix: WATER

Extracted: February 18, 1999

Sampled: February 15, 1999 Analyzed: February 18, 1999 Run#: 17437

		REPORTING	BLANK	BLANK :	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mg/L)	(mg/L)	(mg/L)	(%)	
ANTIMONY	0.0059	0.0050	N.D.	93.8	1
ARSENIC	N.D.	0.0050	N.D.	98.6	1
BARIUM	0.10	0.0050	N.D.	95.6	1
BERYLLIUM .	N.D.	0.0050	N.D.	95.2	1
CADMIUM	N.D.	0.0020	N.D.	95.4	<b>1</b> .
CHROMIUM	N.D.	0.0050	N.D.	95.6	1
COBALT	N.D.	0.0050	N.D.	95.2	1
COPPER ·	0.033	0.0050	N.D.	94.6	1.
LEAD	N.D.	0.0050	N.D.	95.8	1
MOLYBDENUM	N.D.	0.0050	N.D.	94.8	1
NICKEL	0.015	0.0050	N.D.	94.8	1
SELENIUM	0.0077	0.0050	N.D.	96.0	1
SILVER	N.D.	0.0050	N.D.	91.4	1
THALLIUM	N.D.	0.0050	N.D.	96.0	1
VANADIUM	N.D.	0.0050	N.D.	95.6	1
ZINC	0.014	0.010	N.D.	95.4	1
MERCURY	N.D.	0.00050	N.D.	109	1
Margurer autworked on	and analyzed on E	Coherrowse 70 TO	20		

Mercury extracted on and analyzed on February 18, 1999.

Christopher Arndt

Analyst

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#:

510996100900/2000

re: One sample for Soluble Miscellaneous Metals with Mercury analysis.

Method: EPA 3005A/6010A/7470A Nov 1990

Client Sample ID: ABL-GW-7

Spl#: 229105

Sampled: February 15, 1999

Matrix: WATER Run#: 17437 Extracted: February 18, 1999

Analyzed: February 18, 1999

	RESULT	REPORTING LIMIT	BLANK RESULT	BLANK SPIKE	DILUTION FACTOR
ANALYTE	(mg/L)	(mg/L)	(mg/L)	(%)	
ANTIMONY	0.0057	0.0050	N.D.	93.8	1
ARSENIC	N.D.	0.0050	N.D.	98.6	1
BARIUM BERYLLIUM	0.019	0.0050	N.D.	95.6	1
CADMIUM	N.D.	0.0050	N.D.	95.2	1
CHROMIUM	N.D.	0.0020	Ŋ.D.	95.4	1
COBALT	N.D.	0.0050	N.D.	95.6	1
COPPER	N.D. 0.027	0.0050	N.D.	95.2	1
LEAD	N.D.	0.0050 0.0050	N.D.	94.6	1
MOLYBDENUM	0.0065	0.0050	N.D. N.D.	95.8	<u> </u>
NICKEL	0.0056	0.0050	N.D.	94.8 94.8	1
SELENIUM	N.D.	0.0050	N.D.	96.0	1
SILVER	N.D.	0.0050	N.D.	91.4	<b>†</b>
THALLIUM	N.D.	0.0050	N.D.	96.0	ī
VANADIUM	N.D.	0.0050	N.D.	95.6	ī
ZINC	0.010	0.010	N.D.	95.4	ī
MERCURY	N.D.	0.00050	N.D.	109	ī
Mercury extracted on	and analyzed on F	ebruary 18, 199	9.		_

Christopher Arndt

Analyst

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Soluble Miscellaneous Metals with Mercury analysis.

Method: EPA 3005A/6010A/7470A Nov 1990

Client Sample ID: ABL-GW-8

Sp1#: 229087

Matrix: WATER

Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17437 Analyzed: February 18, 1999

	•	REPORTING	BLANK	BLANK I	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mg/L)	(mg/L)	(mg/L)	(%)	
ANTIMONY	0.0052	0.0050	N.D.	93.8	1
ARSENIC	N.D.	0.0050	N.D.	98.6	1
BARIUM	0.026	0.0050	N.D.	95.6	1
BERYLLIUM	N.D.	0.0050	N.D.	95.2	1
CADMIUM	N.D.	0.0020	N.D.	95.4	1
CHROMIUM	N.D.	0.0050	N.D.	95.6	1
COBALT	0.060	0.0050	N.D.	95.2	. 1
COPPER	0.063	0.0050	N.D.	94.6	. 1
LEAD	N.D.	0.0050	N.D.	95.8	1
MOLYBDENUM	N.D.	0.0050	N.D.	94.8	1
NICKEL	0.27	0.0050	N.D.	94.8	1
SELENIUM	0.0059	0.0050	N.D.	96.0	1
SILVER	N.D.	0.0050	N.D.	91.4	1
THALLIUM	N.D.	0.0050	N.D.	96.0	1
VANADIUM	N.D.	0.0050	N.D.	95.6	1
ZINC	0.24	0.010	N.D.	95.4	1
MERCURY	N.D.	0.00050	N.D.	109	1

Mercury extracted on and analyzed on February 18, 1999.

Christopher

Analyst

Verona Operations Manager

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Soluble Miscellaneous Metals with Mercury analysis.

Method: EPA 3005A/6010A/7470A Nov 1990

Client Sample ID: ABL-GW-10

Spl#: 229106

Sampled: February 15, 1999 Run#: 17437

Matrix: WATER

Extracted: February 18, 1999

Analyzed: February 18, 1999

	RESULT	REPORTING LIMIT	BLANK RESULT	BLANK SPIKE	DILUTION FACTOR
ANALYTE	(mg/L)	(mg/L)	(mg/L)	(%)	
ANTIMONY	0.0084	0.0050	N.D.	93.8	1
ARSENIC	N.D.	0.0050	N.D.	98.6	ī
BARIUM	0.019	0.0050	N.D.	95.6	ī
BERYLLIUM	N.D.	0.0050	N.D.	95.2	ī
CADMIUM	N.D.	0.0020	N.D.	95.4	ī
CHROMIUM	N.D.	0.0050	N.D.	95.6	ī
COBALT	N.D.	0.0050	N.D.	95.2	1
COPPER	0.045	0.0050	N.D.	94.6	1
LEAD	Ŋ.D.	0.0050	N.D.	95.8	1
MOLYBDENUM	Ŋ.D.	0.0050	N.D.	94.8	1
NICKEL	0.018	0.0050	N.D.	94.8	1
SELENIUM SILVER	Ŋ.D.	0.0050	N.D.	96.0	1
<del></del>	Ŋ.D.	0.0050	N.D.	91.4	1
THALLIUM	N.D.	0.0050	N.D.	96.0	1
VANADIUM	N.D.	0.0050	N.D.	95.6	1
				95.4	1
				109	1
ZINC MERCURY Mercury extracted on	0.022 N.D.	0.010 0.00050	N.D. N.D.	95.4	1 1

and analyzed on February 18, 1999.

Christopher Arndt

Analyst

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#: 510996100900/2000

re: One sample for Soluble Miscellaneous Metals with Mercury analysis.

Method: EPA 3005A/6010A/7470A Nov 1990

Client Sample ID: ABL-GW-11

 Extracted: February 18, 1999

Sampled: February 15, 1999 Run#: 17437 Analyzed: February 18, 1999

		REPORTING	BLANK	BLANK	DILUTION
	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(mg/L)	(mg/L)	(mg/L)	(%)	
ANTIMONY	0.0069	0.0050	N.D.	93.8	1
ARSENIC	N.D.	0.0050	N.D.	98.6	1
BARIUM	0.058	0.0050	N.D.	95.6	1
BERYLLIUM	N.D.	0.0050	N.D.	95.2	1
CADMIUM	N.D.	0.0020	N.D.	95 <b>.4</b>	1
CHROMIUM	N.D.	0.0050	N.D.	95.6	1
COBALT	N.D.	0.0050	N.D.	95.2	1
COPPER	0.019	0.0050	N.D.	94.6	1
LEAD	N.D.	0.0050	N.D.	95.8	1
MOLYBDENUM	0.0068	0.0050	N.D.	94.8	1
NICKEL	0.0082	0.0050	N.D.	94.8	1
SELENIUM	0.013	0.0050	N.D.	96.0	1
SILVER	N.D.	0.0050	N.D.	91.4	1
THALLIUM	N.D.	0.0050	N.D.	96.0	1
VANADIUM	N.D.	0.0050	N.D.	95.6	1
ZINC	0.027	0.010	N.D.	95.4	1
MERCURY	N.D.	0.00050	N.D.	109	1
Mercury extracted on	and analyzed on F	ebruary 18, 199	99.		

Christopher Arndt

Analyst

Michael Verona

**Environmental Services (SDB)** 

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: Not provided

Received: February 16, 1999

Project#:

510996100900/2000

re: One sample for Soluble Miscellaneous Metals with Mercury analysis.

Method: EPA 3005A/6010A/7470A Nov 1990

Client Sample ID: ABL-GW-12

Spl#: 229086

Sampled: February 15, 1999

*Matrix:* WATER Run#: 17437 Extracted: February 18, 1999

Analyzed: February 18, 1999

ANALYTE	RESULT (mg/L)	REPORTING LIMIT (mg/L)	BLANK RESULT (mg/L)	BLANK SPIKE (%)	DILUTION FACTOR
ANTIMONY	N.D.	0.0050	N.D.	93.8	1
ARSENIC	Ŋ.D.	0.0050	N.D.	98.6	1
BARIUM	0.024	0.0050	N.D.	95.6	1
BERYLLIUM	N.D.	0.0050	N.D.	95.2	1
CADMIUM	Ŋ.D.	0.0020	N.D.	95.4	1
CHROMIUM	N.D.	0.0050	N.D.	95.6	1
COBALT	0.0064	0.0050	N.D.	95.2	1
COPPER	0.043	0.0050	N.D.	94.6	1
LEAD	N.D.	0.0050	N.D.	95.8	1
MOLYBDENUM	N.D.	0.0050	N.D.	94.8	1
NICKEL	0.012	0.0050	N.D.	94.8	1
SELENIUM	0.0059	0.0050	N.D.	96.0	1
SILVER	Ŋ.D.	0.0050	N.D.	91.4	1
THALLIUM	N.D.	0.0050	N.D.	96.0	1
VANADIUM	Ŋ.D.	0.0050	N.D.	95.6	1
ZINC	0.011	0.010	N.D.	95.4	1
MERCURY	N.D.	0.00050	N.D.	109	1
Mercury extracted on	and analyzed on F	ebruarv 18. 199	9.		

Christopher Arndt

Analyst

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Matrix spike report for Soluble Miscellaneous Metals with Mercury

analysis.

Method: EPA 3005A/6010A/7470A Nov 1990

Matrix: WATER Extracted: February 18, 1999
Lab Run#: 17437 Instrument: Analyzed: February 18, 1999

Daw Ruin. In	±3/	THECTUME	=11 C .		1	чиатугс	a: re	oruary	, TO' T	177	
		Spiked						_			<b>જુ</b>
		Sample	Spike	Amt	Amt Fo	ound	Spike	Recor	r	% F	RPD
		Amount	MS	MSD	MS	MSD	MS	MSD	Control	L <u>Lin</u>	<u>n</u>
Analyte		(mg/L)	(mg		(mg/L)	)	(%)	(왕)	Limits	RPD	
ANTIMONY	P	N.D.	0.500	0.500	0.488	0.476	97.6	95.2	80-120	2.49	20
ARSENIC		N.D.	0.500	0.500	0.498	0.495	99.6	99.0	80-120	0.60	20
BARIUM		0.31	0.500	0.500	0.790	0.781	96.0	94.2	80-120	1.89	20
BERYLLIUM		N.D.	0.500	0.500	0.492	0.481	98.4	96.2	80-120	2.26	20
CADMIUM	•	N.D.	0.500	0.500	0.476	0.468	95.2	93.6	80-120	1.69	20
CHROMIUM		N.D.	0.500	0.500	0.481	0.472	96.2	94.4	80-120	1.89	20
COBALT	*	N.D.	0.500	0.500	0.475	0.466	95.0	93.2	80-120	1.91	20
COPPER		N.D.	0.500	0.500	0.484	0.474	96.8	94.8	80-120	2.09	20
LEAD		N.D.	0.500	0.500	0.477	0.468	95.4	93.6	80-120	1.90	20
MOLYBDENUM		N.D.	0.500	0.500	0.490	0.480	98.0	96.0	80-120	2.06	20
NICKEL		0.0078	0.500	0.500	0.477	0.468	93.8	92.0	80-120	1.94	20
SELENIUM		N.D.	0.500	0.500	0.519	0.510	104	102	80-120	1.94	20
SILVER		N.D.	0.500	0.500	0.470	0.460	94.0	92.0	80-120	2,15	20
THALLIUM		N.D.	0.500	0.500	0.476	0.468	95.2	93.6	80-120	1.69	20
VANADIUM		N.D.	0.500	0.500	0.499	0.488	99.8	97.6	80-120	2.23	20
ZINC		0.023	0.500	0.500	0.508	0.500	97.0	95.4	80-120	1.66	20
MERCURY		N.D.	0.0200	0.0200	0.0217	0.0218	108	109	85-115	0.92	20

Sample Spiked: 229241 Submission #: 9902214 Client Sample ID: GW-6

Environmental Services (SDB)

February 23, 1999

Submission #: 9902200

URS GREINER W&C OAKLAND

Atten: April Giangerelli

Project: 510996100900/2000 Received: February 16, 1999

re: Blank spike and duplicate report for Soluble Miscellaneous Metals with

Mercury analysis.

Method: EPA 3005A/6010A/7470A Nov 1990

Matrix: WATER
Lab Run#: 17437

Analyzed: February 18, 1999

			Spil	ke					ૠ
	Spike A	Amount	Amount	Found	Spike	Recov	Control	. %	RPD
•	BSP	Dup	BSP 1	Dup	BSP	$\mathtt{Dup}$			
<u>Analyte</u>	(mg/L)	·	(mg/L)		(%)	(%)	Limits	RPD	Lin
ANTIMONY	0.500	0.500	0.469	0.477	93.8	95.4	80-120	1.69	20
ARSENIC	0.500	0.500	0.493	0.499	98.6	99.8	80-120	1.21	20
BARIUM	0.500	0.500	0.478	0.485	95.6	97.0	80-120	1.45	20
BERYLLIUM	0.500	0.500	0.476	0.478	95.2	95.6	80-120	0.41	20
CADMIUM	0.500	0.500	0.477	0.481	95.4	96.2	80-120	0.83	20
CHROMIUM	0.500	0.500	0.478	0.484	95.6	96.8	80-120	1.25	20
COBALT	0.500	0.500	0.476	0.484	95.2	96.8	80-120	1.67	20
COPPER	0.500	0.500	0.473	0.482	94.6	96.4	80-120	1.88	20
LEAD	0.500	0.500	0.479	0.487	95.8	97.4	80-120	1.66	20
MOLYBDENUM	0.500	0.500	0.474	0.483	94.8	96.6	80-120	1.88	20
NICKEL	0.500	0.500	0.474	0.480	94.8	96.0		1.26	20
SELENIUM	0.500	0.500	0.480	0.484	96.0	96.8	80-120	0.83	20
SILVER	0.500	0.500	0.457	0.462	91.4	92.4		1.09	20
THALLIUM	0.500	0.500	0.480	0.487	96.0	97.4	80-120	1.45	20
VANADIUM	0.500	0.500	0.478	0.486	95.6	97.2	80-120	1.66	
ZINC	0.500	0.500	0.477	0.488	95.4	97.6	80-120	2.28	20
MERCURY	0.0200	0.0200	0.0218	0.0219		110		0.91	20

Environmental Services (SDB)

March 9, 1999

Submission #: 9903032

URS GREINER W&C OAKLAND

Atten: ALBERT RIDLEY

Project: Not provided

Project#: 5109961000900/200

Received: February 15, 1999

re: 3 samples for STLC Lead analysis.

Method: CA WET3005A/7420A

Matrix: SOIL

Extracted: March 8, 1999

Run#: 17709

Sampled: February 15, 1999

Analyzed: March 8, 1999

		REPORTING	BLANK	BLANK	DILUTION
	LEAD	LIMIT	RESULT	SPIKE	FACTOR
Spl# CLIENT SPL ID	(mq/L)	(mg/L)	(mg/L)	(%)	
230769 ABL-SB-5-0-1	N.D.	1.0	N.D.	104	1
230770 ABL-SB-11-0-1	2.2	1.0	N.D.	104	1

Matrix: SOIL

Extracted: March 8, 1999

Sampled: February 16, 1999

Run#: 17709 Analyzed: March 8, 1999

BLANK BLANK DILUTION REPORTING LEAD LIMIT RESULT SPIKE FACTOR CLIENT SPL ID (mq/L)(mg/L) (mq/L) (%) 230768 ABL-SS-1-0-1 33 1.0 104

Analyst

**Environmental Services (SDB)** 

March 9, 1999

Submission #: 9903032

URS GREINER W&C OAKLAND

Atten: ALBERT RIDLEY

Project: Not provided

Received: February 15, 1999

Project#: 5109961000900/200

re: One sample for STLC Misc Metals with DI Water analysis.

Method: CA WET3005A Mod/6010A/7470A Nov 1990

Client Sample, ID: ABL-SB-5-0-1

Spl#: 230772

Matrix: SOIL

Extracted: March 8, 1999

Sampled: February 15, 1999

Run#: 17714

Analyzed: March 8, 1999

RESULT

REPORTING LIMIT

BLANK RESULT BLANK DILUTION SPIKE **FACTOR** 

ANALYTE LEAD

(mq/L)

(mq/L)0.50

(mq/L)

Analyst

**Ver**ona Operations Manager

**Environmental Services (SDB)** 

March 9, 1999

Submission #: 9903032

URS GREINER W&C OAKLAND

Atten: ALBERT RIDLEY

Project: Not provided

Received: February 15, 1999

Project#: 5109961000900/200

re: One sample for STLC Misc Metals with DI Water analysis.

Method: CA WET3005A Mod/6010A/7470A Nov 1990

Client Sample ID: ABL-SB-11-0-1

Spl#: 230773

Sampled: February 15, 1999

Matrix: SOIL

Run#:

Extracted: March 8, 1999

Analyzed: March 8, 1999

REPORTING BLANK BLANK DILUTION RESULT LIMIT RESULT SPIKE FACTOR

17714

(mg/L)

(mg/L)(mg/L)

Analyst

<del>Vero</del>na

Environmental Services (SDB)

March 9, 1999

Submission #: 9903032

URS GREINER W&C OAKLAND

Atten: ALBERT RIDLEY

Project: Not provided

Received: February 16, 1999

Project#: 5109961000900/200

re: One sample for STLC Misc Metals with DI Water analysis. Method: CA WET3005A Mod/6010A/7470A Nov 1990

Client Sample ID: ABL-SS-1-0-1

Spl#: 230771

71 Matrix: SOIL

Extracted: March 8, 1999

Sampled: February 16, 1999

Run#: 17714

Analyzed: March 8, 1999

REPORTING BLANK BLANK DILUTION RESULT LIMIT RESULT SPIKE **FACTOR** ANALYTE (mg/L)(mg/L)(mg/L) LEAD N.D. 0.50 N.D.

Shafi Balekadi

Michael Verona Operations Manager

**Environmental Services (SDB)** 

March 9, 1999

Submission #: 9903032

URS GREINER W&C OAKLAND

Atten: ALBERT RIDLEY

Project: 5109961000900/200 Received: February 16, 1999

re: Matrix spike report for STLC Lead analysis.

Method: CA WET3005A/7420A

Matrix: SOIL

Lab Run#: 17709 Instrument:

Extracted: March 8, 1999
Analyzed: March 8, 1999

Spiked

Sample Spike Amt Amt Found Spike Recov Amount MS MSD MS MSD MS MSD Control % RPD **Analyte** (mg/L)(mq/L) (mg/L) (왕) (왕) <u>Limits RPD Lim</u> LEAD 85 50.0 50.0 132 132 94.0 94.0 80-120 0 20

> Sample Spiked: 231343 Submission #: 9903082 Client Sample ID: R88 A-D

Environmental Services (SDB)

March 9, 1999

Submission #: 9903032

URS GREINER W&C OAKLAND

Atten: ALBERT RIDLEY

Project: 5109961000900/200 Received: February 16, 1999

re: Matrix spike report for STLC Misc Metals with DI Water analysis.

Method: CA WET3005A Mod/6010A/7470A Nov 1990

Matrix: SOIL

Lab Run#: 17714 Instrument:

Extracted: March 8, 1999

Analyzed: March 8, 1999

Spiked

Sample Spike Amt Amt Found Spike Recov Amount MS MSD MS MSD MS MSD Control <u>Analyte</u> (mg/L)(mg/L) (mg/L)(%) (%) Limits RPD Lim LEAD N.D. 5.00 5.00 5.25 5.14 105 103 80-120 1.92 20

> Sample Spiked: 231001 Submission #: 9903055 Client Sample ID: HA-3(2.5)

Environmental Services (SDB)

March 9, 1999

Submission #: 9903032

URS GREINER W&C OAKLAND

Atten: ALBERT RIDLEY

Project: 5109961000900/200 Received: February 16, 1999

re: Blank spike and duplicate report for STLC Lead analysis.

Method: CA WET3005A/7420A

Matrix: SOIL
Lab Run#: 17709

Analyzed: March 8, 1999

Spike Spike Amount Amount Found Spike Recov 윰 **BSP BSP** Dup Dup **BSP** Dup RPD Control % **Analyte** (mg/L) (mq/L)(%) (%) Limits RPD Lim LEAD 50.0 50.0 52.1 52.5 104 105 80-120 0.95 20

**Environmental Services (SDB)** 

March 9, 1999

Submission #: 9903032

URS GREINER W&C OAKLAND

Atten: ALBERT RIDLEY

Project: 5109961000900/200 Received: February 16, 1999

re: Blank spike and duplicate report for STLC Misc Metals with DI Water

analysis.

Method: CA WET3005A Mod/6010A/7470A Nov 1990

Matrix: SOIL Lab Run#: 17714

Analyzed: March 8, 1999

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				Sp	ike				%
		Spike	Amount	Amoun	t Found	Spike	Recov	Control %	RPD
		BSP	Dup	BSP	Dup	BSP	Dup		
<u>Analyte</u>		(mcr/L)		(mg/L	)	(왕)	(왕)	Limits RPD	Lim
LEAD		5.00	5.00	5.13	5.16	103	103	80-120 0	20

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9902200/279891-109 LOF2 44613 **Woodward-Clyde Consultants** chain of Custody Record 500 12th Street, Suite 200 • Oakland, CA 94607-4014 (510) 893-3600 PROJECT NO. ANALYSES Number of Containers 510996100900/2000 8080 REMARKS SAMPLERS: (Signature) (Sample Cara E preservation, handling DATE TIME SAMPLE NUMBER procedures, etc.) 2|15|99|1515 | ABL-SB-1-0-1 S ABL-SB-1-2-3 1530 ABL-QW-1 W 1630 ABL-GW-2 Mı 9 ABL-GW-3 W 645 1440 ABL-GW-4 9 9 1700 ABL-GW-5 W 1700 DUPGWO1 W 1730 ABL-GW-7 BUR 3 X 40ml VOA ONLY. 1750 ABL-GW-9 W 1800 ABL-GW-10 W 1830 ABL-GW-11 W TOTAL NUMBER OF 186 CONTAINERS RELINQUISHED BY: DATE/TIME RECEIVED BY: RELINQUISHED BY: DATE/TIME RECEIVED BY: Signature) (Signature) (Signature) (Signature) METHOD OF SHIPMENT: SHIPPED BY: COURIER: RECEIVED FOR LAB BY DATE/TIME (Signature) (Signature) (Signature) CHROMALAB COURIER

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SAMPLE	996 RS: (S	ignature) SAMPLE NUMBE		Sample Matrix (S)oil, (W)ater, (A)ir	Q-HALL TUSINGS	174	) (1	3020	-	10#7	\$250 - VOCS					Number of Containers		REMAI (Sam) preserva handl procedure	ole ation, ng	
	045 1100 1120 1145	ABL-SS-1-0 ABL-SS-2-1 ABL-SS-3-1 ABL-SS-4-1 ABL-SS-5-0 ABL-DCOI	D-) D-)	88888	シンソンソ			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		<b>/</b> ,				THE REPORT OF THE PERSON OF TH		7       	5 To Co	MERSE NO MIRCES; ABL-SS- ABL-SS- BE CO MIRCETELY DEPROPERSON	160. 5-0: 5-0: 20541 Per	7-1-0
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# CHROMALAB, INC.

ADD ON/CHANGE ORDER

New Submission No:
1.0011

Environmental Services (SDB) (DOHS 1094)

Order No: 448//

Original Submission Info  Client Name: Woodward - Cly de  Project Mgr: Albert Ridley  Project Name:	Name of Caller: Albert Ridley  Call Dale: Time:  Add on Due Dale: 3/9/59 Date Sampled 2/15 / 2/14  Comments:
Project No: 510 996 10009 50 /2000	ANALYSIS BERDAT
PO#:  Date Received: 2/15, 2/16  Submission No: 790 2200, 9902205  BAMPLE ID. DATE TIME MATRIX PRIVIEW	THY-CASSING THY-CASSING THY-CASSING THY-CASSING THY-CASSING THY-Diesel, TETH (THY-Diesel, TETH (THY-STICKASON, 8015) FURCEASIE AROMATICS STEEK (EPA 602, 8020) FURCEASIE AROMATICS STEEK (EPA 602, 8020) FURCEASIE HALOCARBONS (EPA 601, 8010) VOLATILE ORCANICS (EPA 601, 8010) FURCEASIE HALOCARBONS (EPA 601, 8010) FOR CASSING (EPA 602, 8020) FOR CASSING (EPA 602, 8080) FOR CASSING FESTICIDES (EPA 602, 8080) FOR CASSING FOR CAN METALS (77) FURCEASIE (17) FUR
ABL-SS-1-01 2/16/99 1030 5 Now	<del></del>
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	SUMN #: 9963632 REP: ASLEV2 CLIENT. URS DUE: 83/89/93

Appendix E Lead Rick Assessment Spreadsheet

#### LEAD RISK ASSESSMENT SPREADSHEET

CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

INPUT		OUTPUT											
MEDIUM	LEVEL			perc	entiles	<u></u>	···-	PRG-99	PRG-95				
LEAD IN AIR (ug/m^3)	0.1		50th	90th	95th	98th	99th	(ug/g)	(ug/g)				
LEAD IN SOIL (ug/g)	300.0	BLOOD Pb, ADULT (ug/dl)	2.1	3.3	3.7	4.3	4.7	891.7	1309.3				
LEAD IN WATER (ug/l)	15	BLOOD Pb, CHILD (ug/dl)	4.4	7.0	7.9	9.1	10,0	140.3	270.8				
PLANT UPTAKE? 1=YES 0=N	1	BLOOD Pb, PICA CHILD (ug/dl)	20.0	31.3	35.5	41.0	45.2	21.3	41.1				
RESPIRABLE DUST (ug/m³3)	50	BLOOD Pb, INDUSTRIAL (ug/dl)	2.0	3.2	3.6	4.1	4.6	4361.5	6405.5				

#### **EXPOSURE PARAMETERS**

		•		resider	ntial	industrial
		units	adults	children	children	adults
G	eneral				with pica	
	Days per week	days/wk	7	7	7	5
D	ermal Contact					·
	Skin area	cm^2	3700	2800	2800	5800
	Soil adherence	mg/cm^2	0.5	0.5	0.5	0.5
	Route-specific constant	(ug/dl)/(ug/day)	0.00011	0.00011	0.00011	0.00011
S	oil ingestion					1
	Soil ingestion	mg/day	25	55	790	25
	Route-specific constant	(ug/dl)/(ug/day)	0.0176	0.0704	0.0704	0.0176
ln	halation			<u> </u>		
	Breathing rate	m^3/day	20	10	10	20
	Route-specific constant	(ug/dl)/(ug/day)	0.082	0.192	0.192	0.082
V	later ingestion	<del></del>				
	Water ingestion	l/day	1.4	0.4	0.4	1.4
	Route-specific constant	(ug/dl)/(ug/day)	0.04	0.16	0.16	0.04
F	ood ingestion			·		
	Food ingestion	kg/day	2.2	1.3	1.3	2.2
	Route-specific constant	(ug/dl)/(ug/day)	0.04	0.16	0.16	0.04
	Dietary concentration	ug/kg	9.8	9.8	16.9	10.0
	Lead in produce	ug/kg	135.0	135.0	135.0	
	<del>-</del>				· · · · · · · · · · · · · · · · · · ·	l

#### PATHWAYS, ADULTS

	Residential		Industrial			
Pathway	Blood Pb ug/dl	percent of total	Blood Pb ug/dl	percent of total	Concentration in medium	
SOIL CONTACT:	0.06	3%	0.07	3%	300	ug/g
SOIL INGESTION:	0.13	6%	0.09	5%	300	ug/g
INHALATION:	0.19	9%	0.13	7%	0.12	g/m^3
WATER INGESTION:	0.84	40%	0.84	42%	15	ug/l
FOOD INGESTION:	0.87	42%	0.88	44%	9.8	b/kg diet

#### PATHWAYS, CHILDREN

	Typical		with pica			
Pathway	Blood Pb ug/dl	percent of total	Blood Pb ug/dl	percent of total	concentration in medium	
SOIL CONTACT:	0.04	1%	0.04	0%	300	ug/g
SOIL INGESTION:	1.16	26%	16.68	84%	300	ug/g
INHALATION:	0.22	5%	0.22	1%	0.12	g/m^3
WATER INGESTION:	0.96	22%	0.96	5%	15	ug/l
FOOD INGESTION:	2.05	46%	2.05	10%	9.8	b/kg diet

3/12/99 MCL